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PROCEDURE	Page 1 of 6
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Detectors (DET) Group Engineering Document Management Plan

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- Updated group-shared file systems information in Section 3

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PROCEDURE	Page 2 of 6
Procedure #:	3.1.141
Revision #:	1

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)	4
4	Document/Drawing Requirements.....	5
5	Software Tools	6
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

Detectors (DET) 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 DET 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. APS-U documents will be stored in accordance with policies and procedures established by APS-U management.

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

PROCEDURE	Page 4 of 6
Procedure #:	3.1.141
Revision #:	1

The left column of [Table 2](#) lists the types of documents generated by the DET 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			
MISSION CRITICAL: Machine Protection or Critical for Operation							
COST:							
Fabrication exceeds \$100K				X			
Fabrication exceeds \$10K	X						
Fabrication exceeds \$2K	X						
EXTERNAL USE: Subject to External Review Fabrication by external vendor Possible Use at Other Facilities	X			X			
Legacy drawings:	[1]						
Document/File Types							
AutoCAD	X				X		
Pro/E						X	
FPGA Code	X	X					
PLC Ladder Logic Source Code	X	X		X			
Software Source Code		X					
DEFAULT	X		X	X			

Additional Guidance:

[1] All legacy drawings are kept in the GSFS with their related project documents.

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

Group-shared files systems for DET:

Path: /net/oxygen/edp/xsd_det/

Type of RCS: none

Directory Structure Guidance:

/net/oxygen/edp/xsd_det/<STAFF_NAME> (each staff member has a directory for their use)

Software source code is kept in the RCS located at <https://subversion.xor.aps.anl.gov/detpool/>ProjectName, where ProjectName is a repository for a particular project.

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	BC #, date, and revision must be on the drawing Title Block similar to that used by the Controls Group (for new work)
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
PC Layout	Orcad Layout
FPGA Programming	Altera Quartus, Xilinx ISE
PLC Programming	Vendor-specific software
Mechanical Layouts (Front Panels, Chassis, etc)	AutoCAD, Visio, Vendor-specific software
Feature Sheet	Single page Word document with picture of product
Block Diagrams	Orcad, Visio, PowerPoint
Wiring Diagrams	Orcad, Visio, PowerPoint
Project Description	Wiki Page (https://wiki.aps.anl.gov/bts/index.php/Main_Page)

6 Alias Project Naming Convention (if any)

N/A

7 Alias Drawing Naming/Numbering Convention (if any)

N/A

8 Group-specific EDP Collection Browse Categories

N/A

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