ASME QAI-1–2023

(Revision of ASME QAI-1–2018)

Qualifications for Authorized Inspection

The American Society of Mechanical Engineers

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The American Society of Mechanical Engineers
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The next edition of this Standard is scheduled for publication in 2025. This Standard will become effective 6 months after the Date of Issuance.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The standards committee that approved the code or standard was balanced to ensure that individuals from competent and concerned interests had an opportunity to participate. The proposed code or standard was made available for public review and comment, which provided an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

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The endnotes and preamble in this document (if any) are part of this American National Standard.

ASME Collective Membership Mark

ASME Single Certification Mark

The American Society of Mechanical Engineers
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FOREWORD

The format and structure of ASME QAI-1–2023 is a departure from previous editions. However, the authorized inspection requirements and the qualification requirements for Inspectors, Supervisors, and Certified Individuals have not changed. The Standard is delineated by chapters and appendices. This edition establishes requirements that are to be applied uniformly across all entities performing designated oversight activities provided by an Authorized Inspection Agency, Certified Individual, or Qualified Inspection Organization. To ensure that requirements are applied consistently and evenly, the following terms are used within the Standard:

- *Shall* is used to denote a requirement.
- *Should* is used to denote a recommendation.
- *May* is used to denote permission, neither a requirement nor a recommendation.

The process for an entity to have its quality program accredited by the American Society of Mechanical Engineers (ASME) is addressed in ASME CA-1.

The requirements in ASME QAI-1 were developed and are maintained by the ASME Committee on Qualifications for Authorized Inspection, which was first formed on March 29, 1973, as a special committee under the Policy Board, Codes and Standards and that now reports to the ASME Board on Conformity Assessment.

ASME Codes and Standards are developed and maintained with the intent to represent the consensus of concerned interests. The committee operates under approved ASME procedures and is guided by the principles of consensus, due process, transparency, and openness. The committee is balanced, with participants from diverse interest categories, and fair and equitable consideration of all viewpoints is exercised by all concerned interests.

ASME QAI-1 has been developed with the following principles that are intended to apply to all jurisdictional authorities accredited as an Authorized Inspection Agency by ASME:

(a) Reciprocity. The enforcement authority (jurisdiction) agrees to accept the results of inspections required by the ASME Boiler and Pressure Vessel Code that have been performed by an accredited Authorized Inspection Agency.

(b) Integrity. The Authorized Inspection Agency maintains the commitment to the integrity of the inspection process and of the ASME Single Certification Mark by fulfilling its obligations under the ASME Boiler and Pressure Vessel Code and by recognizing the role of the third-party inspection system.

(c) Openness. The enforcement authority (jurisdiction) permits ASME Certificate Holders and applicants for ASME Certificates of Authorization located within its jurisdiction to select other ASME-accredited Authorized Inspection Agencies.

(d) Participation in the Process. The Authorized Inspection Agency agrees to participate in the development of the ASME Boiler and Pressure Vessel Code by becoming a member of either the Conference Committee or the International Interest Review Group.

When required by context in this Standard, the singular shall be interpreted as the plural and vice versa, and the feminine, masculine, or neuter gender shall be treated as such other gender as appropriate.

This Standard was approved by the Standards Committee on Qualification for Authorized Inspections and by ASME on August 7, 2023.

COMMITTEE ON QUALIFICATIONS FOR AUTHORIZED INSPECTION

(The following is the roster of the committee at the time of approval of this Standard.)

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General. ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Standard should be sent to the staff secretary noted on the committee's web page, accessible at https://go.asme.org/QAIcommittee.

Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive e-mail notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Standard

(4) to permit the use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Standard.

(c) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Standard and the paragraph, figure, or table number(s)

(4) the edition(s) of the Standard to which the proposed case applies

(d) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Approved cases are posted on the committee web page.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Interpretation Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic e-mail confirming receipt.

ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers can track the status of their requests at https://go.asme.org/Interpretations.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Interpretations are published in the ASME Interpretations Database at https://go.asme.org/Interpretations as they are issued.

Committee Meetings. The QAI Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/QAIcommittee.

Chapter 1
Introduction

1-1 SCOPE

This Standard provides requirements for the qualification of individuals performing designated oversight activities as required by the American Society of Mechanical Engineers (ASME). This Standard also establishes the requirements for an organization qualifying Inspectors and Supervisors to be accredited.

1-2 DESIGNATED OVERSIGHT

ASME authorizes Certificate Holders under a Certificate of Authorization to apply the ASME Single Certification Mark to items that are in conformance with the governing standard. This authorization requires designated oversight to assure that the activities performed by the Certificate Holder are in accordance with the appropriate ASME standard. The types of designated oversight are

(a) Authorized Inspection Agency

(b) Certified Individual

(c) Qualified Inspection Organization

The type of designated oversight required for each of ASME's conformity assessment programs is specified in ASME CA-1.

1-3 QUALIFICATION AND ACCREDITATION REQUIREMENTS

This Standard establishes the duties and qualification requirements for the certification and accreditation of individuals and organizations, respectively, who provide designated oversight.

These duties and qualification requirements include

(a) the qualification and accreditation requirements and responsibilities of an Authorized Inspection Agency.

(b) the appointment requirements and duties of the following:

(1) Authorized Inspector

(2) Authorized Inspector Supervisor

(3) Authorized Nuclear Inspector

(4) Authorized Nuclear Inspector Supervisor

(5) Authorized Nuclear Inservice Inspector

(6) Authorized Nuclear Inservice Inspector Supervisor

(7) Authorized Nuclear Inspector (Concrete)

(8) Authorized Nuclear Inspector Supervisor (Concrete)

These appointments may be generically referred to as "Inspector" and "Supervisor" elsewhere within this Standard.

(c) the qualification and certification requirements and duties of a Certified Individual.

1-4 DEFINITIONS

ASME: the American Society of Mechanical Engineers. Also called *the Society*.

ASME standard: a document establishing characteristics of quality and/or requirements for conformity assessment. Some documents may be referred to as an "ASME code" or "code," e.g., the ASME Boiler and Pressure Vessel Code (ASME BPVC).

authorized inspection: the inspection, monitoring, or auditing activities required by an ASME standard or other activities performed by an Inspector or Supervisor.

Authorized Inspection Agency: an organization accredited by ASME that employs one or more Inspectors and Supervisors to provide third-party inspection services to either a Certificate Holder working under a Certificate of Authorization or an applicant seeking to obtain a Certificate of Authorization.

Authorized Inspector: a Commissioned Inspector holding an Authorized Inspector commission card issued by the National Board. Authorized Inspectors are selected and designated by their employer (an accredited Authorized Inspection Agency) as being qualified to provide third-party authorized inspection services for a Certificate Holder performing work under a Certificate of Authorization or an applicant seeking to obtain a Certificate of Authorization. Authorized Inspectors have the authority to sign a manufacturer's Data Report. See also *Inspector*.

Authorized Inspector Supervisor: a Commissioned Inspector who

(a) is employed by an accredited Authorized Inspection Agency

(b) holds the appropriate endorsement or endorsements

(c) has been qualified and designated by the employer to perform supervisory duties

See also *Supervisor*.

Certificate Holder: an organization that holds a certificate issued by ASME.

Certificate of Authorization: a type of certificate issued by ASME that grants authorization to apply the ASME Single Certification Mark on an item to indicate its conformance with an ASME standard.

Certified Individual: an employee of an organization working under a Certificate of Authorization who has been qualified and certified by that Certificate Holder to provide ASME-designated oversight. The Certified Individual ensures the activities performed by the Certificate Holder are in accordance with the appropriate ASME standard.

Commissioned Inspector: an individual who has met the education, experience, employment, and examination requirements in NB-263 RCI-1. The individual may or may not hold one or more endorsements. The Commissioned Inspector is issued a commission number and a card by the National Board. This card identifies the name of the individual; commission number; type of commission [Inservice Commission or Authorized Inspector Commission]; endorsements (N, I, C, B, O, NS, NSI, and/or NSC), if any; and expiration date.

construction: an all-inclusive term that comprises materials, design, fabrication, examination, inspection, testing, certification, and overpressure protection.

employer: the following definitions apply:

(a) for Inspectors and Supervisors, the ASME-accredited organization that holds the Certificate of Accreditation issued by ASME to provide authorized inspections.

(b) for a Certified Individual, the organization that holds a Certificate of Authorization and constructs items under the scope of the certificate.

employment: the following definitions apply:

(a) an individual that is either

(1) exclusively employed by a single Authorized Inspection Agency to provide authorized inspections on a full- or part-time basis.

(2) engaged through a contractual arrangement with a single Authorized Inspection Agency to provide inspection services.

(b) an individual employed to provide designated oversight as a Certified Individual on a full- or part-time basis exclusively for only one Certificate Holder constructing items under a Certificate of Authorization.

endorsement: specialized qualifications issued by the National Board to an Authorized Inspector for the performance of specific duties in accordance with the ASME Boiler and Pressure Vessel Code.

enforcement authority: a government entity that has adopted or accepted an ASME standard as a means of compliance with its regulations or laws and that accepts items marked with the ASME Single Certification Mark for installation within its jurisdiction. Enforcement authorities may refer to the ASME standard as an ASME code.

governing standard: the standard that establishes the technical conformance requirements for a product and/or service.

inactive: the following definitions apply:

(a) for a Certificate Holder, no ASME construction activities were performed.

(b) for inspection personnel, no authorized inspection activities were performed.

indoctrination: instruction in job responsibilities and authority that includes general criteria, technical objectives, requirements of applicable codes and standards, regulatory commitments, company procedures, and quality assurance program requirements.

Inspector: an abbreviated title for an Authorized Inspector, Authorized Nuclear Inspector, Authorized Nuclear Inservice Inspector, or Authorized Nuclear Inspector (Concrete). When employed by an Authorized Inspection Agency, the Inspector is selected, qualified, and designated by that agency to perform specific duties under each of the aforementioned titles. See also *Authorized Inspector*.

Inspector's diary: a datebook, in electronic or bound form, in which the Inspector details inspections and other code-related activities conducted in the role as an Inspector.

monitor: to observe or check an individual's performance or compliance with the requirements specified in the governing standard or Quality Management System.

National Board: the National Board of Boiler and Pressure Vessel Inspectors. Typically abbreviated as "the National Board."

nonconformance: a deficiency in characteristic, documentation, or procedures that renders the quality of an item or activity unacceptable or indeterminate. The deficiency may be based on requirements in an ASME standard or a Quality Management System.

Owner: the organization that is legally responsible for the operation of a nuclear facility and that has applied for, or has been granted, an operating license by the regulatory authority having lawful jurisdiction.

process sheets: a listing including, but not limited to, fabrication, testing, examination, and inspection activities. Also called *travelers.*

Quality Management System (QMS): an all-inclusive term that covers quality assurance, quality control, quality system, or quality program, depending on the requirements of the governing standard.

right of access: the right of the ASME, the Authorized Inspection Agency, or the Certified Individual to enter the premises of a location where activities are performed under an ASME certificate, and to have free access to information and personnel for the purpose of conducting audits, examinations, inspections, monitoring, reviews, surveys, surveillances, or verification activities.

substitution: a temporary assignment of an Inspector or Supervisor to an active shop or site to provide coverage in the absence of the normally assigned individual. This absence will not typically exceed 15 calendar days for any single occurrence for more than four separate occurrences at the same active shop or site within any 12-month period. Filling an opening vacated by the normally assigned Inspector or Supervisor who is no longer under the employment of the Authorized Inspection Agency is a replacement activity that does not meet this definition.

Supervisor: an abbreviated title for an Authorized Inspector Supervisor, Authorized Nuclear Inspector Supervisor, Authorized Inservice Inspector Supervisor, or Authorized Nuclear Inspector Supervisor (Concrete). When employed by an Authorized Inspection Agency, the Supervisor is selected, qualified, and designated by that agency to perform specific supervisory duties under each of the aforementioned titles. See also *Authorized Inspector Supervisor*.

survey: a planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence the adequacy of compliance with established procedures, instructions, drawings, and other applicable documents, and a review of the effectiveness of implementation. A survey should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance.

third party: an entity that operates independently of the Certificate Holder possessing a Certificate of Authorization, nuclear Owner's Certificate, or Quality Assurance Program Certificate. The third party has no financial interest or conflict of interest, nor a perceived conflict of interest, in the work performed under the Certificate of Authorization, nuclear Owner's Certificate, or Quality Assurance Program Certificate.

top management: a person or group of people who directs and controls an organization at the highest level.

training: teaching to achieve initial proficiency, maintain proficiency, and adapt to changes in technology, methods, or job responsibilities.

travelers: see *process sheets*.

1-5 ACCREDITED ORGANIZATIONS

Organizations are authorized to provide designated oversight when accredited by ASME as an Authorized Inspection Agency pursuant to the provisions set forth in Chapter 3. These organizations shall have a Quality Management System (QMS) accredited by ASME through the satisfactory performance of a survey on a triennial basis. Accredited organizations shall also be subjected to planned interim audits by ASME during the 3-yr accreditation period.

An Authorized Inspection Agency has a QMS to designate and assign individuals who are authorized to perform authorized inspections as either an Inspector or a Supervisor. All references to "Inspector" or "Supervisor" in this Standard shall mean the Authorized Inspector or Authorized Inspector Supervisor as defined in section 1-4.

A Qualified Inspection Organization is an organization that provides inspection services applicable to the ASME Boiler and Pressure Vessel Code, Section XII. Requirements for qualification and duties of Qualified Inspection Organizations, and the qualifications for qualified Inspectors, are defined in Mandatory Appendix I.

1-6 REFERENCED STANDARDS

The following is a list of publications referenced in this Standard. Unless otherwise specified, the latest edition shall apply.

ASME Boiler and Pressure Vessel Code, Section I. Rules for Construction of Power Boilers. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section II. Materials — Part A, Ferrous Material Specifications. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section II. Materials — Part B, Nonferrous Material Specifications. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section II. Materials — Part C, Specifications for Welding Rods, Electrodes, and Filler Metals. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section II. Materials — Part D, Properties (Customary). The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section II. Materials — Part D, Properties (Metric). The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Appendices. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components —Division 1, Subsection NB, Class 1 Components. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 1, Subsection NCD, Class 2 and Class 3 Components. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 1, Subsection NE, Class MC Components. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 1, Subsection NF, Supports. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 1, Subsection NG, Core Support Structures. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 2, Code for Concrete Containments. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 3, Containments for Transportation and Storage of Spent Nuclear Fuel and High Level Radioactive Material and Waste. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 4, Fusion Energy Devices. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Division 5, High Temperature Reactors. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section III. Rules for Construction of Nuclear Facility Components — Subsection NCA, General Requirements for Division 1 and Division 2. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section IV. Rules for Construction of Heating Boilers. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section V. Nondestructive Examination. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section VIII. Rules for Construction of Pressure Vessels — Division 1. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section VIII. Rules for Construction of Pressure Vessels — Division 2, Alternative Rules. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section VIII. Rules for Construction of Pressure Vessels — Division 3, Alternative Rules for Construction of High Pressure Vessels. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section IX. Welding, Brazing, and Fusing Qualifications. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section X. Fiber-Reinforced Plastic Pressure Vessels. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section XI. Rules for Inservice Inspection of Nuclear Reactor Facility Components — Division 1, Rules for Inspection and Testing of Components of Light-Water-Cooled Plants. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section XI. Rules for Inservice Inspection of Nuclear Reactor Facility Components — Division 2, Requirements for Reliability and Integrity Management (RIM) Programs for Nuclear Reactor Facilities. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section XII. Rules for Construction and Continued Service of Transport Tanks. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code, Section XIII. Rules for Overpressure Protection. The American Society of Mechanical Engineers.

ASME BPE. Bioprocessing Equipment. The American Society of Mechanical Engineers.

ASME CA-1. Conformity Assessment Requirements. The American Society of Mechanical Engineers.

ASME RTP-1. Reinforced Thermoset Plastic Corrosion-Resistant Equipment. The American Society of Mechanical Engineers.

NB-263 RCI-1. Rules for Commissioned Inspectors. National Board of Boiler and Pressure Vessel Inspectors.

NB-383. Rules for Certified Individuals. National Board of Boiler and Pressure Vessel Inspectors.

NB-391. Rules for Qualified Inspectors. National Board of Boiler and Pressure Vessel Inspectors.

Chapter 2
Authorized Inspection Agency

2-1 QUALIFICATION REQUIREMENTS OF AN AUTHORIZED INSPECTION AGENCY

An organization qualifies as an Authorized Inspection Agency by meeting the requirements of paras. 2-1.1 through 2-1.4.

2-1.1 Legal Entity

The organization shall be a legal entity. A government agency, department, or authority established through federal, state, provincial, or local government statute shall also be considered a legal entity.

2-1.2 Liabilities

When operating as a nongovernment entity, the organization shall have insurance or reserves to cover its liabilities. On an annual basis, top management (however named within the QMS) shall evaluate the finances and sources of income of the organization to determine that adequate arrangements are in place to cover liabilities.

2-1.3 Impartiality and Independence

Top management shall ensure that commercial, financial, or other pressures do not and will not compromise the organization's impartiality.

The Authorized Inspection Agency

(a) shall not design, manufacture, distribute, supply, install, repair, or maintain items falling within the scope of the ASME standard or standards governing its authorized inspection activities.

(b) shall be free from any commercial, financial, and other internal or external influences that may affect its independence and impartiality. The organization shall be independent of activities that conflict with the integrity of the inspection services provided to Certificate Holders performing activities under a Certificate of Authorization. Employees of the Authorized Inspection Agency shall also be independent and impartial.

(c) shall not perform authorized inspection activities for work provided by others within the organization or for other companies within the overall corporate structure.

2-1.4 Organization and Management

The organization shall have

(a) an established QMS that conforms with the requirements of this Standard.

(b) adequate resources to implement and maintain an effective QMS.

(c) an employee identified and authorized by top management as being responsible for establishing, maintaining, and implementing the QMS. This individual shall have at least 3 yr of practical inspection or conformity assessment experience operating under an established and certified QMS.

(d) at least one Supervisor and two Inspectors meeting the requirements of this Standard.

(1) The Supervisor or Supervisors and Inspector or Inspectors shall be in the employment of the organization providing third-party inspection services.

(2) One or more Supervisors and Inspectors may hold provisional commissions with or without endorsements from the National Board when the organization's QMS is initially accredited by ASME. The Supervisors and Inspectors shall not perform authorized inspections until they are in possession of their formal National Board commissions and applicable endorsements.

(e) a technically competent individual proficient in the appropriate ASME standard to assist the Inspector in verifying that applicable design calculations have been properly applied.

(f) an individual who has overall responsibility for overseeing authorized inspection activities performed by Supervisors and Inspectors. This individual shall have at least 3 yr of practical experience under an Authorized Inspection Agency as an Authorized Inspector Supervisor.

(1) This individual shall be an employee of the organization.

(2) When the individual's commission, including one or more applicable endorsements, has not been maintained, knowledge of the relevant ASME standards, code cases, and referenced standards shall be determined through an examination administered by the National Board. Based on the results of the examination, top management shall decide whether adequate knowledge has been retained and if additional training is required.

2-1.5 Performance Audits

ASME shall audit, at its discretion, the authorized inspections provided by Inspectors and Supervisors for compliance with this Standard. These audits shall be performed by ASME designees at locations where authorized inspections are provided and may be performed in conjunction with a joint review, survey, or audit for which the Inspector and Supervisor have been designated and assigned to provide authorized inspection services.

2-1.6 Service Provision

The Authorized Inspection Agency shall provide authorized inspections by commissioned inspectors with appropriate endorsements, when required. These individuals shall be properly qualified, designated, and assigned under the Authorized Inspection Agency's accredited program.

2-2 DUTIES OF AN ACCREDITED AUTHORIZED INSPECTION AGENCY

An Authorized Inspection Agency shall

(a) provide documentary evidence of the annual evaluation performed as required under para. 2-1.2.

(b) provide adequate safeguards for the confidentiality of information obtained during

(1) authorized inspections performed for Certificate Holders

(2) auditing activities performed on Supervisors and Inspectors on the performance of their duties

(3) other activities when authorized by ASME

The documentation requested by the National Board to ascertain the fulfillment of the candidate's qualification requirements as an Inspector or Supervisor, initially and at renewals, shall be provided to the National Board and shall be subject to the safeguarding measures in place for confidentiality.

(c) provide a letter of support for the individual identified in para. 3-2.2(b)(5) to become a member of the ASME QAI Conference Committee. The Authorized Inspection Agency shall provide adequate resources for the member to actively participate in meetings and on ballots.

(d) provide authorized inspections by individuals who have been selected, designated, and assigned as Supervisors or Inspectors under the designations identified in sections 4-1 and 6-1, respectively. These individuals shall have the qualifications, experience, and training of a Supervisor or Inspector as defined in Chapter 4 or Chapter 6, respectively.

(e) provide qualified, designated, and assigned Supervisors and/or Inspectors to participate in ASME joint reviews, surveys, audits, interviews, and investigations of the Certificate Holders for which they provide authorized inspections.

(f) provide qualified, designated, and assigned Inspectors to monitor construction in accordance with ASME standards.

(g) provide qualified, designated, and assigned Supervisors to monitor the performance of the Inspectors and to audit the activities at a shop or field site where the Certificate Holder is or has been actively engaged in activities under its Certificate of Authorization. An Authorized Inspection Agency's QMS that permits the use of multiple Supervisors shall describe the following:

(1) the conditions when multiple Supervisors may be assigned to an Inspector

(2) the criteria for determining which Supervisor shall be assigned to perform the audit

(3) the procedure for reporting the audit results to the other assigned Supervisor or Supervisors for review and acceptance

(4) how compliance to paras. 5-2(c) and 5-2(d) will be achieved

(h) give written notice to each Inspector of the name, office address, email address, and telephone numbers of the respective Supervisor when the Inspector has a National Board Authorized Inspector Commission or whenever there is a change in supervision or in the Supervisor's contact information.

(i) establish and implement an effective QMS to assure that personnel work in accordance with the requirements of this Standard. This QMS shall

(1) be documented by written policies, procedures, or instructions

(2) be carried out throughout the term of any agreement covering inspections required by the governing standards

(3) provide for indoctrination and training, as necessary, of personnel performing activities under the QMS to ensure that the required proficiency is achieved and maintained

(j) provide written instructions to Inspectors and their Supervisors specifying their respective duties and responsibilities.

(k) provide written instructions to Inspectors requiring them to immediately contact their Supervisor whenever the Inspector is unable to readily resolve any questions or issues concerning compliance with the ASME standard at any point during the planning, construction, and certification of the item. The Authorized Inspection Agency shall include instructions reminding the Inspectors that they have the authority and the duty to refuse to sign any ASME BPVC Data Report involving a nonconformance with the ASME standard.

(l) conduct annual planned audits of activities performed by Supervisors to verify compliance with the provisions of ASME standards.

(1) Trained personnel who do not have direct responsibility for performance of the activities being audited shall perform the audit.

(2) The audit shall be performed in accordance with a written procedure or checklist.

(3) The auditor shall document the results of the audit in a report for review by management.

(4) The Authorized Inspection Agency shall take follow-up action, including reaudit of deficient areas, where indicated, to ensure that necessary corrective action is completed.

(m) establish and implement a written policy to ensure levels of inspection activity are commensurate with the scope of the Authorized Inspection Agency's ASME Certificate of Accreditation.

(n) provide certification for Commissioned Inspectors confirming the fulfillment of the experience, training, and qualification requirements of this Standard. This certification shall be made available for review by jurisdictional authorities and ASME on request.

(o) select candidates as applicants for the National Board Authorized Inspector commission and endorsements, subsequently designate each qualified candidate as an Inspector, and assign a Supervisor to each individual to ensure that the duties of an Inspector are satisfactorily fulfilled.

(p) select qualified Inspectors as candidates for the National Board Supervisor endorsements and subsequently designate each qualified candidate as a Supervisor.

(q) verify that audits required by this Standard have been carried out during the renewal of an Inspector's commission and endorsements, as applicable.

(r) establish a system to record and control the radiation exposure of those under its employment engaged in nuclear inspection activities when providing authorized inspections under ASME BPVC, Section III or Section XI.

(s) ensure that, when providing authorized inspections to a Certificate Holder working under a Certificate of Authorization or for an Owner, the Inspector's diary is made available to the ASME team both at the time of the Certificate Holder's joint review, survey, audit, or investigation and at any other time requested by ASME.

(t) ensure the Inspector's diary is maintained to provide a record of the Inspector's activities and to denote the continuity of inspections.

(u) notify ASME when entering into an agreement or whenever an existing agreement is terminated with a Certificate Holder. The enforcement authority shall also be notified by the Authorized Inspection Agency whenever an agreement with an Owner, under an Owner's Certificate, is written or terminated.

(v) notify ASME immediately of any changes affecting the validity of the Authorized Inspection Agency Certificate of Accreditation.

(w) perform follow-up activities on Certificate Holders when requested by ASME.

(x) report in writing to the ASME Conformity Assessment department any nonconforming activity, related to ASME Standard or Quality Assurance Program compliance, that they are unable to resolve with a Certificate Holder.

Chapter 3
Accreditation of an Authorized Inspection Agency

3-1 GENERAL

An organization providing third-party authorized inspections as an Authorized Inspection Agency shall have its QMS accredited by ASME in accordance with the current edition of ASME CA-1.

(a) The employment of Inspectors and Supervisors shall meet the criteria of this Standard.

(b) An applicant seeking to become accredited or an accredited organization seeking to renew its accreditation shall submit the proper application and be subjected to an ASME survey. The purpose of the survey is to evaluate the organization's QMS, including its implementation. It is the responsibility of the organization to develop, maintain, and implement a QMS that meets the requirements of section 3-2. An Authorized Inspection Agency Certificate of Accreditation is issued by ASME to recognize an organization's accreditation status as an Authorized Inspection Agency. The accreditation is valid for a 3-yr period.

(c) The manual describing the Certificate Holder's QMS, and any revisions thereto, shall be subject to ASME acceptance prior to its implementation.

(d) The accredited organization shall be subject to a planned audit program by ASME during the 3-yr accreditation period.

(e) The acceptance of a Certificate Holder's QMS through issuance of a Certificate of Accreditation shall not be interpreted to mean endorsement of the items or activities inspected by the Certificate Holder's Inspectors and Supervisors.

3-2 QMS

3-2.1 Purpose

A documented QMS shall be established, implemented, and maintained in accordance with the requirements of this Standard. The QMS shall document the policies and describe the processes being implemented to address the requirements of this Standard. The controls for implementing the QMS shall be documented in the QMS Manual. The QMS Manual shall identify the scope of activities to which it applies and shall provide for the planning, control, and accomplishment of activities ensuring the effective implementation of duties and activities as described in applicable parts of this Standard.

3-2.2 Content

The QMS Manual shall address all the following elements:

(a) Organization. The organizational structure, functional responsibilities, levels of authority, and lines of responsibility for activities required for conformance with the requirements of this Standard shall be documented.

(1) Measures shall be in place to define the qualification and designation requirements for all personnel involved in performing activities under this Standard.

(2) The management and reporting structure of the organization shall keep paramount the impartiality of the performance of the Inspectors' and Supervisors' duties. When the Authorized Inspection Agency is a part or a subsidiary of a larger organization, the activities and external lines of communication and reporting structure shall be documented.

(-a) Personnel under the employment of the Authorized Inspection Agency shall be free from any commercial, financial, and other internal or external influences that may affect their judgment or conflict with their responsibilities and duties.

(-b) The Authorized Inspection Agency shall operate independently from any other department, division, or company within or external to its organizational structure.

(-c) Inspectors and Supervisors shall not provide authorized inspection services on work provided by other departments, divisions, or companies within the overall corporate structure.

(b) Program Description. The scope of the activities for which the QMS applies shall be described. The scope shall include all requirements of this Standard for which the organization is accredited by ASME.

A statement of policy and authority shall also be provided, indicating the support of top management for establishing overall expectations for effective implementation of the program. The statement shall include the following:

(1) top management's support of and commitment to providing the necessary resources to implement the QMS.

(2) top management's commitment to continually preserve the integrity of the inspection process and the ASME Single Certification Mark.

(3) top management's commitment to have qualified, designated, and assigned individuals who are free from any conflict of interest or perceived conflict of interest perform authorized inspections addressed under the scope of the ASME Authorized Inspection Agency Certificate of Accreditation. This commitment means individuals performing authorized inspections will hold valid and appropriate National Board commissions and endorsements and will be free from commercial, financial, and other pressures that might influence their judgment or the results of their work.

(4) an annual verification of the company's financial position to determine its overall financial health and to provide a declaration that sufficient reserves and sources of income or liability insurance are in place to cover its

(-a) liabilities

(-b) operations

(-c) continued commitment to safeguard its ability to perform authorized inspections free from any commercial, financial, and other pressures that could compromise impartiality

(5) the identity of the individual who has the authority and is responsible for establishing, maintaining, and implementing the QMS.

(-a) Top management shall support this individual's membership on the ASME QAI Standards Committee or a subtier group, such as a conference committee or an international working group reporting to the Standards Committee.

(-b) When the Authorized Inspection Agency is part of a larger organization, the relationship with other parts of the larger organization shall be clearly described.

(c) Document Control. The process for the review and revision of the QMS shall be described. All changes to the QMS shall be controlled and the process for review, approval, distribution, and use of the latest approved documents at the location or locations where the prescribed activity is performed shall be specified.

(d) Diary. The following requirements for the Inspector's diary, whether electronic or bound, shall be detailed:

(1) The diary shall be completed daily or at each inspection visit by the Inspector and Supervisor.

(2) The diary shall be available at the location of the inspection. For field sites, the Inspector's diary shall be available for the duration of the work.

(3) The diary shall be made available to ASME and/or ASME teams on request.

(4) The diary shall be maintained for a minimum of 5 yr from the date of the last entry.

(5) Electronic diaries specifically shall

(-a) be under the complete administrative control of the Authorized Inspection Agency

(-b) be secured in such a way as to prevent revisions, additions, or deletions to previously logged data

(-c) provide a means for other Inspectors within the Authorized Inspection Agency to review entries as required

(-d) include a provision for signature by a personal identification number (PIN) or other secure means

(e) Qualification, Designation, and Assignment of Authorized Inspection Agency Personnel Performing Activities Under the QMS. The qualification requirements for the personnel identified in the organization under (a)(2)(-a) shall be described. For Supervisors and Inspectors, the qualification, designation, and assignment process shall be described.

(f) Indoctrination and Training. The process for the indoctrination of personnel identified in the organization under (a)(2)(-a) shall be described. At a minimum, the indoctrination shall address the organization's QMS and its implementation. The process of training individuals to be designated as Supervisors or Inspectors shall be described.

(g) Records. The process for records management shall be described. The description shall include measures to ensure that the records are controlled and maintained in a manner that prevents damage, deterioration, and loss. The Authorized Inspection Agency's records necessary to verify compliance with this Standard, except for personnel qualification records, shall be maintained for a minimum of 5 yr. The most recent personnel qualification records, necessary to verify compliance with this Standard, shall be maintained while the individual is providing Authorized Inspection Agency services and for a minimum of 5 yr after the individual ceases to provide these services.

(h) Corrective Actions. The process for the identification, review, and correction of conditions or activities that are not conducted in accordance with the QMS shall be described. Corrective action shall be taken to preclude the repetition of nonconforming conditions. The description of the process shall include how corrective action is implemented, documented, and reported to management.

(i) Supervision of Inspectors. Measures to provide meaningful supervisory duties shall be described. These measures shall prohibit two individuals from evaluating, monitoring, and auditing each other's activities by interchanging their designated roles as Inspector and Supervisor to one another.

(j) Monitoring. Monitoring activities to be performed by the Inspector or Supervisor shall be described. The frequency at which monitoring is to be conducted shall be specified. At a minimum, when no work is performed under an ASME Certificate of Authorization, the Inspector shall check that the organization as described in the manual remains the same and review of the latest changes to ASME standards have been performed and documented by the Certificate Holder. The Inspector or Supervisor shall record in the Inspector's diary all monitoring activities performed and shall

(1) identify who performed the monitoring

(2) identify the date the monitoring was performed

(3) provide a brief description of what has been observed or checked

(k) Audits. The internal audit process shall be described. The audit process shall, at a minimum, include the following:

(1) A comprehensive system of planned and periodic audits shall be carried out to verify compliance with applicable requirements of this Standard and the QMS and to determine the effectiveness of the QMS. The audits shall be performed at least annually and in accordance with written procedures or checklists by appropriately trained personnel who do not have direct responsibility in the areas being audited.

(2) Audit results shall be documented and the results shall be reviewed by management responsible for the area audited. Follow-up action, including reaudit of deficient areas, shall be taken where indicated.

(3) At least annually, the overall adequacy and effectiveness of the implementation of the QMS shall be reviewed and the results of the review documented and reported to top management in writing.

Chapter 4
Supervisor Qualifications

4-1 QUALIFICATION REQUIREMENTS FOR A SUPERVISOR

The Authorized Inspection Agency shall select a Supervisor in its employ to be designated as an Authorized Inspector Supervisor, Authorized Nuclear Inspector Supervisor, Authorized Nuclear Inservice Inspector Supervisor, or Authorized Nuclear Inspector Supervisor (Concrete). The selected individual or individuals may be assigned to perform the duties specified in Chapter 5 if they meet the appropriate qualification requirements of this Chapter.

(a) An individual shall have the commission and endorsement identified in Table 4-1-1 to supervise authorized inspections for items constructed under the ASME BPVC. To obtain an endorsement, the candidate shall submit the proper application to the National Board, meet all qualification requirements of this Standard and of NB-263 RCI-1, and pass the appropriate supervisor endorsement examination developed and administered by the National Board.

NOTE: The National Board examination will determine the candidate's ability to ascertain the validity of requirements addressed in the applicable ASME BPVC Section including quality assurance or quality control requirements, material, design, overpressure protection, fabrication methods, inspections, tests, and certification by stamps and ASME BPVC Data Reports. The examination will be graded by the National Board and the results provided to the Authorized Inspection Agency employing the candidate.

(b) A candidate for designation as a Supervisor shall meet the following qualification requirements and, as applicable, those listed in section 4-2, section 4-3, section 4-4, or section 4-5:

(1) The individual shall be in the employment of the Authorized Inspection Agency.

(2) The individual shall be qualified as an Authorized Inspector in accordance with section 6-2 and shall be designated as such by the Authorized Inspection Agency.

(3) The individual shall receive health physics training prior to any exposure to occupational ionizing radiation when performing authorized inspections under ASME BPVC, Section III and/or Section XI.

4-2 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED INSPECTOR SUPERVISOR

(a) A candidate for designation as an Authorized Inspector Supervisor shall have or obtain a B endorsement, shall meet the qualification requirements in section 4-1, and shall have

(1) previously been designated and assigned as an Authorized Inspector with at least 2 yr experience in either

(-a) ASME BPVC–related work, such as inspection under the provisions of ASME BPVC

(-b) the administration of shop inspection services under ASME BPVC

(2) knowledge of ASME conformity assessment procedures gained by participation in at least three ASME joint review teams as a member or as an observer

(3) on-the-job knowledge of and experience with the proper application of the governing standards, i.e., the ASME BPVC Sections identified in Table 4-1-1, code cases, and reference standards

(b) A qualified Authorized Inspector Supervisor meets the qualification requirements of (a) and holds a B endorsement. The employer may designate the individual an

Table 4-1-1
Authorized Inspector Supervisor Commission and Endorsements

Designation (Title)	Commission	Endorsement Designator	Supervision of Authorized Inspectors for Items Constructed Under ASME BPVC
Authorized Inspector Supervisor	Authorized Inspector	B	Sections I; IV; VIII, Divisions 1, 2, and 3; X; and XII
Authorized Nuclear Inspector Supervisor	Authorized Inspector	NS	Section III, Divisions 1, 3, and 5
Authorized Nuclear Inservice Inspector Supervisor	Authorized Inspector	NSI	Section XI, Divisions 1 and 2
Authorized Nuclear Inspector Supervisor (Concrete)	Authorized Inspector	NSC	Section III, Division 2

Authorized Inspector Supervisor and assign one or more qualified Authorized Inspectors to the Supervisor.

4-3 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR

(a) A candidate for designation as an Authorized Nuclear Inspector Supervisor shall have or obtain an NS endorsement, shall meet the qualification requirements in section 4-1, and shall have

(1) an N endorsement

(2) at least 2 yr experience, subsequent to being qualified as an Authorized Nuclear Inspector, in either

(-a) diversified inspection in the construction of ASME BPVC, Section I, Section III, or Section VIII pressure equipment

(-b) administration of shop inspection services under ASME BPVC, Section I, Section III, or Section VIII pressure equipment

(3) on-the-job knowledge of and experience with the proper application of the governing standards, i.e., the ASME BPVC Sections identified in Table 4-1-1, code cases, and reference standards

(4) experience that includes the review and implementation of QMSs and resolution of corrective actions associated with the program

(5) knowledge of ASME nuclear survey procedures, gained from either of the following:

(-a) service with at least two nuclear survey teams as a member or as an observer

(-b) service as a member or observer on at least one ASME nuclear survey team, plus documented satisfactory completion of a course promulgated by ASME on the conduct of nuclear surveys and administration of ASME nuclear certification programs

(b) A qualified Authorized Nuclear Inspector Supervisor meets the qualification requirements of (a) and holds an NS endorsement. The employer may designate the individual an Authorized Nuclear Inspector Supervisor and assign one or more qualified Authorized Nuclear Inspectors to the Supervisor.

4-4 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSERVICE INSPECTOR SUPERVISOR

(a) A candidate for designation as an Authorized Nuclear Inservice Inspector Supervisor shall have or obtain an NSI endorsement, shall meet the qualifications listed in section 4-1, and shall have

(1) an NS endorsement and be qualified as an Authorized Nuclear Inspector Supervisor.

(2) an I endorsement.

(3) at least 1 yr experience, subsequent to being designated and assigned as an Authorized Nuclear Inservice Inspector, in

(-a) performing the duties of an Authorized Nuclear Inservice Inspector

(-b) nondestructive examination (NDE) methods

The minimum 1 yr engagement under (-a) and (-b) may be accomplished during the same year.

(4) on-the-job knowledge of and experience with the proper application of the governing standards, i.e., the ASME BPVC Sections identified in Table 4-1-1, code cases, and reference standards.

(b) A qualified Authorized Nuclear Inservice Inspector Supervisor meets the qualification requirements of (a) and holds an NSI endorsement. The employer may designate the individual an Authorized Nuclear Inservice Inspector Supervisor and assign one or more qualified Authorized Nuclear Inservice Inspectors to the Supervisor.

4-5 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR (CONCRETE)

(a) A candidate for designation as an Authorized Nuclear Inspector Supervisor (Concrete) shall have or obtain an NSC endorsement, shall meet the qualification requirements listed in section 4-1, and shall have

(1) an NS endorsement and be qualified as an Authorized Nuclear Inspector Supervisor

(2) a C endorsement

(3) on-the-job knowledge of and experience with the proper application of the governing standards, i.e., the ASME BPVC Sections identified in Table 4-1-1, code cases, and reference standards

(b) A qualified Authorized Nuclear Inspector Supervisor (Concrete) meets the qualification requirements of (a) and holds an NSC endorsement. The employer may designate the individual an Authorized Nuclear Inspector Supervisor (Concrete) and assign one or more qualified Authorized Nuclear Inspectors (Concrete) to the Supervisor.

Chapter 5
Supervisor Duties

5-1 INTRODUCTION

A Supervisor designated as an Authorized Inspector Supervisor, Authorized Nuclear Inspector Supervisor, Authorized Nuclear Inservice Inspector Supervisor, or Authorized Nuclear Inspector Supervisor (Concrete), and assigned at least one Inspector, shall be responsible for performing the duties specified in this Chapter. The specific duties defined within this Chapter are based on the designation of Inspector and the Certificate of Authorization issued to the company for which authorized inspection activities are to be provided. The Supervisor shall hold the same endorsements as each Inspector being supervised.

5-2 GENERAL DUTIES OF A SUPERVISOR

The Supervisor shall, as a minimum

(a) maintain a record of Inspectors being supervised, which shall contain the following information:

(1) the name of the Inspector.

(2) the name of the organization appearing on the Certificate of Authorization to which the Inspector has been assigned to provide authorized inspections.

(3) the shop and/or field site locations where activities are performed under the Certificate of Authorization.

(4) the date of each visit to such locations when related to supervisory duties. This shall be in addition to the recording of the date in the Inspector's diary as required by (g).

When a Supervisor is assigned to provide authorized inspection services with an NSI endorsement for Owners, the information required in (2) and (3) shall be that of the Owner and its sites rather than the organization holding the Certificate of Authorization.

(b) maintain a record of those Inspectors assigned to the Supervisor and a description of their assignments.

(c) assist in maintaining the competency of each assigned Inspector at an acceptable level. This shall be achieved through periodic panel discussions of work-related topics, written communications of unique problems and their solutions, informal question-and-answer discussion sessions, and other means deemed suitable. The Supervisor shall maintain documentation of such activities.

(d) supervise the technical performance of each assigned Inspector. A written report shall be provided to the Supervisor's management when significant nonconforming activities on the part of the Inspector or the Certificate Holder are reported to or observed by the Supervisor, following a full investigation of such activities.

(e) audit the performance of each assigned Inspector on a planned and periodic basis at approximately 12-month intervals, and at additional times when necessary. The Supervisor shall be accompanied by the Inspector during the audit, except as noted in para. 5-3(d). The audit shall be documented in a report containing the status of each item audited and a brief description of the objective evidence reviewed to evaluate the duty being audited. The performance audit shall take place at a shop or field site location where the Certificate Holder is or has been actively engaged in activities under its Certificate of Authorization. An Inspector who has undertaken no more than three inspection visits shall be audited but is not required to accompany the Supervisor. The Authorized Inspection Agency's QMS shall describe the manner in which audits of Inspectors falling into this category are to be performed and documented and how any findings are to be resolved. An Inspector who has not been engaged in ASME BPVC inspection work is not required to be audited.

(f) confirm that corrective actions have been verified by the assigned Inspector to ensure compliance with requirements specified in ASME standards at the assigned shop, field, and site locations.

(g) record in the Inspector's diary the dates of all audits and visits to shop, field, and site locations when related to supervisory duties.

(h) investigate and report in writing to the Supervisor's management significant observed or reported nonconformances against a requirement in the ASME standard or in the Certificate Holder's QMS for activities performed under a Certificate of Authorization.

(i) participate as an ASME team member on joint reviews where the Certificate Holder is active and on all surveys and interviews. When the assigned Supervisor's participation on an ASME team is not possible or practicable, a substitute Supervisor with the proper commission and endorsement for the scope of work being evaluated by ASME may participate.

5-3 DUTIES OF AN AUTHORIZED INSPECTOR SUPERVISOR

(a) The Authorized Inspector Supervisor shall audit the performance of each Inspector. This audit is not required if the Inspector performs no ASME-authorized inspections within the 12-month period established under para. 5-2(e).

(b) When an Inspector is assigned multiple Supervisors, only one Supervisor is required to audit the performance of the Inspector as defined within the Authorized Inspection Agency's QMS.

(c) The Supervisor assigned to Certificate Holders performing activities under a Certificate of Authorization whose scope of activity permits stamping of the UM certification designator, shall review, on an annual basis, the Certificate Holder's QMS to determine conformance with the requirements of the ASME standard.

(d) An Inspector who has performed three or fewer inspection visits shall be audited but the Inspector need not be present. The Authorized Inspection Agency's Quality Program shall describe the manner in which these audits are performed and documented. The audit documentation shall include the following:

(1) an evaluation of the inspection activities performed

(2) the results of the inspection

(3) the way in which the results are addressed, including the resolution of any findings, with the Inspector

5-4 DUTIES OF AN AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR, AUTHORIZED NUCLEAR INSERVICE INSPECTOR SUPERVISOR, AND AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR (CONCRETE)

5-4.1 Acceptance of QMS Manual

(a) The Supervisor assigned to a Certificate Holder working under a Certificate of Authorization is the responsible individual who accepts the Certificate Holder's QMS Manual. Acceptance of the manual, including revisions, shall be based on

(1) the manual being an auditable document containing the essential controls.

(2) the Certificate Holder's capabilities to construct an item in conformance with ASME standards under the system described in the manual. Acceptance of the manual and its implementation shall be done prior to an ASME survey.

(b) The Authorized Nuclear Inspector Supervisor assigned to a Certificate Holder working under a nuclear Certificate Holder's or Owner's Certificate shall review and accept the Owner's documented program addressing its responsibilities under ASME BPVC, Section III, which provides the Owner the option of documenting its program in a quality manual or procedure. Acceptance of the documented program, including revisions, and implementation of the program shall be completed prior to an ASME interview. The Supervisor shall conduct

(1) an annual audit of the Owner's documented program and report the results to ASME. The report shall contain sufficient information for ASME to determine whether to renew the Owner's Certificate.

(2) an audit of the Certifying Engineer's qualification activities at least once a year, except for the year the Certificate Holder is surveyed by the Society, to verify that the procedures are being followed and that records exist to support the qualification activities.

(c) The Supervisor assigned to a Certificate Holder having a Quality Assurance Program Certificate is the responsible individual who accepts the Certificate Holder's QMS Manual. Acceptance of the manual, including revisions, shall be based on

(1) the manual being an auditable document containing the essential controls

(2) the Certificate Holder's capabilities to construct an item in conformance with ASME standards under the system described in the manual

Acceptance of the manual shall be completed prior to the manual review conducted by the ASME survey team.

5-4.2 Radiation Monitoring

The Supervisor shall record and limit exposure to radiation in the system established by the Authorized Inspection Agency for themselves and for their assigned Inspectors.

5-4.3 Auditing Performance of Nuclear Inspectors

The performance audit of the Inspector, as required by para. 5-2(e), shall be performed at least twice a year at the shop or a site assigned to the Inspector and at which the Inspector is or has been actively engaged in authorized inspection activities under the governing ASME standards, i.e., ASME BPVC, Section III or Section XI. When an Inspector is assigned to more than one shop or site where activities are being performed under a Certificate of Authorization, or have been performed since the previous audit, the Inspector shall be audited at least once a year at each location. An Inspector who has performed three or fewer inspection visits shall be audited but the Inspector need not be present. The Authorized Inspection Agency's QMS shall describe the manner in which these audits are performed and documented. The audit documentation shall include an evaluation of the actual inspection activities performed, the results, and how the results, including the resolution of any findings, are addressed with the Inspector. The Inspector providing coverage under a substitution assignment need not be audited at the specific location in which authorized inspections were performed, provided that the required performance audit is performed at an active shop or site where

the Inspector does not serve as a substitute. The audit shall include, but not be limited to, a check that the relevant duties detailed under section 7-1 are being performed.

(a) Inspectors performing authorized inspections requiring an N or C endorsement shall

(1) check one item under construction or in the installation phase to ensure implementation of the QMS.

(2) check the travelers or process sheets accompanying items in the construction or installation phase to ensure that these accurately represent and properly attest to the work, examinations, tests, and inspections performed. Particular attention should be given to provision for hold points and sign-offs.

(3) ensure under a Certificate of Authorization that changes, if any, in the Certificate Holder's QMS have been accepted and have been properly incorporated in the manual.

(4) review nonconformances to ensure that appropriate technical review has been provided and that corrective measures are adequate and timely.

(5) review the Certificate Holder's recordkeeping procedure to ensure traceability of any phase of work or NDE results as required by the ASME standard.

(6) check the Inspector's records or Inspector's diary of inspection phases performed on identified items and verify that dates of the inspection activities are noted.

(b) Inspectors performing authorized inspections requiring an I endorsement shall check the following:

(1) the Inspector's record or Inspector's diary of inspection phases performed on identified items. The Supervisor shall verify that dates of the inspection activities are noted.

(2) methods used by the Inspector to ensure the Owner has met the requirements of ASME standards.

(3) that the Inspector is complying with the employer's policies, instructions, and procedures.

(4) the Owner's recordkeeping procedures to verify that any phase of NDE, evaluation of results, or subsequent repair activities meet traceability requirements.

(5) calibration procedures of NDE equipment and adequacy of recordkeeping procedures.

(6) local environmental conditions of components examined to ensure that tests and examinations performed on the components are valid.

(7) that all nonconforming items disclosed during this audit or prior audits have been brought into accordance with applicable ASME standards.

5-4.4 Auditing Activities

For Certificate Holders performing activities under an N-type Certificate of Authorization, the assigned and designated Supervisor shall

(a) audit the QMS Manual at least once a year to verify implementation. This audit shall not be waived. Examples of the types of activities that shall be reviewed are internal and supplier audit results, lead auditor qualifications, and the incorporation of the requirements of the latest code edition in the quality program.

(b) audit at least twice a year activities that are covered by the QMS Manual but are performed at locations not assigned to an Inspector. Engineering and procurement are examples of the types of activities referred to, and a corporate office is an example of such a location. If no activities have been performed at these locations during the period from the last audit, then only one audit per year is required. These audits are not required the year the Certificate Holder is surveyed by the Society.

(c) audit the portion of the QMS that includes furnishing material under the certificate scope statement at least once a year, except for the year the Certificate Holder is surveyed by the Society.

(d) audit all elements of a QMS pertaining to the construction of supports under an NS Certificate of Authorization at least once each year, except for the year the Certificate Holder is surveyed by the Society.

(e) audit at least once each year the Certifying Engineer's qualification activities to verify that the procedures are being followed and that records exist to support the qualification activities, except for the year the Certificate Holder is surveyed by the Society.

(f) audit the Owner's Quality Assurance Program at least once each year and report the results to the Society for review and determination as to whether the Owner's Certificate shall be renewed.

Chapter 6
Inspector Qualifications

6-1 QUALIFICATION REQUIREMENTS FOR AN INSPECTOR

The Authorized Inspection Agency shall be responsible for selection of Inspectors under its employment who are designated as Authorized Inspectors, Authorized Nuclear Inspectors, Authorized Nuclear Inservice Inspectors, or Authorized Nuclear Inspectors (Concrete). The selected individuals may be assigned to perform the duties specified in Chapter 7 when meeting the appropriate qualification requirements of this Chapter.

(a) Table 6-1-1 identifies the commission and endorsement a candidate shall have to perform authorized inspections of the following:

(1) an Owner

(2) a Certificate Holder performing activities under a Certificate of Authorization

(3) a Certificate Holder performing activities under a nuclear Owner's Certificate

The individual (or Inspector) shall submit the proper application to the National Board to obtain a commission, an endorsement, or both.

NOTE: The National Board examination will encompass sufficient means to determine the candidate's knowledge of, and familiarity with, the applicable ASME BPVC Sections. The examination will be graded by the National Board and the results provided to the Authorized Inspection Agency employing the candidate.

(b) A candidate for designation as an Inspector shall meet the following qualification requirements and, as applicable, those listed in section 6-2, section 6-3, section 6-4, or section 6-5:

(1) be in the employment of the Authorized Inspection Agency

(2) have knowledge of QMSs and shop and field procedures and processes

(3) have the knowledge and ability to evaluate and monitor shop and field procedures and performance

(4) have demonstrated the ability to perform shop and field inspections to the satisfaction of the Authorized Inspection Agency employing the Inspector

(5) have a satisfactory degree of experience, knowledge, and background for the inspection of items within the scope of the appropriate ASME standard, consistent with the complexity of the assignment

(6) have knowledge of the requirements for quality assurance records that may be categorized as either lifetime or nonpermanent records

(7) have received health physics training prior to any exposure to occupational-related ionizing radiation when selected and designated by the Authorized Inspection Agency to provide authorized inspection services requiring an N, I, or C endorsement

(8) be examined annually to ensure they have natural or corrected near-distance acuity in at least one eye such that they are capable of reading Jaeger Number 1 test chart or equivalent at a distance of not less than 12 in. (305 mm)

6-2 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED INSPECTOR

(a) A candidate for designation as an Authorized Inspector, without an endorsement, as indicated in Table 6-1-1, shall obtain or hold an Authorized Inspector Commission, shall meet the qualifications listed in section 6-1, and shall have

(1) been engaged for at least 80 hr of diversified experience as an Inspector Trainee under the direct supervision of an Inspector or Inspector Supervisor in accordance with the ASME BPVC

(2) on-the-job knowledge of and experience with the applicable governing standards, i.e., the BPVC Sections identified in Table 6-1-1, code cases, and reference standards

(b) A qualified Authorized Inspector meets the qualification requirements of (a) and is a Commissioned Authorized Inspector. The employer may designate the individual an Authorized Inspector and assign Certificate Holders holding a Certificate of Authorization for the performance of authorized inspections on construction activities to the governing standards, i.e., the ASME BPVC Sections identified in Table 6-1-1, including applicable code cases.

6-3 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSPECTOR

(a) A candidate for designation as an Authorized Nuclear Inspector shall have or obtain an N endorsement, shall meet the qualifications listed in section 6-1, and shall have

Table 6-1-1
Authorized Inspector Commissions and Endorsements

Designation (Title)	Commission	Endorsement	Qualified to Perform Authorized Inspections for Items Constructed Under ASME BPVC
Authorized Inspector	Authorized Inspector	...	Sections I; IV; VIII, Divisions 1, 2, and 3; X; and XII
Authorized Nuclear Inspector	Authorized Inspector	N	Section III, Divisions 1, 3, and 5
Authorized Nuclear Inservice Inspector	Authorized Inspector	I	Section XI, Divisions 1 and 2
Authorized Nuclear Inspector (Concrete)	Authorized Inspector	C	Section III, Division 2

(1) qualified as an Authorized Inspector

(2) been engaged for at least 1 yr subsequent to being qualified as an Authorized Inspector

(-a) in ASME standards–related work, such as inspections under the provisions of the ASME BPVC Sections

(-b) as an Inspector Trainee of nuclear items under the direct supervision of an Authorized Nuclear Inspector providing authorized inspections at an active Certificate Holder location performing work under an N-type Certificate of Authorization

(-c) in a combination of (-a) and (-b)

(3) on-the-job knowledge of and experience with the governing standards, i.e., the BPVC Sections identified in Table 6-1-1, code cases, and reference standards

(b) A qualified Authorized Nuclear Inspector is one who meets the qualification requirements of (a) and holds an N endorsement. The employer may designate the individual an Authorized Nuclear Inspector and assign Certificate Holders holding a Certificate of Authorization or nuclear Owner's Certificate for the performance of authorized inspections on construction activities to the governing standards, i.e., the BPVC Sections identified in Table 6-1-1, including code cases, requiring an N endorsement.

6-4 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSERVICE INSPECTOR

(a) A candidate for designation as an Authorized Nuclear Inservice Inspector shall have or obtain an I endorsement, shall meet the qualifications listed in section 6-1, and shall have

(1) qualified as an Authorized Nuclear Inspector

(2) at least 1 yr experience subsequent to being a qualified as an Authorized Nuclear Inspector

(-a) in ASME standards–related work, such as inspections under the provisions of the ASME BPVC Sections

(-b) as an Inspector Trainee of nuclear items under the direct supervision of an Authorized Nuclear Inservice Inspector providing authorized inspections at an Owner's location that covers programmatic and hardware activities

(-c) in a combination of (-a) and (-b)

(3) on-the-job knowledge of and experience with the governing standards, i.e., the BPVC Sections identified in Table 6-1-1, code cases. and reference standards

(b) A qualified Authorized Nuclear Inservice Inspector meets the qualification requirements of (a) and holds an I endorsement. The employer may designate the individual an Authorized Nuclear Inservice Inspector and assign Owners to perform authorized inspections on repair/replacement activities to the governing standards, i.e., the ASME BPVC Sections identified in Table 6-1-1, including applicable code cases, requiring an I endorsement.

6-5 QUALIFICATION REQUIREMENTS FOR AN AUTHORIZED NUCLEAR INSPECTOR (CONCRETE)

(a) A candidate for designation as an Authorized Nuclear Inspector (Concrete) shall have or obtain a C endorsement, shall meet the qualifications listed in section 6-1, and shall have

(1) qualified as an Authorized Nuclear Inspector

(2) been engaged for at least 1 yr in design, construction, or inspection of concrete structures similar to those used on nuclear facilities, or satisfactorily completed an accelerated course in the fundamentals of concrete construction and inspection

(3) on-the-job knowledge of and experience with the governing standards, i.e., the BPVC Sections identified in Table 6-1-1, code cases, and reference standards

(b) A qualified Authorized Nuclear Inspector (Concrete) meets the qualification requirements of (a) and holds a C endorsement. The employer may designate the individual as an Authorized Nuclear Inspector (Concrete) and assign Certificate Holders holding either a Certificate of Authorization or a nuclear Certificate Holder's or Owner's Certificate for the performance of authorized inspections on construction activities to the governing standards, i.e., the ASME BPVC Sections identified in Table 6-1-1, including code cases, requiring a C endorsement.

Chapter 7
Inspector Duties

7-1 GENERAL DUTIES OF AN INSPECTOR

The designated Inspector shall be responsible for performing the appliable duties in section 7-2, section 7-3, or section 7-4 when assigned by the employer to provide authorized inspections for a Certificate Holder in possession of a Certificate of Authorization. Additionally, the Inspector shall

(a) review and be knowledgeable of the QMS implemented and maintained by the Certificate Holder.

(b) maintain the Inspector's diary provided by the Authorized Inspection Agency. The Inspector shall record in the Inspector's diary activities and inspections made, detailing corrections and any other pertinent data that will be useful to the assigned Inspector, the assigned Supervisor, and the Inspector's employer. Information to be recorded shall include a description of the item inspected, the type of observations made, and the results of inspection.

(c) verify that the Certificate Holder's activities are performed under a Certificate of Authorization that is current and appropriate for the work performed.

NOTE: The fact that the Certificate Holder has the required ASME Single Certification Mark is not sufficient evidence to assume the organization has a current and valid Certificate of Authorization. It is necessary to check the Certificate to make certain it has not expired and to determine the scope of construction permitted under the terms of the Certificate.

(d) verify that the Certificate Holder performing activities under its Certificate of Authorization has the necessary ASME standards, addenda, and code cases.

(e) conduct all required inspections in accordance with NB-263 RCI-1 and the relevant ASME standards.

(f) report to the Supervisor when right of access is denied by the Certificate Holder to personnel, documents, and areas of the shop, site, or field involved with activities performed under a Certificate of Authorization.

(g) monitor the QMS implemented or maintained by the Certificate Holder. As part of monitoring, the Inspector shall verify the current ASME standards have been reviewed by the Certificate Holder and, where appropriate, the QMS has been changed to meet the current requirements. Monitoring is not required when the Certificate Holder is inactive. If the Inspector is prevented by the Certificate Holder from carrying out the required monitoring, the Inspector shall report this situation to the Supervisor.

(h) verify that the work performed under a Certificate of Authorization is in conformance with the QMS Manual and relevant ASME standards covered under the scope of the certificate through inspection and monitoring activities.

(i) verify the material used in construction complies with the ASME standard.

(j) verify, when joining methods require the use of welding, brazing, or fusion, that

(1) welding, brazing, and fusion procedures are in conformance with ASME standards

(2) welders, welding operators, brazers, brazing operators, and fusion operators performing the joining are properly qualified and that their qualification permits them to use the required procedures

(k) verify, when construction activities require heat treatments, that the activity is properly documented and in conformance with ASME standards.

(l) verify the following when construction activities require NDE and tests to be performed:

(1) NDE personnel (Levels III, II, and I) are qualified and certified to a written practice in conformance with ASME standards

(2) NDE are performed using qualified procedures and qualified personnel

(3) the required NDE, impact tests, and other tests have been performed and properly documented and that the results are acceptable

(m) not permit the use of the ASME Single Certification Mark on items that have an uncorrected nonconformity and shall refuse to sign ASME BPVC Data Reports on such items.

(n) witness the final pressure test and verify the test was performed in conformance with the ASME standard.

(o) verify, prior to application of the ASME Single Certification Mark, to the best of the Inspector's knowledge and belief, that the item is in conformance with the ASME standard.

(p) verify the nameplate stamping is correct and that the nameplate has been properly attached.

(q) verify, prior to signing the Data Report as an appropriately endorsed Inspector, that the responsible representative of the Certificate Holder has verified the information on the Data Report to be correct and has signed the Data Report.

(r) be a member of the ASME team conducting the joint review or survey [see para. 2-2(e)].

7-2 DUTIES OF AN AUTHORIZED INSPECTOR

The assigned Inspector designated as an Authorized Inspector shall provide authorized inspections to determine conformity to ASME BPVC, Sections I, IV, VIII, X, and XII; applicable code cases; and reference standards. This Authorized Inspector shall perform the duties specified in section 7-1 and as follows:

(a) The Inspector shall accept the manual describing the QMS for activities performed under a Certificate of Authorization. The Inspector shall verify that the manual addresses the essential controls for each basic quality element specified by the governing standard. The manual shall provide ASME and the Authorized Inspection Agency the right of access to all personnel, locations, and documents pertaining to activities performed under the Certificate of Authorization.

(b) The Inspector shall verify that the organization is able to implement the QMS as described and is performing activities in conformance with the requirements of the ASME standard. The Inspector shall monitor the following elements when required by the governing standard specified in the manual and/or shall inspect the following activities performed under the element for conformance:

(1) Authority and Responsibility. The Inspector shall monitor the persons identified in the manual as accountable and responsible for controlling and implementing the quality system to verify that the persons have

(-a) management's continued support

(-b) the organizational freedom to identify quality problems

(-c) the organizational freedom to initiate, recommend, and provide solutions

(2) Organization. The Inspector shall monitor if the structure of the organization as described in the manual correctly reflects the actual organization.

(3) Drawings, Design Calculations, and Specification Control. The Inspector shall monitor if the system used to review, approve, and release for use drawings, design calculations, material specifications, welding procedure specifications, and travelers or checklists is implemented as described in the manual. Additionally, the Inspector shall

(-a) select hold points on the traveler or checklist to perform inspections. NB-263 RCI-1 shall be used to ensure all required inspections are performed.

(-b) select one or more design calculations to verify compliance with the governing standard.

(4) Material Control. The Inspector shall monitor that the system used for selecting, ordering, receiving, identification, traceability, storage, and release and use of material, including welding material, for fabrication is implemented as described in the manual. Additionally, the Inspector shall

(-a) verify that the materials used in the construction of the item are in conformance with the ASME standard through review of all material test reports and other material documentation

(-b) make visual inspections of the item to confirm that the material identification markings have been properly transferred onto the item

(-c) make visual inspections of the item to confirm that there are no material defects

(5) Examination and Inspection Program. The Inspector shall monitor if the system used to assure the achievement of quality is implemented as described in the manual. Additionally, the Inspector shall

(-a) perform internal and external visual inspections throughout the course of the item's construction to confirm that there are no nonconformances such as, but not limited to, defects in the material, weld, and dimensions.

(-b) witness the performance of the pressure (hydrostatic or pneumatic) test.

(-c) verify the appropriate Data Report has been completed, that the contents of the Data Report are correct, and that the responsible representative of the Certificate Holder has verified correctness of the Data Report prior to the representative signing the report.

(-d) not permit application of the ASME Single Certification Mark on the item until it is verified to the best of the Inspector's knowledge and belief that the item is in compliance with the ASME standard. When a nameplate is used, the inspector shall verify that the nameplate stamping is correct and properly attached to the item.

(-e) certify the item's conformance to the governing standard by signing the Data Report.

(6) Correction of Nonconformities. The Inspector shall monitor if the system used to identify nonconformities and determine final disposition is implemented as described in the manual. Additionally, the Inspector shall inspect and accept all repairs made by welding.

(7) Welding, Brazing, and Fusing. The Inspector shall monitor if the system used to control welding, brazing, and fusing activities is being implemented as described in the manual. Additionally, the Inspector shall

(-a) verify that all welding, brazing, and fusing procedures have been qualified

(-b) verify that all welders, welding operators, brazers, brazing operators, and fusing operators have been qualified and their qualifications have been maintained

(-c) have the right to have a welder, welding operator, brazer, brazing operator, or fusing operator be requalified

(-d) verify traceability of the production weld, braze, and fuse to the individual who performed the process

(8) NDE. The Inspector shall monitor if the system used to control NDE activities is implemented as described in the manual. Additionally, the Inspector shall

(-a) verify NDE personnel (Levels III, II, and I) have been qualified and certified in accordance with the relevant standard

(-b) verify written procedures have been prepared and accepted by NDE Level III personnel

(-c) have the right to have an NDE examiner be requalified

(-d) verify that the required NDE, impact tests, and other tests have been performed and that the results are acceptable

(9) Heat Treatment. The Inspector shall monitor if the system used to control heat treatment activities is implemented as described in the manual. Additionally, the Inspector shall verify that heat treatments, including postweld heat treatments, have been performed when required by the ASME standard and are properly documented.

(10) Calibration or Measuring and Test Equipment. The Inspector shall monitor if the system used to control calibration activities and the use of calibrated measuring and test equipment is implemented as described in the manual.

(11) Records Retention. The Inspector shall monitor if the system used to identify a document as a quality record, including its distribution and retention period, is implemented as described in the manual.

(12) Forms. The Inspector shall monitor if the system used to develop and identify the use of approved forms is implemented as described in the manual. Additionally, the Inspector shall verify that approved forms are used throughout the construction.

(13) Internal Audits. The Inspector shall monitor if the system used by management to determine the adequacy of its QMS is being implemented as described in the manual.

7-3 DUTIES OF AN AUTHORIZED NUCLEAR INSPECTOR

The assigned Inspector shall hold an N endorsement and shall perform inspection and monitoring activities to determine conformity to the governing standard, i.e., ASME BPVC, Section III, Divisions 1, 3, and 5; code cases; and reference standards.

7-3.1 N-Type Certificate Holders

The Inspector's duties shall include, but not be limited to, inspection and monitoring activities specified in section 7-1 and those identified as in (a) through (g). The Inspector shall

(a) verify that the Design Specification and Design Report, where required, are available; properly certified by Certifying Engineers in accordance with Section III, Division 1, Division 3, or Division 5; and on file.

(b) verify that the Certificate Holder's controls for materials are such that responsible personnel transfer the material's identification when it is necessary to cut the material into two or more pieces, to maintain traceability of the material.

(c) verify that the Certificate Holder's personnel are examining all cut edges, as required by ASME BPVC, Section II or Section III, Division 1 or Division 3.

(d) verify that only properly qualified procedures, welders, and operators are used when welded repairs are necessary during construction.

(e) verify that required heat treatments have been performed and properly documented.

(f) verify that required NDE and tests have been performed by qualified personnel and that the results have been properly documented and meet ASME BPVC, Section V and Section III (Division 1, Division 3, or Division 5, as applicable) requirements. NDE procedures and acceptance standards shall be in accordance with ASME standards.

(g) perform inspections, where applicable, on items that are reported on Data Reports and those that are constructed using methods other than welding.

7-3.2 Nuclear Owner's Certificate

The duties of the Inspector shall include, but not be limited to, the following:

(a) monitoring the Owner's progress in compiling supporting data needed to complete Form N-3

(b) verifying that the required documentation for overpressure protection exists and is properly filed for that portion of the system covered by Form N-3

(c) reviewing Form N-3 prior to signing the Data Report but only after it has been certified by the Owner

7-4 DUTIES OF AN AUTHORIZED NUCLEAR INSPECTOR (CONCRETE)

The assigned Inspector shall hold a C endorsement and shall perform inspection and monitoring activities to determine conformity to the governing ASME standard, i.e., ASME BPVC, Section III, Division 2; applicable code cases; and reference standards. The Inspector's duties shall include, but not be limited to, inspection and monitoring activities specified in section 7-1 and in (a) through (l). The Inspector shall

(a) verify that changes to the QMS, when made, meet the governing ASME standard and are properly approved, and that the system is appropriately updated to reflect such changes.

(b) verify that the Design Specification, Design Drawings, Design Report, and Construction Specification, where required, are available, are properly certified by Certifying Engineers in accordance with ASME BPVC requirements, and are on file.

(c) verify that material complies with the applicable ASME BPVC, Section III, Division 2 requirements and the Construction Specification.

(d) verify that the Certificate Holder's controls for metallic material are such that responsible personnel transfer the metallic material identification when cutting or separating metallic material into two or more pieces, to maintain traceability of the material.

(e) verify that the Certificate Holder's personnel are examining cut edges of metallic materials as required by ASME BPVC, Section III, Division 2.

(f) verify that Welding Procedure Specifications and all concrete batching, mixing, and placing procedures conform to ASME BPVC, Section III, Division 2 and the Construction Specification.

(g) verify that only properly qualified procedures, personnel, and materials are used when concrete repairs are necessary during construction.

(h) verify that required examinations and tests conform to qualified procedures specified in the Construction Specification, that the results are documented, and that the examinations and tests are performed by qualified personnel. The Inspector shall also verify that compression, tension, weighing, and measuring equipment is calibrated.

(i) visually verify that reinforcing bar placement and size are as specified in the Design Drawings and the Construction Specification prior to concrete placement. The Inspector shall visually verify that tendon conduits, where used, are properly sized, placed, and protected prior to, and during, concrete placement as specified in the Design Drawings and the Construction Specification.

(j) visually verify form cleanliness prior to concrete placement, the application of specified procedures during placement, and proper concrete curing prior to and after removal of forms as specified in the Construction Specification.

(k) perform the required inspections of inaccessible areas and witness vacuum box testing when required by the governing ASME standard (ASME BPVC, Section III, Division 2), prior to closure for hydrostatic or pneumatic tests.

(l) review and verify that the Construction Report is in compliance with the governing ASME standard (ASME BPVC, Section III, Division 2).

7-5 DUTIES OF AN AUTHORIZED NUCLEAR INSERVICE INSPECTOR

The assigned Inspector shall hold an I endorsement and shall perform inspection and monitoring activities to determine conformity to the governing ASME standard, i.e., ASME BPVC, Section XI; applicable code cases; and reference standards. The Inspector's duties shall include, but are not limited to, inspection and monitoring activities specified herein. The Inspector shall

(a) verify that the Owner or User has the applicable ASME standards.

(b) maintain an Inspector's diary. The Inspector shall keep the Inspector's diary provided by the Authorized Inspection Agency up to date. The Inspector shall record in the Inspector's diary activities and inspections made, detailing corrections and any other pertinent data that will be useful to the assigned Inspector, the assigned Supervisor, and the Inspector's employer. Information to be recorded shall include a description of the item inspected, the type of observations made, and the results of inspection.

(c) verify that materials used for NDE comply with the governing ASME standard.

(d) verify that required NDE and tests have been made by personnel who meet the qualifications and requirements of ASME BPVC, Section XI and that the results are properly documented and meet ASME BPVC, Section XI requirements. NDE procedures and acceptance standards shall be in accordance with ASME BPVC, Section XI.

(e) verify that the Design Specification and Design Report for repairs and replacements, where required, are available, are properly certified by Registered Professional Engineers or Certifying Engineers in accordance with relevant ASME BPVC requirements, and are on file.

(f) verify that all required welding procedures conform to the governing ASME standards (ASME BPVC, Sections IX and XI).

(g) verify that welders and welding operators are properly qualified to use the required procedures.

(h) verify that material and replacement parts comply with the governing ASME standard (ASME BPVC, Section XI).

(i) verify that heat treatments required by the governing ASME standard for repairs and replacements (ASME BPVC, Section XI) have been performed and are properly documented.

(j) verify that the responsible representative of the Owner has signed the required Forms NIS-1 and NIS-2 and verified they are correct before the Inspector signs them.