**Title : Control System Functional Requirements specification**

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# Introduction

## Identification

This document outlines a plan for the control system upgrade for something.

## Purpose

In order to provide a more maintainable control system the following document outlines one plan for the upgrade of the existing control system.

## Scope

For the purposes of this document, the following scope restrictions apply:

* The steps outlined in this document provide a proposed upgrade to the control system.

## Document Overview

The purpose of this document is to specify the instrumentation and control system requirements for the systems in question.

Section 2 lists all other documents which are referenced from within this document.

Section 3 defines the components which have been established.

Section 4 defines the functional requirements which have been defined in order to provide the necessary operational capabilities.

Section 5 defines the non-functional requirements which have been defined in order to support the development and continued operations of the Control System.

# Referenced Documents

## APS Documents

The APS Conceptual design report

## DOE Documents

There are no relevant DOE documents identified.

## International Standards

There are no relevant international documents identified.

# Functional Requirements

All requirements in this document are labelled with a unique identifier of the form TLA nnn, where nnn is a number between 001 and 999.

In the following the word “shall” denotes requirements that are regarded as mandatory.

Once this document is approved and in the case where a requirement is deleted, the existing requirement numbering should not be changed. The deleted requirement should be marked “not required”.

## General System Requirements

### Design

TLA001 The instrumentation and control system shall function in a totally stand alone or isolated fashion; there shall be no external systems dependencies for operation

### Signals to be monitored

The following equipment shall be used to monitor signal

TLA002 AXYZ for assorted digital and analog signals

### Display Interfaces

TLA003 It shall be possible to view all variables from a single screen, or   
set of screens.

# Non-Functional Requirements

## System Internal Interface Requirements

### Integration Requirements

TLA004 Nothwithstanding xyz It shall be possible to interface the instrumentation and control system to the Controls systems used at the APS without modification; implicit in this requirement are;

TLA005 EPICS shall be used as appropriate; and

TLA006 APS naming conventions shall be observed.

### Testability

TLA007 This system is exempt from formally testing as it is a sample

### Useability

TLA008 The language to be used for all user interfaces, documentation and help facilities shall be US English.

# Glossary of terms and acronyms

Most acronyms and certain specific technical terms are detailed here; they may also be outlined in the text. Many common use acronyms, such as APS and RF are omitted:

**TLA** Three letter Acronym