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RF Group Engineering Document Management Plan

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Radio Frequency 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 Radio Frequency 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

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The left column of [Table 2](#) lists the types of documents generated by the Radio Frequency 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	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:	X						
Document/File Types							
AutoCAD Mechanical					X		
OrCad Capture	X	X					
OrCad PSpice AD	X	X					
FPGA Code		X					
PLC Ladder Logic Source Code, AB and AD			X	X			
Software Source Code		X					
Acrobat - pdf	X	X	X	X	X	X	
Ansys HFSS	X						
CST Microwave Studio	X						
Solidworks	X						
Microsoft Project	X						
LabView	X						
Schaeffer Front Panel Designer	X						
DEFAULT			X	X			

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

Path: /net/oxygen/pcfiles/pc/rfshare

Type of RCS: none

Directory Structure Guidance:

/net/oxygen/pcfiles/rfshare/drawings/STAFF_NAME> (each staff member has a directory for their use)

4 Document/Drawing Requirements

Criteria	Drawing Requirements
All Drawings	RF Group Alias Drawing # must be on drawing Title Block similar to that used in Design and Drafting See procedure 3.1.114 for details
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.

Software Tool	Uses
OrCad Capture	Schematic Capture, Block Diagrams, Basic Mechanical Layouts, Wiring Diagrams, Conceptual Drawings
OrCad PSpice AD	Electronic Circuit Simulation
Allen Bradley AI - V	PLC Programming
Automation Direct DSLaunch 5	PLC Programming
AutoCad Mechanical	Mechanical Layouts, Pictorials, Sign and Label Generation, Area Equipment Layouts, Conceptual Drawings
Acrobat Pro	Universally Viewable files from CAD/CAM software
Ansys HFSS	Small Segment Analysis
CST Microwave Studio	RF Structure Simulation
Solidworks	3D Mechanical Design
Microsoft Project	Task Planning and Scheduling
LabView	Dedicated Process Software Development
Schaeffer Front Panel Designer	Chassis Front Panel Development for Production

6 Alias Project Naming Convention (if any)

- 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 RF Group-specific EDP Collection Browse Categories

- 352 MHz Source
- 352 MHz Waveguide Switching / PSS
- LINAC
 - LLRF
 - HLRF
 - CAVITIES / ACCLERATING STRUCTURES and WAVEGUIDE
 - TEST STAND / L6
 - WAVEGUIDE SWITCHING

- PAR
 - FUNDAMENTAL
 - HARMONIC
- Booster Synchrotron
 - LLRF
 - HLRF
 - Waveguide
 - Interlocks
 - Cavities
- Storage Ring
 - LLRF
 - HLRF
 - Cavities
 - Interlocks
 - Waveguide Switching System / RF6
 - Test Stand / RFTS
- SPX
 - LLRF
 - HLRF
 - Cavity Systems
 - Test Stand
 - Cryogenics
 - Cryomodule
 - Equipment Interlocks
 - Personnel Safety System
 - Building 400A

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