Center for Nuclear Waste Regulatory Analyses

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September 26, 1991
Contract No. NRC-02-88-005
Account No. 20-3702-032

U. S. Nuclear Regulatory Commission
Attn: Mr. Joe Holonich
Division of Contracts and Property Management
Mail Stop 4-H-3
Washington, D. C. 20555

Subject: Intermediate Milestone No. 20-3702-032-025; "Configuration Management and Control of PASS and the PADB"

Dear Mr. Holonich:

This letter is submitted in completion of subject milestone as an update of the status of configuration management and control for the Program Architecture Support System (PASS) and the Program Architecture Data Base (PADB). This letter also updates the status of configuration management and control for other Center computer systems.

The first version of the Center's Configuration Management and Control Manual (July 1990), contained the following statement in the introduction: "It is envisioned that in the future, the policy portions of this manual will be incorporated in the Center QA Manual, Section 3.6, Software Quality Assurance, contractually related matters will be incorporated in the ADP Plan, and the specific guidelines for each category of CNWRA computer systems under Configuration Management and Control will be issued as procedures." During the past year the incorporation of the various portions of the Configuration Management and Control Manual into individual procedures and other documents began. The status and plans for configuration management and control documentation for each of the primary categories of computer software and data in the Center are discussed below.

1.   Engineering and Scientific Codes

Technical Operating Procedure (TOP) 018, Configuration Management and Control for Engineering and Scientific Codes was delivered in July, 1990, and comments from the NRC were incorporated. It is expected that the NRC will also use this procedure to support participation in code development and other scientific work. Twelve codes have now been submitted for control under this procedure. A list of the Software Summary Forms for these codes is provided as Attachment A.

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2.   PASS V2.0 and the PADB

The PASS system and the PADB are, to date, being utilized for predecisional information and have a limited user group (Center and NRC staff); therefore, configuration management and control is being implemented in a less formal manner which is based on standard documentation practices controlled by the Center. A list of this documentation is included as Attachment B to this report.

Quality Assurance audits conducted during the past year confirmed that the software development and documentation practices being used for PASS V2.0 are acceptable. An update to the PASS User Guide was delivered on August 23, 1991 and was accepted without change by the NRC.
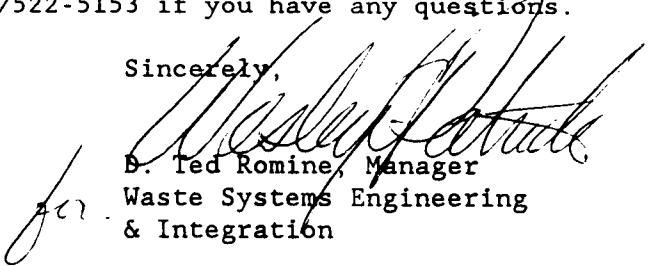
TOP-001 (Program Architecture Development and Maintenance) is being revised and will be issued within the next month. The revision reflects refinements resulting from work with the PADB and PASS during the last year. The Interactive Input Subsystem and the Maintenance Subsystem which support both developmental and approved versions of information in the PADB will be implemented during the next few months and documentation for these systems will be added to the existing body of PASS V2.0 documentation. At that time policy related to configuration management and control for PASS and the PADB will be incorporated into Section 3.6 of the Center QA Manual and appropriate configuration control practices for operation of PASS V2.0 and any necessary modifications to TOP-001 required for operation of the PADB will be issued.

3.   Commercial Hardware and Software Systems

The annual ADP plan will be revised and delivered on December 9, 1991. It will contain an updated list of the software levels for the SWRI IBM 4381, the NRC's IBM 9370, and the Center's personal computer hardware and software. The ADP Plan will also be expanded to address FY92-97 in support of contract renewal activities.

Please contact Mr. Rawley Johnson at 512/522-5153 if you have any questions.

Sincerely,

D. Ted Romine, Manager
Waste Systems Engineering
& Integration

RDJ/bsc
cc: J. Funches   IMS Staff
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ATTACHMENT A
LIST OF ENGINEERING AND SCIENTIFIC CODES UNDER
CONFIGURATION MANAGEMENT AND CONTROL

DATE ENTERED	NUMBER ASSIGNED	DESCRIPTION/AUTHOR	TYPE	FILE LOCATION
01/03/91	91-15	EQ3/6 Codes (2 disks; RLM (cover letter)	Disk	CNWRA FIREPROOF SAFE
02/04/91	91-08	3DEC, V1.20, S. Hsiung	PRINTOUT	CNWRA FIREPROOF SAFE
02/04/91	91-07	UDEC Code, S. Hsiung	PRINTOUT	CNWRA FIREPROOF SAFE
02/04/91	91-09	SPECTROM-331, S. Hsiung	PRINTOUT	CNWRA FIREPROOF SAFE
02/04/91	91-10	EQ316 Package, Wm. Murphy	PRINTOUT	CNWRA FIREPROOF SAFE
02/05/91	91-01	BIGFLOW (provisional), R. Ababou	PRINTOUT	CNWRA FIREPROOF SAFE
02/05/91	91-12	XIMUL (provisional), R. Ababou	PRINTOUT	CNWRA FIREPROOF SAFE
02/05/91	91-11	TOUGH, R. Green	PRINTOUT	CNWRA FIREPROOF SAFE
02/08/91	91-06	Taurus, H. G. Pennick	PRINTOUT	CNWRA FIREPROOF SAFE
02/08/91	91-02	EBSPAC, H. G. Pennick	PRINTOUT	CNWRA FIREPROOF SAFE
02/08/91	91-05	FACET, H. G. Pennick	PRINTOUT	CNWRA FIREPROOF SAFE
02/08/91	91-04	TOPAZ 3D, H. G. Pennick	Reel	CNWRA FIREPROOF SAFE
02/08/91	91-03	INGRID, H. G. Pennick	PRINTOUT	CNWRA FIREPROOF SAFE
03/07/91	91-16	DACRIN: B. Sagar	Disk	CNWRA FIREPROOF SAFE
03/07/91	91-17	PABLM; B. Sagar	PRINTOUT	CNWRA FIREPROOF SAFE
03/07/91	91-18	TOSPAC; B. Sagar	Reel	CNWRA FIREPROOF SAFE
03/07/91	91-20	TRUMP; B. Sagar	Reel 1	CNWRA FIREPROOF SAFE
03/28/91	91-13	Pro. Config. Management & Control of Scientific & Engrg. Codes; B.Sagar/R.Johnson	Disk	CNWRA FIREPROOF SAFE
04/30/91	91-14	preFOR: A Pre-processor for Fortran Files; B. Sagar/R.Janetzke	Disk	CNWRA FIREPROOF SAFE

DATE ENTERED	NUMBER ASSIGNED	DESCRIPTION/AUTHOR	TYPE	FILE LOCATION
06/04/91	91-22	RDFREE- A Fortran Utility Free Form Input; B. Sagar & R. Janetzke. Also RDFREE Program disk CNWRA 91-005	Disks (2)	CNWRA FIREPROOF SAFE
06/05/91	91-69	Neftran II (MKS)	Disk	CNWRA FIREPROOF SAFE
07/07/91	91-19	TRUST; B. Sagar	Reel 1	CNWRA FIREPROOF SAFE
7/18/91	91-20	CNWRA 91-009; B. Sagar/R.Janetzke	Disk	CNWRA FIREPROOF SAFE
8/30/91	91-21	MINTEQA2/PRODEFA2, D.Turner	Disk	CNWRA FIREPROOF SAFE

ATTACHMENT B
LIST OF PASS V2.0 DOCUMENTATION

1. Technical Operating Procedure, TOP-001-02, Program Architecture Development and Maintenance, September 1991.

2. QAP-002, Review of CNWRA Documents, Reports, Papers, and Presentation Materials, May 31, 1991.

3. Automated Data Processing Plan, Center for Nuclear Waste Regulatory Analyses, December 1990.

4. Requirements Definition Report for Version 2.0 of PASS Major Milestone 3702-032-050, November 30, 1989.

5. Lessons Learned Report on Implementation of PASS V2.0 and the PADB, Intermediate Milestone No. 20-3702-032-105, August 8, 1991.

6. PASS V2.0 Interactive Input Subsystem Requirements Definition, Center for Nuclear Waste Regulatory Analyses, May 1991.

7. PASS/PADB Version 2.0, Alternate Uncertainty Reduction Methods Subsystem, October 26, 1990.

8. PASS/PADB Version 2.0, Batch Execution Facility, October 26, 1990.

9. PASS/PADB Version 2.0, Compliance Determination Method Subsystem, October 26, 1990.

10. PASS/PADB Version 2.0, Compliance Determination Method Strategy Subsystem, October 26, 1990.

11. PASS/PADB Version 2.0, Correspondence Index Subsystem, October 26, 1990.

12. PASS/PADB Version 2.0, Elements of Proof Subsystem, October 26, 1990.

13. PASS/PADB Version 2.0, Elements of Proof Set Subsystem, October 26, 1990.

14. PASS/PADB Version 2.0, Error Message Subsystem, October 26, 1990.

15. PASS/PADB Version 2.0, Input Control Subsystem, October 26, 1990.

16. PASS/PADB Version 2.0, Information Requirements Subsystem, October 26, 1990.

17. PASS/PADB Version 2.0, Keyword Processing Subsystem, October 26, 1990.

18. PASS/PADB Version 2.0, Modular Software Architectural Subsystem, October 26, 1990.

19. PASS/PADB Version 2.0, Navigation Subsystem, October 26, 1990.

20. PASS/PADB Version 2.0, Regulatory Requirements Subsystem, October 26, 1990.

21. PASS/PADB Version 2.0, Regulatory Text Load Subsystem, October 26, 1990.

22.   PASS/PADB Version 2.0, Regulatory Text Retrieval Subsystem, October 26, 1990.

23.   PASS/PADB Version 2.0, System Design Notebook, October 26, 1990.

24.   PASS/PADB Version 2.0, Technical Document Index Subsystem, October 26, 1990.

25.   PASS/PADB Version 2.0, Technical Review Components Subsystem, October 26, 1990.

26.   PASS/PADB Version 2.0, Technical Review Components Set Subsystem, October 26, 1990.

27.   PASS/PADB Version 2.0, Textual Data Subsystem, October 26, 1990.

28.   PASS/PADB Version 2.0, Uncertainty Subsystem, October 26, 1990.

29.   PASS/PADB Version 2.0, Uncertainty Components Subsystem, October 26, 1990.

30.   PASS/PADB Version 2.0, Uncertainty Reduction Methods Subsystem, October 26, 1990.