

# Advanced Photon Source

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## Group-specific Engineering Document Management Plan [Template—see instructions in [APS 1429449](#)]

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- No changes made to this procedure since its last review

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## Group-specific 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 [insert NAME] 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. [This table is for information only and should not be modified.]

**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

[Groups are encouraged to use a graded approach for managing their engineering documents by applying more rigorous revision control to those documents that are most

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critical. The [Argonne QAPP](#) offers good examples of criteria that can be used to implement a graded approach.]

The left column of Table 2 lists the types of documents generated by the [insert NAME] 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. [It is recommended that groups follow this guidance. However, it is for each group to determine which workflow and repository best suit their needs.]

**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	
<b>SAFETY:</b> RSS Critical Component or Personnel Safety Related				X	X	X	X
<b>MISSION CRITICAL:</b> Machine Protection or Critical for Operation				X	X	X	X
<b>COST:</b>							
Fabrication exceeds \$100K				X	X	X	X
Fabrication exceeds \$10K				X	X	X	
Fabrication exceeds \$2K	X						
<b>EXTERNAL USE:</b> Subject to External Review Fabrication by external vendor Possible Use at Other Facilities				X	X	X	X
<b>Legacy drawings:</b> Criteria ...	X						
<b>Document/File Types</b>							
AutoCAD					X		
Solidworks					X		X
Pro/E						X	X
FPGA Code		X					
PLC Ladder Logic Source Code			X	X			
Software Source Code		X					
<b>DEFAULT</b>			X	X			

**Additional Guidance:**

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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.

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

Group-shared File Systems must reside on either the oxygen or phoebus servers. A group may have more than one shared file system, particularly if a Revision Control System (RCS) is used on one of them. If your group needs a new shared file system created, submit an IT Help Desk ticket for an “EDP Group-shared File System.”

List the Group-shared Files Systems for your group following the examples below:

**Path:** /net/phoebus/asdctls

**Type of RCS:** svn

**Directory Structure Guidance:**

/net/phoebus/asdctls/modules/... (all custom modules go here)

/net/phoebus/asdctls/fpgacode/... (all fpga code goes here)

**Path:** /net/oxygen/edp/aes\_med

**Type of RCS:** none

**Directory Structure Guidance:**

/net/oxygen/edp/aes\_med/<STAFF\_NAME> (each staff member has a directory for their use)

## 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 Title Block similar to ... Other?
Safety-Related Systems Work For Others	Use Design & Drafting Standard for all drawings associated with these projects
Other	Other

## 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
PC Layout	Orcad Layout
FPGA Programming	Altera Quartus, Xilinx ISE
PLC Programming	
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)

Examples:

- For component types, the Controls Group will continue to use the Model Name/Number currently assigned.
- For installed systems, the Controls Group will continue to use the AOI naming scheme.
- The RF Group will continue to use the drawing package naming convention described in APS\_1285936 as alias project #s.

## 7 Alias Drawing Naming/Numbering Convention (if any)

Example:

- The RF Group will continue to use the drawing numbering convention described in APS\_1285936 as alias drawing #s.

## 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).

Illustrated below (using indents) are two examples of group-specific menus.

GroupMenu1 would be all level1 items, with each level1 item generating a GroupMenu2 with level2 items.

Example 1:

- LINAC
  - L1
  - L2
  - L3
- PAR
- Booster
- SR
  - RF1
  - RF2
  - RF3
  - S36
  - S37
- SPX

Example 2:

- Application
  - LINAC
  - Booster
  - SR
- Component
  - Chassis
  - VME

Groups should give careful consideration to the definition of these menus to best organize their collections in an intuitive way.

## 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](http://centraldocs.aps.anl.gov/comment_form.php)