

Fuel Cycle Facility MM/QA During Construction

Fuel Facilities Construction Oversight Workshop – August 15, 2023

Regulations Relevant to Construction

New Facility Requirements

[70.64(a): “Requirements for new facilities or new processes at existing facilities”]

“Baseline design criteria. Each prospective applicant or licensee shall address the following baseline design criteria in the design of new facilities. Each existing licensee shall address the following baseline design criteria in the design of new processes at existing facilities that require a license amendment under § 70.72. The baseline design criteria must be applied to the design of new facilities and new processes, but do not require retrofits to existing facilities or existing processes (e.g., those housing or adjacent to the new process); however, all facilities and processes must comply with the performance requirements in § 70.61. Licensees shall maintain the application of these criteria unless the analysis performed pursuant to § 70.62(c) demonstrates that a given item is not relied on for safety or does not require adherence to the specified criteria.”

Regulations
Relevant
to
Construction

Quality Standards & Records

[70.64(a)(1): “Quality standards and records”]

“The design must be developed and implemented in accordance with management measures, to provide adequate assurance that items relied on for safety will be available and reliable to perform their function when needed. Appropriate records of these items must be maintained by or under the control of the licensee throughout the life of the facility.”

Regulations
Relevant
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Construction

Management Measures (MM)

[70.4: “Definitions”]

“Management measures mean the functions performed by the licensee, generally on a continuing basis, that are applied to items relied on for safety, to ensure the items are available and reliable to perform their functions when needed.”

Regulations
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Management Measures (MM)

[70.4: “Definitions”]

Include:

- Configuration Management
- Maintenance
- Training & Qualifications
- Procedures
- Audits & Assessments
- Incident Investigations
- Records Management
- Other QA Elements

Regulations
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Configuration Management (CM):

[70.4: “Definitions”]

“Configuration management means a management measure that provides oversight and control of design information, safety information, and records of modifications (both temporary and permanent) that might impact the ability of items relied on for safety to perform their functions when needed.”

Regulations
Relevant
to
Construction

Configuration Management (CM):

[70.72(a) "Facility changes and change process"]

"The licensee shall establish a configuration management system to evaluate, implement, and track each change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel. This system must be documented in written procedures and must assure that [70.72(a)(1)-(6)] are addressed prior to implementing any change"

Regulations
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Configuration Management (CM):

[70.72(e) “Facility changes and change process”]

"If a change covered by § 70.72 is made, the affected on-site documentation must be updated promptly."

[70.72(f) “Facility changes and change process”]

"The licensee shall maintain records of changes to its facility carried out under this section. These records must include a written evaluation that provides the bases for the determination that the changes do not require prior Commission approval under paragraph (c) or (d) of [70.72]. These records must be maintained until termination of the license."

MM
Inspection
Strategy
Overview

Three Phase MM Inspection Program

Inspections will be based on commitments in license application and may consist of:

- 1) MM Programmatic Inspection (Early)
- 2) In-Process Construction Inspections (Throughout)
- 3) Pre-Operational Testing (ORR as applicable)

MM Inspection Strategy Overview

MM Programmatic Inspection: Potential Focus Areas:

Evaluate the organizational structure and the licensee's or applicant's MM program for compliance with regulatory requirements and license/application commitments:

- 1) Review personnel qualifications/training (construction focus)
- 2) Determine if implementing procedures comply with commitments in license/application: configuration management, procurement, inspection, nonconformances, corrective actions, records, etc.

MM Inspection Strategy Overview

In-Process Construction MM Inspections

Potential Focus Areas:

- 1) Ensure that implementing procedures are being executed/controlled
- 2) Verify as-built configuration(s) accurately reflect design
- 3) Verify procurement documents have design & quality requirements
- 4) Assess licensee oversight of suppliers and contractors is adequate
- 5) Evaluate personnel training & qualifications
- 6) Verify specified/sufficient QC testing is being performed
- 7) Verify that required records are being generated and stored
- 8) Evaluate effective implementation of corrective action program

MM
Inspection
Strategy
Overview

Pre-Operational Testing Inspection (ORR)

Potential Focus Areas:

- 1) Evaluate the licensee's organizational structure and personnel qualifications (operations focus)
- 2) Evaluate personnel training and qualification program
- 3) Evaluate testing and maintenance program
- 4) Evaluate incident investigation program
- 5) Evaluate implementation of operational programs (criticality control, radiation protection, etc.)
- 6) Evaluate management measures implementation on IROFS
- 7) Assess licensee's overall compliance with license application

Questions?