

Advanced Photon Source

PROCEDURE	Page 1 of 6
Procedure #:	3.1.123
Revision #:	0
Issue Date:	4/22/13
Review Period:	2 years
Supersedes:	n/a
Last Reviewed:	4/22/13

Controls Group Engineering Document Management Plan

Changes made in this revision:

- N/A

Prepared by:

A. Scaminaci, AES/CTLS

Reviewed by:

AES/CTLS Group Leader

AES/QAR

Approved by:

AES/ADD-CS

AES/DD

APS_1432795

The current version of this procedure is accessible from <http://centraldocs.aps.anl.gov/>. Print or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the online version.

PROCEDURE	Page 2 of 6
Procedure #:	3.1.123
Revision #:	0

Table of Contents

1	Introduction	3
1.1	Related Documents	3
2	Repository Use and Revision Tracking for Engineering Documents	3
3	Group-shared File Systems and Revision Control Systems (RCS)	5
4	Document/Drawing Requirements.....	5
5	Software Tools	5
6	Alias Project Naming Convention (if any)	6
7	Alias Drawing Naming/Numbering Convention (if any).....	6
8	Group-specific EDP Collection Browse Categories	6
9	Feedback and Improvement.....	6

Controls Group Engineering Document Management Plan

1 Introduction

This document sets forth group-specific guidelines for management of engineering documents and drawings consistent with the Managing APS Documents Policy ([APS 1273342](#)). The Controls Group is required to have such a policy in place to guide their staff in the details of controlling their engineering documents under this procedure.

1.1 Related Documents

- Managing APS Documents Policy ([APS 1273342](#))
- Managing APS Engineering Documents ([APS 1423689](#))
- APS Design and Drafting Drawing Standard ([APS 1429632](#))
- [Argonne Quality Assurance Program Plan](#)

2 Repository Use and Revision Tracking for Engineering Documents

Table 1, which is copied from the Managing APS Documents Policy ([APS 1273342](#)), maps the valid document repositories with the workflows that are supported by each repository.

Table 1: Work Flows and Revision Tracking Capability per Repository Type

Repository	Staff-controlled / No Revision Tracking (Not a controlled document)	Staff-controlled / Revision Tracking (Not a controlled document)	Controlled Document (A formal change procedure including an approval workflow and Revision Tracking)
Group-Shared File System (GSFS)	X		
Group-Shared File System Plus a Revision Control System (RCS)		X	
ICMS		X	X (with approval thread)
Vault			X
PDMLink			X

Advanced Photon Source

The left column of Table 2 lists the types of documents generated by the Controls Group in its routine operation. The rest of the table gives guidance on which workflow and repository should be used for each type of document.

Table 2: Work File Repository Usage

Criteria	Staff-controlled/ No Revision Tracking	Staff-controlled / Revision Tracking		Controlled Document			Drawing must meet D&D Standard (APS 1429632)
	Group-shared File System (GSFS)	GSFS + RCS	ICMS	ICMS (with approval thread)	Vault	PDMLink	
SAFETY: RSS Critical Component or Personnel Safety Related				X	X	X	X
MISSION CRITICAL: Machine Protection or Critical for Operation				X	X	X	X
COST:							
Fabrication exceeds \$100K				X		X	X
Fabrication exceeds \$10K				X	X	X	
Fabrication exceeds \$2K	X						
EXTERNAL USE: Subject to External Review Fabrication by external vendor Possible Use at Other Facilities				X	X	X	X
Legacy drawings: Criteria ...	X						
Document/File Types							
AutoCAD					X		
EagleCAD					X		X
Allegro						X	X
FPGA Code		X					
PLC Ladder Logic Source Code			X	X			
Software Source Code		X					
DEFAULT			X	X			

3 Group-shared File Systems and Revision Control Systems (RCS)

Path: /net/phoebus/controls/

Type of RCS: cvs,svn

Directory Structure Guidance:

/net/phoebus/controls/modules/... (all custom software modules go here)

/net/phoebus/controls/fpga/... (all fpga designs go here)

/net/phoebus/controls/pcb/... (all PC board designs go here),

/net/phoebus/controls/doc/... (all documentation goes here)

Path: /net/phoebus/controls

Type of RCS: cvs, svn

Directory Structure Guidance:

4 Document/Drawing Requirements

To provide consistency within this group and with other groups, the following requirements for drawings should be used.

Criteria	Drawing Requirements
All Drawings	EDN # or valid Alias must be on drawing
Safety-Related Systems Work For Others	Use Design & Drafting Standard for all drawings associated with these projects

5 Software Tools

Standardized software applications for certain engineering drawing requirements are listed in the table below.

Document/Drawing Type	Software Tools
Schematic Capture	Orcad Capture, EagleCad
PC Layout	Allegro Layout, EagleCad
FPGA Programming	Altera Quartus, Xilinx ISE/Vivado, Lattice Diamond
Spice Simulation	LTspice
PLC Programming	DirectNet 5, C-More
Mechanical Layouts (Front Panels, Chassis, etc)	AutoCAD Lite, Visio
Feature Sheet	Single page Word document with picture of product
Block Diagrams	Orcad, Visio, PowerPoint
Wiring Diagrams	Orcad, Visio, PowerPoint
Project Description	Wiki Page

6 Alias Project Naming Convention (if any)

Not applicable as of this revision.

7 Alias Drawing Naming/Numbering Convention (if any)

Not applicable.

8 Group-specific EDP Collection Browse Categories

The Engineering Document Portal allows staff to define “collections” of documents that correlate to a project, component, or subsystem. These collections may be assigned group-specific tags to allow intuitive searching and browsing of the collections. Up to three group-specific menus may be defined, where cascaded menus may be dependent on the item chosen from the previous menu (i.e., each item in GroupMenu1 can specify a different GroupMenu2).

/net/phoebus/controls:
1000_IRMIS
1000_Archive
11000_documentation
12000_QA
2000_Projects
3000_Management
4000_Presentations
5000_CVS
6000_Applications
7000_Financials
8000_Unsorted-misc
9000_Personal
XXX_ARCHIVE
ioctestapps

9 Feedback and Improvement

If you are using this procedure and have comments or suggested improvements for it, please go to the [APS Policies and Procedures Comment Form](#)* to submit your input to a Procedure Administrator. If you are reviewing this procedure in workflow, your input must be entered in the comment box when you approve or reject the procedure.

Instructions for execution-time modifications to a policy/procedure can be found in the following document: Field Modification of APS Policy/Procedure ([APS_1408152](#)).

* http://centraldocs.aps.anl.gov/comment_form.php