

LANL Waste Characterization, Reduction, and Repackaging Facility DOE ORR 7/21

ENGINEERING (ENG)

OBJECTIVE

ENG.1: LANS has established and implemented an adequate Configuration Management (CM) program to develop and maintain consistency among system requirements and performance criteria, documentation, and physical configuration to ensure continued operational readiness of the systems identified by the BIO, TSRs, and SER for the WCRR. **(CRs 1, 2, 4, 5, 7, 9, 10)**

CRITERIA

1. An adequate CM process incorporating all safety systems identified in the WCRR BIO, TSRs, and SER has been developed and implemented. (10 CFR 830.122; DOE O 420.1B, DOE O 433.1A, WCRRF TSR 5.6.8)
2. WCRR documentation includes a formal listing of those systems, structures, and components that are within the scope of the Configuration Management Program, and that list conforms to safety basis documentation. (DOE O 420.1B)
3. Documentation, including system drawings, accurately reflects WCRR's as-built configuration such that operations and maintenance activities can be adequately planned and safely conducted. The design baseline documentation is up to date and consistent with all descriptions and assumptions in safety basis documentation. (DOE O 433.1; 10 CFR 830.122)
4. The Configuration Management process implemented at WCRR adequately controls sources for changes, including a formal modification procedure that includes adequate identification and implementation of procedure updates and training appropriate for proposed changes. (DOE O 433.1)
5. Configuration management processes associated with WCRR are adequately integrated with the Unreviewed Safety Question (USQ) process. (10 CFR 830.203)
6. Modification and change control packages associated with WCRR are closed with all actions completed, or have been specifically identified and adequately reviewed by management to ensure that nuclear operations can safely be started with those incomplete changes or actions. (DOE O 433.1)

APPROACH

Requirements:

- DOE O 420.1B, *Nuclear Facility Safety*
- 10 CFR 830, *Nuclear Safety Management*
- WCRRF BIO and TSRs

Document Review:

- WCRR CORR report of ENG Functional Area, including System and Design Engineering and USQ processes, and any Corrective Action documentation for issues identified.
- WCRR, LANL, and LANS Configuration Management program implementing policies and procedures
- Work Order and Design Change Packages for WCRR modifications installed or approved within the previous year
- USQ program policies and procedures, and any WCRR-related USQ program records completed or in progress for the previous year.
- WCRR Ventilation Engineering Review Report
- System and component technical documentation including SDDs, system drawings, and any operational and maintenance documents (including procedures) for SSCs identified as safety systems in the safety basis.
- Latest performed or credited In-Service Inspection program documentation and records, including approved procedures not yet executed.
- Documentation formally assigning CSEs to WCRR
- Documentation of assigned CSE qualifications, or in-progress qualification documentation if not yet completed.
- If any assigned CSEs are not fully qualified, documentation of any compensatory measures taken pending qualification
- Quality Assurance Plan specifying configuration management and design processes for WCRR
- Appropriate portions of the WCRR BIO, TSRs, and SER constituting the current safety basis
- WCRR Master Equipment List
- WCRR Maintenance Implementation Plan or equivalent (portions applicable to change control)

Interviews:

- WCRR Facility Manager
- Cognizant System Engineers for WCRR VSS
- Field engineers who support WCRR
- Individual responsible for coordinating USQs and/or safety basis changes
- Manager responsible for the Configuration Management process at WCRR
- Individual to whom Cognizant System Engineers report
- LANL Engineering Manager responsible for WCRR

Observations:

- Walkdown of WCRR design features

ENG.2

OBJECTIVE

ENG.2: System and Design Engineering programs have been established and implemented to support system configuration management, evaluation of system performance, and identification of system performance adverse trends. **(CRs 1, 2, 3, 4, 6, 7, and 10)**

CRITERIA

1. WCRR documentation includes a formal listing of those systems, structures, and components that are within the scope of the System Engineering program, and that list conforms to safety basis documentation. (DOE O 420.1B)

2. A qualified Cognizant System Engineer (CSE) has been formally assigned to systems, structures, and components (SSCs) identified in the safety basis. If the assigned CSE is not fully qualified, adequate compensatory measures have been formally implemented. (DOE O 420.1B)
3. The level of knowledge of CSEs concerning assigned systems, roles, and responsibilities for WCRRF operations is adequate. (DOE O 420.1B)
4. The change control process requires that the Cognizant System Engineer concur with proposed changes for assigned systems. (DOE O 420.1B)
5. Assigned Cognizant System Engineers routinely communicate and coordinate with operations and maintenance personnel regarding issues with assigned systems. (DOE O 420.1B)
6. Assigned Cognizant System Engineers routinely review maintenance, surveillance, and In-Service Inspection results for assigned systems to remain aware of system status and emerging trends, provide assistance in determining operability, assist with correcting out-of-specification conditions, evaluate questionable data, and provide or support analysis when the system is suspected of inoperability or degradation. (DOE O 420.1B)
7. Approved System Design Descriptions (SDDs) exist for systems, structures, and components within the scope of the System Engineer and Configuration Management Programs, contain information identified by DOE-STD-3024, and conform to as-built configuration and descriptions contained in safety basis documents. (DOE O 420.1B)
8. An adequate Engineering review of the facility ventilation system has been completed using appropriate DOE and industrial criteria and guidelines. Any identified deficiencies have been adequately resolved. (PMP/POA CR 6)

APPROACH

Requirement:

- DOE O 420.1B, *Facility Safety*

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- Documentation formally assigning CSEs to WCRR

- Documentation of assigned CSE qualifications or in-progress qualification documentation, if not yet completed.
- If any assigned CSEs are not fully qualified, documentation of any compensatory measures taken pending qualification
- Quality Assurance Plan specifying configuration management and design processes for WCRR
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- Manager responsible for the Configuration Management process at WCRRF
- Individual to whom Cognizant System Engineers report
- LANL Engineering Manager responsible for WCRRF

Observations:

- Walk down WCRRF design features