2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) FDNW Engineering Services	4. Related EDT No.: 626841
5. Proj./Prog./Dept./Div.: Stabilization	6. Design Authority/ Design Agent/Cog. Engr.: J.R. Kriskovich/T. Kaiser	7. Purchase Order No.: N/A
8. Originator Remarks: Software Configuration Management Plan for 500 CFM Portable Exhausters		9. Equip./Component No.: 500 cfm portable exhausters
		10. System/Bldg./Facility: Various/Portable
11. Receiver Remarks: 11A. Design Baseline Document? [X] Yes [] No		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date:

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Desig- nator	(G) Reason for Trans- mittal	(H) Origi- nator Dispo- sition	(I) Receiv- er Dispo- sition
1	HNF-3962		0	SCM plan for 500 CFM Portable ExhausterS	Q	1		

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION
(See Approval Designator for required signatures)

(G) Rea-son	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN	(G) Rea-son	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN
1	1	Design Authority J.R. Kriskovich RL-56			
1	2	Design Agent W.R. Swift E6-26 TERRY KAISER T4-07			
1	2	Cog.Eng. J.R. Kriskovich RL-56 TERRY KAISER			
1	1	Cog. Mgr. R.J. Larson T4-07 M KOCH S7-24	3		Central Files B1-07
1	1	QA T. Volkman S7-34			
1		Safety N/A	3		DOE/RL Reading Rm. H2-53
1		Env. N/A			

18. Willa Y Thomas 6-22-99 Signature of EDT Originator	19. Authorized Representative Date for Receiving Organization	20. Jim Kuskul 7-14-99 Design Authority/ Cognizant Manager Date	21. DOE APPROVAL (if required) Ctrl. No. [] Approved [] Approved w/comments [] Disapproved w/comments

S

Software Configuration Plan for 500 CFM PORTABLE EXHAUSTER POR04, POR05, POR06

J.R. Kriskovich
Lockheed Martin Hanford Co.
Richland WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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Key Words: 500 cfm exhauster, Software Configuration Management Plan, POR04, POR05, POR06
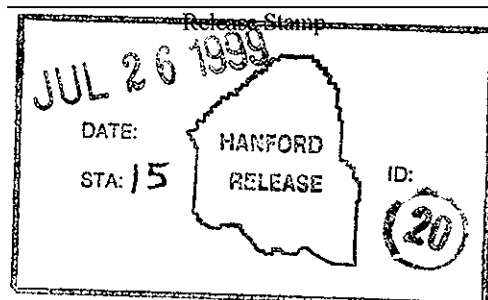
Abstract: The Software Configuration Management Plan (SCMP) provides the instructions for change control of the portable 500 cfm exhauster skids Programmable Logic Controller (PLC) software configuration. This supporting document has been prepared to make the 500 cfm exhauster "Software Configuration Management Plan" readily retrievable. This Plan covers saltwell portable exhauster units POR04, POR05, and POR06.

Janis Aardal 7-26-99
Release Approval

A-6400-073 (01/97)   GEF321

DATE:
STA: 15   HANFORD RELEASE   ID:
JUL 26 1999

SOFTWARE CONFIGURATION MANAGEMENT PLAN

FOR THE

500 CFM EXHAUSTER SKID SYSTEMS

February 4, 1999

TABLE OF CONTENTS

1.0   INTRODUCTION

1.1   PURPOSE

This Software Configuration Management Plan (SCMP) provides the instructions for change control of the Portable 500 CFM Exhauster Skids Programmable Logic Controller (PLC) software configuration (also referred to within this document as the Exhauster Skid system software). This SCMP covers the following saltwell exhauster units: POR04, POR05, and POR06.

1.2   SCOPE

This plan applies to the Exhauster Skid system software configuration used by the current waste tank operations contractor. It consists primarily of the PLC ladder logic program. It does not include the Human Machine Interface software application.

It does not apply to reports and data generated by the PLC software except where specifically identified. Control of information produced by the software once it has been exported is the responsibility of the controlling organization.

Associated design basis documentation is found referenced in the System Description, HNF-3587, and reference to the P&ID set and other documentation. Changes to design basis documentation, via ECN ref. 2, will require following this SCMP to evaluate impact to the exhauster skid functions.

1.3   OVERVIEW

The Exhauster Skids will be used to provide ventilation to the single shell waste storage tanks if during saltwell pumping activities the flammable gas levels exceed 25% of the LFL. The skids are self-contained ventilation systems that can be deployed at any of the waste storage tanks with a compatible riser. The exhauster system applies a vacuum and draws air and vapor from the tank dome space, which is then routed through the filter system installed on the skid and then vented to the atmosphere. The skids include the Generic Effluent Monitoring System (GEMS) to monitor radiation levels of the exhausted air. Primary control will be performed by an on-board PLC and a remote Human Machine Interface (HMI) program maintained by the salt well pumping organization.

There are three Portable 500 CFM Exhauster Skids referred to as Exhausters POR04, POR05, POR06

For more information regarding this system, please refer to the Portable 500 CFM Exhauster Skid System Description document, HNF-3587, Ref. 3.

February 4, 1999

1.4   DEFINITIONS

<u>Production:</u> Pertaining to the status of a given system following acceptance by the customer.

<u>Software Change Request and Problem Report (SCR/PR):</u> A document which identifies a proposed change to or suspected problem with the Exhauster Skid PLC software. An SCR/PR may identify a new function, modify an existing function or report suspected problems of the software.

<u>Software Configuration Management (SCM):</u> A set of management disciplines within the context of the software 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

<u>Lockheed Martin Hanford Company (LMHC)</u>--shall be designated as system owner, operator and maintenance authority. LHMC will maintain full control over software development and final testing.

<u>Fluor Daniel Northwest (FDNW)</u>--shall be designated Exhauster Skid PLC Program developer. Once the Exhauster Skid is completed, the software will be transferred to the system owner.

2.2   RESPONSIBILITIES

Function	Organization	Development Individual	Operations Individual	Responsibilities relative to this plan
Exhauster Skid Owner	LMHC	T. Kaiser (LMHC)	T.Kaiser (LMHC) Cog. Engineer	o Assigns Design Authority (Cognizant Engineer), who is CCB member o Assigns the Software Administrator(s)
Design Authority	LMHC	J. Kriskovich (LHMC)	J. Kriskovich (LHMC) Design Authority	o CCB Chair o Represents Owner(s) In Approvals o Approve test results of changes before placing in operation. o Screen SCR/PR for appropriateness before forwarding to Lead Engineer for analysis and estimating.
Software Administrator	FDNW/LMHC	S. Romero (FDNW)	T.Kaiser (LMHC) Cog. Engineer	o Control authorized users, privilege levels and passwords. o Overall Responsibility For SCMP o Assigns Lead Engineer/Design Agent(s) o Assigns Software Custodian
Lead Engineer (LE)	FDNW/LMHC	S. Romero (FDNW— QTP\ATP)	T.Kaiser (LMHC) Cog. Engineer	o Design Agent of record. o Evaluate and implement changes resulting from SCR/PR. o Evaluate SCR/PR for impact on cost, schedule, & deliverables. o Maintain SCR/PR and SCR/PR log (log is paper-based and contained in a binder). o Maintain a library of all associated correspondence, personnel assignments, documentation, deliverables, reports, logs, software, etc., in their most up-to-date version.
Change Control Board Chair	NHC/LMHC	J. Kriskovich (LMHC)	J. Kriskovich (LMHC)	o Accept/prioritize work proposed by SCR/PR. o Approve or disapprove completed testing results from SCR/PR implementation
Software Developer	FDNW	C. Ghormley (FDNW)	T. Kaiser LMHC Cog Engr	o Provides development
Software Custodian	FDNW	C. Ghormley (FDNW)	T.Kaiser (LMHC) Cog. Engineer	o Ensure backup and recovery of application and software. o Ensure proper labeling and storage of backup media. o Ensure correct software is installed for production use. o Ensures problem reports are distributed to users.
Software Engineer(s)	FDNW	C. Ghormley (FDNW)	T.Kaiser (LMHC) Cog. Engineer	o Do the work identified in SCR/PR and conduct tests. o Ensure adequate tests are performed. o Document test results and include with change request, or indicate supporting document number if applicable. o Obtain independent review.
Report problems and submit change requests	Any Organization-- Development\Operation	Anyone In Organization	Anyone In Organization	o Identify and report problems on a SCR form. o Submit changes on a SCR form.
(1) The appointed individual may be changed via letter or cc:Mail, signed by the organizational manager. Memorandum to be maintained in the project file. Modification to this SCM not required.				

2.3   INTERFACE CONTROL

The saltwell pumping HMI is linked to the Exhauster Skid PLC and communicates a shutdown signal to the PLC in case of a critical alarm from some other part of the process. A critical alarm or condition at a different point in the waste transfer system can trigger the HMI to generate a signal to shut down the exhauster activity. Other than this, there is no control of the Exhauster Skid PLC system allowed to the HMI (unless approved and implemented per this SCMP).

There is also monitoring of Exhauster Skid PLC data by the saltwell pumping HMI, via the same link. Therefore any changes to the Input/Output map of the exhauster skid PLC must be communicated to the organization and individuals responsible for maintaining the saltwell pumping HMI and must be approved and implemented per this SCMP.

2.4   IMPLEMENTATION

This SCMP becomes effective whenever a   problem or change request is identified.   Overall responsibility for the SCM activity rests with the Software Administrator described in Section 2.2. Version change control of PLC source code and executables becomes effective when released for testing for major revisions, and released for production on minor revisions.

2.5   POLICIES AND PROCEDURES

Configuration management of the Exhauster Skid PLC items will be in accordance with <u>HNF-PRO-2778, IRM Application Software Sys Life Cycle Standards</u>, particularly with regard to Software Control, Change Request And Problem Reports, and Document Approvals.

3.0   SOFTWARE CONFIGURATION MANAGEMENT ACTIVITIES

Configuration Management will be applied to the Exhauster Skid PLC system software per the requirements established and steps provided herein.

3.1   CONFIGURATION IDENTIFICATION

3.1.1   Application Software

Design basis documentation which sets the foundation for the configuration of the Exhauster Skid PLC is found in the P&ID set and in the System Description, HNF-3587, and associated references.

At the skid, messages, alarms, and information for the operator are shown on two Allen-Bradley Message View display terminals mounted in a cabinet above the PLC panel. The first (upper) display shows the current alarm status by automatically scrolling through all active alarms and some system status information, including stack flow rate, stack total flow, record sample flow rate, record sample total flow, and CAM flow rate. The second (lower) display shows unacknowledged alarms. Acknowledgement functions are also performed via the Message View display terminals. The Message View terminals are connected to the PLC on an Allen-Bradley remote I/O network.

The remote HMI software is Wonderware.[1] Configuration control of this HMI system is outside the scope of this document, except for the definition of the PLC control signal interface and the mapping of Input/Output signals to this remote HMI.

Each production PLC software release shall be a grouping of the code and executable software products, and any modifications to vendor software (e.g., configurations, etc.). The release is assigned a unique release number by the Exhauster Skid developer. A designator will also be used to designate the Exhauster Skid phase (ATP for acceptance testing, OTP for operational testing, or SYS for an operational system). The software release number is of the form R.r as described in <u>HNF-PRO-2778, IRM Application Software Sys Life Cycle Standards</u>. Please refer to the sample form in the "Release Cover Sheet and Revision Record", Appendix B. The release form shall also note operating system and development tool revision numbers in Section 7 of this same form.

3.1.2   Software Products

Each software product (e.g., the application software development packages, the operating system software, the network communications software, etc.) is assigned a unique product name and release version number by the appropriate vendor and will be used as identification as much as practical on the software release documentation.

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[1]Wonderware is a trademark of Wonderware Software Development Corp.

3.1.3   Computer Hardware

Computer hardware configuration control, such as installed field PLCs is controlled by normal Hanford administrative procedures (e.g., H-2, H-14 drawing system via Engineering Data Transmittals (EDT) and Engineering Change Notices (ECN)), Ref. 2. Configuration control of hardware is required by the Exhauster Skid SCMP, only for the cases of 1) identification of the minimum equipment necessary for operation and 2) evaluation of Exhauster Skid, local and remote HMI and/or PLC impact, caused by field hardware changes that are part of the design basis documentation set--via an SCR/PR.

3.1.4   Documentation

Each Exhauster Skid document is assigned a unique name, number, and revision in accordance with the HNF documentation procedures and are documented in the "Release Cover Sheet and Revision Record". See Appendix B, Section 6 for a sample listing.

Exhauster Skid SCR/PR forms shall be kept in local project files in log form by the Lead Engineer. When a Release of the Exhauster Skid system occurs, the Lead Engineer will establish either 1) a file with the information related to that release or 2) will produce an HNF document to formally document the Release sheet and associated SCR/PRs.

3.1.5   Application Reports

Control of application reports generated by the Exhauster Skid is not provided under this SCMP, and is the responsibility of the software user organizations.

3.1.6   Removable Media Labels

Removable media shall be labeled consistent with the information contained in the HNF-PRO-2778, IRM Application Software Sys Life Cycle Standards, Software Control.

The removable media will record the following information on the label:

- Media identifier (i.e., disc number)
- Software identification
- Software revision identification ("RX..Y", "X" = major and "Y" = minor software changes, e.g. 1.0)
- Software or data name or description
- Responsible organization and software custodian's name
- Recording date and time.

3.1.7 Directory Nomenclature

Original or backup source and executable software placed on media containing multiple versions/revisions shall be segregated using the available directory/ subdirectory structure.

A major directory shall be provided for the software product, labeled with the product mnemonic. Subdirectories shall be provided for each major revision. Each minor revision shall be contained in a separate sub-subdirectory, uniquely identified with the appropriate revision number. The subdirectory name shall contain the major and minor revision number, separated by a period. For example:

    E:\500ES\R1\R1.0   Would contain all source and executables for the initial product release.

    E:\ 500ES\R1\R1.1   Would contain the source and executables for the first minor release.

    E:\ 500ES\R4\R4.3   Would contain the source and executables for the third minor release of the fourth major product release.

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 handwritten 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 software will be processed as described in this section. Refer to section 3.2.2 for emergency hardware changes.

Responsible Person	Description of Action
Anyone In Exhauster Skid Organizations	Prepare a SCR/PR to identify a problem with or request a change to the software. Ensure that evaluation is performed of design basis documentation changes (via an SCR/PR and attached ECN) for potential changes to the Exhauster Skid. Forward the SCR/PR to a Design Authority or Design Agent (Lead Engineer). Include recommendations on how to proceed when appropriate.
Design Authority (or delegate)	Determine which SCR/PRs are appropriate and forward to the Software Developer for analysis and hours estimate. Evaluate whether the change is an emergency or routine SCR/PR.
Cog Engineer	If routine, assign a SCR/PR Number and enter it in the log. See example in Appendix B. Analyze SCR/PR and estimate hours and impact to complete and implement. Determine if SCR/PR requires a major or minor revision. Evaluates SCR/PRs with change control board members and decides to accept, modify, reject, or defer. Prioritize accepted SCR/PRs. Forward to Software Developer and Maintainer\Software Engineer(s) to do work. Plan with Software Engineer(s) how and to what extent changes to the software will be tested and documented. Forward appropriate problem reports to vendor if it is a problem in vendor's product.

Responsible Person	Description of Action
Software Engineer	Do the work identified in SCR/PR and conduct tests.
	Ensure that changes that cannot be tested in a test environment are conducted in a manner that will not have adverse affect on the software production environment.
	Document test results and include with change request, or indicate supporting document number if applicable. Obtain independent review.
	Provide change documentation to Lead Engineer and Cog Engineer.
Cog Engineer	Group one or more SCR/PR's into a planned release.
	Evaluate the results of the tests with Independent Reviewers (e.g., the Design Authority, etc.) to determine if the changes (individually and as a whole) are acceptable for a test\production release.
	Request approval of CCB to place release into the test\production environment.
Change Control Board	Approve or disapprove placing a release in the test\production environment.
Cog Engineer	Schedule implementation with the Software Administrator. Place source code and executable files for the release on floppy disks, labeled per 3.1.6. Alternatively, place source code and executable files on labeled release optical of CD-ROM disks in a directory\ subdirectory identified per 3.1.7. This copy shall be treated as the master/original release copy.
	Place source code and executable files on the secure fileserver backup partition (<password>) in a directory\subdirectory identified per 3.1.7. This copy shall be treated as the backup release copy. The partition password shall be controlled by the Custodian and shall be disclosed only to those with a need to know.
	Turn over media (e.g., floppy or optical disks) to custodian.
	Obtain close-out signatures. Update the Software Change Request and Problem Report information for Exhauster Skid.
	Prepare documentation, secure approvals and place in project file.
Software Custodian	Verifies signatures on documentation.
	Verifies removable media are properly labeled.
	Stores removable media in a media storage cabinet designated by the Software Custodian.
	Verifies backup exists in a properly identified subdirectory on the backup partition.
	Verify that the SCR/PR closeout is distributed to the initiator, and others as appropriate.

3.2.2   Emergency Changes

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

Responsible Person	Description of Action
Anyone In Exhauster Skid Organizations	Submit a phone request or cc:Mail to Cog Engineer, Software Engineer, or Manager identifying problem.
Software Administrator or Cog Engineer or Software Engineer	Evaluate whether the change is an emergency or routine SCR/PR. (Note: definition of an "emergency" is up to the discretion of Software Administrator or delegate) If emergency, then ensure all actions and documentation described for a routine change are completed as soon as possible following an emergency change to the system software.

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 be available on the Exhauster Skid directory.

3.4   AUDITS AND REVIEWS

The Exhauster Skid and associated documentation, including software change control, will be available for audit during normal working hours. The Exhauster Skid Software Administrator should periodically audit the project file and change control documentation to ensure compliance. Other surveillance and audits are the responsibility of other outside organizations and are outside the scope of this plan.

All changes and tests shall be reviewed (verified) by an independent technical person. For minor changes and releases, test results may be attached to the SCR/PR.

Should changes require major modifications or enhancements, the Cog Engineer, Software Engineer Design Authority will determine if a formal plan will be prepared. The formal plan will identify appropriate technical, V&V and QA reviews consistent with HNF procedures and commensurate with the complexity of the change.

3.5   ACCESS CONTROL

Access control for operation of the Exhauster Skid PLC software is administrative. However, to make changes to the PLC code requires software other than what is available to the user through the local or remote HMI. Therefore, changes to the system will have to be made locally at the Exhauster Skid and this would require administrative access control.

3.6   BACKUP AND RECOVERY

Backup of the source code and executable files that constitute each product release is done by the software custodian onto the fileserver backup partition selected and documented by the Software Custodian--for example "\\LMHC\PROJECTS\500ES\SCMP\" (see section 3.2.1) at the time of release. The Software Custodian is responsible for verifying that the backup is in place and the appropriate files exist.

Recovery shall be accomplished by rewriting the appropriate files from the master media onto the production fileserver or its replacement. This shall be accomplished by the Software Custodian or Cog Engineer\Software Engineer as needed. Should the master media be simultaneously corrupt, recovery shall be from the backup fileserver partition.

4.0   TOOLS, TECHNIQUES AND METHODOLOGIES

Tools and instructions for software administration and usage are contained in Ref. 1.

All Exhauster Skid 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 Design Authority has reviewed and approved the test results and the Change Control Board has approved the implementation. Modifications and enhancements will be grouped logically into production releases.

5.0   SUPPLIER CONTROL

The software developer will ensure that new releases and installation of the vendor application and software product are tested prior to its being placed in production. Changes in vendor application and/or software product will be processed as a change request or problem report with the same approval requirements as a locally generated change.

The Software Developer will maintain a software project file or binder of all software-related project documentation, correspondence, and project produced documents. Vendor provided materials and manuals will be maintained by the Software Custodian. This software project file or binder will maintain the most current version of all documents for the life of Exhauster Skid.

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6.0   RECORDS COLLECTION AND RETENTION

The Exhauster Skid software developer will process software development and maintenance records in accordance with <u>HNF-PRO-2778, IRM Application Software Sys Life Cycle Standards</u>. Any items indicating "Forward to Records Management..." will instead be sent to the cognizant manager. These records, include at a minimum the SCR/PR log book and SCR/PR form entries, and will be kept by the Cog Engineer in local project files.

7.0   REFERENCES

1)   HNF INFORMATION RESOURCE MANAGEMENT PROCEDURES

        <u>HNF-PRO-2778, IRM Application Software Sys Life Cycle Standards</u>

2)   HNF ENGINEERING PROGRAM

        <u>HNF-PRO-244, Engineering Data Transmittal Requirements</u>
        <u>HNF-PRO-440, Engineering Document Change Control Requirements</u>

3)   System Design Description for Portable 500 CFM Exhauster Skids POR-04, POR-05 and POR-06, <u>HNF-3587</u>

Error

An error occurred while processing this page. See the system log for more details.

These instructions are for preparing the Change Request or 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 (Anyone In Exhauster Skid Organizations may submit) :

1. Indicate if this is a problem report or request for enhancement.

2. Record the name of the person submitting the form and the date.

3. Record Exhauster Skid for project.

4. Record Exhauster Skid for software program name.

5. Record submitter's evaluated priority as shown.

6. Provide a requested completion date, or leave blank if unknown.

7. Provide a single sentence title of problem or enhancement.

8. 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.

Lead Engineer:

a. On receipt, enter into the Exhauster Skid SCR/PR Log. Enter the next SCR number on the form.

b. Enter the date received.

c. Enter charge number if known, otherwise, leave blank.

d. Enter current Version/Revision of the product.

e. Review change request or problem with CCB personnel per matrix in Section 2.2. Note that SCR/PR may require attached cost estimate and planning by the Lead Engineer if extensive change or testing are anticipated. Mark accept, modify, reject or defer as appropriate.

   Lead Engineer signs "decision by" block, and assigns to Software Developer And Maintainer, if accepted.

Software Developer and Maintainer:

f. Assigns a Software Engineer in the Assigned To field and a Target Release Date as appropriate.

g. Software Engineer fills in solution, impacts and comments area, and identifies programs, modules and files to be affected. A list may be attached. Also documents/performs testing as identified by the Lead Engineer and attaches test results or additional verification documentation.

h. Software Engineer signs "Task Completed By" block and passes to independent reviewers (e.g., CCB chair and Lead Engineer).

I. Independent reviewer(s), at a minimum including the Design Authority, signs "Verified By" block.

j. When included in a release, place release version in "Actual Release Version" block.

k. Lead   Engineer   signs   "Closed   By"   block   when   complete   or   rejected.

APPENDIX B: EXHAUSTER SKID RELEASE COVER SHEET & REVISION RECORD

RELEASE COVER SHEET & REVISION RECORD

1. Software ID (Name):   Rev:
2. Release Type: [ ] Initial Release   [ ] Change

3. Abstract

4. Software Files (or attach directory listing)

5. Software files record storage media and location

6. Documentation Requirements	Title	Number	Rev
Design			
Design Verif.			
Validation			
User			
Config. Cntl.			

7. Environment Hardware	Description	Rev	
Oper. Software(s)			
Language(s)			
Comm. Networks			

8. Released for:
[ ] Integration   [ ] Operational Test   [ ] Operation

9. Approvals

Lead Engineer:_____   Date:__

Design Authority:_____   Date:__

Software Administrator:_____   Date:__

February 4, 1999

Instructions for the Release Cover Sheet & Revision Record

Fill out as indicated. See example as follows:

1.   Provide Software Name and new revision number.

2.   Check release type.

3.   Provide an abstract describing the product being released. Indicate if only a portion of the software is being modified.

4.   List all source and executable 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 on all files may be set to release date, time may be set to indicate the release version number (e.g. 2.07a).

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 software custodian.

6.   List the documentation components for the release.

7.   List the operational environment of the software.

8.   Check the reason/limits for the release.

9.   Provide approval signatures as required by SCMP.