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105K EAST ION EXCHANGE & CARTRIDGE FILTER RESTART
COMPUTER SOFTWARE CONFIGURATION MGMT PLAN

Pages: 24

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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

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5. Proj./Prog./Dept./Div.: SNF	6. Cog. Engr.: R WHITEHURST	7. Purchase Order No.: NA
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1	WHC-SD-SNF-CSCM-001		0	105 KE ION EXCHANGE AND CARTRIDGE FILTER RESTART CONFIGURATION MANAGEMENT PLAN	Q	1,2	1	

16. KEY			
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E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment	4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)								(G)	(H)
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
1,2	2	Cog.Eng. R. WHITEHURST R3-86		12/10/95							
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18. Signature of EDT Originator Date 12-9-95	19. Authorized Representative for Receiving Organization Date	20. Cognizant Manager Date 12/11/95	21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
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105 K EAST ION EXCHANGE AND CARTRIDGE FILTER RESTART COMPUTER SOFTWARE CONFIGURATION MANAGEMENT PLAN

DS SCHERMERHORN

Westinghouse Hanford Co., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

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RESTART PROJECT

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gnis Braden
Release Approval

12/11/95
Date

Release Stamp

Approved for Public Release

100 K AREA CARTRIDGE FILTER RESTART PROJECT

CONFIGURATION MANAGEMENT PLAN

December 1995

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1.0 INTRODUCTION

1.1 PURPOSE

This System Configuration Management Plan (SCMP) provides instructions for software change control of the 100 K Area Cartridge Filter Restart Project. This plan has no dependencies on any other SCMP.

1.2 SCOPE

This plan applies to the 100 K Area, it includes only the application software including "InTouch" and "TISOFT" programs. InTouch is a trademark of Wonderware Software Systems. TISOFT is a trademark of Siemens Industrial.

1.3 OVERVIEW

The 100 K Area cartridge filter restart project is a computer monitored facility in the 100 K Area. The computer-based monitoring system provides indication for the majority of the fuel storage basin. It consists of one industrial IBM PC-compatible computer and associated equipment and one Programmable Logic Controllers (PLC) and associated equipment.

1.4 DEFINITIONS

Production: Pertaining to the status of a given system once it has entered the operation and maintenance phase. Normally follows acceptance by the customer.

System Change Request and Problem Report (SCR/PR): A document which identifies a proposed change to or suspected problem with the 100 K Area Software. An SCR/PR may identify a new function, modify an existing function, or report suspected problems with the system.

System Configuration Management (SCM): A set of management disciplines within the context of the system engineering process that applies technical and administrative direction and surveillance. It identifies and documents the functional and physical characteristics of a product, controls changes to those characteristics, and it records and reports the change processing and implementation.

2.0 MANAGEMENT

2.1 ORGANIZATION

100 K Area Cognizant Engineering -- shall be considered the 100 K Area software owner/custodian providing support, direction, and funding with regard to the system. The System Cognizant Manager shall be the manager of 100 K Cognizant engineering. The organization manager will appoint the System Cognizant Engineer to represent the organization.

Environment, Safety, Health & Quality Assurance/ Quality Assurance Organization (ESQ/QA) -- shall review and approve this SCMP.

2.2 RESPONSIBILITIES

Organization/Individual	Responsibilities relative to this plan.
100 K Area Cognizant Engineering	1 System owner/custodian
System Cognizant Manager	1 Assign System Cognizant Engineer 2 Assign Software Custodian. For the 100 K Area, this will typically be the System Cognizant Engineer. 3 Assign the System Developer if outside the 100 K area engineering organization. 4 Overall responsibility for SCM.
System Cognizant Engineer	1 Accept/modify/reject/defer/prioritize work proposed by SCR/PR. 2 Evaluate SCR/PR for impact on cost, schedule, and deliverables. 3 Approve or disapprove completed work resulting from SCR/PR. 4 Approve test results of changes before placing in production. 3 Maintain a project file of all project associated correspondence, personnel assignments, documentation, deliverables, reports, logs, software, SCR/PRs, etc., in their most up-to-date version.
System Developer	1 Evaluate and implement changes resulting from SCR/PR. 2 Update system documentation resulting from implementation of SCR/PR modifications.

Organization/Individual	Responsibilities relative to this plan.
Software Custodian	1 Ensure backup and recovery of application and system software.
	2 Ensure proper labeling and storage of backup media.
	3 Ensure correct software is installed for production use.
	4 Ensure problem reports are distributed to users.
Change request or problem report originator	1 Anyone involved with the 100 K Area may request a change or identify a problem by preparing a SCR/PR and submitting to the System Cognizant Engineer.

2.3 INTERFACE CONTROL

The 100 K Area Software Cognizant Engineer must notify the Operations Department of any proposed changes.

2.4 IMPLEMENTATION

This SCMP becomes effective for the 100 K Area cartridge filter restart project when the system is placed in operation and a problem or change request is identified. It also applies when items are to be released for acceptance or operational testing. This plan does not apply to the 100 K Area items that are in development.

2.5 POLICIES AND PROCEDURES

Configuration management of 100 K Area configuration controlled items will be in accordance with applicable parts of Software Practices (ref. 1), SP-6.1 Document Control, SP-6.2 Software Control, SP-6.3 Change Request And Problem Report, and SP-6.4 Document Approvals.

3.0 SYSTEM CONFIGURATION MANAGEMENT ACTIVITIES

Configuration Management will be applied to the software items per the requirements established in Software Practices (ref. 1), Sections SP-6-1 and SP-6-2, plus additional instructions and steps provided herein.

3.1 CONFIGURATION IDENTIFICATION

3.1.1 Application Software

Each production system release shall be a grouping of all the application files necessary to run the system. The release is assigned a unique release number by the 100 K Area System Developer. The system release number is of the form R.r as described in WHC-CM-3-10, SP-6.2.

3.1.2 System Software and Application Languages

Each system software product is assigned a unique name and release version number by the product vendor.

System or vendor-supplied software products (e.g., operating system, network operating system, memory manager, etc.) will be identified as much as practical on the system release documentation.

3.1.3 System Hardware

System hardware is controlled by normal Westinghouse Hanford administrative systems. No configuration control is required by the 100 K Area other than identification of the minimum equipment necessary for operation.

3.1.4 Documentation

Each 100 K Area document is assigned a unique name, number, and revision in accordance with the Company Supporting Document system (see WHC-CM-3-10, SP-6.1 for instructions) or the Internal Publication system (see WHC-CM-3-5 for instructions).

3.1.5 Application Reports

There are no application reports generated by the 100 K Area cartridge filter restart project.

3.1.6 Backup Media Labels

Backup media shall be labeled with the information contained in Software Practices (ref. 1), section 6, paragraph 5.3.1.

3.2 CONFIGURATION CONTROL

SCR/PR approvals are recorded and submitted using the SCR/PR form. See Appendix A for an example of the form.

CC:mail approvals for processing SCR/PRs may be substituted for written approvals. When cc:mail approvals are used, a copy of the cc:mail approval must be attached to the SCR/PR.

Telephone approvals for processing SCR/PRs may be used, but subsequently, must be documented on the SCR/PR form or with a cc:mail approval.

3.2.1 Routine Change

Routine changes to the system will be processed as described in this section. Refer to section 3.2.2 for emergency hardware changes.

Responsible Person	Description of Action
Anyone	<p>Prepare a SCR/PR to identify a problem with or request a change to the system.</p> <p>Forward the SCR/PR to the System Cognizant Engineer. Include recommendations on how to proceed when appropriate.</p>
System Cognizant Engineer	<p>Assign a SCR/PR Number and enter in the SCR/PR log form (Appendix C). Maintain the SCR/PR log sheets in the project file.</p> <p>Determine which SCR/PRs are appropriate and forward to the System Developer for analysis and hours estimate.</p>
System Cognizant Engineer and/or System Developer	<p>Analyze SCR/PR and estimate hours and impact to complete and implement.</p> <p>Evaluate SCR/PR and decide to accept, modify, reject, or defer.</p> <p>Prioritize accepted SCR/PRs.</p> <p>Determine if SCR/PR requires a major or minor revision.</p> <p>Plan how and to what extent changes to the system will be tested and documented.</p> <p>Forward appropriate problem reports to vendor if it is a problem in vendor's product.</p>

Responsible Person	Description of Action
System Developer	<p>Do the work identified in SCR/PR and conduct tests.</p> <p>Ensure that changes that cannot be tested in a test environment are conducted in a manner that will not have adverse affect on the system production environment.</p> <p>Document test results and include with change request, or indicate supporting document number if applicable. Obtain independent review.</p> <p>Provide change documentation to System Cognizant Engineer.</p>
System Developer	<p>Group one or more SCR/PRs into a planned release.</p> <p>Evaluate the results of the tests, as necessary, with the System Cognizant Engineer to determine if the changes (individually and as a whole) are acceptable for a production release.</p>
System Cognizant Engineer	<p>Approve or disapprove placing a release in the production environment.</p>
System Developer	<p>Schedule implementation with users of the system.</p> <p>Place files for the release on disk(s), labeled per section 3.1.6.</p> <p>Turn over disk(s) to custodian.</p> <p>Obtain close-out signatures.</p> <p>Prepare and issue release documentation as an ECN to the <u>100 Area S/W Release & Change Record</u> (ref. 5). Multiple releases may be held for a maximum of one year in the system project file before being issued into the change control record document.</p> <p>Update system documentation as required and place copies in the system project file.</p>
Custodian	<p>Verifies signatures on documentation.</p> <p>Verifies removable media are properly labeled.</p> <p>Stores removable media in locked room or cabinet.</p> <p>Distributes copies to remote locations as required.</p>

3.2.2 Emergency Changes

Emergency changes may be initiated to correct system problems that are interfering with the system operation.

Responsible Person	Description of Action
Anyone	Submit a phone request or cc:mail to the System Cognizant Engineer or Manager identifying the problem.
System Cognizant Engineer or System Developer	Ensure all actions and documentation described for a routine change are completed as soon as possible following an emergency change.

3.3 CONFIGURATION STATUS ACCOUNTING

The configuration status of all controlled items is shown on the Release Cover Sheet. In addition, the status of all SCR/PRs and associated releases will be maintained and is available from the System Cognizant Engineer.

3.4 AUDITS AND REVIEWS

The 100 K Area software and associated documentation, including system change control records, will be available for audit during normal working hours. The Cognizant System Manager will periodically audit the project file and change control documentation to ensure compliance. Other surveillance and audits are the responsibility of other WHC and outside organizations.

All changes and tests shall be reviewed (verified), commensurate with their complexity, by an independent technical person. The System Cognizant Engineer, if not the same individual as the System Developer, may perform the review. Test results should be attached to the SCR/PR.

Should changes require major modifications or enhancements, the System Cognizant Engineer, System Developer, and Cognizant Manager will determine what testing (V&V) and reviews (technical and QA) consistent with Software Practices (ref. 1) section 3.0, and commensurate with the complexity of the change will be required.

3.5 ACCESS CONTROL

Access to system software will be controlled by the cognizant engineer. Since a hardware key (electronic device) is required for interface access, the key location will be tracked by the cognizant engineer or delegate at all times.

3.6 BACKUP AND RECOVERY

A production copy of the 100 K Area software is maintained with the Cognizant Engineering department. Two duplicate copies of the 100 K Area software are maintained on removable media with physical control provided by the custodian.

Recovery techniques are dependent on the cause. However, if recovery is required, it would be performed from the backup media.

4.0 TOOLS, TECHNIQUES, AND METHODOLOGIES

Special user instructions and documentation are contained in refs. 4 and 6.

4.1 TEST ENVIRONMENT

All 100 K Area hardware and software modifications and enhancements will be completed and certified in a test environment where possible. These changes will be implemented into the production environment only after the System Cognizant Engineer has reviewed and approved any pertinent test results. Modifications and enhancements will be grouped logically into production releases.

5.0 SUPPLIER CONTROL

The System Cognizant Engineer will ensure that new releases and installation of the vendor application and system software are tested prior to its being placed in production.

The System Cognizant Engineer will maintain a project file of all project documentation, correspondence, and project-produced documents. Vendor provided materials and manuals will be maintained in a library. This project file will maintain the most current version of all documents for the life of the facility.

6.0 RECORDS COLLECTION AND RETENTION

Development and maintenance records will be maintained in accordance with WMC-CM-3-10, Appendix N "Records Retention and Disposition" except as follows. Any items indicating "Forward to IRM Records Management..." will instead be issued as an ECN to ref. 5.

7.0 REFERENCES

- 1) WHC-CM-3-10 Software Practices
 - SP-6.1 Document Control
 - SP-6.2 Software Control
 - SP-6.3 Change Request And Problem Report
 - SP-6.4 Document Approvals
- 2) WHC CM-4-2 Quality Assurance
 - QR-19.0 Software Quality Assurance Requirements
- 3) WHC-CM-6-1 Standard Engineering Practices
 - EP-1.6 Engineering Data Transmittal
 - EP-2.2 Engineering Document Change
- 4) WHC-SD-SNF-CSUD-001 105 K East Ion Exchange and Cartridge Filter Restart Computer Software User Documentation.
- 5) WHC-SD-SNF-CSWD-001 105 K East Ion Exchange and Cartridge Filter Restart Computer Software Documentation.
- 6) Programmable Industrial Control Simulation, Texas Instruments 545 Version, Reference Manual

APPENDIX A

100 K Area SOFTWARE CHANGE REQUEST AND PROBLEM REPORT FORM

The User will fill out a "Software Change Request or Problem Report" form describing the problem and forward to 100 K Area Cognizant Engineering. Instructions are on the following page.

SOFTWARE CHANGE REQUEST AND PROBLEM REPORT	
NOTE: Submitter Fills In Parts 1-8 (NON-GRAY)	FOR 100 K Eng. USE ONLY
1. SCR Type: ☐ Development ☐ Problem ☐ Enhancement ☐ Emergency	SCR Number:
2. Submitted By:	Date:
3. Project Name:	TPCN, W/O:
4. Software Program Name:	Current Ver/Rev:
5. Submitter's Priority ☐ (1=Critical 2=Very Important 3=Important 4=Inconvenience 5=Nice)	6. Requested Completion Date:
7. Task/Change/Problem Title (One Sentence Description):	
8. Detailed Description/Justification (Attach Additional Sheet If Necessary):	
FOR 100 K Eng. USE ONLY: Software Change Request And Problem Report Resolution Information	
Decision By:	☐ Accept ☐ Modify ☐ Reject ☐ Defer
Assigned To:	Target Release Date:
Solution Comments/Impact:	
Software Programs, Modules or Files Affected:	
Task Completed By:	Date:
Verified By:	Date:

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Filter Restart Computer Software Configuration Management
Plan. Rev 0.

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Actual Release Version:

Date:

Closed By:

Date:

These instructions are for preparing the Software Change Request and Problem Report. If more space is needed, use blank pages and attach to the SCR/PR form. This will be the record of the change request or problem report.

Submitter:

- a. Indicate if this is a problem report or request for enhancement.
- b. Record the name of the person submitting the form and the date.
- c. Record "100 K Area SNF" for project.
- d. Record "Cartridge Restart" for software program name.
- e. Record submitter's evaluated priority as shown.
- f. Provide a requested completion date, or leave blank if unknown.
- g. Provide a single sentence title of problem or enhancement.
- h. Provide a description of the changes requested or the problems being reported. Provide justification if this is a change request. Attach additional sheets if necessary.

System Cognizant Engineer:

- a. On receipt, enter the SCR/PR into the log in the project file. Enter the SCR/PR number from the log onto the SCR/PR form.
- b. Enter the date received.
- c. Enter TPCN or Work Order number if known, otherwise, leave blank.
- d. Enter current Version/Revision of the product.
- e. Review change request or problem. Mark "Accept", "Modify", "Reject", or "Defer" as appropriate. System Cognizant Engineer signs "Decision By" block, and assigns to System Developer if accepted.
- f. Enter "Assigned To" and "Target Release Date" as appropriate.
- g. System Developer fills in solution, impacts, and comments area and identifies programs, modules, and files to be affected. A list may be attached.
- h. System Developer signs "Task Completed By" block.

- i. Independent reviewer signs "Verified By" block. Attach test results or additional verification documentation.
- j. When included in a release, place release version in "Actual Release Version" block.
- k. System Cognizant Engineer signs "Closed By" block when complete or rejected.

APPENDIX B: 100 K Area RELEASE COVER SHEET & REVISION RECORD

RELEASE COVER SHEET & REVISION RECORD

1. Software ID (Name): Revision: _____
2. Release Type: ☐ Initial Release ☐ Change Approval Level: E S Q D Sfty Class _____

3. Abstract

4. Software Files (or attach directory listing)

5. Software files record storage media and location

6. Documentation	Title	Document Number	Rev
Requirements			
Design			
Validation			
User			
Configuration Cntl			

7. Environment	Description	Rev	Approval Lvl/Sfty Class
Hardware			
Oper. System(s)			
Language(s)			
Comm. Networks			

8. Released for:
☐ Integration ☐ Acceptance Test ☐ Operational Test ☐ Operation

9. Approvals

System Cognizant Engineer: _____

Date: _____

System Cognizant Manager: _____

Date: _____

System Developer: _____

Date: _____

Other: _____

Date: _____

Instructions for the Release Cover Sheet & Revision Record

Fill out as follows:

1. Provide System Name and new revision number.
2. Mark release type. Indicate Impact Level (E, Q, S, D) and Safety Class.
3. Provide an abstract describing the product being released. Indicate if only a portion of the system is being modified.
4. List all files that are being released, and where they reside. Attaching a directory listing is acceptable, if it includes the full name of the file, creation date and time (combination is version identification). Date/time on all files may be set to release date/time.
5. Indicate source and executable file master type (floppy disk, optical, magnetic tape), media serial number, and storage location. This media will be held by the system custodian.
6. List the documentation components for the release.
7. List the operational environment of the system.
8. Check the reason/limits for the release.
9. Provide approval signatures as required.
10. Combine Release Cover Sheet, SCR/PR forms, test data, "diff" files, etc., and release as an ECN to the 100 K Software Release and Change Record document.

APPENDIX C

100 K Area SOFTWARE CHANGE REQUEST AND PROBLEM REPORT LOG FORM

The System Cognizant Engineer should enter the next sequential number on the log form, enter the Task/Change/Problem Title from the SCR/PR form, and enter the SCR/PR number on the SCR/PR form.

SCR/PR Number	Description (from block 7 of SCR/PR form)

SCR/PR Log sheet number _____

DISTRIBUTION SHEET

To	From	Page 1 of 1			
Distribution	100 K Area Process Engineering	Date 12/7/95			
Project Title/Work Order		EDT No. 605804			
105 K East Ion Exchange and Cartridge Filter Restart Project		ECN No. NA			

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
WIEMERS MJ	X3-84	X			
WHITEHURST R	R3-86	X			
SCHERMERHORN DS	L6-04	X			
EDWARDS PJ	A4-79	X			
MEDFORD DW	X3-74	X			
CENTRAL FILES	A3-88	X (ORIG + 2)			
<i>Project Files</i>	X 3-85	X			