

MAR 09 1989

CENTER/NRC MILESTONES-MAR

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MEMORANDUM FOR: CNWRA Program Management Staff

FROM: Michael P. Lee
Project Officer
Waste Systems Engineering and Integration

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

Enclosed you will find the March Progress Report outlining the current status of all CNWRA element/subelement milestones for the accelerated development of the Program Architecture. There were no Program Architecture development milestones achieved since the issuance of the February Progress Report (dated February 8, 1988) owing to an ongoing dialogue between NRC and the CNWRA in two areas. The first area of NRC/CNWRA discussion relates to the reorientation of the Program Architecture development process based upon the "lessons learned" to date. The second area of discussion concerns the letter reports that are to accompany major milestones R8 and R9.

With regard to the Program Architecture development process, selected NRC/CNWRA program management staff completed (February 10, 1989) a "compliance" review of regulatory requirement topic no.'s E17 (entitled "Adverse Condition -- Geochemical Processes") and E36 (entitled "Structures, Systems, and Components Important to Safety -- Protection Against Natural Phenomena and Environmental Conditions") that were previously submitted (October 31, 1988) for use in demonstrating partial fulfillment of element/subelement milestones A3 and A4. This so-called "compliance" review was performed in accordance with the instructions issued under Technical Operating Procedure (TOP)-001-02, as represented by element/subelement milestones D7 and D8, to promote guidance to the Center's staff on performing the analysis of the pertinent regulatory requirements. The review of regulatory requirement topic examples E17 and E36 also supported review of the letter report associated with element/subelement milestone R7 (short title: Proof-of-System), whose review was also completed (February 15, 1989) by NRC's technical staff.

Collectively, NRC's review of element/subelement milestones E17, E36, and R7 were deemed sufficient for the purposes of closing-out comments on the functional features of the Program Architecture Support System (PASS), as represented by automated data processing milestones A5 (short title: PASS organizational structure) and A6 (short title: Finalize PASS documentation). The center is in the process of collating these and all other NRC comments regarding Program Architecture process and content, and will report to NRC with its proposed plans for making what it regards as the necessary adjustments.

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During the month of February, the CNWRA conducted a series of briefings which a provided preliminary identification and subsequent analysis of regulatory uncertainties that existed in selected regulatory requirements that are "siting" related. The first series of briefings concerned a recommended prioritization of regulatory uncertainties for subsequent address by NRC through the use of attributes; this briefing corresponded to major milestone R8. The second briefing in the series, corresponding to major milestone R9, provided preliminary recommendations to NRC on those regulatory requirements requiring priority attention in the review of DOE's Site Characterization Program. Both briefings corresponded to two activities necessary to close-out both the R8 and R9 major milestones; the second will be the letter reports.

As part of the scoping exercise regarding the format and content of the letter reports accompanying the R8 and R9 milestones, NRC directed that the analyses leading to these two major milestones be repeated but with the use of additional/different attributes as directed by NRC. The revised R9 analysis has been completed and a draft is scheduled for delivery to NRC during the week of March 6, 1989. NRC and the Center have reached closure on the format for the letter report supporting milestone R8; this letter report is scheduled for delivery to NRC on or about April 7, 1989.

The Center has advised NRC, both in writing (memorandum dated January 23, 1989) and verbally (January 26, 1989), that a revised production schedule leading to the accelerated development of the Program Architecture will be forthcoming after it has had an opportunity to collate information acquired from the "lessons learned" as well as NRC's most recent requirement concerning the preparation of the R8 and R9 major milestone letter reports. This revised production schedule would be in response to an NRC request (memorandum dated October 12, 1988) that the Center update it's "Program Architecture Milestone Schedule" to reflect the current production schedule for these as well as all remaining milestones associated with the accelerated development of the Program Architecture. It is currently estimated that the delays associated with the R8/R9 reassessment, the lessons learned review, and the Center's limited involvement in the review of DOE's Site Characterization Plan will not permit analysis of all of the pertinent regulations that have application to NRC's high-level waste program in the fall of 1989, as originally required in the FFRDC contract.

Also of interest is information regarding the estimated status of completion of element/subelement milestones E1 through I7 that was recently reported in the CNWRA's Program Manager's Period Report for Period 4 - FY1989 (PMPR No. 89-4) for the reporting period December 24, 1988 through January 20, 1989. The estimated status of completion for those element/subelement milestones reported by the Center in the PMPR (dated February 3, 1989) is as follows:

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CENTER/NRC MILESTONES-MAR

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MILESTONE	ABBREVIATED DESCRIPTION	% COMPLETE
E1	Element Activity via TOP-001-02 on Set #1	98%
P7	PARC Review of Set #1 Regulatory Requirements	70%
I3	Integrate PARC Set #1 Data	60%
E2	Element Activity via TOP-001-02 on Set #2	85%
P8	PARC Review of Set #2 Regulatory Requirements	60%
I4	Integrate PARC Set #2 Data	20%
E3	Element Activity via TOP-001-02 on Set #3	80%
P9	PARC Review of Set #3 Regulatory Requirements	45%
P10	PARC Review of Set #4 Regulatory Requirements	30%
I5	Integrate PARC Set #3 Data	5%
E4	Element Activity via TOP-001-02 on Set #4	80%
I6	Integrate PARC Set #4 Data	5%
I7	Integrated and "Certified" Data (Sets 1-4)	30%

Original Signed By

Michael P. Lee
Project Officer
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; Modifications submitted 02/08/89
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 02/10/89	10/21/88(f); 11/25/88(f); 12/12/88(f)
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 02/10/89	10/21/88(f); 11/25/88; 12/12/88(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
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 02/10/89	Estimated status of completion by Center (01/06/89) is 95%; 10/20/88(p); Topics E17 and E36 reviewed
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	N/A	N/A	Estimated status of completion by the Center (01/06/89) is 60%
I12	Input example data for proof-of-system demonstrations	9/26/88	3-22 partial	16	N/A	N/A	Milestone achieved through R7 briefing
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 (01/06/89) is 40%
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]	02/15/89	12/09/88(f); Review conducted through R7
A6	Finalize PASS documentation for informal report and presentation	9/30/88	20	16	WSEI [I]	02/15/89	12/09/88(f); Review conducted through R7

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	N/A	N/A	Milestone achieved through R7 briefing
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 (01/06/89) is 100%
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	N/A [I]	N/A	Estimated status of completion by Center (01/06/89) is 80%
I4	Integrate PARC reviewed data (Set 2)	10/12/88	3-15 partial	11, 12 partial	WSEI [I]		Estimated status of completion by Center (01/06/89) is 20%
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 (e.g. E17/E36)

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 (01/06/89) is 75%
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	N/A	N/A	Estimated status of completion by Center (01/06/89) is 40%
15	Integrate PARC reviewed data (Set 3)	11/9/88	3-15 partial	11, 12 partial	WSEI [I]		Estimated status of completion by Center (01/06/89) is 5%
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]		Estimated status of completion by Center (01/06/89) is 100%
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	N/A	N/A	Estimated status of completion by Center (01/06/89) is 25%

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]		Estimated status of completion by Center (01/06/89) is 5%
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]		Estimated status of completion by Center (01/06/89) is 25%
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]	02/15/89	Briefing conducted 12/01/88; Report received 12/09/88(f)
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]	*	*Briefings conducted 01/04/89 and 01/26/89; letter report due date TBD
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]	*	*Briefing conducted 01/11/89; letter report due date TBD
A7	Complete an update of the PASS structure as necessary	1/20/89	21	16	PEM's WSEI [I]	02/08/89	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	

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)	6/9/89	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	N/A	N/A	
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

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; Modifications submitted 02/08/89
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 specifi- cations 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 02/10/89	10/21/88(f); 11/25/88(f); 12/12/88(f)
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 02/10/89	10/21/88(f); 11/25/88; 12/12/88(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
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 02/10/89	Estimated status of completion completion by Center (01/06/89) is 95%; 10/20/88(p); Topics E17 and E36 reviewed
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	N/A	N/A	Estimated status of completion by the Center (01/06/89) is 60%
I12	Input example data for proof-of-system demonstrations	9/26/88	3-22 partial	16	N/A	N/A	Milestone achieved through R7 briefing
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 (01/06/89) is 40%
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]	02/15/89	12/09/88(f); Review conducted through R7
A6	Finalize PASS documentation for informal report and presentation	9/30/88	20	16	WSEI [I]	02/15/89	12/09/88(f); Review conducted through R7

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	N/A	N/A	Milestone achieved through R7 briefing
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 (01/06/89) is 100%
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	N/A [I]	N/A	Estimated status of completion by Center (01/06/89) is 80%
I4	Integrate PARC reviewed data (Set 2)	10/12/88	3-15 partial	11, 12 partial	WSEI [I]		Estimated status of completion by Center (01/06/89) is 20%
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 (e.g. E17/E36)

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 (01/06/89) is 75%
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	N/A	N/A	Estimated status of completion by Center (01/06/89) is 40%
I5	Integrate PARC reviewed data (Set 3)	11/9/88	3-15 partial	11, 12 partial	WSEI [I]		Estimated status of completion by Center (01/06/89) is 5%
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]		Estimated status of completion by Center (01/06/89) is 100%
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	N/A	N/A	Estimated status of completion by Center (01/06/89) is 25%

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]		Estimated status of completion by Center (01/06/89) is 5%
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]		Estimated status of completion by Center (01/06/89) is 25%
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]	02/15/89	Briefing conducted 12/01/88; Report received 12/09/88(f)
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]	*	*Briefings conducted 01/04/89 and 01/26/89; letter report due date TBD
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]	*	*Briefing conducted 01/11/89; letter report due date TBD
A7	Complete an update of the PASS structure as necessary	1/20/89	21	16	PEM's WSEI [I]	02/08/89	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	

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)	6/9/89	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	N/A	N/A	
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



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MAR 09 1989

MEMORANDUM FOR: CNWRA Program Management Staff

FROM: Michael P. Lee
Project Officer
Waste Systems Engineering and Integration

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

Enclosed you will find the March Progress Report outlining the current status of all CNWRA element/subelement milestones for the accelerated development of the Program Architecture. There were no Program Architecture development milestones achieved since the issuance of the February Progress Report (dated February 8, 1988) owing to an ongoing dialogue between NRC and the CNWRA in two areas. The first area of NRC/CNWRA discussion relates to the reorientation of the Program Architecture development process based upon the "lessons learned" to date. The second area of discussion concerns the letter reports that are to accompany major milestones R8 and R9.

With regard to the Program Architecture development process, selected NRC/CNWRA program management staff completed (February 10, 1989) a "compliance" review of regulatory requirement topic no.'s E17 (entitled "Adverse Condition -- Geochemical Processes") and E36 (entitled "Structures, Systems, and Components Important to Safety -- Protection Against Natural Phenomena and Environmental Conditions") that were previously submitted (October 31, 1988) for use in demonstrating partial fulfillment of element/subelement milestones A3 and A4. This so-called "compliance" review was performed in accordance with the instructions issued under Technical Operating Procedure (TOP)-001-02, as represented by element/subelement milestones D7 and D8, to promote guidance to the Center's staff on performing the analysis of the pertinent regulatory requirements. The review of regulatory requirement topic examples E17 and E36 also supported review of the letter report associated with element/subelement milestone R7 (short title: Proof-of-System), whose review was also completed (February 15, 1989) by NRC's technical staff.

Collectively, NRC's review of element/subelement milestones E17, E36, and R7 were deemed sufficient for the purposes of closing-out comments on the functional features of the Program Architecture Support System (PASS), as represented by automated data processing milestones A5 (short title: PASS organizational structure) and A6 (short title: Finalize PASS documentation). The center is in the process of collating these and all other NRC comments regarding Program Architecture process and content, and will report to NRC with its proposed plans for making what it regards as the necessary adjustments.

Add: CNWRA

426.1
NH19
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During the month of February, the CNWRA conducted a series of briefings which a provided preliminary identification and subsequent analysis of regulatory uncertainties that existed in selected regulatory requirements that are "siting" related. The first series of briefings concerned a recommended prioritization of regulatory uncertainties for subsequent address by NRC through the use of attributes; this briefing corresponded to major milestone R8. The second briefing in the series, corresponding to major milestone R9, provided preliminary recommendations to NRC on those regulatory requirements requiring priority attention in the review of DOE's Site Characterization Program. Both briefings corresponded to two activities necessary to close-out both the R8 and R9 major milestones; the second will be the letter reports.

As part of the scoping exercise regarding the format and content of the letter reports accompanying the R8 and R9 milestones, NRC directed that the analyses leading to these two major milestones be repeated but with the use of additional/different attributes as directed by NRC. The revised R9 analysis has been completed and a draft is scheduled for delivery to NRC during the week of March 6, 1989. NRC and the Center have reached closure on the format for the letter report supporting milestone R8; this letter report is scheduled for delivery to NRC on or about April 7, 1989.

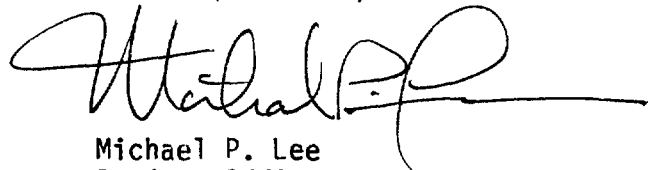
The Center has advised NRC, both in writing (memorandum dated January 23, 1989) and verbally (January 26, 1989), that a revised production schedule leading to the accelerated development of the Program Architecture will be forthcoming after it has had an opportunity to collate information acquired from the "lessons learned" as well as NRC's most recent requirement concerning the preparation of the R8 and R9 major milestone letter reports. This revised production schedule would be in response to an NRC request (memorandum dated October 12, 1988) that the Center update it's "Program Architecture Milestone Schedule" to reflect the current production schedule for these as well as all remaining milestones associated with the accelerated development of the Program Architecture. It is currently estimated that the delays associated with the R8/R9 reassessment, the lessons learned review, and the Center's limited involvement in the review of DOE's Site Characterization Plan will not permit analysis of all of the pertinent regulations that have application to NRC's high-level waste program in the fall of 1989, as originally required in the FFRDC contract.

Also of interest is information regarding the estimated status of completion of element/subelement milestones E1 through I7 that was recently reported in the CNWRA's Program Manager's Period Report for Period 4 - FY1989 (PMPR No. 89-4) for the reporting period December 24, 1988 through January 20, 1989. The estimated status of completion for those element/subelement milestones reported by the Center in the PMPR (dated February 3, 1989) is as follows:

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<u>MILESTONE</u>	<u>ABBREVIATED DESCRIPTION</u>	<u>% COMPLETE</u>
E1	Element Activity via TOP-001-02 on Set #1	98%
P7	PARC Review of Set #1 Regulatory Requirements	70%
I3	Integrate PARC Set #1 Data	60%
E2	Element Activity via TOP-001-02 on Set #2	85%
P8	PARC Review of Set #2 Regulatory Requirements	60%
I4	Integrate PARC Set #2 Data	20%
E3	Element Activity via TOP-001-02 on Set #3	80%
P9	PARC Review of Set #3 Regulatory Requirements	45%
P10	PARC Review of Set #4 Regulatory Requirements	30%
I5	Integrate PARC Set #3 Data	5%
E4	Element Activity via TOP-001-02 on Set #4	80%
I6	Integrate PARC Set #4 Data	5%
I7	Integrated and "Certified" Data (Sets 1-4)	30%



Michael P. Lee
Project Officer
Waste Systems Engineering and
Integration

Enclosure: As stated

Distribution List For Memo Dated

Date: MAR 09 1989

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