

FEB 08 1989

CENTER/NRC MILESTONES-FEB

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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 -- FEBRUARY PROGRESS REPORT

Enclosed you will find the February 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 January Progress Report are as follows:

MILESTONES	ABBREVIATED DESCRIPTION	RECEIPT DATE
R8	Present a report to NRC on recommended rulemaking needs for repository activities	01/04/89 01/26/89 (briefings)
E2	Element Activity via TOP-001-02 on Set #2	01/06/89*
E4	Element Activity via TOP-001-02 on Set #4	01/06/89*
R9	Present a report to the NRC on recommended rulemaking needs for repository activities	01/11/89 (briefing)

[* Completed but not transmitted to NRC]

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

Selected NRC/CNWRA program management staff performed 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. The review of regulatory requirement topic examples E17 and E36 also supports review of the letter report associated with element/subelement milestone R7, which is now under NRC staff technical review.

Selected NRC technical staff and management attended a series of briefings in which the CNWRA provided a preliminary identification and subsequent analysis of regulatory uncertainties that exist in selected regulatory requirements that are "siting" related.

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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 series, corresponding to major milestone R9, provided preliminary recommendations to NRC to guide review of DOE's Site Characterization Plan. Both briefings corresponded to two activities necessary to close-out both the R8 and R9 major milestones; the second is a letter report.

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. In response to this direction, the CNWRA is preparing an impact statement to estimate the delay the R8/R9 milestone reassessments will have on the overall production schedule for Program Architecture development.

The Center has advised NRC, both verbally (January 26, 1989) and in writing (memorandum dated January 23, 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 in performing the initial analyses associated with regulatory requirement topic examples E17 and E36, so-called "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 along with the lessons learned to date regarding the analysis of the pertinent regulations will not permit baselining of the Program Architecture in the fall of 1989, as originally required.

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 3 - FY1989 (PMPR No. 89-3) for the reporting period November 26, 1988 through December 23, 1988. The estimated status of completion for those element/subelement milestones reported by the Center in the PMPR (dated January 6, 1988) is as follows:

<u>MILESTONE</u>	<u>ABBREVIATED DESCRIPTION</u>	<u>% COMPLETE</u>
E1	Element Activity via TOP-001-02 on Set #1	95%
P7	PARC Review of Set #1 Regulatory Requirements	60%
I3	Integrate PARC Set #1 Data	40%

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CENTER/NRC MILESTONES-FEB

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(continued) MILESTONE	ABBREVIATED DESCRIPTION	% COMPLETE
P8	PARC Review of Set #2 Regulatory Requirements	80%
I4	Integrate PARC Set #2 Data	20%
E3	Element Activity via TOP-001-02 on Set #3	75%
P9	PARC Review of Set #3 Regulatory Requirements	40%
P10	PARC Review of Set #4 Regulatory Requirements	25%
I5	Integrate PARC Set #3 Data	5%
I6	Integrate PARC Set #4 Data	5%
I7	Integrated and "Certified" Data (Sets 1-4)	25%

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
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); 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	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	Estimated status of completion by Center (01/06/89) is 95%; 10/20/88(p); Topics E17 and E36 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	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]	see R7	12/09/88(f); Review conducted through R7
A6	Finalize PASS documentation for informal report and presentation	9/30/88	20	16	WSEI [I]	see R7	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]	*	*Briefing conducted 12/01/88; Report received 12/09/88(f) Review of report underway
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
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
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]		

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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	
18	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	
19	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	

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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

FEB 08 1989

MEMORANDUM FOR: CNWRA Program Management Staff

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

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E4	Element Activity via TOP-001-02 on Set #4	01/06/89*
R9	Present a report to the NRC on recommended rulemaking needs for repository activities	01/11/89 (briefing)

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Michael P. Lee
Project Officer
Waste Systems Engineering and
Integration

Enclosure: As stated

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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); 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	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	Estimated status of completion by Center (01/06/89) is 95%; 10/20/88(p); Topics E17 and E36 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	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]	see R7	12/09/88(f); Review conducted through R7
A6	Finalize PASS documentation for informal report and presentation	9/30/88	20	16	WSEI [I]	see R7	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]	*	*Briefing conducted 12/01/88; Report received 12/09/88(f) Review of report underway
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
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
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	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