NRC INSPECTION MANUAL

NMSS/FCSS

MANUAL CHAPTER 1247

QUALIFICATION PROGRAM FOR FUEL FACILITY INSPECTORS IN THE NUCLEAR MATERIAL SAFETY AND SAFEGUARDS PROGRAM AREA

Table of Contents

1247-01 PURPOSE 1
1247-02 OBJECTIVES 1
1247-03 DEFINITIONS 1
03.01 Basic Inspector Certification 1
03.02 Basic-Level Training and Qualification 1
03.03 Category 1
03.04 Competency 2
03.05 Continuing Training 2
03.06 Deviation 2
03.07 Equivalency Examination 2
03.08 Equivalent Experience 2
03.09 Full Inspector Qualification 2
03.10 Study Guide Training (SG) 2
03.11 Initial Training and Qualification 2
03.12 Inspector 2
03.13 Inspector Qualification Board 3
03.14 Interim Inspector Qualification 3
03.15 Licensee 3
03.16 On-the-job Training (OJT) 3
03.17 Post-Qualification Training 3
03.18 Proficiency-Level Training and Qualification 3
03.19 Qualification Journal 3
03.20 Refresher Training 3
03.21 Specialized and Advanced Training 4
1247-04 RESPONSIBILITIES AND AUTHORITIES 4
04.01 Associate Director for Training and Development, Office of Human Resources 4
04.02 Director, Office of Nuclear Materials Safety and Safeguards 4
04.03 Director, Office of Nuclear Security and Incident Response (NSIR) 4
04.04 Regional Administrator 4
04.05 Directors, NMSS, NSIR, and Regional Divisions 4
04.06 Chiefs, NMSS Program Branches 5
04.07 Immediate Supervisor of Qualifying Individuals 5
1247-05 REQUIREMENTS 5
05.01 Training and Qualification Requirements 5
05.02 Alternate Methods for Meeting a Program Requirement 6
05.03 Final Qualification Activity 7
05.04 Maintaining Qualification 8
05.05 Special Circumstances 8
05.06 Other Administrative Requirements 9
05.07 Deviations 9
1247-06 POST-QUALIFICATION TRAINING 10
06.01 Refresher Training. Activities 10
06.02 Continuing Training 10
1247-07 MONITORING PROGRAM EFFECTIVENESS 11
1247-08 PROGRAM REVISIONS 11

Attachment 1: General Overview of the Fuel Facility Inspector Training and Qualification Program Att1-1
Attachment 2: Inspector Competencies Att2-1
Attachment 3: Fuel Facility Inspector Qualification Requirements for Inspectors Previously Qualified Under IMC 1245, IMC 1246, or IMC 1252 ..... Att3-1
Attachment 4: Revision History Att4-1

Appendix A, Basic-Level Training and Certification Journal
Appendix B, General Proficiency-Level Training and Qualification Journal
Appendix C, Technical Proficiency-Level Training and Qualification Journals
C1, Fuel Facility Operations Inspector Technical Proficiency Training and Qualification Journal
C2, Fuel Facility Health Physics Inspector Technical Proficiency Training and Qualification Journal
C3, Fuel Facility Emergency Preparedness Inspector Technical Proficiency Training and Qualification Journal
C4, (Reserved) Fuel Facility Security Inspector Technical Proficiency Qualification Journal
C5, Fuel Facility Material Control and Accounting Technical Proficiency Training and Qualification Journal
C6, Fuel Facility Criticality Safety Technical Proficiency Training and Qualification Journal
Appendix D, Advanced and Specialized Training Courses and Qualification Programs
D1, Information Security Inspector Specialized Qualification Program Training and Qualification Journal .....

1247-01 PURPOSE

01.01 To define initial training and qualification requirements for U.S. Nuclear Regulatory Commission (NRC) staff performing inspections of fuel facilities, in the Nuclear Material Safety and Safeguards (NMSS) program area.

01.02 To define training and qualification requirements for NRC staff that have previously qualified as inspectors using Inspection Manual Chapter (IMC) 1245, IMC 1246, or IMC 1252 and who will be performing fuel facility inspections in the NMSS program area.

01.03 To establish the requirements for completing refresher and continuing training for updating and maintaining qualification.

01.04 To establish the requirement and define the process for evaluating the effectiveness of the inspector training and qualification process.

1247-02 OBJECTIVES

02.01 To define the qualification program for fuel facility operations, health physics, emergency preparedness, security, material control and accounting, and criticality safety.

02.02 To ensure that the NRC staff has the necessary knowledge and skill to successfully implement NMSS fuel facility inspection programs.

02.03 To ensure that the inspector training and qualification program remains effective in preparing inspectors to implement the inspection program.

1247-03 DEFINITIONS

03.01 Basic Inspector Certification. A certification made by the individual's supervisor which signifies that the individual has successfully completed all basic level inspector training and qualification activities. Achieving Basic Inspector Certification allows an individual to perform limited scope inspection activities. Inspection activities will be specifically assigned and are to be performed with an appropriate degree of detailed supervision.

03.02 Basic-Level Training and Qualification. The activities designed to provide newly hired staff with an awareness of basic information related to the Agency, the role of the inspector, and the technology being regulated, and to provide a context for the development of proficiency as an inspector. Successful completion of Basic-Level Training leads to Basic Inspector Certification.

03.03 Category. An area or class of activity for which a license may be issued (such as medical, academic, irradiators, well logging, etc.).

03.04 Competency. The group of related knowledge, skills and abilities describing the characteristics needed to perform successfully as an inspector.

03.05 Continuing Training. Activities designed to build on what a trainee learned in initial training by:

a. Providing more in-depth knowledge in areas that are covered in initial training.

b. Addressing changes to the programs and processes that affect how NRC staff conducts job related activities.

c. Providing lessons learned from recent industry and agency activities.

03.06 Deviation. The determination by management, based on an assessment of prior inspection experience and training, that an individual can perform fuel facility inspections without having completed the full formal fuel facility inspector qualification process.

03.07 Equivalency Examination. An examination administered through the training organization or its contractors, in lieu of specific course attendance.

03.08 Equivalent Experience (Previous Experience). Credit for course requirements, Study Guide (SG) training, or On-the-job training (OJT) may be granted based on equivalent experience or previous training as documented on the appropriate equivalency justification form.

03.09 Full Inspector Qualification. A certification by the Regional Administrator or Office Director, the basis of which is a recommendation by the Inspector Qualification Board. Full Inspector Qualification indicates that the individual has completed all Basic-Level and Proficiency-Level inspector training and qualification activities. Achieving Full Inspector Qualification allows an individual to be assigned the full scope of inspection-related activities to be independently performed with routine oversight and supervision.

03.10 Study Guide Training (SG). A training method that uses personal study activities involving review of SG resource information and staff interviews to develop the required job-related knowledge and skills.

03.11 Initial Training and Qualification. The complete set of training activities (individual-study, classroom, and on-the-job training) that covers the knowledge, skills, and abilities needed to successfully achieve Full Inspector Qualification.

03.12 Inspector. An individual who conducts on-site activities including individual or team inspections, audits, or reviews.

03.13 Inspector Qualification Board. A board, consisting of management and inspection staff, established to assess the qualifications of an individual to independently perform the prescribed NMSS inspections.

03.14 Interim Inspector Qualification. A certification by the Regional Administrator or Office Director, the basis of which is a recommendation by the Inspector Qualification Board. Interim Inspector Qualification indicates that the inspector has completed Basic-level and most Proficiency-Level inspector training and qualification requirements. Interim Inspector Qualification may be granted when some required training courses are not offered, and no equivalent courses are available. A limited Interim Qualification can also be granted when proficiency has been completed in some but not all of the study guide training related to inspection procedures. A determination must be made that the inspector will be able to conduct inspections without an adverse impact to inspection quality. Achieving Interim Inspector Qualification allows an inspector to be assigned to any and all procedures that the inspector is proficient in, up to the full scope of inspection-related activities, to be performed independently with routine oversight and supervision. Interim Inspector qualification is granted on a case-by-case basis.

03.15 Licensee. The entity which has been licensed by the NRC to operate a fuel cycle facility (a nuclear fuel fabrication or assembly facility, a uranium enrichment plant or a uranium conversion plant). "Licensee" shall read as certificate holder, for a facility certified under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70 or 76.

03.16 On-the-job Training (OJT). A training method that uses structured hands-on activities to develop the required job-related knowledge and skills.

03.17 Post-Qualification Training. Training received after qualification to supplement or enhance the professional development of NRC staff. (See also Refresher Training and Continuing Training.)

03.18 Proficiency-Level Training and Qualification. The activities designed to develop the technical knowledge and interpersonal skills of inspectors already qualified at the Basic-Level. Successful completion of the Proficiency-Level Training and Qualification activities leads to Full Inspector Qualification.

03.19 Qualification Journal. The Qualification Journal is the document listing the requirements for achieving qualification and containing the documentation of successful completion of the individual-study requirements, formal classroom instruction, and on-the-job training.

03.20 Refresher Training. Activities designed to maintain the overall level of performance by:

a. Re-addressing some knowledge, skills and abilities (KSAs) presented in initial training, particularly those that are related to important tasks that are hard to do and infrequently performed.

b. Providing training in areas where individual or program performance has been identified as needing improvement.

03.21 Specialized and Advanced Training. Technical training which increases the depth of an individual's knowledge in a specific area. Specialized and advanced training can be completed after completing the inspector qualification requirements or concurrent with other Proficiency-Level training. However, unless specifically identified in the proficiency-level training for the inspector classification, specialized and advanced training are not required for Full Inspector Qualification. (Examples include: heating, ventilation and air conditioning (HVAC), Internal Dosimetry, etc.)

1247-04 RESPONSIBILITIES AND AUTHORITIES

04.01 Associate Director for Training and Development, Office of Human Resources (HR). Administers and implements the formal training programs for NMSS as identified in this manual chapter. Assesses training course effectiveness and identifies areas where the course content needs to be revised.

04.02 Director, Office of Nuclear Materials Safety and Safeguards (or designee). Ensures that the NMSS staff achieves and maintains qualifications in accordance with the guidelines in this manual chapter. Establishes the training qualification requirements for staff that perform inspection activities for which NMSS is responsible. Certifies the NMSS headquarters staff who qualify under this manual chapter. Approves Deviation Requests.

04.03 Director, Office of Nuclear Security and Incident Response (NSIR) (or designee). Ensures that the NSIR staff achieves and maintains qualifications in accordance with the guidelines in this manual chapter. Establishes the training qualification requirements contained in Appendix C4, Fuel Facility Security Inspector Technical Proficiency Qualification Journal. Certifies the NSIR headquarters staff who qualify under this manual chapter.

04.04 Regional Administrator. Ensures that the regional staff achieves and maintains qualifications in accordance with the guidelines in this Manual chapter. Develops procedures for implementing this manual chapter for regional staff. Certifies the regional staff who qualify under this manual chapter.

04.05 Directors, NMSS, NSIR, and Regional Divisions. Approves the use of and accepts the justification for using an alternate method for meeting qualification program requirements. Assists the Office of Human Resources in developing, monitoring, and reviewing formal training courses for qualification programs.

04.06 Chiefs, NMSS Program Branches. Develop and maintain, in conjunction with the Associate Director for Training and Development (ADTD) of HR, the regions, and headquarters staff, the Qualification Journals listed in Appendices A through C of this chapter. Evaluate proposed changes to the NMSS programs for impacts on training. Periodically review and assess the effectiveness of staff in implementing NMSS programs to identify refresher and continuing training topics. Assess the inspector training and qualification program effectiveness and identifies areas where the program needs to be revised.

04.07 Immediate Supervisor of Qualifying Individuals. Assigns fully qualified individuals to work with trainees during the qualification process. Ensures that qualifying individuals have successfully completed the basic level requirements. Requests deviations, as appropriate, from the Program Office. Certifies that the individual is qualified to the Basic Level. Assesses the ability of the qualifying individual and provides appropriate levels of detailed supervision based on the individual's level of proficiency. At the Proficiency Level, ensures an individual's readiness to independently perform job responsibilities. Recommends each qualifying individual assigned to them as prepared for review by the Inspector Qualification Board.

1247-05 REQUIREMENTS

Staff implementing NMSS and NSIR programs must understand the facilities, equipment, processes, and activities of those programs, as well as the criteria, techniques, and mechanics of implementing the programs. The qualification process is intended to provide staff with sufficient information to perform program activities that are technically correct and in accordance with NRC regulations, policies, and procedures.

a. Attachment 1, "General Overview of the Fuel Facility Inspector Training and Qualification Program," is a complete description of the program for qualifying inspectors.

b. Attachment 2, "Inspector Competencies," lists the competencies which serve as the basis for the inspector qualification requirements.

c. Attachment 3, "Fuel Facility Inspector Qualification Requirements for Inspectors Previously Qualified Under IMC 1245, IMC 1246, or IMC 1252" provides the training requirements and necessary documentation that will constitute completion of the Fuel Facility Inspector qualification for those inspectors previously qualified under IMC 1245 or IMC 1252. Inspectors previously qualified under IMC 1246 need not re-qualify under IMC 1247 unless qualifying for a new specialty inspection category. Equivalent experience guidance in Section 03.09 above applies.

05.01 Training and Qualification Requirements.
Fuel facility inspector training and qualification requirements are described in Appendices A, B, C, and D of this manual chapter. Staff assigned to perform inspections in NMSS program areas must successfully complete all training activities and qualification requirements listed in

Appendix A and Appendix B as well as at least one specialty inspection category listed in Appendix C. The inspector must complete all study guides and requirements of the applicable qualification program within 24 months. Individuals in the Nuclear Safety Professional Development Program (NSPDP) may be granted a 3-month extension by their division directors. Justification for the extension must be documented and recorded in the individual's training record. Other specialty inspection categories in Appendix C may be completed with concurrence from the immediate supervisor. A qualification board is not required for subsequent specialty certifications once the immediate supervisor has verified the inspector's competency. Qualified inspectors (fuel, reactors, security, etc.) may qualify to be an Information Security Inspector in accordance with the criteria defied in Appendix D1, Information Security Inspector Specialized Qualification Program Training and Qualification Journal.

05.02 Alternate Methods for Meeting a Program Requirement. All staff must successfully meet all of the training and qualification program requirements. However, previous work experience and training may be accepted as evidence that an individual already possesses the required knowledge or skills normally achieved by completing parts of the program.

a. Previous Experience. The individual's Division Director has the authority to accept previous experience and training as an alternate method for meeting the requirements contained in this Manual chapter. Justification for accepting previous experience and training to meet program requirements must be documented and recorded in the individual's training record. Forms for documenting the equivalency justification are located in each qualification journal.

b. Appropriate Knowledge Level. The individual's Division Director may request that the individual demonstrate the appropriate level of knowledge or skill by successfully completing an equivalency examination. Requests for equivalency examinations should be made by the individual's supervisor to the ADTD, HR.

c. Individuals Qualifying or Qualified in Other Areas. Individuals who are in the process of qualifying as an inspector under IMC1245, IMC 1246, or IMC1252 may also qualify as a Fuel Facility inspector. In such cases, previous equivalent training requirements that are common to the two programs need not be repeated and credit for similar training will be indicated in the fuel facility inspector qualification journal. Individuals who have previously qualified as an inspector under IMC1245 or IMC1252 may also qualify as a fuel facility inspector. Completion of the SGs and course requirements identified in the signature sheet shown in Attachment 3 of this IMC, will constitute completion of the fuel facility inspector qualification requirements for those individuals who are already qualified inspectors. Individuals qualified under IMC1247 or IMC1246 may qualify in a different technical proficiency area under IMC1247. In such cases, the inspector must complete the required training under the technical proficiency qualification journal. A fully qualified inspector is not required to complete an inspector qualification board. Completion of the Attachment 3 requirements will be certified by the appropriate NMSS or NSIR Branch Chief or the Director, Division of Fuel Facility Inspection, Region II. Individuals who have previously qualified under IMC1246 are not required to re-qualify under IMC 1247.

05.03 Final Qualification Activity.

a. Inspector Qualification Board. The inspector qualification board is used to evaluate how well an individual can integrate and apply inspector competencies to field situations. Upon completion of all requirements identified in the Inspector Qualification Journals, an inspector qualification board will be conducted to confirm the individual has the necessary KSAs to independently conduct the prescribed NRC inspections. The list of KSAs to be assessed by the board is contained in Attachment 2, "Inspector Competencies."

b. Members. A qualification board will consist of at least three members. Each board will contain a manager at the branch chief level or above. The board chairman shall be at least at the branch chief level but cannot be the individual's immediate supervisor. Although the focus of the qualification board is not on technical issues, at least one board member must be knowledgeable or qualified in the technical proficiency area for which the individual is seeking qualification. Whenever practical, the immediate supervisor of the individual seeking qualification should observe the board, if the supervisor is not a member of the board.

c. Board Conduct.

1. The board members and the board chairman should work together to ensure that the tasks and KSAs in attachments 2 and 3 will be covered during the board.

2. Specific questions can be selected from those used in previous qualification boards or new questions can be developed. Each question shall relate to at least one of the KSAs to be verified by the board. Questions should allow and encourage the individual to provide answers that demonstrate knowledge of NRC policy and philosophy as they relate to the licensee and in particular to the implementation of the fuel facility inspection program and inspector self-management.

3. Technical questions should be limited in number, pertain to the technical area in which qualification is being sought, and should not be the primary focus of the board's assessment. Technically-based scenarios and examples can be used to determine how well an individual can translate their technical knowledge into appropriate inspector actions. However, lengthy questioning merely to determine if an individual can recall specific technical facts should not be used. An individual's technical competence in specific disciplines is assessed as specified by the supervisor or designee (individual's mentor or senior staff).

4. The board should typically require about 2 hours to complete its assessment but the time may vary based on the individual board and the candidate.

(a) Board Recommendations. The board will document the results of their assessment in writing to the Regional Administrator or Office Director each time a board examines an individual.

(1) If the board's assessment is favorable, the recommendation will be to grant Full Inspector Qualification. Any areas where additional review was required (look-up items) must be completed by the individual and verified by an assigned member of the board before forwarding the recommendation to the Regional Administrator or Office Director.

(2) If the board has identified areas of weakness requiring formal remediation, the board will identify the areas for improvement in writing and recommend that the individual appear before a board for reexamination when the remediation activities are complete. The board and the individual's supervisor will agree on a schedule for reexamination.

(3) If the board has identified performance deficiencies that could not be successfully addressed with a remediation effort, the board will document the full scope of the deficiencies and recommend that the individual not be remediated or reexamined.

(4) The employee will receive a copy of the board's findings and recommendation.

(b) Reexamination Board. A reexamination board must include at least one individual from the original board. The board questioning during reexamination will focus on the areas of identified weakness. The board may explore any area where weakness is identified during the conduct of the reexamination.

(c) Board Documentation. The Board's recommendations are forwarded to the Regional Administrator or Office Director for certification. Upon certification, the qualification will be documented in the inspector's Electronic Official Personnel Folder and will identify the effective date of the certification.

05.04 Maintaining Qualification. All qualified staff are expected to maintain their qualification. Proficiency may be met by performing inspections on a routine basis. If required by a specific qualification journal, refresher, continuing, and post qualification training should also be completed. Inspectors may complete the required training at any time during the period specified in the qualification journal. The base month for determining refresher training requirements will remain constant, regardless of when the training is completed. Approval to extend an inspector's refresher training beyond the established due date must be approved as a deviation in accordance with Subsection 05.07 of this IMC.

05.05 Special Circumstances. Budget reductions, delays in establishing replacement contracts, or unavailability of critical instructors might result in the long-term unavailability of NRC-controlled courses required for formal

qualification. In this case, the ADTD, HR, will communicate this to the cognizant division directors. This does not remove the need for the qualifying employee to attend the required course, or a suitable alternative, if one can be found. It is expected that employee schedules will be adjusted as necessary to allow and require the employee to attend the required training when it is made available.

Requests for course substitutions or other equivalent training activity shall be submitted by the qualifying individual's immediate supervisor to the cognizant Division Director for approval.

05.06 Other Administrative Requirements.

a. Formal Training Requirements and Expectations.

1. Trainees are expected to attend all parts of a formal training program in order to receive credit for the course.

2. Written examinations are sometimes administered for formal courses to evaluate the employee's understanding of the material. The passing grade for most examinations is 70 or 80 percent.

3. Individuals who fail examinations will be given the opportunity to review the material that they did not pass through self-study and then be reexamined on that material. If deemed necessary, individuals who fail an entire course may also repeat the course with the approval of the Division Director.

4. In courses where a formal examination is not given, satisfactory course completion is determined by attendance and completion of class activities.

5. In all cases, completion of formal training courses will be documented by HR. The individual is responsible for making sure that the course completion record is noted on the signature cards in the Qualification Journals.

b. Previously Qualified Inspectors. Individuals who were inspector qualified prior to issuance of IMC 1247, and whose qualification has lapsed because they did not complete required refresher training, can be assigned to independently conduct inspection activities if the individual's branch chief assures that the individual has demonstrated understanding of the current inspection program and procedures.

c. Technical Experts. Technical experts who have never been qualified as an inspector may be used to support inspection activities, but they must work under the guidance and oversight from a fully qualified inspector.

05.07 Deviations. The qualification journals listed in this IMC specify the total requirements for an individual to be qualified. Only the cognizant Division Director can authorize deviations from the requirements in IMC 1247. The Fuel Facility Inspector Training and Qualification Program has been sequenced to optimize learning by ensuring that individuals have completed basic courses before beginning more complex ones.

Therefore, every attempt should be made to take courses in the recommended sequence to obtain maximum benefit of a course. Deviations are needed to extend the refresher training past the due date. Requests for extending the date for completing refresher training must identify the reasons why the required training cannot be completed on schedule. Deviation requests can be submitted by the immediate supervisor of the qualifying individual to the Director of the appropriate program division. Requests can be made via e-mail or memorandum.

1247-06 POST-QUALIFICATION TRAINING

An inspector's training does not end upon being certified as a fully qualified inspector. Suggestions for refresher training and continuing training are provided in the specific qualification journal in Appendix C of this IMC for each specific inspector classification.

06.01 Refresher Training. Activities designed to maintain the overall level of performance by:

a. Readdressing some KSAs presented in initial training, particularly those that are related to important tasks that are hard to do and not performed very often.

b. Providing training in areas where individual or program performance has been identified as needing improvement.

c. Providing training in inspector specific program areas (Examples include counterpart conferences).

06.02 Continuing Training. Qualified inspectors are expected to build on what they have learned during initial training as well as to keep up-to-date on changes to the inspection program. It may also be used to review lessons learned from recent industry and agency activities. More specifically:

a. Temporary instructions (TIs) or Policy and Guidance Directives (P&GDs) that focus on a specific area may necessitate staff receiving special training before performing inspections. The NMSS or NSIR program area division having lead responsibility for preparing the TI will identify these special training requirements, and communicate the training needs to the ADTD as necessary. The schedule for preparation of any special training should allow enough advance time for the lead NMSS or NSIR division, in coordination with the ADTD, to prepare the required training course and implement it, before inspection or licensing is performed using the TI.

b. Changes to inspection procedures (IPs), IMCs, or other aspects of the inspection program may necessitate training. The need for continuing training will be evaluated by the appropriate NMSS or NSIR division whenever the inspection program is modified. Any training requirements must be completed by all qualified inspectors who are expected to implement any changed inspection procedure.

c. Novel processes or facilities such as Mixed Oxide or Laser Enrichment specific training.

The appropriate NMSS or NSIR division will evaluate lessons learned from recent industry events and agency activities to determine the need for staff training.

1247-07 MONITORING PROGRAM EFFECTIVENESS

The implementation of the NMSS programs will be monitored by the program office to identify any areas where programmatic performance may be declining. Staff may provide feedback via comments and recommendations on the content and effectiveness of the inspector qualification program outlined in this manual chapter to NMSS Staff. The program office will monitor program effectiveness by reviewing training and qualification board result and monitoring feedback from regional representatives on the 1247 working group at least annually or through the periodic assessment process for overall fuel cycle facility program effectiveness.

1247-08 PROGRAM REVISIONS

This IMC is periodically revised as necessary to reflect new training needs of staff as determined by changes to current policy or changes to procedures, or both. An individual who is qualified prior to the time any revisions are made to this IMC will continue to use the IMC that they started the qualification process under. However, applicability of new requirements and the method of training on the revision for previously qualified staff will be determined by the program office.

Those individuals previously qualified to perform limited scope activities will continue in that status. However, any new requirements must be met in order to achieve Full Inspector Qualification.

Staff in the process of qualifying when a revision is issued will transition to and complete their qualification under the new program. Individuals will be given credit in the new program for training activities completed in the old program based on Subsection 05.02 of this IMC.

Major program revisions will be issued with specific guidance on how training and work completed under the old program should be applied within the new program. Qualification records converted in accordance with this guidance will not require additional approvals.

END

Attachments:

Attachment 1, General Overview of the Fuel Facility Inspector Training and Qualification Program
Attachment 2, Inspector Competencies

Attachment 3, Fuel Facility Inspector Qualification Requirements for Inspectors Previously Qualified Under IMC1245, IMC 1246, or IMC1252
Attachment 4, Revision History for IMC 1247

Appendices:

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Appendix D, Advanced and Specialized Training Courses and Qualification Programs
D1, Information Security Inspector Specialized Qualification Program Training and Qualification Journal

ATTACHMENT 1

General Overview of the Fuel Facility Inspector Training and Qualification Program

The inspector training and qualification program is designed to ensure the development of competency in the four general areas of 1) legal basis and regulatory processes, 2) technical expertise, 3) regulatory practices, and 4) personal and interpersonal effectiveness. A more detailed listing of competency information is provided in Attachment 2 and is derived from work done for operating reactor inspectors which was documented in "Revising Inspection Manual 1245, Inspector Training and Qualification: Rationale and Methodology for Changes"(ML030030669).

Basic-Level Program.

The inspector qualification process begins with the Basic-Level program. This part is designed to allow individuals to begin their training the first day they begin work at the NRC. The emphasis in the Basic-Level is mainly on on-the-job activities and structured, self-paced and self-directed individual study.

Completing the Basic-Level program will develop an awareness of the role of the Agency, the role of the inspector, and the technology being regulated. Individuals work on activities that will introduce them to the Regulatory Framework, Fuel Cycle Processes and Facilities, Information Technology, Emergency Response, Communication, and Inspection. In addition, some interpersonal skills courses are required for the Basic-Level certification. If time permits, these courses may be completed with other Basic-Level requirements but in all cases must be completed prior to becoming a fully qualified inspector.

This "overview" approach provides the context for meaningful learning during on-site work, a foundation for in-depth training in the next level, and serves as the basis for granting individuals some independence in performing limited job-related activities while they are in the qualification process. To that end, upon completion of all of the requirements in the Basic-Level portion of the Training and Certification Journal, the individual will be certified by their immediate supervisor. This Basic Inspector Certification allows an inspector to perform limited scope inspection activities, as assigned, under an appropriate degree of detailed supervision. This may mean that the inspector will be allowed to perform all of some procedures or that the inspector may perform a small part of several procedures.

The Basic-Level will take several months to complete. As a competency-based program, the emphasis is on practicing specific activities until the individual can meet the evaluation criteria. The time needed to achieve that goal will vary based on each individual's previous experience and prior training. The foundation information presented in the Basic-Level should be completed before the other qualification activities are started.

Proficiency Level Program.

There are two aspects of inspector performance that are addressed at the Proficiency-Level, General Proficiency and Technical Proficiency. General proficiency focuses on developing the

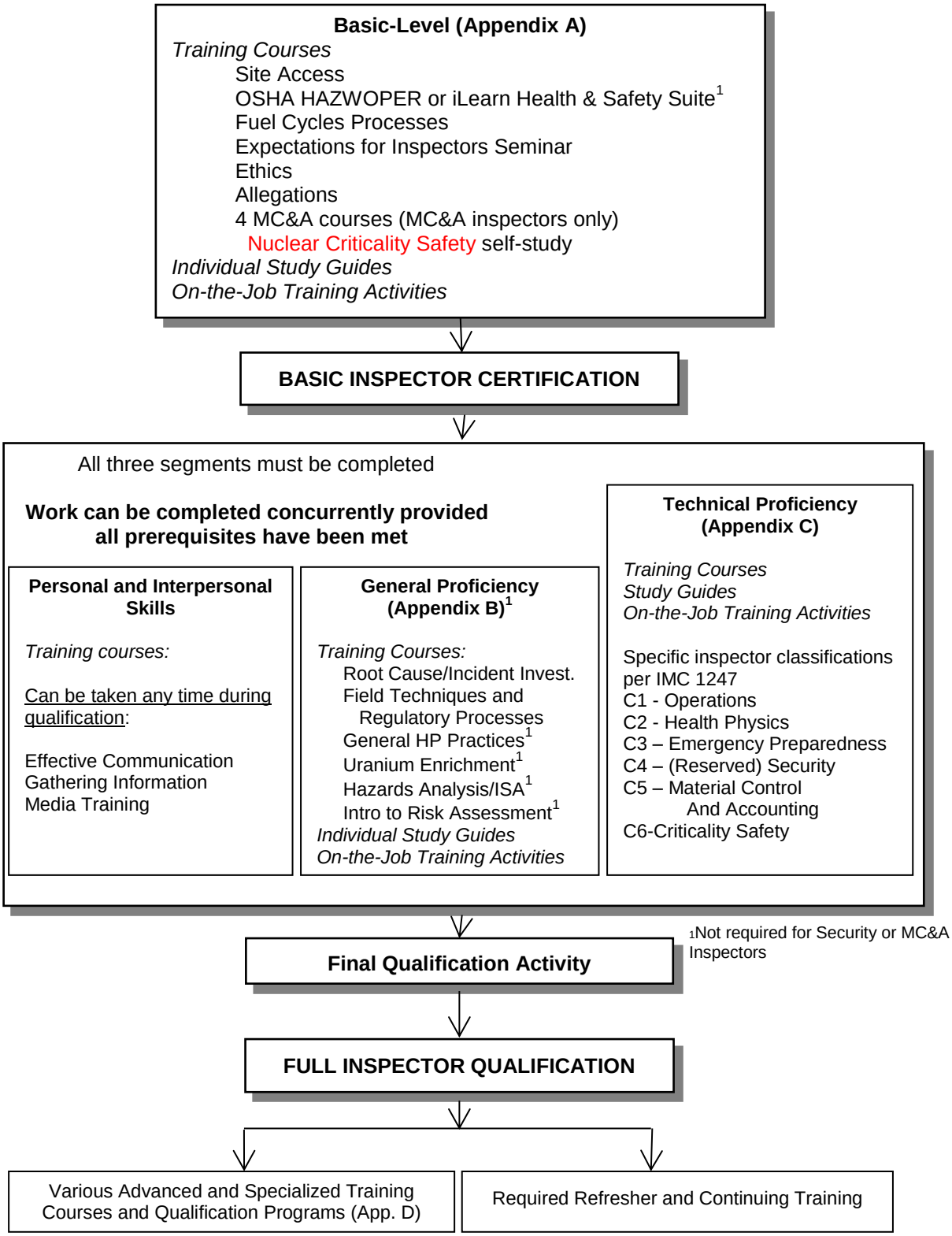
Inspection, Teamwork and Interpersonal Skills needed by an inspector to function either independently or as part of a team to implement the inspection and oversight program. General Proficiency courses can be completed concurrent with the technical proficiency courses as long as the course prerequisites are met. Technical Proficiency focuses on developing the appropriate depth of knowledge in one of the seven specific technical inspection areas. General Proficiency, Technical Proficiency, and Personal and Interpersonal Skills training activities may be completed in parallel.

The Final Qualification Activity, the Qualification Board, is a culminating evaluation activity in the inspector training and qualification process. The Qualification Board evaluates the ability of an individual to integrate and apply the KSAs they have learned to field situations. Training and qualification records for individuals who have successfully completed the Qualification Board will be sent to the Regional Administrator or Office Director for certification as a qualified inspector. Being certified as Fully Qualified allows an inspector to be assigned the full scope of inspection-related activities to be independently performed with routine oversight and supervision.

The overall sequence of the Inspector Training and Qualification Program is outlined in Figure 1 on the next page**.**

FIGURE 1

Inspector Training and Qualification Program Sequence For Fuel Facility Inspectors



ATTACHMENT 2

Inspector Competencies

The training and qualification program detailed in this IMC is designed to ensure that inspectors acquire competency in four general areas:

Area 1: Understand the legal basis and the regulatory processes for achieving the NRC's regulatory objectives by:

- Acquiring a fundamental understanding of the USNRC organizational structure, mission, goals, and objectives (Regulatory Framework) [1]
- Understanding the basis for the authority of the agency (Regulatory Framework)
- Understanding the processes established to achieve the regulatory objectives (Regulatory Framework)

Area 2: Understand the technology and apply concepts in various technical areas to allow the NRC to carry out its overall responsibilities by:

- Understanding science and engineering fundamentals in a specific field of expertise (Basic Technologies)
- Developing and maintaining an understanding of the basic fuel cycle facility processes, hazards, and how licensees must provide for protection of public health and safety (Technical Area Expertise)
- Using the knowledge of a specific facility type or within a specialized technical area to identify, address, and resolve regulatory issues (Technical Area Expertise)

Area 3: Master the techniques and skills needed to collect, analyze, and integrate information using a safety focus to develop a supportable regulatory conclusion by:

- Independently gathering information through objective review, observation, and open communications (Inspection)
- Determining acceptability of information by comparing to established criteria (Inspection)
- Responding to events or conditions involving potential or actual adverse safety consequence (Emergency Response)

[1] Specific competency areas are listed in parenthesis following each item

- Approaching problems objectively, gathering and integrating information, and developing a comprehensive understanding before reaching a conclusion (Problem Analysis)

- Objectively analyzing and integrating information using a safety focus to identify the appropriate regulatory conclusion and regulatory response (Assessment and Enforcement)

Area 4: Have the personal and interpersonal skills to carry out assigned regulatory activities either individually or as a member of a team by:

- Clearly expressing ideas or thoughts, carefully listening, and speaking and writing with appropriate safety focus and context (Communication)

- Working collaboratively with others toward common objectives (Teamwork)

- Working independently, exercising judgment, and exhibiting flexibility in the completion of activities including during difficult or challenging situations (Self-Management)

- Using technology to gather, manipulate, and share information (Information Technology)

Inspector Competency Assessment by the Oral Qualification Board

The Qualification Board will specifically assess how well an inspector demonstrates an understanding of and appreciation for the NRC's organizational values of integrity, excellence, service, respect, cooperation, commitment, and openness. To that end, the Oral Qualification Board will be used to verify that inspectors demonstrate the following knowledge and abilities in the listed competency areas:

Area 1: Legal Basis and Regulatory Processes

- Appreciation of federal, state and local interfaces
- Appreciation and understanding of the rights and concerns of stakeholders
- Appreciation of how legal requirements relate to routine tasks
- Comprehension of relevant policies and procedures used in carrying out specific regulatory tasks

Area 2: Technical Disciplines

- Knowledge or abilities identified to be verified by the Qualification Board
- Technical knowledge may be assessed at discretion of cognizant Branch Chief

Area 3: Regulatory Practices

- Appreciates the need for sensitivity when following up on allegations
- Recognizes the nature of information and treats that information in accordance with the appropriate guidance
- Factual answers are in keeping with the Agency's position and views
- Recognizes and responds with an appropriate sense of urgency to incidents as they arise and ensures that others are appropriately informed
- Uses sound judgment in exercising the appropriate level of caution, planning and contingency planning
- Approaches problems objectively, considering all potential outcomes on an equal basis
- Makes appropriate generalizations from data
- Maintains an awareness of current Agency priorities and sensitivities
- Identifies key issues, understands the consequences, and applies the appropriate regulatory framework
- Proposes supportable enforcement action based on a review of the subject

Area 4: Personal and Interpersonal Effectiveness

- All communication reflects an awareness of public concern, the focus of local official needs, and media perspectives
- Uses tact and diplomacy in conveying messages ensuring that the listener understands the rationale and logic behind the message
- Resolves conflict by facilitating discussion and proposing mutually beneficial solutions. Seeks advice when appropriate
- Communicates messages with clarity and impact to widely varied forums and provides answers that reflect an awareness of the sensitivities and interests of the audience
- Is not afraid to admit not having the answer and knows where to find answer or to get assistance
- Maintains a commitment to team objectives even when own ideas are not supported
- Shows flexibility in response to change
- Recognizes limits of authority and uses the authority in a fair and equitable manner
- Exercises diplomacy and discretion during interactions with difficult audiences and situations
- Approaches others in a way that elicits cooperation

ATTACHMENT 3

Fuel Facility Inspector Qualification Requirements
for Inspectors Previously Qualified Under IMC 1245, IMC 1246 or IMC 1252
(Inspectors Previously Qualified Under IMC 1246 Need Not Re-qualify Under IMC 1247 Unless Qualifying For a New Specialty Inspection Category)

Signature Card and Division Director Certification

Inspector Name: _____	*Employee Initials/ Date*	*Branch Chief or Designee Signature/Date*
Required Individual Study Activities (SGs)		
SG-22 Integrated Safety Analysis Overview		
SG-23 Overview of 10 CFR Part 30		
SG-24 Overview of 10 CFR Part 40		
SG-25 Overview of 10 CFR Part 70		
SG-26 Overview of 10 CFR Part 71		
SG-27 Overview of 10 CFR Part 73		
SG-28 Overview of 10 CFR Part 74		
SG-29 Overview of 10 CFR Part 76		
SG-31 Licensee-Specific Regulatory Documents and Procedures		
SG-32 Planning Fuel Facility Inspections		
Required Training Courses		
F-201 or F-201S, Fuel Cycle Processes		
F-101S, Nuclear Criticality Safety[2]		
F-102S, General HP Practices for Fuel Cycle Facilities[2]		
F-204S, Uranium Enrichment Processes		
P-404, Hazards Analysis (ISA) [2]		
MCA-101DC, Intro to Nuclear Materials Control an Accountability[1]		

Inspector Name: _____	*Employee Initials/ Date*	*Branch Chief or Designee Signature/Date*
MCA-104DB, Introduction to Measurement Programs[1]		
MCA-110, Basics of Nuclear Materials Accountability[1]		
MCA- 120, Basics of Nuclear Materials Control[1]		
On-the-Job Training Activities		
OJT-1 Facility Familiarization Tour with a Qualified Inspector		
OJT-2 Licensee Performance Reviews		
OJT-3 Inspection Activities		
OJT-4 Documenting Inspection Findings		
Required Technical Proficiency (Appendix C)		
Complete the appropriate technical proficiency Appendix or equivalent: Specific inspector classifications per IMC 1247 C1 – Operations C2 – Health Physics C3 – Emergency Preparedness C4 – (Reserved) Security C5 – Material Control And Accounting C6 – Criticality Safety		

[1] Required for MC&A inspectors only
[2] Not required for initial qualification of MC&A inspectors

Fuel Facility Inspector Qualification Certification

_____
(Inspector's Name)

Has previously qualified as an inspector under IMC 1245, IMC 1246, or IMC 1252 and has successfully completed all of the course requirements to be a

FUEL FACILITY INSPECTOR

Branch Chief Signature:
Division Director Signature:

Date:

This signature card and certification must be accompanied by the appropriate Form 1, Basic Level Equivalency Justification, if applicable.

ATTACHMENT 4

Revision History for IMC 1247

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number
N/A		Updated to add qualification program for Nuclear Criticality Inspector qual (IMC 1247 App C6)		
N/A	02/18/09 CN 09-006	Researched commitments for 4 years and found none. New inspection manual chapter to replace the qualification requirements in IMC 1246 for NRC fuel facility operations, health physics, emergency preparedness, security, material control and accounting, and construction inspectors.	None	ML090370940
N/A	ML12257A125 06/11/14 CN 14-012	This document has been revised to reflect Changes in IMC 1247 Appendixes and to include new Appendix C6 – Criticality Safety has been added to IMC 1247.	None	ML14084A476
N/A	ML14225A560 10/28/14 CN 14-026	Added Appendix D, for INFOSEC Inspector qualification and other minor editorial changes.	None	ML14225A557