
INSPECTION PROCEDURE 88201

INSPECTION OF MANAGEMENT MEASURES DURING CONSTRUCTION OF FUEL CYCLE FACILITIES

Effective Date: June 20, 2025

PROGRAM APPLICABILITY: IMC 2600, 2694

This procedure provides guidance for inspection of management measures activities associated with the construction of new fuel cycle facilities (FCFs), other than plutonium processing facilities, and modifications to existing FCFs, as applicable.

88201-01 INSPECTION OBJECTIVES

- 01.01 To determine if an applicant or licensee has established management measures in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 70.62(d), or as required by the license, to ensure compliance with the performance requirements of 10 CFR 70.61.
- 01.02 To determine if the design has been developed and implemented in accordance with management measures, as required by 10 CFR 70.64(a)(1), to provide adequate assurance that items relied-on for safety (IROFS) will be available and reliable to perform their function when needed.
- 01.03 To determine if an applicant or licensee has effectively implemented management measures, as required by the license, for the design, procurement, fabrication, installation, construction, maintenance, and testing, as applicable, of IROFS.
- 01.04 To determine if an applicant or licensee has effectively implemented a corrective action program (CAP), if applicable, during construction activities.

88201-02 INSPECTION REQUIREMENTS

This inspection procedure (IP) is intended to provide inspection requirements and guidance applicable to a wide variety of potential construction projects at both existing and new FCFs. These projects may vary greatly in scope, complexity, and risk to public health and safety. As a result, not all appendices or sections of each appendix of this IP may be applicable or implemented at a specific facility. Recommended inspection scope and hours for a specific new FCF will be documented in the principal inspection plan (PIP) for that facility developed in accordance with Inspection Manual Chapter (IMC) 2694, "Fuel Cycle Facility Construction and Pre-Operational Readiness Review Inspection Program." Additionally, this IP can be used to provide additional management measures inspection guidance for plant modification inspections at existing facilities but is not required to be implemented for these projects. Use of this IP or sections of this IP for modifications at existing FCFs, would be done on a case-by-case basis, in accordance with IMC 2600, Appendix B, "NRC Core Inspection Requirements."

This IP applies to FCFs licensed under 10 CFR Part 40 and Part 70, other than plutonium processing facilities. The specific licensing basis and commitments between facilities vary. As a result, all sections of this IP may not be applicable to a specific facility. Likewise, the terminology used in some sections of this IP may not be entirely consistent with that used in the licensing basis of a specific facility. This IP does not establish new requirements for any facility but must be applied in harmony with the licensing basis of that facility. In using this IP, inspectors should correlate the specific sections and terminology used with that defined in the licensing basis of the facility being reviewed. For example, the term, “IROFS” as used in this IP may be considered to refer to similar safety features or credited controls for 10 CFR Part 40 licensees.

02.01 General Inspection Requirements

a. Requirements for Performance of Inspections

The inspection will be performed in accordance with the inspection plan. Unexpected events subsequent to approval of the inspection plan, for example, a delay in construction materials delivery or change in inspection dates, may result in changes to the inspection when conducted.

b. Requirements for the Inspection of Management Measures Implementing Documents

1. Verify that the applicant’s or licensee’s management measures implementing documents demonstrate compliance with the applicant’s or licensee’s integrated safety analysis (ISA) summary. Select the appropriate appendix or appendices to this IP that address the ISA requirements that have been assigned in the inspection plan. Use the sections of the appendix or appendices that address the inspection of the management measures implementing documents. Where the applicant or licensee has delegated portion(s) of their management measures implementation to other organization(s) working on behalf of the applicant or licensee (as an agent of the applicant or licensee), the inspector(s) should also review the applicable management measures implementing documents for those organizations.
2. Perform the inspection by conducting interviews, reviewing ongoing work activities, and/or examining management measures implementing documents and associated records. Inspections should be performed in accordance with the schedule illustrated in Exhibit 1.

c. Requirements for the Inspection of Management Measures Implementation

Verify that the applicant’s or licensee’s management measures have been adequately implemented by the responsible organization(s), in accordance with regulatory requirements. Perform the inspection by using direct observations, conducting interviews, and/or examining records. Although examination of completed records is essential to a thorough inspection, the focus of these inspections should be on real-time observation of construction activities, including in-process records documenting effective application of management measures to IROFS. Inspector judgment should be exercised to focus on those activities that have the highest importance to safety. Inspections should be performed in accordance with the schedule illustrated in Exhibit 1.

d. Requirements for Inspection Reporting

An inspection report and any findings will be prepared, approved, and released in accordance with IMC 0616, "Fuel Cycle Safety and Safeguards Inspection Reports."

88201-03 INSPECTION GUIDANCE

Background

- a. In accordance with 10 CFR 70.62(d), each applicant or licensee must establish management measures to ensure compliance with the performance requirements of 10 CFR 70.61.
- b. As defined in 10 CFR 70.4, "Definitions," management measures mean the function performed by the licensee, generally on a continuing basis, that are applied to the IROFS, to ensure the items are available and reliable to perform their functions when needed. Management measures include configuration management, maintenance, training and qualifications, procedures, audits and assessments, incident investigations, records management, and other quality assurance (QA) elements.
- c. Management measures are activities that are applied to IROFS to provide reasonable assurance that items will be available and reliable to perform their intended safety function when needed to prevent accidents or mitigate the consequences of accidents to an acceptable level. Reasonable assurance is established by considering factors such as necessary maintenance, operating limits, common-cause failures, and the likelihood and consequences of failure or degradation of the IROFS and the measures.
- d. The degree to which management measures are applied may be a function of the item's importance in meeting the performance requirements. Criteria for determining the degree to which measures are applied may include the following: function or end use of the IROFS; consequence of failure of the IROFS to public health and safety or worker protection; reliability of the IROFS; complexity of the design or fabrication of the IROFS; uniqueness of the item, and/or history of supply and performance. The application of a "graded" program for management measures should not result in either intended or effective changes to the design, configuration, or technical requirements of IROFS that would result in a loss of confidence that the IROFS' designated safety function would be performed.

03.01 General Guidance

- a. Title 10 CFR Part 70 establishes procedures and criteria for the issuance of licenses to receive title to, own, acquire, deliver, receive, possess, use, and transfer Special Nuclear Material. Clearly, these regulations cover a broad scope of facilities with a corresponding wide range in risk to public health and safety. As a result, it is anticipated that IROFS, management measures, and the degree to which management measures are applied to IROFS will vary between facilities depending on the nature of a specific facility and the type and number of safety significant items (and services) at that facility. Likewise, the corresponding level of inspection required at a specific facility will vary between facilities. Given these facts, not all appendices or portions of each appendix of this IP may be applicable or implemented at a specific facility. The applicable appendices, specific samples, number of samples, and the number, scope and frequency of inspections

required to complete an appendix of this IP will be determined based on the risk posed to public health and safety by a specific facility considering the unique characteristics of that facility. These criteria should be established during the overall inspection planning for the facility. Once established, these criteria will be documented in a facility-specific inspection plan. For new facilities under construction, the facility-specific inspection plan will be the PIP developed in accordance with IMC 2694, Appendix C. As construction proceeds, the facility-specific inspection plan should be periodically reviewed for efficacy and revised as necessary. Inspection team leads should consult the facility-specific inspection plan during planning for inspections using the guidance in this IP. Again, not all appendices or portions of each appendix of this IP may be applicable or implemented at a specific facility. It is anticipated, however, that inspection of management measures at most facilities will entail review of both implementing documents and the application of management measures to IROFS. For new facilities under construction, application of some management measures (i.e., maintenance, incident investigations) to IROFS may be limited. Exhibit 1, "Inspection Frequency for IP 88201 Appendices," provides general guidance for inspecting both the program documents and implementation for each of the appendices. Additional guidance is provided below.

- b. The management measures applied at a facility may include QA elements which are similar to those required by QA program standards, such as ASME NQA-1, ANSI/ANS 15.8, or the ISO 9000 family of standards. Title 10 CFR Part 70, however, does not require implementation of a formal QA program meeting 10 CFR 50, Appendix B, or any other QA standard. Regardless, the applicant or licensee of a facility may for other reasons commit in whole or in part to a specific QA program standard. If so, the corresponding QA program may or may not be part of the management measures applied to IROFS. In these cases, the inspector should carefully review the facility ISA and determine the relationship between the management measures applied to IROFS and the QA program. Appendix H of the IP, however, is applicable to any management measures that are applied to IROFS and within its' scope, regardless of whether they are implemented as part of a formal QA program.
- c. Inspection of the QA program will likely be required for any facilities at which the management measures applied to IROFS include commitment to a QA program standard. Appendix H of this IP is applicable at these facilities as well. Contained within Appendix H are requirements and guidance for inspecting the applicable portions of the QA program and its implementation. The requirements and guidance for inspecting each of the 18 criteria listed in 10 CFR 50, Appendix B, are contained within Appendix H of this IP. The requirements and guidance provided in Appendix H may also be tailored to facilities that commit to another QA program standard. Use of this IP in this manner is at the discretion of management.
- d. As described above, Appendix H of this IP has a dual purpose: inspection of any management measures which fall within its' scope and inspection of QA programs that are adopted, in whole or in part, as management measures. Given this dual purpose, Appendix H is somewhat unique compared to Appendices A-G. Representative sample sizes are provided in Appendix H for guidance only. These sample sizes are consistent with those suggested for evaluating QA programs in accordance with IP 69021, "Inspections of Quality Assurance Program Implementation During Construction of Non-Power Production and Utilization Facilities."

- e. NRC regulations or licenses generally require fuel cycle licensees to implement some CAP elements for certain aspects of their licensed activities. These elements include the identification and implementation of corrective actions for failures associated with IROFS or management measures, audit and assessment findings, and incident investigation results. Some fuel cycle applicants or licensees may voluntarily implement CAPs that go beyond the scope of NRC requirements. Section 2.3.2 of the NRC Enforcement Policy permits NRC-identified Severity Level IV violations to be dispositioned as non-cited violations if the NRC finds that the licensee has implemented an adequate CAP, and that the Section 2.3.2.a criteria are met. Licensees may choose to develop and implement CAPs for the purpose of applying Section 2.3.2 of the NRC Enforcement Policy. For the NRC to make the determination that a CAP is adequate, the licensee needs to demonstrate that it has an acceptable CAP and the NRC must determine (through inspection) that the CAP is effective as described in Regulatory Guide (RG) 3.75, "Corrective Action Programs for Fuel Cycle Facilities."

03.02 Construction Inspection Specific Guidance

- a. The purpose of these inspection activities is to determine if the applicant or licensee has established and is effectively applying management measures to IROFS during construction to provide reasonable assurance that the IROFS will be available and reliable to perform their intended function if needed during operation of the facility. It is anticipated that inspection activities may include:
 - 1. examining samples of documents specifying the management measures to be applied to the organization, design, procurement, fabrication, installation, construction, and testing, as applicable, of IROFS to verify if adequate management measures have been established for safety significant work activities;
 - 2. direct observation of in-process construction-related activities associated with IROFS such as fabrication, qualification, assembly, installation, inspection, examination, storage, and testing to determine if applicable management measures are being applied to the activity;
 - 3. review of construction-related records associated with IROFS documenting as-built construction to determine if applicable management measures were effectively applied to the activity.
- b. As indicated in Exhibit 1, it is recommended that an initial inspection be conducted to review the management measures implementing documents within the first 6 months after construction has begun. During this initial inspection, if sufficient activities have been conducted or are in progress, an inspection of the implementation of the management measures could be conducted in specific areas. Any samples completed during the initial inspection can be credited toward the total sampling requirements for the applicable appendix as established in the PIP. After the initial inspection, periodic inspections of the effective application of management measures will be performed in conjunction with the inspection of the construction of safety significant items (and services) in accordance with IP 88200.
- c. Gather pertinent information, review the facility specific inspection plan, and discuss inspection planning and scheduling issues with the appropriate Region II Project Inspector, for example:

1. importance/prioritization of activities
 2. concurrent inspections to be conducted using other IPs
 3. status of previous NRC findings
 4. applicant or licensee responses to applicable Bulletins, Circulars, and Information Notices sent to licensee
 5. 10 CFR Part 21 reporting by licensee, as applicable
- d. Contact the applicant or licensee for information needed to prepare the inspection plan, for example:
1. status of construction activities (used to focus inspection and determine required sampling during inspection)
 2. identification of individuals assigned key positions and functions described by the licensee's management measures
 3. availability of applicant or licensee personnel during the period tentatively scheduled for the inspection
 4. changes to the applicant's or licensee's management measures since the previous NRC inspection (e.g., management measures policy, management measures personnel, management measures description, implementing documents)
- e. Utilizing the information gathered in c and d above, determine which activities will be inspected, and develop the inspection plan accordingly. Select and use the appropriate appendix or appendices to this IP that address ISA requirements that are relevant to the activities to be inspected to further develop specific inspection tasks.
- f. During the inspection, the inspector should be asking: What documented process is used for this activity? (This may already be determined during the planning process.) Is there documented, objective evidence for completion of the activity? For example, if the inspector is responsible for inspection of welding activities, then the inspector will use the main body of this IP and Appendix J as the primary tools to conduct the inspection.

The inspector would then perform the following to verify that the applicant's or licensee's management measures have been implemented effectively in accordance with documented instructions consistent with its' ISA.

1. Determine what implementing documents were used by the applicant or licensee to conduct the activity.
2. Observe the activity being performed, if possible, to see that it is conducted in accordance with the applicable implementing documents.
3. Review training and qualification records of individuals performing safety significant work, if applicable.
4. Examine the associated records for that activity (it is expected that aspects of other appendices will be applicable during the inspection because several appendices may apply to each construction activity).

- g. To maximize efficiency in the inspection program, implementation of this IP should be coordinated with IP 88200, "Inspection of Safety Significant Items (and Services) During Construction of Fuel Cycle Facilities." During inspection of structures, systems, and components (SSCs), the inspector should focus on the review and observation of a variety of safety-significant construction activities associated with IROFS, if available, and use those activities as the starting point for the inspection sample. If the inspector observes the installation of a component, the inspector should consider reviewing the fabrication, procurement, receipt inspection, and qualification and certification records for the item and verify the upstream records are traceable to the item. Furthermore, the inspector should consider reviewing the training and qualification records for the construction, inspection, and test personnel associated with the item's inspection and installation in the plant. The inspector could review the associated design documents for that item and verify that the as-built condition of the SSC is consistent with the original design, and that any design changes were properly controlled. The inspector should also consider reviewing any associated nonconformance reports or other corrective action records associated with the activity. This scope of review is not necessary for every inspection but is included here to illustrate that many sections of this procedure can be accomplished for almost any safety-significant construction activity. The inspections of these items should be reviewed against the applicant's or licensee's ISA.

88201-04 RESOURCE ESTIMATE

The resource estimate for conducting management measures inspections during construction and operational readiness review (ORR) is approximately 144–360¹ hours² of direct inspection effort over the duration of the project. This is based upon 72–180 hours of review of the applicable management measures related to construction by a two-to-four-person team for 1 or 2 weeks during the early stages of construction, plus 72–180 hours of review of the management measures program by a two-to-four-person team for 1 or 2 weeks during the ORR which will focus on operations. Implementation of applicable management measures will also be inspected during construction as part of the IP 88200 inspections. These hours will be accounted for in the IP 88200 estimate. Aspects of the project that will influence the estimate are factors such as complexity, scale, and whether the licensee has a Part 50 Appendix B compliant program.

The resource estimate for conducting inspections of construction activities prior to issuance of a license depends on the amount of such activities occurring before a license is issued. However, the resource estimate for conducting pre-license inspections should not exceed approximately 100 hours of direct inspection. Licensees may have contractors acting as their agents but using separate management measures programs. For this circumstance, additional inspection resources may be necessary to review additional management measures programs.

¹ The estimated hours assumes that a resident inspector is not needed for construction or operation of the facility. Each new facility will be assessed using a risk-informed approach to determine if a resident inspector is needed. If a resident inspector is needed, the estimate will be updated.

² Hours are an estimate; staff will continually assess the hours expended on each construction project and adjust the estimate based on operating experience and complexity of the project.

88201-05 PROCEDURE COMPLETION

Procedure completion is dependent on the specific facility and will be as determined in the PIP for the facility.

88201-06 REFERENCES

Note: Additional references specific to Appendix A through Appendix H are included in the Reference section of that appendix.

10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants"

10 CFR Part 21, "Reporting of Defects and Noncompliance"

10 CFR 70.22, "Contents of applications"

10 CFR 70.62, "Safety program and integrated safety analysis"

IP 69021, "Inspections of Quality Assurance Program Implementation During Construction of Non-Power Production and Utilization Facilities"

RG 3.75, "Corrective Action Programs for Fuel Cycle Facilities," dated July 2014

END

List of Appendices:

- A: Configuration Management (CM)
- B: Maintenance
- C: Training and Qualification
- D: Procedures
- E: Audits and Assessments
- F: Incident Investigations
- G: Records Management
- H: Other Quality Assurance (QA) Elements

List of Exhibits:

- 1: Inspection Frequency for IP Appendices

List of Attachments:

- Attachment 1: Revision History for IP 88201

END

Exhibit 1: Inspection Frequency for IP 88201 Appendices

Initial Team Inspection (Management Measures Implementing Documents):

It is recommended that an initial inspection be conducted to review the management measures implementing documents within the first 6 months after construction has begun. This inspection should cover management measures implementing document requirements for all applicable appendices to this IP. During this initial inspection, if sufficient activities have been conducted or are in progress, an inspection of the implementation of management measures could be conducted in specific areas. Any samples completed during the initial inspection can be credited toward the total sampling requirements for the applicable appendix.

Management Measures Program Implementation Follow-up Inspections:

After the initial inspection, effective implementation of management measures to specific construction activities will be periodically evaluated as part of the inspection of construction of safety-significant items (and services) in accordance with IP 88200. The goal is to cover all applicable management measures implementation guidance described in the appendices to this IP during the first year of construction, however this might not be practical based on the type and amount of construction activities completed during the first year (e.g., no unusual events may have occurred to complete the management measures Implementation inspections described in Appendix F).

Attachment 1: Revision History for IP 88201

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
	ML25010A406 06/20/25 CN 25-018	Initial issuance. IP 88201 revision includes eight appendices on an individual MMs based upon NUREG 1520, including: configuration management, maintenance, training and qualification, procedures, audits and assessments, incident investigations, records management, and other quality assurance elements (1-18) (as applicable).	N/A	N/A