

DEC 09 1988

CENTER/NRC MILESTONES-DEC

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MEMORANDUM FOR: CNWRA Program Management Staff

FROM: Michael P. Lee/Brian E. Thomas  
Project Officers  
Waste Systems Engineering and Integration

SUBJECT: CENTER MILESTONES FOR THE ACCELERATION OF THE PROGRAM  
ARCHITECTURE -- DECEMBER PROGRESS REPORT

Enclosed you will find the December Progress Report outlining the current status of all CNWRA element/subelement milestones for the accelerated development of the Program Architecture. Those milestones achieved since the issuance of the November Progress Report are as follows:

<u>MILESTONES</u>	<u>ABBREVIATED DESCRIPTION</u>	<u>RECEIPT DATE</u>
A3/A4	Finalize PASS structure through Process Block #15	11/25/88
R7	Briefing, if requested, and report of the example of the proof-of-system data	12/01/88 (partial)

We also wish to bring to your attention a few additional points with respect to this table:

One additional regulatory requirement topic was submitted by the Center in accordance with NRC's letter of October 28, 1988 requesting that the Center select regulatory requirement topic examples sufficient to test and demonstrate the completeness of the automated data processing features of the Program Architecture Support System, as called for by the requirements of element/subelement milestones A3 and A4. A draft of regulatory requirement topic no. E36, entitled "Structures, Systems, and Components Important to Safety--Protection Against Natural Phenomena and Environmental Conditions," was received on November 25, 1988. This topic supplements the draft of regulatory requirement topic no. E17 ("Adverse Condition--Geochemical Processes") that was previously submitted (on October 31, 1988) for use in demonstrating fulfillment of the A3/A4 milestones.

Selected NRC/CNWRA program management staff traveled to the Center during the week of November 28, 1988 to attend a briefing that demonstrated major milestone R7 -- the "proof-of-system" example. The briefing was the first of two activities necessary to close-out this milestone; the second is a report and it is scheduled for transmission to NRC sometime during the next two weeks.

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In addition, the Center submitted to NRC for review and comment it's draft of the "Proposed Outline for [Milestone] R8 -- Recommendations for Regulatory Actions Resulting from Analysis of 10 CFR Part 60" (dated November 8, 1988). Milestone R8 is a report to NRC on CNWRA-recommended rulemaking needs as they relate to repository activities. On November 28, 1988, NRC's draft comments were completed in order to promote discussion with the Center on the subject milestone during the joint NRC/CNWRA meeting noted above.

Also of interest is information regarding the estimated status of completion of element/subelement milestones E1 through E3 that was recently reported in the CNWRA's Program Manager's Period Report for Period 1 - FY1989 (PMPR No. 89-1) for the reporting period October 1, 1988 through October 28, 1988. The estimated status of completion for those element/subelement milestones reported by the Center in the PMPR (dated November 11, 1988) is as follows:

<u>MILESTONE</u>	<u>ABBREVIATED DESCRIPTION</u>	<u>% COMPLETE</u>
E1	Element Activity via TOP-001-02 on Set #1	85%
P7	PARC Review of Set #1 Regulatory Requirements	25%
I12	Input Example Data for R7 Deliverable ("Proof-of-System")	80%
I3	Integrate PARC Set #1 Data	5%
P6	PARC Review of Example Data R7 for Deliverable ("Proof-of-System")	70%
A5	Finalize PASS structure thru Process Block #22	15%
A6	Finalize PASS Documentation for R7 Deliverable	10%
E2	Element Activity via TOP-001-02 on Set #2	40%
P8	PARC Review of Set #2 Regulatory Requirements	5%
I4	Integrate PARC Set #2 Data	0%
E3	Element Activity via TOP-001-02 on Set #3	40%

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Nine element/subelement milestones, in addition to those cited in the CNWRA PMPR Report No. 89.1, are also scheduled for completion prior to the R8 and R9 milestones due date. These milestones are: P5, D10, P9, I5, E4, P10, I6, D11, and I7. NRC has requested (memorandum dated October 12, 1988) that the Center update it's "Program Architecture Milestone Schedule" to reflect the current production schedule for these nine milestones as well as all remaining milestones associated with the accelerated development of the Program Architecture.

**Original Signed By**

Michael P. Lee/Brian E. Thomas  
Project Officers  
Waste Systems Engineering and  
Integration

Enclosure: As stated

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NRC Internal Milestone Table for CNWRA Products

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
D1, R1	Develop and approve TOP-001	6/17/88	N/A	2	PEM's [T]	5/23/88	TOP-001, Rev. 0 approved 6/12/88 Guidance to PARC on Revision of old Milestone (MS) 12
D2, R2	Modify the Center's process diagram and receive NRC concurrence	6/23/88	N/A	6	WSEI [T]	6/23/88	Process diagram approved following revisions requested by NRC
D3, R3	Develop and approve Program Architecture terminology	6/24/88	N/A	1	PEM's [T]	6/16/88	Basic definitions developed 6/16/88
P1, R4	Finish and approve specifications for membership of the Program Architecture Review Committee (PARC) and guidelines for review of Milestone 12 data	7/7/88	N/A	3	None	N/A	7/05/88(f); internal CNWRA memorandum establishing PARC--No comment necessary.
P2	Implement guidelines and specifications for the PARC to review the current PASS database (MS 12 review) by categorized regulations	7/12/88	N/A	4	PEM's [T]	7/12/88	TOP-001-01, Rev. 0 approved 7/12/88
I1	Integrate final approved process diagram, Program Architecture terminology, final schedule, PARC Guidance, and examples worked to-date for initiating further progress	7/14/88	N/A	1,2,3,6 7,8	PEM's [I]	8/05/88	Milestone updated 7/26/88
D4, R5	Prepare the preliminary specifications for the PA/PASS deliverables and presentations of R7, R8, and R9	7/21/88	20 partial 21 partial	13a	PEM's [T]	7/25/88 9/1/88	8/11/88(f)
I2	Integrate PARC input to update the PASS database	8/4/88	5 partial	4	WSEI [I]	8/3/88 9/1/88 9/3/88	8/12/88(p); 8/24/88(f)

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
P3	Finalize review of WSEI MS 12, database	8/5/88	6 partial	5	WSEI [I]	9/3/88	8/15/88(p); 8/24/88(f)
D5	Define the new data fields and field inter-relationships	8/5/88	N/A	13a	WSEI [T]	9/1/88	Draft 7/21/88; 7/26/88(p), 8/12/88(f)
D6, R6	Finalize the specifications for the PA/PASS deliverables and presentations of R7, R8, and R9	8/5/88	20 partial 21 partial	13b	WSEI [T]	9/1/88	Draft 7/21/88; 8/12/88(f)
A1	Finalize PASS organizational structure, field definitions, and report generation for MS 12 data	8/12/88	N/A	N/A	WSEI [I]	9/1/88	8/10/88(f)
P4	Prepare draft guidelines and specifications for the PARC to review data input for Process Diagram Blocks 3 through 22 [TOP-001-03]	8/12/88	3-22 partial	12, 16	PEM's [T]	11/17/88	8/29/88(f); approved for use 9/9/88
A2	Finalize PASS organizational structure, field definitions, and report generation for elements of proof	8/17/88	20 partial 21 partial	13a partial	WSEI [I]	9/16/88	9/2/88(f)
D7	Finalize guidance for the Elements to ID and list elements of proof, uncertainties, uncertainty questions, information needs, and compliance determination methods	8/17/88	N/A	7 partial	PEM's [T]	9/1/88	Draft 6/26/88 TOP-001-02 approved 9/1/88 7/26/88(p); 8/15/88(f)

NRC Internal Milestone Chart for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
D9	Finalize PARC Guidance for Review of Element Data Input for Process Diagram Blocks 3-15 [TOP-001-03]	8/23/88	3-15 partial	15	WSEI [T]	11/17/88	8/29/88(f); approved for use 9/9/88
A3	Finalize PASS organizational structure, field definitions, and report generation for DOE compliance demonstration methods, NRC compliance determination methods, uncertainties, uncertainty questions, and information requirements	8/26/88	20 partial 21 partial	13a partial	WSEI [I]	10/28/88 11/25/88	10/21/88(f); 11/25/88(f); Final comment pending of
D8	Provide guidance to Elements on input format for DOE and state "issues," ranking, open items, and uncertainty reduction methods	8/26/88	N/A	7 partial	PEM's [T]	9/1/88	Draft 7/26/88; 8/15/88(f) TOP-001-02 approved 9/1/88
P5	Finalize the PARC guidelines and initiate PARC review of data input for the old WSEI Milestone 19 (for one complete data entry "proof-of-system") (for Process Diagram Blocks 3-22) and for other data (for Process Diagram Blocks 3-15)	9/2/88	3-22 partial	12, 16	WSEI PEM's [T]	9/12/88	
A4	Finalize PASS organizational structure, field definitions, and report generation for DOE, State and Tribe "issues," etc; ranking open items; and uncertainty reduction methods	9/9/88	20 partial 21 partial	13a partial	WSEI [I]	10/28/88 11/25/88	10/21/88(f); 11/25/88; Final comments pending

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
E1	Identify the elements of proof, uncertainties, etc. for regulatory requirement (See D7 and D8) (Set 1)* (Process Diagram Blocks 3-15)	9/16/88	3-15 partial	10 partial	PEM's Staff [I]	10/31/88 11/2/88	Estimated status of completion by Center (11/11/88) is 85%; 10/20/88(p); Topic E17 in review through A3/A4
P7	Review, and revise (correct)(Set 1)* regulatory requirements, elements of proof, compliance determination methods, information requirements uncertainties, uncertainty questions, State and DOE issues, flagged open items, NRC actions, other action parties, and uncertainty reduction methods	9/26/88	3-15 partial	12	WSEI PEM's [I]		Estimated status of completion by the Center (11/11/88) is 25%
I12	Input example data for proof-of-system demonstrations	9/26/88	3-22 partial	16	PEM's [T]		Estimated status of completion by Center (11/11/88) is 80%
I3	Integrate PARC reviewed data (Set 1)	9/27/88	3-15 partial	11, 12 partial	PEM's [I]		Estimated status of completion by Center (11/11/88) is 5%
A5	Finalize PASS organizational structure, field definitions, and report generation for costs, schedules, and lead times; alternative and tradeoff programs; research plans; and critical path control.	9/30/88	20 partial 21 partial	13a partial	WSEI PEM's [I]		Estimated status of completion by Center (11/11/88) is 15%
A6	Finalize PASS documentation for informal report and presentation	9/30/88	20	16	WSEI [I]		Estimated status of completion by Center (11/11/88) is 10%

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
P6	Complete PARC review of example data for proof-of-system demonstrations (I12)	9/30/88	3-22 partial	4, 16	PEM's [I]		Estimated status of completion by Center (11/11/88) is 70%
E2	Identify the elements of proof, uncertainties, etc. for regulatory requirement (Set 2)* (Process Diagram Blocks 3-15)	9/30/88	3-15 partial	10 partial	PEM's Staff [I]		Estimated status of completion by Center (11/11/88) is 40%
P8	Review, and revise (correct)(Set 2)* regulatory requirements, elements of proof, compliance determination methods, information requirements, uncertainties, uncertainty questions, State and DOE issues, flagged open items, NRC actions, other action parties, and uncertainty reduction methods	10/11/88	3-15 partial	12	PEM's [I]		Estimated status of completion by Center (11/11/88) is 5%
I4	Integrate PARC reviewed data (Set 2)	10/12/88	3-15 partial	11, 12 partial	WSEI [I]		Estimated status of completion by Center (11/11/88) is 0%
D10	Complete the revision of the PARC guideline as necessary	10/12/88	3-15 partial	12 revisions	WSEI [T]		Revisions based on review of P4, D9, and E1



NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
E3	Identify the elements of proof, uncertainties, etc. for regulatory requirement (Set 3)* (Process Diagram Blocks 3-15)	10/28/88	3-15 partial	10 partial	PEM's Staff [I]		Estimated status of completion by Center (11/11/88) is 50%
P9	Review, and revise (correct)(Set 3)* regulatory requirements, elements of proof, compliance determination methods, information requirements, uncertainties, uncertainty questions, State and DOE issues, flagged open items, NRC actions, other action parties, and uncertainty reduction methods	11/8/88	3-15 partial	12	WSEI PEM's [I]		
I5	Integrate PARC reviewed data (Set 3)	11/9/88	3-15 partial	11, 12 partial	WSEI [I]		
E4	Identify the elements of proof, uncertainties, etc. for regulatory requirement (Set 4)* (Process Diagram Blocks 3-15)	11/11/88	3-15 partial	10 partial	PEM's Staff [I]		
P10	Review, and revise (correct)(Set 4)* regulatory requirements, elements of proof, compliance determination methods, information requirements, uncertainties, uncertainty questions, State and DOE issues, flagged open items, NRC actions, other action parties; and uncertainty reduction methods	11/21/88	3-15 partial	12	WSEI PEM's [I]		

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
I6	Integrate PARC reviewed data (Set 4)	11/21/88	3-15 partial	11, 12 partial	WSEI [I]		
D11	Updated version the PARC guidelines as necessary	11/21/88	N/A	16 partial	WSEI PEM's [T]		
I7	Integrated and "certified" data sets (1-4) for deliverable	11/23/88	3-15	11, 12	WSEI [I]		
R7	Briefing, if requested, and report of the example proof-of-system data (input and integrated by WSEI, see I12). Originally covered in old WSEI Milestone 19	12/01/88	3-22 partial	15	PEM's [C]		*Demonstration conducted 12/01/88
R8	Present a report to the NRC on recommended rulemaking needs for repository activities	12/21/88	3-15	11,12	WSEI PEM's [C]		
R9	Present a report to the NRC on recommended SCP/review, audit, and research activities	12/21/88	N/A	N/A	WSEI PEM's [C]		
A7	Complete an update of the PASS structure as necessary	1/20/89	21	16	PEM's WSEI [I]		
D12	Guide Elements for rest of process inputs (Process Diagram Blocks 16-22)	3/17/89	N/A	16 partial	PEM's [T]		

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
E5	Identify the elements of proof, uncertainties, etc. for sets 1-4 data (Process Diagram Blocks 16-22) and for other regulatory requirement (Set 5)* (Process Diagram Blocks 3-22)	4/12/89	3-22 partial	16 partial	PEM's [I]		
P11	PARC review of input data Set 5*	4/13/89	3-22 partial	16	WSEI [I]		
I8	Integrate PARC reviewed data (Set 5)	4/14/89	3-22 partial	16	WSEI [I]		
E6	Identify the elements of proof, uncertainties, etc. for sets 1-4 data (Process Diagram Blocks 16-22) and for other regulatory requirement (Set 6)* (Process Diagram Blocks 3-22)	5/10/89	3-22 partial	16 partial	PEM's [I]		
P12	PARC review of input data Set 6*	5/11/89	3-22 partial	16	WSEI [I]		
I9	Integrate PARC reviewed data (Set 6)	5/12/89	3-22 partial	16	WSEI [I]		
E7	Identify the elements of proof, uncertainties, etc. for sets 1-4 data (Process Diagram Blocks 16-22) and for other regulatory requirement (Set 7)* (Process Diagram Blocks 3-22)	6/7/89	3-22 partial	16 partial	PEM's [I]		
P13	PARC review of input data Set 7*	6/8/89	3-22 partial	16	WSEI [I]		

NRC Internal Milestone Table for CNWRA Products (continued)

Center Milestone	Center Milestone Description	Center Milestone Due Date	Process Diagram Block No.	12/21/88 Deliverable Step No.	NRC Action Req'd.	Comments Sent To CNWRA	Notes/Comments
I10	Integrate PARC reviewed data (Set 7)	6/9/88	3-22 partial	16	WSEI [I]		
E8	Identify the elements of proof; uncertainties, etc. for sets 1-4 data (Process Diagram Blocks 16-22) and for other regulatory requirement (Set 8)* (Process Diagram Blocks 3-22)	7/3/89	3-22 partial	16 partial	PEM's [I]		
P14	PARC review of input data Set 8*	7/6/89	3-22 partial	16	WSEI [I]		
I11	Integrate PARC reviewed data (Set 8)	7/7/89	3-22 partial	16	WSEI [I]		

\*NOTE: Each set of regulatory requirements is a workable subset of the total regulations selected for Element review.

LEGEND

CENTER MILESTONE ACTIVITY CODES:

P=PARC/QA Activities  
 A=ADP Activities  
 E=Element Activities  
 D=New WSE&I Directives/Developments  
 I=New WSE&I Integration Points  
 R=New WSE&I Reporting Activities

COMMENT DATE CODES:

p=Partial fulfillment of milestone (receipt)  
 f=Complete fulfillment of milestone (receipt)

NRC ACTION REQUIRED CODES:

WSEI=Waste Systems Engineering & Integration Program Element  
 PEM's=Program Element Managers

REVIEW TYPE CODES:

[C]=Contract Deliverables/1 week turnaround  
 [T]=Controlled Technical Guidance Documents/24-48 hour turnaround  
 [I]=Internal Center Milestones/1 week turnaround