ASME QAI-1–2005
(Revision of ASME QAI-1–2003)

Qualifications for Authorized Inspection

AN ASME STANDARD



The American Society of Mechanical Engineers

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(Revision of ASME QAI-1–2003)

Qualifications for Authorized Inspection

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The American Society of Mechanical Engineers
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FOREWORD (05)

The 2005 edition of ASME QAI-1 incorporates the 2003 edition of QAI-1, and revisions and additions approved by the QAI Standards Committee since the publication of the 2003 edition.

This Standard is arranged into the Parts listed below.

ASME QAI-1–2005

Part	Description
1	Requirements for qualifications and duties of the Authorized Inspection Agency, its Authorized Nuclear Inspectors, and its Authorized Nuclear Inspector Supervisors, as used with the ASME Boiler and Pressure Vessel Code Section III, Division 1, Rules for Construction of Nuclear Power Plant Components, and Section III, Division 3, Containment Systems and Transport Packagings for Spent Fuel and High Level Radioactive Waste
2	Requirements for qualifications and duties of the Authorized Inspection Agency, its Authorized Nuclear Inservice Inspectors, and its Authorized Nuclear Inservice Inspector Supervisors, as used with the ASME Boiler and Pressure Vessel Code Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components
3	Requirements for qualifications of the Authorized Inspection Agency, its Authorized Nuclear Inspectors (Concrete), and its Authorized Nuclear Inspector Supervisors (Concrete), as used with the ASME Boiler and Pressure Vessel Code Section III, Division 2, Code for Concrete Reactor Vessels and Containments (ACI 359)
4	Requirements for Accreditation of Authorized Inspection Agencies
5	Requirements for qualifications and duties of the Authorized Inspection Agency and its Supervisors, and qualifications of Authorized Inspectors, as used with the ASME Boiler and Pressure Vessel Code Sections I; IV; VIII, Divisions 1, 2, and 3; X; and XII.
6	Requirements for qualifications and duties for Qualified Inspection Organizations and qualifications for Inspectors and Supervisors as used with the ASME Boiler and Pressure Vessel Code Section XII
7	Requirements for Accreditation of Qualified Inspection Organizations performing inspections as required by the ASME Boiler and Pressure Vessel Code Section XII
8	Requirements for qualification and duties of the Certified Individual performing inspections as used with the ASME Boiler and Pressure Vessel Code Sections I; IV; VIII; Divisions 1, 2, and 3; X; and XII when so referenced by the respective Code Sections

These requirements 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 which now reports to the ASME Board on Conformity Assessment. The Committee operates under procedures accredited by the American National Standards Institute.

The QAI-1 Standard has been developed with the following principles intended to apply to all jurisdictional authorities accredited as an AIA 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 AIA.

(b) Integrity. The AIA maintains the commitment to the integrity of the inspection process and of the ASME Code Symbol Marks 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 AIAs.

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(d) Participation in the Process. The AIA 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 (IIRG).

When required by context in this Section, 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.

Requests for interpretations or suggestions for improvement of this Standard should be addressed to the Secretary of the Committee on Qualifications for Authorized Inspection, The American Society of Mechanical Engineers, MS-21A, Three Park Avenue, New York, NY 10016.

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ASME QAI-1–2005
SUMMARY OF CHANGES

ASME QAI-1–2005 replaces previously issued ASME QAI-1–2003.

ASME QAI-1–2005 includes editorial changes and corrections as well as the following changes identified by a margin note, **(05)**.

Page	*Location*	*Change*
v	Foreword	Revised
18	4-0	Revised
20–23	Part 5	Revised
24–27	Part 6	Added
28, 29	Part 7	Added
30	Part 8	Added

SPECIAL NOTE:

The interpretations to ASME QAI-1 issued between September 2002 and December 2004, and current approved Cases to ASME QAI-1 follow the last page of this edition as a separate supplement.

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QUALIFICATIONS FOR AUTHORIZED INSPECTION

PART 1
Qualifications and Duties for Authorized Inspection Agencies, Nuclear Inspectors, and Nuclear Inspector Supervisors (Applicable to ASME Boiler and Pressure Vessel Code Section III, Divisions 1 and 3)

1-0 SCOPE

Part 1 of this Standard is for use with Section III, Divisions 1 and 3, of the ASME Code,[1] including applicable Addenda and Code Cases.

1-1 THE AUTHORIZED INSPECTION AGENCY

1-1.1 Qualifications

An Authorized Inspection Agency is one designated by, or acceptable to, the appropriate legal authority of a state of the United States of America, or province of Canada, that has adopted Section III, Division 1 or Section III, Division 3, of the ASME Boiler and Pressure Vessel Code.[1] Such agencies shall meet the criteria of Section III, Division 1 or Section III, Division 3, of the ASME Code and of the National Board Rules for Commissioned Inspectors.[2]

1-1.1.1 An Authorized Inspection Agency shall be either

(a) a jurisdiction[3] which has adopted and does administer Section III, Division 1 or Section III, Division 3, of the ASME Code as a legal requirement and is qualified to be represented on the ASME Code Conference Committee; or

(b) an insurance company which has been licensed or registered by the appropriate authority of a state of the United States of America, or of a province of Canada, to write boiler and pressure vessel insurance in such state or province. The insurance company shall show its capability to provide boiler and pressure vessel insurance coverage by being actively engaged in writing such insurance in one or more of the states or provinces where so licensed or registered. The insurance company shall also obtain credentials (e.g., Certificate of Competency, jurisdictional commission) when applicable, for their Nuclear Inspectors and Nuclear Inspector Supervisors from the jurisdictional authorities[3] that have the responsibility of administering the boiler and pressure vessel laws in the state of the United States of America, or the province of Canada, in which the company is so licensed or registered, that have adopted and do administer Section III, Division 1 or Section III, Division 3, of the ASME Code.

1-1.1.2 An Authorized Inspection Agency shall be accredited by the Society pursuant to the provisions set forth in Part 4 of this Standard.

1-1.1.3 The Authorized Inspection Agency shall provide authorized inspection service within such states or provinces by inspectors who meet the qualifications of the Authorized Nuclear Inspector as defined herein.

1-1.2 Duties

An Authorized Inspection Agency[4] shall perform the duties specified in 1-1.2.1 through 1-1.2.10.

1-1.2.1 Participate in the ASME surveys of organizations for which they provide Authorized Nuclear Inspection.

1-1.2.2 Provide qualified Authorized Nuclear Inspectors to monitor construction[5] in accordance with the ASME Code Section III, Division 1 or 3, or both.

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

[3] Considered to be enforcement authority per Section III, Part NCA, NCA-9000, of the ASME Code, as appropriate.

[4] Wherever used in Part 1 of this Standard, the term *Agency* or *employer* refers to the Authorized Inspection Agency, the term *Supervisor* refers to an Authorized Nuclear Inspector Supervisor, and the term *Inspector* refers to an Authorized Nuclear Inspector.

[5] *Construction,* as used in Divisions 1 and 3, is an all-inclusive term comprising materials, design, fabrication, examination, testing, inspection, and certification required in the manufacture and installation of items.

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1-1.2.3 Maintain qualified Supervisors to monitor the performance of the Authorized Nuclear Inspectors and to audit the activities at nuclear shops and field sites for which inspection agreements have been made, in accordance with the requirements of 1-2.2.6.

1-1.2.4 Give written notice to all Authorized Nuclear Inspectors of the name, office address, and office and home phone numbers of their respective Supervisors.

1-1.2.5 Assure proper execution of responsibilities. In particular, the Agency shall

(a) establish and implement an internal program which shall provide assurance that those of its employees holding the positions of Supervisor and Authorized Nuclear Inspector perform work in accordance with the requirements of Part 1 of this Standard. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout the life term of any agreement covering inspections required by the ASME Code, in accordance with the program. The program shall provide for indoctrination and training of personnel performing such activities, as necessary, to ensure that suitable proficiency is achieved and maintained.

(b) provide instructions in writing to Authorized Nuclear Inspectors and their Supervisors, specifying their respective duties and responsibilities.

(c) provide instructions in writing to Authorized Nuclear Inspectors requiring them to immediately contact their Supervisor whenever the Inspector is unable to readily resolve any question concerning ASME Code compliance, manufacturing procedure, or quality assurance provision or its implementation. Instructions should be included as a reminder to the Authorized Nuclear Inspector that he has the authority and the duty to refuse to sign any Data Reports involving nonconformance with the ASME Code.

(d) conduct annual planned audits of activities performed by Authorized Nuclear Inspector Supervisors to verify compliance with the provisions of the ASME Code Section III, Division 1 or 3, or both, and Part 1 of this Standard. The audit shall be performed by appropriately trained personnel, in accordance with a written procedure or checklist. Audit results shall be documented and reviewed by management. Follow-up action, including reaudit of deficient areas, shall be taken where indicated to ensure that necessary corrective action is completed.

(e) establish and implement a written policy to ensure levels of inspection activity commensurate with the scope of the AIA's Certificate of Accreditation.

1-1.2.6 Provide certification for each Authorized Nuclear Inspector and Supervisor to be performing work under the provisions of the ASME Code Section III, Division 1 or 3, or both, to ensure that the Inspectors and Supervisors meet the required experience and training requirements of Part 1 of this Standard. Certification and documentation of qualifications shall be retained by the employer and shall be made available for review by the jurisdictional Authorities and the ASME Survey Team, upon request.

1-1.2.7 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inspector applicant, certifying that he has the required experience and training and that qualified supervision will be provided to ensure that the Authorized Nuclear Inspector satisfactorily fulfills his functions.

1-1.2.8 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inspector Supervisor applicant, certifying that the Supervisor has the required experience and training.

1-1.2.9 Verify to the National Board that the audits required by 1-2.2.6 have been carried out.

1-1.2.10 Notify the ASME Conformity Assessment Department of the termination of an inspection agreement with a holder of an ASME Certificate of Authorization.

1-1.3 AIA Quality Program

1-1.3.1 A documented Quality Program shall be established, implemented, and maintained by the Authorized Inspection Agency (AIA) in accordance with the requirements of this Standard. The AIA Quality Program shall identify the activities to which it applies and shall provide for the planning, control, and accomplishment of activities affecting the quality of the Authorized Inspection Agency's implementation of duties and activities as described in applicable parts of this Standard.

1-1.3.2 The AIA Quality Program shall, at a minimum, include the following parts:

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

(b) Program Description. The Program shall describe the scope of the activities for which the Program applies. The scope shall include all requirements of the QAI-1 Standard for which the Authorized Inspection Agency is accredited by the Society (or for which the applicant is seeking Society accreditation as an Accredited Authorized Inspection Agency). The Program shall document the policies and describe the process for the implementation of the requirements of the QAI-1 Standard.

(c) Document Control. The Program shall describe the process for the review and revision of the Program. All

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changes to the Program shall be controlled and the process for review and approval of changes shall be specified. All changes to the Program require prior review and approval by the Society before implementation as required by Part 4, para. 4-4(d) of this Standard. Further, the Program shall be controlled to ensure appropriate distribution to and use at the location(s) where the prescribed activity is performed.

(d) Training. The Program shall describe the process for the indoctrination and training of personnel responsible for implementing the Program.

(e) Records. The Program shall describe the process for records management. The description shall include measures to ensure that the records are controlled and maintained in a manner that prevents damage, deterioration, and loss. The AIA's records necessary to verify compliance with this QAI Standard, except for personnel qualification records, shall be maintained for a minimum of 5 years. The personnel qualification records, necessary to verify compliance with this QAI Standard, shall be maintained while the individual is providing AIA services and for a minimum of 5 years after the individual ceases to provide AIA services.

(f) Corrective Actions. The Program shall describe the process for the identification, review, and correction of a condition or activity which is not conducted in accordance with the Program. 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.

(g) Audits. The Program shall describe the audit process and shall include the following as a minimum:

(1) A comprehensive system of planned and periodic audits shall be carried out to verify compliance with applicable requirements of the QAI-1 Standard and the AIA Quality Program and to determine its effectiveness. The audits shall be performed in accordance with written procedures or checklists by appropriately trained personnel not having 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 AIA Quality Program shall be reviewed and the results of the review documented and reported to management.

1-2 THE AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR

1-2.1 Qualifications

The Supervisor shall be selected and designated as such by his employer. He shall have qualified as an Authorized Nuclear Inspector and shall have the additional qualifications specified in 1-2.1.1 through 1-2.1.5.

1-2.1.1 The Supervisor shall have passed an examination developed, promulgated, and administered by the National Board. Such examinations shall encompass sufficient means of determination of the candidate's ability to ascertain the validity and quality of the nondestructive examination and other quality assurance requirements of Section III, Divisions 1, 2, and 3, and Section XI of the ASME Code.

1-2.1.2 The Supervisor shall have knowledge of the basic fundamentals of health physics, insofar as permissible exposure to radiation is concerned.

1-2.1.3 To be considered for certification a candidate shall satisfy one of the following requirements:

(a) graduate of a 4-year accredited engineering or science college or university, plus 5 years of experience in quality assurance, including testing or inspection (or both) of equivalent manufacturing, construction, or installation activities. At least 2 years of this experience should be associated with nuclear facilities; or if not, the individual shall have training sufficient to acquaint him thoroughly with the safety aspects of a nuclear facility.

(b) high school graduate, plus 10 years of experience in general quality assurance or engineering, or equivalent manufacturing, construction, or installation activities. Five years of this experience is required in quality assurance, including testing or inspection (or both) of equivalent construction and installation activities. At least 2 years of this experience should be associated with nuclear facilities; or if not, the individual shall have training sufficient to acquaint him thoroughly with the safety aspects of a nuclear facility.

(c) at least 5 years ASME Boiler and Pressure Vessel Code related work, which includes inspection under the provisions of the ASME Code Section I, III, or VIII; supervision of such work prior to the establishment of these qualifications; administration of shop inspection service under the referenced Sections or experience in applicable Code related manufacturing or construction activities.

1.2.1.4 The Supervisor shall have knowledge of ASME nuclear survey procedures, which shall include either of the following:

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

(b) serving as a member or observer on 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 accreditation program

1-2.1.5 The Supervisor shall have experience including the review of implementation of the applicant's QA

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Manual and Program and the resolution of corrective actions associated with the program.

1-2.2 Duties

The Authorized Nuclear Inspector Supervisor shall perform the duties specified in 1-2.2.1 through 1-2.2.10.

1-2.2.1 Maintain a record of Certificate Holders' shop and field sites where Inspectors assigned to him by his Authorized Inspection Agency for supervision are performing Code inspection activities. He shall record the date of his visits to such locations when related to his assigned supervisory duties.

1-2.2.2 Maintain a record of those Authorized Nuclear Inspectors assigned to him and a description of their assignments.

1-2.2.3 Assist in maintaining the competency of the Authorized Nuclear Inspector through periodic arrangement of panel discussions of work-related topics; written communications of unique problems and their solution; informal question and answer discussion sessions, and other means he deems suitable. The Supervisor shall maintain documentation of such activities.

1-2.2.4 The Supervisor shall be responsible for the technical performance of the Authorized Nuclear Inspector(s) assigned to him. He shall report in writing to his management significant nonconforming activities that are reported to him or that he has observed on the part of the Inspector, following full investigation of such activities.

1-2.2.5 Either establish, or have available to him, a system to record and limit his radiation exposure and that of the Inspectors assigned to him. This system shall be under the regulation of his employer, who shall maintain an acceptable system of control.

1-2.2.6 Audit the performance of each Authorized Nuclear Inspector under his supervision on a planned and periodic basis. Each Authorized Nuclear Inspector actively engaged in Section III, Division 1 or 3, or both, Code inspection shall be audited at least twice a year at the shop or site to which he is assigned. When an Inspector is assigned to more than one shop or site at which Code activities are being performed, or have been performed since the previous audit, the Authorized Nuclear Inspector shall be audited at least once a year at each location. At the time of this audit, the Supervisor shall be accompanied by the Authorized Nuclear Inspector. The audit shall include, but not be limited to, a check that the duties listed under 1-3.2 are being performed, and a check of the following:

(a) one item under construction or installation phase to ensure implementation of the Quality Assurance Program.

(b) travelers or process sheets[6] 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-off.

(c) the Certificate Holder's Quality Assurance Manual to ensure that changes, if any, in the Quality Assurance Program have been accepted and have been properly incorporated in the Manual.

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

(e) the Certificate Holder's record keeping procedure to ensure traceability of any phase of work or nondestructive examination results as required by the ASME Code.

(f) the Authorized Nuclear Inspector's records or diary of inspection phases performed on identified items, with dates of the inspection activities noted.

1-2.2.7 The audit required in 1-2.2.6 shall be recorded in writing and shall contain a written comment regarding the status of each item audited.

1-2.2.8 The Supervisor shall ensure that the activities covered by the Certificate Holder's Quality Assurance Manual which are performed at locations not assigned to an Authorized Nuclear Inspector are audited at least twice a year. Corporate offices would be an example of such a location. Engineering and procurement could be examples of the types of activities performed at 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.

1-2.2.9 The Supervisor shall ensure that portions of the N Type Certificate Holder's Quality Assurance Program that involve supply or manufacture and supply of materials are audited at least once each year.

1-2.2.10 The Supervisor shall investigate and report in writing to his management significant observed or reported ASME Code or Quality Assurance Program nonconformance by the Certificate Holder engaged in ASME Code Section III, Division 1 or 3 activities.

1-3 THE AUTHORIZED NUCLEAR INSPECTOR

1-3.1 Qualifications

All Inspectors shall comply with the National Board Rules for Commissioned Inspectors, and hold a valid State Certificate of Competency (where required) and a valid National Board Commission. An applicant for

[6] *Travelers or process sheets* — a listing of sequential operations which include, but need not be limited to, inspections, testing, examinations, and fabrication activities.

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designation as an Authorized Nuclear Inspector shall satisfy the requirements as defined by 1-3.1.1 through 1-3.1.8. Documentation of satisfactory completion of these requirements shall be maintained by the Authorized Inspection Agency employing the Inspector.

1-3.1.1 A minimum of 1 year of diversified shop inspection experience in the construction of Section I or Section VIII pressure vessels, or 1 year of diversified experience as an Inspector trainee of nuclear items under the direct supervision of an Authorized Nuclear Inspector.

1-3.1.2 Demonstrated ability to perform shop and field inspections to the satisfaction of the Authorized Inspection Agency employing the Inspector.

1-3.1.3 Experience, knowledge, and background consistent with the complexity of the assignment.

1-3.1.4 Knowledge of applicable Sections of the ASME Code and Code Cases.

1-3.1.5 Knowledge of Quality Assurance Manuals and shop and field procedures.

1-3.1.6 Knowledge and ability to evaluate and monitor shop and field procedures.

1-3.1.7 Knowledge of the requirements for maintenance and retention of in-transit and permanent records.

1-3.1.8 A passing grade on an examination in the methods of welding and nondestructive examinations for Authorized Nuclear Inspectors, given by the National Board, covering knowledge of, and familiarity with, the ASME Code. The examination shall be graded by the National Board and results provided to the Authorized Inspection Agencies concerned.

1-3.2 Duties

The Inspector's duties are covered in the ASME Code and include, but are not limited to 1-3.2.1 through 1-3.2.18.

1-3.2.1 He shall verify that the manufacturer or installer has the required Certificate of Authorization to construct the items contracted for. It is necessary to check the Certificate to make certain that it has not expired and to determine the scope of construction permitted under the terms of the Certificate.

NOTE: The fact that the manufacturer or installer has the required Code Symbol Stamp is not sufficient evidence to assume that he has a valid Certificate of Authorization.

1-3.2.2 He shall monitor the Quality Assurance Program and verify conformity.

1-3.2.3 He shall verify that the Certificate Holder has the necessary Code books, Addenda, and Code Cases for the work he inspects.

1-3.2.4 He shall verify that the Design Specification and Design Report, where required, are available, properly certified by Registered Professional Engineers in accordance with ASME Code requirements, and that they are on file.

1-3.2.5 He shall verify that material complies with the applicable ASME Code requirements.

1-3.2.6 When it is necessary to cut the material into two or more pieces, he shall verify that the Certificate Holder's controls are such that responsible personnel transfer the identification in order to maintain traceability of the material.

1-3.2.7 He shall verify that the Certificate Holder's personnel are examining all cut edges, as required by the ASME Code.

1-3.2.8 He shall verify that welding procedures conform to the ASME Code Sections III and IX.

1-3.2.9 He shall verify that welders and welding operators are properly qualified and that their qualification permits them to use the required procedures.

1-3.2.10 During construction, he shall verify that the welding controls permit only the use of qualified welding procedures and qualified welders and operators.

1-3.2.11 If welded repairs are found to be necessary during construction, he shall verify that only properly qualified procedures, welders, and operators are used.

1-3.2.12 He shall verify that required heat treatments have been performed and are properly documented.

1-3.2.13 He shall verify that required nondestructive examinations and tests have been performed by qualified personnel and that the results are properly documented and meet Code requirements. Nondestructive examination procedures and acceptance standards shall be in accordance with the ASME Code.

1-3.2.14 He shall perform the required inspections prior to closure for testing. He shall also witness hydrostatic or pneumatic tests.

1-3.2.15 He shall verify that the responsible representative of the Certificate Holder has signed the Data Report and verified it as correct before he signs it.

1-3.2.16 Prior to stamping, he shall verify to the best of his knowledge and belief that the item is in compliance with the ASME Code. He shall also verify that the nameplate stamping is correct and that the nameplate has been properly attached.

1-3.2.17 He shall also inspect, where applicable, items that are reported on Data Reports and those that are constructed using methods other than welding.

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1-3.2.18 He shall keep a bound (not looseleaf) record or diary of his activities and inspections made, detailing corrections and any other pertinent data that will be useful to him and his employer. Information to be recorded shall include a description of the item inspected, the type of observations made, the requirements that prompted the activity, and the results of inspection.

1-3.3 Performance of Inspector's Duties

The audit performed in conformance with 1-2.2.6 and documented in accordance with 1-2.2.7 shall provide evidence of the satisfactory performance of the duties of 1-3.2 by the Inspector.

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PART 2
Qualifications and Duties for Authorized Inspection Agencies, Nuclear Inservice Inspectors, and Nuclear Inservice Inspector Supervisors (Applicable to ASME Boiler and Pressure Vessel Code Section XI)

2-0 SCOPE

Part 2 of this Standard is for use with Section XI of the ASME Code,[1] including applicable Addenda and Code Cases.

2-1 THE AUTHORIZED INSPECTION AGENCY

2-1.1 Qualifications

An Authorized Inspection Agency is one designated by, or acceptable to, the appropriate legal authority of a state of the United States of America, or province of Canada, that has adopted Section XI of the ASME Boiler and Pressure Vessel Code.[1] Such agencies shall meet the criteria of Section XI of the ASME Code and of the National Board Rules for Commissioned Inspectors.[2]

2-1.1.1 An Authorized Inspection Agency shall be either

(a) a jurisdiction[3] which has adopted and does administer Section XI of the ASME Code as a legal requirement and is qualified to be represented on the ASME Code Conference Committee; or

(b) an insurance company which has been licensed or registered by the appropriate authority of a state of the United States of America, or of a province of Canada, to write boiler and pressure vessel insurance in such state or province. The insurance company shall show its capability to provide boiler and pressure vessel insurance coverage by being actively engaged in writing such insurance in one or more of the states or provinces where so licensed or registered. The insurance company shall also obtain credentials (e.g., Certificates of Competency, jurisdictional commission) when applicable, for their Nuclear Inservice Inspectors and Nuclear Inservice Inspector Supervisors, from the jurisdictional authorities[3] that have the responsibility of administering the boiler and pressure vessel laws in the state of the United States of America, or the province of Canada, in which the company is so licensed or registered, that have adopted and do administer Section XI of the ASME Code.

2-1.1.2 An Authorized Inspection Agency shall be accredited by the Society pursuant to the provisions set forth in Part 4 of this Standard.

2-1.1.3 The Authorized Inspection Agency shall provide authorized inspection service within such states or provinces by inspectors who meet the qualifications of the Authorized Nuclear Inservice Inspector as defined herein.

2-1.2 Duties

An Authorized Inspection Agency[4] shall perform the duties specified in 2-1.2.1 through 2-1.2.9.

2-1.2.1 Provide qualified Authorized Nuclear Inservice Inspectors to monitor inservice examinations, tests, repairs, and replacements in accordance with the ASME Code Section XI.

2-1.2.2 Maintain qualified Supervisors to monitor the performance of the Authorized Nuclear Inservice Inspectors and to audit the activities at sites for which inspection agreements have been made in accordance with the requirements of 2-2.2.6.

2-1.2.3 Give written notice to all Authorized Nuclear Inservice Inspectors of the name, office address, and office and home phone numbers of their respective Supervisors.

2-1.2.4 Assure proper execution of responsibilities. In particular, the Agency shall

(a) establish and implement an internal program which shall provide assurance that those of its employees holding the positions of Supervisor or Nuclear Inservice Inspector perform work in accordance with the

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

[3] Considered to be enforcement authority per Section III, Part NCA, NCA-9000, of the ASME Code, as appropriate.

[4] Wherever used in Part 2 of this Standard, the term *Agency* or *employer* refers to the Authorized Inspection Agency, the term *Supervisor* refers to an Authorized Nuclear Inservice Inspector Supervisor, and the term *Inspector* refers to an Authorized Nuclear Inservice Inspector.

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requirements of Part 2 of this Standard. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout the term of any agreement covering inspections required by the ASME Code, in accordance with the program. The program shall provide for indoctrination and training of personnel performing these activities, as necessary, to ensure that suitable proficiency is achieved and maintained.

(b) provide instructions in writing to Authorized Nuclear Inservice Inspectors and their Supervisors, specifying their respective duties and responsibilities.

(c) conduct annual planned audits of its activities to verify compliance with the provisions of the ASME Code. The audits shall be performed by appropriately trained personnel in accordance with a written procedure or checklist. Audit results shall be documented and reviewed by management. Follow-up action, including reaudit of deficient areas, shall be taken where indicated to ensure that necessary corrective action is completed.

(d) Establish and implement a written policy to ensure levels of inspection activity commensurate with the scope of the AIA's Certificate of Accreditation.

2-1.2.5 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inservice Inspector applicant, certifying that the Inspector has the required experience and training and that qualified supervision will be provided to ensure that the Authorized Nuclear Inservice Inspector satisfactorily fulfills his functions.

2-1.2.6 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inservice Inspector Supervisor applicant, certifying that the Supervisor has the required experience and training.

2-1.2.7 Verify to the National Board that the audits required by 2-2.2.6 have been carried out.

2-1.2.8 Establish a system to record and control the radiation exposure of those employees engaged in nuclear inspection activities.

2-1.2.9 Take appropriate action to advise the Owner of the need to correct nonconforming activities reported by its Supervisors and Inspectors to ensure ASME Code compliance.

2-1.3 AIA Quality Program

2-1.3.1 A documented Quality Program shall be established, implemented, and maintained by the Authorized Inspection Agency (AIA) in accordance with the requirements of this Standard. The AIA Quality Program shall identify the activities to which it applies and shall provide for the planning, control, and accomplishment of activities affecting the quality of the Authorized Inspection Agency's implementation of duties and activities as described in applicable parts of this Standard.

2-1.3.2 The AIA Quality Program shall, at a minimum, include the following parts:

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

(b) Program Description. The Program shall describe the scope of the activities for which the Program applies. The scope shall include all requirements of the QAI-1 Standard for which the Authorized Inspection Agency is accredited by the Society (or for which the applicant is seeking Society accreditation as an Accredited Authorized Inspection Agency). The Program shall document the policies and describe the process for the implementation of the requirements of the QAI-1 Standard.

(c) Document Control. The Program shall describe the process for the review and revision of the Program. All changes to the Program shall be controlled and the process for review and approval of changes shall be specified. All changes to the Program require prior review and approval by the Society before implementation as required by Part 4, para. 4-4(d) of this Standard. Further, the Program shall be controlled to ensure appropriate distribution to and use at the location(s) where the prescribed activity is performed.

(d) Training. The Program shall describe the process for the indoctrination and training of personnel responsible for implementing the Program.

(e) Records. The Program shall describe the process for records management. The description shall include measures to ensure that the records are controlled and maintained in a manner that prevents damage, deterioration, and loss. The AIA's records necessary to verify compliance with this QAI Standard, except for personnel qualification records, shall be maintained for a minimum of 5 years. The personnel qualification records, necessary to verify compliance with this QAI Standard, shall be maintained while the individual is providing AIA services and for a minimum of 5 years after the individual ceases to provide AIA services.

(f) Corrective Actions. The Program shall describe the process for the identification, review, and correction of a condition or activity which is not conducted in accordance with the Program. 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.

(g) Audits. The Program shall describe the audit process and shall include the following as a minimum:

(1) A comprehensive system of planned and periodic audits shall be carried out to verify compliance with applicable requirements of the QAI-1 Standard and the AIA Quality Program and to determine its effectiveness. The audits shall be performed in accordance with

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written procedures or checklists by appropriately trained personnel not having 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 AIA Quality Program shall be reviewed and the results of the review documented and reported to management.

2-2 THE AUTHORIZED NUCLEAR INSERVICE INSPECTOR SUPERVISOR

2-2.1 Qualifications

The Supervisor shall be selected and designated as such by his employer. He shall have qualified as an Authorized Nuclear Inservice Inspector, and as an Authorized Nuclear Inspector Supervisor, and shall have the additional qualifications specified in 2-2.1.1 through 2-2.1.4.

2-2.1.1 He shall have knowledge of the basic fundamentals of health physics, insofar as permissible exposure to radiation is concerned.

2-2.1.2 To be considered for certification a candidate shall have been actively engaged as an Authorized Nuclear Inservice Inspector for a minimum of 1 year and have at least 1 year of experience in nondestructive examination (NDE) methods. Such minimum of 1 year of active engagement as an Authorized Nuclear Inservice Inspector and 1 year of experience in NDE methods may be during the same year.

2-2.1.3 He shall have passed the examination described in 1-2.1.1.

2-2.1.4 The requirements of 2-2.1.3 do not apply to Supervisors who were qualified as Authorized Nuclear Inservice Inspector Supervisors prior to September 15, 1985, and who, additionally, were qualified as Authorized Nuclear Inspector Supervisors in accordance with Part 1 of this Standard and as Authorized Nuclear Inservice Inspectors.

2-2.2 Duties

The Authorized Nuclear Inservice Inspector Supervisor shall perform the duties specified in 2-2.2.1 through 2-2.2.8.

2-2.2.1 Maintain a record of Owners' sites where Inspectors assigned to him by his Authorized Agency are performing ASME Code inspection activities. He shall record the date of his visits to such locations when related to his assigned supervisory duties.

2-2.2.2 Maintain a record of those Authorized Nuclear Inservice Inspectors assigned to him and a description of their assignments.

2-2.2.3 Assist in maintaining the competency of the Authorized Nuclear Inservice Inspector through periodic arrangement of panel discussions of work-related topics, written communications of unique problems and their solution, informal question and answer discussion sessions, and other means he deems suitable. The Supervisor shall maintain documentation of such activities.

2-2.2.4 The Supervisor shall be responsible for the technical performance of the Authorized Nuclear Inservice Inspector(s) assigned to him. He shall report in writing to his management nonconforming activities that are reported to him or that he has observed on the part of the Inspector, following full investigation of such activities.

2-2.2.5 Either establish, or have available to him, a system to record and limit his radiation exposure and that of the Inspectors assigned to him. This system shall be under the regulation of his employer, who shall maintain an acceptable system of control.

2-2.2.6 Audit the performance of each Authorized Nuclear Inservice Inspector under his supervision on a planned and periodic basis. Each Authorized Nuclear Inservice Inspector actively engaged in Section XI Code inspection shall be audited at least twice a year at the site to which he is assigned. When an Inspector is assigned to more than one site at which Code activities are being performed or have been performed since the previous audit, the Authorized Nuclear Inservice Inspector shall be audited at least once a year at each site. At the time of this audit, the Supervisor shall be accompanied by the Authorized Nuclear Inservice Inspector. The audit shall include, but not be limited to, a check that the duties listed under 2-3.2 are being performed and a check of the following:

(a) the Authorized Nuclear Inservice Inspector's record or diary of inspection phases performed on identified items, with dates of the inspection activities noted

(b) methods used by the Inspector to assure himself that Code requirements are met with by the Owner

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

(d) Owner's record keeping procedures to verify traceability requirements for any phase of nondestructive examination, evaluation of results, or subsequent repair activities

(e) calibration procedures of nondestructive examination equipment and adequacy of record-keeping procedures

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

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(g) a review to ensure that all nonconforming items disclosed during this audit or prior audits have been brought into accordance with applicable ASME Code Sections

2-2.2.7 The audit required in 2-2.2.6 shall be recorded in writing and shall contain a written comment regarding the status of each item audited.

2-2.2.8 The Supervisor shall investigate and report in writing to his management any observed or reported ASME Code or Quality Assurance Program nonconformance by the Owner or other parties engaged in ASME Code Section XI activities.

2-3 THE AUTHORIZED NUCLEAR INSERVICE INSPECTOR

2-3.1 Qualifications

All Inspectors shall comply with the National Board Rules for Commissioned Inspectors; hold a valid State Certificate of Competency (where required) and a valid National Board Commission; and be Authorized Nuclear Inspectors in accordance with 1-3.1 of Part 1 of this Standard. An applicant for designation as an Authorized Nuclear Inservice Inspector shall satisfy the requirements as defined by 2-3.1.1 through 2-3.1.6. Documentation of satisfactory completion of these requirements shall be maintained by the Authorized Inspection Agency employing the Inspector.

2-3.1.1 A minimum of 1 year of diversified Code inspection experience of Section I; Section III, Division 1; and/or Section VIII pressure vessels or 1 year of diversified experience as an Inspector trainee of nuclear items under the direct supervision of an Authorized Nuclear Inservice Inspector. The minimum of 1 year of diversified Code inspection experience may include experience gained in either Code construction or Code inservice inspection activity.

2-3.1.2 Demonstrated ability to perform monitoring of nuclear inservice inspections to the satisfaction of the Authorized Inspection Agency employing the Inspector.

2-3.1.3 Experience, knowledge, and background consistent with the complexity of the assignment.

2-3.1.4 Knowledge of Section XI of the ASME Code and applicable Code Cases, including the requirements for maintenance and retention of records.

2-3.1.5 A passing grade on an examination in the methods of nondestructive examinations for Authorized Nuclear Inservice Inspectors, prepared by the National Board and monitored by a representative of the National Board, covering knowledge of, and familiarity with, ASME Code Section XI and requirements equivalent to SNT-TC-1A[5] supplements for Level II NDE personnel. The examination shall be graded by the National Board and results provided to the Authorized Inspection Agencies concerned.

2-3.1.6 Knowledge of basic fundamentals of health physics, including purpose and working principles of the film badge, dosimeter, and radiation monitoring devices.

2-3.2 Duties

The Inspector's duties are covered in ASME Code Section XI and include, but are not limited to 2-3.2.1 through 2-3.2.10.

2-3.2.1 He shall verify that the Owner or User has the applicable Code books, Addenda, and Code Cases.

2-3.2.2 He shall verify that materials used for nondestructive examinations comply with ASME Code Section XI requirements.

2-3.2.3 He shall verify that required nondestructive examinations and tests have been made by personnel who meet the qualifications and requirements of ASME Code Section XI and that the results are properly documented and meet ASME Code Section XI requirements. Nondestructive examination procedures and acceptance standards shall be in accordance with ASME Code Section XI.

2-3.2.4 He shall verify that the Design Specification and Design Report for repairs and replacements, where required, are available, properly certified by Registered Professional Engineers in accordance with ASME Code requirements, and that they are on file.

2-3.2.5 He shall verify that all required welding procedures conform to ASME Code Sections IX and XI.

2-3.2.6 He shall verify that welders and welding operators are properly qualified to use the required procedures.

2-3.2.7 He shall verify that material and replacement parts comply with the requirements of ASME Code Section XI.

2-3.2.8 He shall verify that heat treatments required by ASME Code Section XI for repairs and replacements have been performed and are properly documented.

2-3.2.9 He shall verify that the responsible representative of the Owner has signed the required NIS-1 and NIS-2 forms, and verified them as correct before he signs them.

2-3.2.10 He shall keep a bound (not looseleaf) record or diary of his activities and inspections made, detailing corrections and any other pertinent data that will be

[5] Refers to ASNT SNT-TC-1A.

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useful to him and his employer. Information to be recorded shall include a description of the item inspected, the type of observations made, the requirements that prompted the activity, and the results of inspection.

2-3.3 Performance of Inspector's Duties

The audit performed in conformance with 2-2.2.6 and documented in accordance with 2-2.2.7 shall provide evidence of the satisfactory performance of the duties of 2-3.2 by the Inspector.

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PART 3
Qualifications and Duties for Authorized Inspection Agencies, Nuclear Inspectors (Concrete), and Nuclear Inspector Supervisors (Concrete) (Applicable to ASME Boiler and Pressure Vessel Code)

3-0 SCOPE

Part 3 of this Standard is for use with Section III, Division 2, of the ASME Code,[1] including applicable Addenda and Code Cases. Division 2 has been prepared and is maintained jointly by the American Concrete Institute and the American Society of Mechanical Engineers.

3-1 THE AUTHORIZED INSPECTION AGENCY

3-1.1 Qualifications

An Authorized Inspection Agency is one designated by, or acceptable to, the appropriate legal authority of a state of the United States of America, or province of Canada, that has adopted Section III, Division 2, of the ASME Boiler and Pressure Vessel Code.[1] Such agencies shall meet the criteria of Section III, Division 2, of the ASME Code and of the National Board Rules for Commissioned Inspectors.[2]

3-1.1.1 An Authorized Inspection Agency shall be either

(a) a jurisdiction[3] which has adopted and does administer Section III, Division 2, of the ASME Code as a legal requirement and is qualified to be represented on the ASME Code Conference Committee; or

(b) an insurance company which has been licensed or registered by the appropriate authority of a state of the United States of America, or of a province of Canada, to write boiler and pressure vessel insurance in such state or province. The insurance company shall show its capability to provide boiler and pressure vessel insurance coverage by being actively engaged in writing such insurance in one or more of the states or provinces where so licensed or registered. The insurance company shall also obtain credentials (e.g., Certificate of Competency, jurisdictional commission) when applicable, for their Nuclear Inspector (Concrete) and Nuclear Inspector Supervisor (Concrete) from the jurisdictional authorities[3] that have the responsibility of administering the boiler and pressure vessel laws in the state of the United States of America, or the province of Canada, in which the company is so licensed or registered, that have adopted and do administer Section III, Division 2, of the ASME Code.

3-1.1.2 An Authorized Inspection Agency shall be accredited by the Society pursuant to the provisions set forth in Part 4 of this Standard.

3-1.1.3 The Authorized Inspection Agency shall provide authorized inspection service within such states or provinces by inspectors who meet the qualifications of the Authorized Nuclear Inspector (Concrete) as defined herein.

3-1.2 Duties

An Authorized Inspection Agency[4] shall perform the duties specified in 3-1.2.1 through 3-1.2.10.

3-1.2.1 Participate in ASME surveys of organizations for which they provide Authorized Nuclear Inspection.

3-1.2.2 Provide qualified Authorized Nuclear Inspectors (Concrete) to monitor construction,[5] in accordance with ASME Code Section III, Division 2.

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

[3] Considered to be enforcement authority per Section III, Part NCA, NCA-9000, of the ASME Code, as appropriate.

[4] Wherever used in Part 3 of this Standard, the term *Agency* or *employer* refers to the Authorized Inspection Agency, the term *Supervisor* refers to an Authorized Nuclear Inspector Supervisor (Concrete), and the term *Inspector* refers to an Authorized Nuclear Inspector (Concrete).

[5] *Construction,* as used in Division 2, includes all those operations required to build the component and its parts in accordance with the Design Drawings and Construction Specifications which have been prepared by the Designer.

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3-1.2.3 Maintain qualified Supervisors to monitor the performance of the Authorized Nuclear Inspectors (Concrete) and to audit the activities at nuclear shops and field sites for which inspection agreements have been made, in accordance with the requirements of 3-2.2.6.

3-1.2.4 Give written notice to all Authorized Nuclear Inspectors (Concrete) of the name, office address, and office and home phone numbers of their respective Supervisors.

3-1.2.5 Assure proper execution of responsibilities. In particular, the Agency shall

(a) establish and implement an internal program which shall provide assurance that those of its employees holding the positions of Supervisor and Authorized Nuclear Inspector (Concrete) perform work in accordance with the requirements of Part 3 of this Standard. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout the term of any agreement covering inspections required by the ASME Code, in accordance with the program. The program shall provide for indoctrination and training of personnel performing such activities, as necessary, to ensure that suitable proficiency is achieved and maintained.

(b) provide instructions in writing to Authorized Nuclear Inspectors (Concrete) and their Supervisors, specifying their respective duties and responsibilities.

(c) provide instructions in writing to Authorized Nuclear Inspectors (Concrete) requiring them to immediately contact their Supervisor whenever the Inspector is unable to readily resolve any question concerning ASME Code compliance, manufacturing procedure, or quality assurance provision or its implementation. Instructions should be included as a reminder to the Authorized Nuclear Inspector (Concrete) that he has the authority and duty to refuse to sign any Data Reports involving nonconformance with the ASME Code.

(d) conduct annual planned audits of activities performed by Authorized Nuclear Inspector Supervisors (Concrete) to verify compliance with the provisions of ASME Code Section III, Division 2, and Part 3 of this Standard. The audit shall be performed by appropriately trained personnel in accordance with a written procedure or checklist. Audit results shall be documented and reviewed by management. Follow-up action, including reaudit of deficient areas, shall be taken where indicated to ensure that necessary corrective action is completed.

(e) establish and implement a written policy to ensure levels of inspection activity commensurate with the scope of the AIA's Certificate of Accreditation.

3-1.2.6 Provide certification for each Authorized Nuclear Inspector (Concrete) and Supervisor to be performing work under the provisions of ASME Code Section III, Division 2, to ensure that the Inspectors and Supervisors meet the required experience and training requirements of Part 3 of this Standard. Certification and documentation of qualifications shall be retained by the employer and shall be made available for review by the jurisdictional Authorities and the ASME Survey Team upon request.

3-1.2.7 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inspector (Concrete) applicant, certifying that he has the required experience and training and that qualified supervision will be provided to ensure that the Authorized Nuclear Inspector satisfactorily fulfills his functions.

3-1.2.8 Submit to the National Board an application for a special endorsement for the Authorized Nuclear Inspector Supervisor Concrete applicant, certifying that the Supervisor has the required experience and training.

3-1.2.9 Verify to the National Board that the audits required by 3-2.2.6 have been carried out.

3-1.2.10 Notify the ASME Conformity Assessment Department of the termination of an inspection agreement with a holder of an ASME Certificate of Authorization.

3-1.3 AIA Quality Program

3-1.3.1 A documented Quality Program shall be established, implemented, and maintained by the Authorized Inspection Agency (AIA) in accordance with the requirements of this Standard. The AIA Quality Program shall identify the activities to which it applies and shall provide for the planning, control, and accomplishment of activities affecting the quality of the Authorized Inspection Agency's implementation of duties and activities as described in applicable parts of this Standard.

3-1.3.2 The AIA Quality Program shall, at a minimum, include the following parts:

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

(b) Program Description. The Program shall describe the scope of the activities for which the Program applies. The scope shall include all requirements of the QAI-1 Standard for which the Authorized Inspection Agency is accredited by the Society (or for which the applicant is seeking Society accreditation as an Accredited Authorized Inspection Agency). The Program shall document the policies and describe the process for the implementation of the requirements of the QAI-1 Standard.

(c) Document Control. The Program shall describe the process for the review and revision of the Program. All

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changes to the Program shall be controlled and the process for review and approval of changes shall be specified. All changes to the Program require prior review and approval by the Society before implementation as required by Part 4, para. 4-4(d) of this Standard. Further, the Program shall be controlled to ensure appropriate distribution to and use at the location(s) where the prescribed activity is performed.

(d) Training. The Program shall describe the process for the indoctrination and training of personnel responsible for implementing the Program.

(e) Records. The Program shall describe the process for records management. The description shall include measures to ensure that the records are controlled and maintained in a manner that prevents damage, deterioration, and loss. The AIA's records necessary to verify compliance with this QAI Standard, except for personnel qualification records, shall be maintained for a minimum of 5 years. The personnel qualification records, necessary to verify compliance with this QAI Standard, shall be maintained while the individual is providing AIA services and for a minimum of 5 years after the individual ceases to provide AIA services.

(f) Corrective Actions. The Program shall describe the process for the identification, review, and correction of a condition or activity which is not conducted in accordance with the Program. 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.

(g) Audits. The Program shall describe the audit process and shall include the following as a minimum:

(1) A comprehensive system of planned and periodic audits shall be carried out to verify compliance with applicable requirements of the QAI-1 Standard and the AIA Quality Program and to determine its effectiveness. The audits shall be performed in accordance with written procedures or checklists by appropriately trained personnel not having 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 AIA Quality Program shall be reviewed and the results of the review documented and reported to management.

3-2 THE AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR (CONCRETE)

3-2.1 Qualifications

The Supervisor shall be selected and designated as such by his employer. He shall have been qualified as an Authorized Nuclear Inspector (Concrete). The Supervisor shall have the additional qualifications specified in 3-2.1.1 through 3-2.1.7.

3-2.1.1 He shall qualify for consideration by meeting one of the following requirements:

(a) graduate of a 4-year accredited engineering or science college or university, plus 5 years of experience in quality assurance, including testing or inspection (or both) of equivalent fabrication or construction activities. At least 2 years of this experience should be associated with the construction or inspection of concrete structures similar to those used in nuclear facilities.

(b) high school graduate, plus 10 years of experience in general quality assurance or engineering, or equivalent fabrication or construction activities. Five years of this experience are required in quality assurance, including testing or inspection (or both) of equivalent construction and installation activities. At least 2 years of this experience shall be associated with the construction or inspection of concrete structures equivalent in complexity to those used in nuclear facilities.

3-2.1.2 He shall have passed the examination described in 1-2.1.1.

3-2.1.3 He shall have knowledge of the basic fundamentals of health physics, insofar as permissible exposure to radiation is concerned.

3-2.1.4 He shall have knowledge of ASME nuclear survey procedures, which shall include

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

(b) serving as a member or observer on 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 accreditation program.

3-2.1.5 He shall have experience assisting in the preparation of applicants for ASME Nuclear Accreditation, including reviews of Quality Assurance Programs. Such activity shall be documented.

3-2.1.6 He shall have a working knowledge of the requirements of ASME Code Section III, Division 2, and related referenced codes and standards.

3-2.1.7 The requirements of 3-2.1.2 do not apply to Supervisors who were qualified as Authorized Nuclear Inspector Supervisors and Authorized Nuclear Inservice Inspector Supervisors prior to January 1, 1991, and who additionally were qualified in accordance with Part 3 of this Standard as an Authorized Nuclear Inspector (Concrete).

3-2.2 Duties

The Authorized Nuclear Inspector Supervisor (Concrete) shall perform the duties specified in 3-2.2.1 through 3-2.2.10.

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3-2.2.1 Maintain a record of Certificate Holders' shop and field sites where Inspectors assigned to him by his Authorized Inspection Agency for supervision are performing Code inspection activities. He shall record the date of his visits to such locations when related to his assigned supervisory duties.

3-2.2.2 Maintain a record of those Authorized Nuclear Inspectors (Concrete) assigned to him and a description of their assignments.

3-2.2.3 Assist in maintaining the competency of the Authorized Nuclear Inspector (Concrete) through periodic arrangement of panel discussions of work-related topics, written communications of unique problems and their solution, informal question and answer discussion sessions, and other means he deems suitable. The Supervisor shall maintain documentation of such activities.

3-2.2.4 The Supervisor shall be responsible for the technical performance of the Authorized Nuclear Inspector(s) (Concrete) assigned to him. He shall report in writing to his management significant nonconforming activities that are reported to him or that he observed on the part of the Inspector, following full investigation of such activities.

3-2.2.5 Either establish, or have available to him, a system to record and limit his radiation exposure and that of the Inspectors assigned to him. This system shall be under the regulation of his employer, who shall maintain an acceptable system of control.

3-2.2.6 Audit the performance of each Authorized Nuclear Inspector (Concrete) under his supervision on a planned and periodic basis. Each Authorized Nuclear Inspector (Concrete) actively engaged in Section III, Division 2, inspection shall be audited at least twice a year at the shop or site to which he is assigned. When an Inspector is assigned to more than one shop or site at which Code activities are being performed, or have been performed since the previous audit, the Authorized Nuclear Inspector (Concrete) shall be audited at least once a year at each location. At the time of this audit, the Supervisor shall be accompanied by the Authorized Nuclear Inspector (Concrete). The audit shall include, but not be limited to, a check that the duties listed under 3-3.2 are being performed and a check of the following:

(a) one item under construction or installation phase to ensure implementation of the Quality Assurance Program.

(b) travelers or process sheets[6] 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-off.

(c) the Certificate Holder's Quality Assurance Manual to ensure that changes, if any, in the Quality Assurance Program have been accepted and have been properly incorporated in the Manual.

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

(e) the Certificate Holder's record keeping procedure to ensure traceability of any phase of work or nondestructive examination results as required by the ASME Code.

(f) the Authorized Nuclear Inspector's (Concrete) records or diary of inspection phases performed on identified items, with dates of the inspection activities noted.

3-2.2.7 The audit required in 3-2.2.6 shall be recorded in writing and shall contain a written comment regarding the status of each item audited.

3-2.2.8 The Supervisor shall ensure that the activities covered by the Certificate Holder's Quality Assurance Manual which are performed at locations not assigned to an Authorized Nuclear Inspector (Concrete) are audited at least twice a year. Corporate offices would be an example of such a location. Engineering and procurement could be examples of the types of activities performed at 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.

3-2.2.9 The Supervisor shall ensure that portions of the N Type Certificate Holder's Quality Assurance Program that involve supply or manufacture and supply of materials are audited at least once each year.

3-2.2.10 The Supervisor shall investigate and report in writing to his management significant observed or reported ASME Code or Quality Assurance Program nonconformance by the Certificate Holder engaged in ASME Code Section III, Division 2, activities.

3-3 THE AUTHORIZED NUCLEAR INSPECTOR (CONCRETE)

3-3.1 Qualifications

All Inspectors shall be certified in accordance with the National Board Rules for Commissioned Inspectors, and hold a valid State Certificate of Competency (where required) and a valid National Board Commission. An applicant for designation as an Authorized Nuclear Inspector (Concrete) shall have additional experience equal to that defined by 3-3.1.1(a) or (b) and shall satisfy the requirements defined by 3-3.1.2 through 3-3.1.4. Documentation of satisfactory completion of these requirements shall be maintained by the Authorized Inspection Agency employing the Inspector.

[6] *Travelers or process sheets* — a listing of sequential operations which include, but need not be limited to, inspections, testing, examinations, and fabrication activities.

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3-3.1.1 A minimum of 2 years of experience in design, construction, or inspection of major concrete structures; or satisfactorily completed an accelerated course acceptable to ASME, ACI, and the National Board, in the fundamentals of concrete construction and inspection, plus 6 months of field training in concrete inspection under the Authorized Inspection Agency.

3-3.1.2 A passing grade on a special examination developed by the National Board with the assistance of the ACI and administered by the National Board. Such examination shall encompass sufficient scope to ascertain the candidate's basic knowledge of concrete construction and fabrication technology and to determine his knowledge of, and his ability to ascertain and interpret, the requirements of Section III, Division 2, of the ASME Code.

3-3.1.3 Demonstrated ability to perform shop and field inspections to the satisfaction of the Authorized Inspection Agency employing the Inspector.

3-3.1.4 He shall have knowledge of the requirements of ASME Code Section III, Division 2, applicable Code Cases, and other codes and standards which are referenced by Section III, Division 2.

3-3.2 Duties

The Authorized Nuclear Inspector's (Concrete) duties are covered in the ASME Code and include, but are not limited to 3-3.2.1 through 3-3.2.19.

3-3.2.1 He shall periodically verify that the fabricator or constructor has the required Certificate of Authorization to construct the items for which he has contract responsibility.

NOTE: The fact that the constructor or fabricator has the required Code Symbol Stamp is not sufficient evidence to assume that he has a valid Certificate of Authorization.

The fact that the manufacturer or installer has the required Code Symbol Stamp for Section III, Division 1 or 3 work may not be sufficient evidence to assume that he has a valid Certificate of Authorization, as required in the ASME Code Section III, Division 2.

3-3.2.2 He shall monitor the Quality Assurance Program and verify conformance to ASME Code requirements. He shall ensure that changes to the QA Program, when made, meet Code requirements and are properly approved and that the Quality Assurance Manual is appropriately updated to reflect such changes.

3-3.2.3 He shall verify that the Certificate Holder has the necessary ASME Code books, Addenda, Code Cases, and referenced codes and standards for the work he inspects.

3-3.2.4 He shall verify that the Design Specification, Design Drawings, Design Report, and Construction Specification, where required, are available, properly certified by Registered Professional Engineers in accordance with ASME Code requirements, and that they are on file.

3-3.2.5 He shall verify that material complies with the applicable ASME Code Section III, Division 2, requirements and the Construction Specification.

3-3.2.6 When it is necessary to cut or separate metallic material into two or more pieces, he shall verify that the Certificate Holder's controls are such that responsible personnel transfer the identification in order to maintain traceability of the material.

3-3.2.7 He shall verify that the Certificate Holder's personnel are examining cut edges of metallic materials as required by ASME Code Section III, Division 2.

3-3.2.8 He shall verify that Welding Procedure Specifications and all concrete batching, mixing, and placing procedures conform to ASME Code Section III, Division 2, and the Construction Specification.

3-3.2.9 He shall verify that welders and welding operators are properly qualified and that their qualification permits them to use the required procedures.

3-3.2.10 If either concrete repairs or welding repairs are found to be necessary during construction, he shall verify that only properly qualified procedures, personnel, and materials are used.

3-3.2.11 He shall verify that required heat treatments of metallic materials have been performed and are properly documented.

3-3.2.12 He shall verify that required examinations and tests conform to qualified procedures specified in the Construction Specifications, that the results are documented, and that they are performed by qualified personnel. He shall also verify that compression, tension, weighing, and measuring equipment is calibrated.

3-3.2.13 He shall visually verify that reinforcing bar placement and size are as specified in the Design Drawings and the Construction Specification prior to concrete placement. He 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.

3-3.2.14 He shall 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.

3-3.2.15 He shall perform the required inspections of inaccessible areas and witnessing of vacuum box testing when required by the Code, prior to closure for hydrostatic or pneumatic tests. He shall witness all hydrostatic or pneumatic tests.

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3-3.2.16 He shall verify that the responsible representative of the Certificate Holder signs the required Data Report and verifies it as correct before he signs it.

3-3.2.17 Prior to stamping he shall verify to the best of his knowledge and belief that the item is in compliance with the ASME Code. He shall also verify that the nameplate stamping is correct and that the nameplate has been properly attached.

3-3.2.18 He shall review and certify that the documentation of the Construction Report is in compliance with the ASME Code.

3-3.2.19 He shall keep a bound (not looseleaf) record or diary of his activities and inspections made, detailing corrections and any other pertinent data that will be useful to him and his employer. Information to be recorded shall include a description of the item inspected, the type of observations made, the requirements that prompted the activity, and the results of inspection.

3-3.3 Performance of Inspector's Duties

The audit performed in conformance with 3-2.2.6 and documented in accordance with 3-2.2.7 shall provide evidence of the satisfactory performance of the duties of 3-3.2 by the Inspector.

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PART 4
Accreditation of Authorized Inspection Agencies

(05) **4-0 SCOPE**

Part 4 of this Standard is for use with Sections I; III, Division 1; III, Division 2; III, Division 3; IV; VIII, Division 1; VIII, Division 2; VIII, Division 3; X; XI; and XII of the ASME Code,[1] including applicable Addenda and Code Cases.

4-1 REQUIRED ACCREDITATION TO PROVIDE AUTHORIZED INSPECTION SERVICES

Authorized Inspection Agencies shall be accredited by the Society[2] pursuant to the provisions set forth in this Part.

4-2 SCOPE OF ACCREDITATION

(a) The AIA Certificate of Accreditation shall identify the office locations from which inspection service is controlled and state the scope of inspections by Code Sections, and Divisions thereof, for which accreditation is granted. Certificates of Accreditation are issued for a 3-year period. The Society may, at its discretion, limit or extend the scope of inspection and remove or add locations.

(b) The Society may, at any time, make regulations concerning the issuance and use of Certificates as it deems appropriate, and all regulations shall become binding upon the holders of Certificates.

4-3 APPLICATION FOR ACCREDITATION

An organization desiring an AIA Certificate of Accreditation shall apply to the Society upon forms issued by the Society describing the basis for qualification as an Authorized Inspection Agency and the scope of activities to be accredited. Upon completion of a successful survey[3] and favorable action by the Society, the applicant shall be granted an AIA Certificate of Accreditation.

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] *Society* refers to The American Society of Mechanical Engineers.

[3] As used in this Standard, *survey* is defined as 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 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.

4-4 EVALUATION FOR AN AIA CERTIFICATE OF ACCREDITATION

(a) Applicants for a new or renewed AIA Certificate of Accreditation require a survey at a location or locations where the applicant's QAI-1 and Boiler and Pressure Vessel Code inspection activities are controlled. The applicant shall specify the location(s) at which the QAI-1 Quality Program will be fully demonstrated. It is not necessary to survey each office or location covered by the same program provided documentation is made available to the survey team. The purpose of the survey is to evaluate the applicant's QAI-1 Quality Program including its implementation.

(b) The extent of the survey will be determined by the Society based on a review of the applicant's intended scope of Code activities described in the application. The acceptance by the Society of the QAI-1 Quality Program shall not be interpreted to mean endorsement of the items or activities inspected by the Authorized Inspection Agency personnel.

(c) As part of the accreditation process for a new or renewed AIA Certificate of Accreditation, the Authorized Inspection Agency shall provide a controlled copy of the AIA Quality Program, required to be maintained in accordance with 1-1.3, 2-1.3, 3-1.3, and 5-1.3 of this Standard, to the Society.

(d) All changes to the AIA Quality Program shall be controlled. Copies of changes to the AIA Quality Program shall be provided to the Society for review and acceptance before implementation.

(e) An Authorized Inspection Agency shall provide ASME survey teams access to facilities, premises, and records necessary to assess conformance with this Standard.

(f) The required AIA Certificate of Accreditation to provide inspection services shall be granted only after the adequacy of this content and implementation of the QAI-1 Quality Program has been satisfactorily demonstrated to an ASME survey team and the survey results acted upon by the Society.

4-5 ISSUANCE OF ACCREDITATION

Each Certificate of Accreditation holder shall have agreed that each Certificate is at all times the property of the Society, that it will be used according to the rules and regulations of this Standard, and that the Certificate

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will be promptly returned to the Society upon demand, or when the Certificate of Accreditation holder discontinues the scope of inspection activities covered by the Certificate. The holder of a Certificate of Accreditation shall not permit any other party to use its Certificate. The Society reserves the absolute right to cancel or refuse to renew such accreditation, returning fees paid for the prorated unexpired term.

4-6 RENEWAL OF ACCREDITATION

Not later than 6 months prior to the date of expiration of the Certificate, the AIA Certificate of Accreditation holder desiring renewal shall apply for renewal of such accreditation and the reissuance of the Certificate.

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PART 5
Qualifications and Duties for Authorized Inspection Agencies and Inspector Supervisors, and Qualifications for Inspectors of Boilers and Pressure Vessels

5-0 SCOPE

Part 5 of this Standard is for use with Sections I; IV; VIII, Division 1; VIII, Division 2; VIII, Division 3; X; and XII of the ASME Code,[1] including applicable Addenda and Code Cases.

5-1 THE AUTHORIZED INSPECTION AGENCY

5-1.1 Qualifications

An Authorized Inspection Agency is one designated by, or approved by a jurisdiction[2] that accepts one or more Sections of the ASME Boiler and Pressure Vessel Code as a means to satisfy legal or regulatory requirements. Such agencies shall meet the criteria of this Standard and of the National Board Rules for Commissioned Inspectors.[3]

5-1.1.1 An Authorized Inspection Agency shall be either

(a) a jurisdiction that accepts and does administer one or more construction code sections[4] of the ASME Boiler and Pressure Vessel Code as a means to satisfy legal or regulatory requirements; or

(b) an insurance company which has been licensed or registered by the appropriate authority of a state of the United States of America, or of a province of Canada, to write boiler and pressure vessel insurance in such state or province.

The insurance company shall show its willingness and capability to provide boiler and pressure vessel insurance coverage by being actively engaged in writing such insurance in one or more of the states or provinces where so licensed or registered. The company shall also obtain credentials (e.g., Certificate of Competency, or jurisdictional commission) when applicable, for their Authorized Inspectors and Inspector Supervisors from the jurisdictional authorities that have the responsibility of administering the boiler and pressure vessel laws in the states of the United States of America, or the provinces of Canada (in which the company is so licensed or registered) that have adopted and do administer one or more sections of the ASME Code, one of which shall be Section I.

5-1.1.2 The jurisdiction described in 5-1.1.1(a) may designate one or more organizations to act on its behalf to enforce its regulations. The organization shall

(a) provide evidence establishing that such delegation of authority is duly authorized by the laws of the jurisdiction

(b) describe how the ASME Code is accepted by the jurisdiction

(c) describe how the Code is enforced by the organization

5-1.1.3 An Authorized Inspection Agency shall be accredited by the Society pursuant to the provisions set forth in Part 4 of this Standard.

5-1.1.4 The Authorized Inspection Agency shall provide authorized inspection service by inspectors who meet the qualifications of the Inspector[5] as defined herein.

5-1.1.5 The Authorized Inspection Agency shall demonstrate the capability to perform the duties required by Part 5. If part of a larger organization, the relationship with other parts of the larger organization shall be clearly defined.

5-1.1.6 The Authorized Inspection Agency shall have the resources necessary to comply with the requirements of Part 5.

5-1.1.7 The Authorized Inspection Agency shall have no commercial interest in, or shall be independent of any part of an organization having direct commercial interest in, the products to be inspected. The staff shall be free from any commercial, financial, and other pressures that might influence their judgment or the results of their work.

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] The term *jurisdiction* refers to a governmental entity that has responsibility for regulation of boilers and pressure vessels.

[3] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

[4] *Construction code sections* are ASME Boiler and Pressure Vessel Code Sections I, IV, VIII, X, and XII.

[5] The term *Inspector* refers to an Authorized Inspector.

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5-1.1.8 The Authorized Inspection Agency shall have adequate arrangements to safeguard the confidentiality of information obtained during inspection activities.

5-1.2 Duties

An Authorized Inspection Agency[6] shall perform the duties specified in 5-1.2.1 through 5-1.2.10.

5-1.2.1 Participate in the shop or site reviews of organizations for which they provide Authorized Inspection.

5-1.2.2 Provide qualified Inspectors to monitor construction in accordance with the ASME Code.

5-1.2.3 Employ qualified Supervisors[7] to monitor the performance of the Inspectors and to audit the activities at shops and field sites for which inspection agreements have been made, in accordance with the requirements of 5-2.2.5.

5-1.2.4 Give written notice to all Authorized Inspectors of the name, office address, and office and home phone numbers of their respective Supervisors.

5-1.2.5 Assure proper execution of responsibilities. In particular, the Agency shall

(a) establish and implement an internal program which shall provide assurance that those of its employees holding the positions of Supervisor and Inspector perform work in accordance with the requirements of Part 5 of this Standard. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout the term of any agreement covering inspections required by the ASME Code, in accordance with the program. The program shall provide for indoctrination and training of personnel performing such activities, as necessary, to ensure that suitable proficiency is achieved and maintained.

(b) provide instructions in writing to Inspectors and their Supervisors, specifying their respective duties and responsibilities;

(c) provide instructions in writing to Inspectors requiring them to immediately contact their Supervisor whenever the Inspector is unable to readily resolve any question concerning ASME Code compliance, manufacturing procedure, or quality control provision or its implementation. Instructions should be included as a reminder to the Inspector that he has the authority and the duty to refuse to sign any Data Reports involving nonconformance with the ASME Code.

(d) conduct annual planned audits of activities performed by Supervisors to verify compliance with the provisions of the ASME Code and Part 5 of this Standard. The audit shall be performed by appropriately trained personnel, in accordance with a written procedure or checklist. Audit results shall be documented and reviewed by management. Follow-up action, including reaudit of deficient areas, shall be taken where indicated to ensure that necessary corrective action is completed.

5-1.2.6 Provide certification for each Inspector and Supervisor to be performing work under the provisions of the ASME Code, to ensure that the Inspectors and Supervisors meet the required experience and training requirements of Part 5 of this Standard. Certification and documentation of qualifications shall be retained by the employer and shall be made available for review by the jurisdictional Authorities and the ASME upon request.

5-1.2.7 Submit to the National Board an application for an "A" endorsement for the Inspector applicant, certifying that he has the required experience and training and that qualified supervision will be provided to ensure that the Inspector satisfactorily fulfills his functions.

5-1.2.8 Submit to the National Board an application for a "B" endorsement for the Supervisor applicant, certifying that the Supervisor has the required experience and training.

5-1.2.9 Verify to the National Board that audits required by 5-2.2.5 have been carried out.

5-1.2.10 Notify the ASME Conformity Assessment Department of the termination of an inspection agreement with a holder of an ASME Certificate of Authorization.

5-1.3 AIA Quality Program

5-1.3.1 A documented Quality Program shall be established, implemented, and maintained by the Authorized Inspection Agency (AIA) in accordance with the requirements of this Standard. The AIA Quality Program shall identify the activities to which it applies and shall provide for the planning, control, and accomplishment of activities affecting the quality of the Authorized Inspection Agency's implementation of duties and activities as described in applicable parts of this Standard.

5-1.3.2 The AIA Quality Program shall, as a minimum, include the following parts:

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

(b) Program Description. The Program shall describe the scope of the activities for which the Program applies. The scope shall include all requirements of the QAI-1 Standard for which the Authorized Inspection Agency

[6] The term *Agency* or *Employer* refers to the accredited Authorized Inspection Agency.

[7] The term *Supervisor* refers to an Authorized Inspector Supervisor.

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is accredited by the Society (or for which the applicant is seeking Society accreditation as an Accredited Authorized Inspection Agency). The Program shall document the policies and describe the process for the implementation of the requirements of the QAI-1 Standard.

(c) Document Control. The Program shall describe the process for the review and revision of the Program. All changes to the Program shall be controlled and the process for review and approval of changes shall be specified. All changes to the Program require prior review and acceptance by the Society before implementation as required by Part 4, para. 4-4(d) of this Standard. Further, the Program shall be controlled to ensure appropriate distribution to and use at the location(s) where the prescribed activity is performed.

(d) Training. The Program shall describe the process for the indoctrination and training of personnel as required by 5-1.2.5(a).

(e) Records. The Program shall describe the process for records management. The description shall include measures to ensure that the records are controlled and maintained in a manner that prevents damage, deterioration, and loss. The AIA's records necessary to verify compliance with this QAI Standard, except for personnel qualification records, shall be maintained for a minimum of 5 years. The personnel qualification records, necessary to verify compliance with this QAI Standard, shall be maintained while the individual is providing AIA services and for a minimum of 5 years after the individual ceases to provide AIA services.

(f) Corrective Actions. The Program shall describe the process for the identification, review, and correction of conditions or activities that are not conducted in accordance with the Program. 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.

(g) Audits. The Program shall describe the audit process and shall include the following as a minimum:

(1) A comprehensive system of planned and periodic audits shall be carried out to verify compliance with applicable requirements of the QAI-1 Standard and the AIA Quality Program and to determine its effectiveness. The audits shall be performed in accordance with written procedures or checklists by appropriately trained personnel not having 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 AIA Quality Program shall be reviewed and the results of the review documented and reported to management.

5-2 THE AUTHORIZED INSPECTOR SUPERVISOR

5-2.1 Qualifications

The Supervisor shall be selected and designated as such by his employer. He shall be qualified as an Inspector and shall have the additional qualifications specified in 5-2.1.1 through 5-2.1.4.

5-2.1.1 The Supervisor shall have passed an examination developed, promulgated, and administered by the National Board and received a "B" endorsement from the National Board. The examination shall encompass sufficient means of determination of the candidate's ability to ascertain the validity and quality of the welding, nondestructive examination, and other quality control requirements of the ASME Code. The examination shall be graded by the National Board and results provided to the Agencies concerned.

5-2.1.2 The Supervisor shall have qualified as an Inspector and subsequently shall have been engaged for at least two years in ASME Boiler and Pressure Vessel Code related work such as inspection under the provisions of the ASME Code, or administration of shop inspection service under the ASME Code.

5-2.1.3 The Supervisor shall have knowledge of ASME shop review procedures, which shall include service with at least three shop review teams as a member or as an observer.

5-2.1.4 The Supervisor shall have knowledge of the requirements of applicable ASME Code Sections.

5-2.2 Duties

The Supervisor shall perform the duties specified in 5-2.2.1 through 5-2.2.7.

5-2.2.1 Maintain a record of Certificate Holders' shop and field sites where Inspectors assigned to him by his Agency for supervision are performing Code inspection activities. He shall record the date of his visits to such locations when related to his assigned supervisory duties.

5-2.2.2 Maintain a record of those Inspectors assigned and a description of their assignments.

5-2.2.3 Assist in maintaining the competency of the Inspector to an acceptable level through periodic arrangement of panel discussions of work-related topics, written communications of unique problems and their solution, informal question and answer discussion sessions, and other means he deems suitable. The Supervisor shall maintain documentation of such activities.

5-2.2.4 The Supervisor shall be responsible for the technical performance of the Inspector(s) assigned to him. He shall report in writing to his management significant nonconforming activities that are reported to him

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or that he observed on the part of the Inspector, following full investigation of such activities.

5-2.2.5 Audit and document the performance of each Inspector assigned to an ASME Code shop or field site at least once each year at approximately twelve month intervals and at additional times as requested by the Inspector. At the time of this audit, the Supervisor shall be accompanied by the Authorized Inspector.

5-2.2.6 The audit required in 5-2.2.5 shall be recorded in writing and shall contain a written comment regarding the status of each item audited.

5-2.2.7 Confirm the corrective action has been verified by the Inspector to ensure compliance with the ASME Code requirements at the shops and sites which have been assigned to the Supervisor.

5-3 THE AUTHORIZED INSPECTOR

5-3.1 Qualifications

All Inspectors shall comply with the National Board Rules for Commissioned Inspectors, and hold a valid Certificate of Competency[8] (where required) and a valid National Board Commission with an "A" endorsement. An applicant for designation as an Inspector shall have the characteristics defined by 5-3.1.1 through 5-3.1.7.

[8] As defined in National Board Rules for Commissioned Inspectors.

5-3.1.1 Demonstrated ability to perform shop and field (on-site) inspections to the satisfaction of the Agency employing him.

5-3.1.2 Satisfactory degree of expertise, experience, and background for the inspection of boilers and pressure vessels according to the complexity of the assignment.

5-3.1.3 Knowledge of applicable Sections of the ASME Code, Addenda, and Code Cases.

5-3.1.4 Knowledge of Quality Control Systems, programs, and shop and field erection procedures.

5-3.1.5 Knowledge and ability to evaluate and monitor shop and field erection procedures and performance.

5-3.1.6 Knowledge of the requirements for maintenance and retention of in-transit and permanent records.

5-3.1.7 A passing grade on an examination given by the National Board, covering knowledge of, and familiarity with, the ASME Code. The examination shall be graded by the National Board and results provided to the Agencies concerned.

5-3.2 Performance of Inspector's Duties

The audit performed in conformance with 5-2.2.5 and documented in accordance with 5-2.2.6 shall provide evidence of the satisfactory performance of the duties as specified in the applicable Sections of the ASME Code and the National Board Rules for Commissioned Inspectors.

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PART 6
Qualifications and Duties for Qualified Inspection Organizations and Qualifications for Qualified Inspectors

6-0 SCOPE

Part 6 of this Standard is for use with Section XII of the ASME Code,[1] including applicable Addenda and Code Cases, and other Section or Sections of the ASME Code when referenced by the respective Code Section.

6-1 THE QUALIFIED INSPECTION ORGANIZATION

6-1.1 Qualifications

A Qualified Inspection Organization (QIO) is one designated by, or acceptable to a legal authority that has adopted one or more Sections of the ASME Boiler and Pressure Vessel Code. Such organizations shall meet the criteria of this Standard and of the National Board[2] Rules for Qualified Inspectors. An ASME accredited Authorized Inspection Agency may also perform as a Qualified Inspection Organization when meeting the requirements of this Standard, if so designated and accepted by the legal authority.

6-1.1.1 A Qualified Inspection Organization shall be licensed or registered by the legal authority when so required by that legal authority. The Qualified Inspection Organization shall also obtain credentials (e.g., Certificate of Competency) when applicable, for their Inspectors[3] and Supervisors[3] from the legal authorities that have the responsibility of administering the boiler and pressure vessel laws in the jurisdiction (in which the Qualified Inspection Organization is so licensed or registered) that have adopted and do administer one or more Sections of the ASME Code.

6-1.1.2 Qualified Inspection Organizations shall be accredited by the Society pursuant to the provisions set forth in Part 7 of this Standard.

6-1.1.3 The Qualified Inspection Organization shall provide inspection service by Inspectors who meet the qualifications of the Inspector as defined herein.

6-1.2 Duties

A Qualified Inspection Organization shall perform the duties specified in 6-1.2.1 through 6-1.2.9.

6-1.2.1 Provide qualified Inspectors to monitor construction and other activities in accordance with the ASME Code.

6-1.2.2 Employ Supervisors to monitor and audit the performance of the Inspectors.

6-1.2.3 Give written notice to all Inspectors of the name, office address, and office and home phone numbers of their respective Supervisors.

6-1.2.4 Assure proper execution of responsibilities. In particular, the Qualified Inspection Organization shall

(a) establish and implement an internal program which shall provide assurance that those of its employees holding the position of Supervisor and Inspector perform work in accordance with the requirements of Part 6 of this Standard. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout the term of any agreement covering inspections required by the ASME Code, in accordance with the program. The program shall provide for indoctrination and training of personnel performing such activities, as necessary, to ensure that suitable proficiency is achieved and maintained.

(b) provide instructions in writing to Inspectors and their Supervisors, specifying their respective duties and responsibilities.

(c) provide instructions in writing to Inspectors to require them to immediately contact their Supervisor whenever the Inspector is unable to readily resolve any question concerning ASME Code compliance, manufacturing procedure, or quality control provision or its implementation. Instructions should be included as a reminder to the Inspector that he has the authority and the duty to refuse to sign any certification involving nonconformance with the ASME Code.

6-1.2.5 Provide certification for each Inspector and Supervisor to be performing work under the provisions of the ASME Code, to ensure that the Inspectors and Supervisors meet the required experience and training requirements of 6-3.1 and 6-2.1 as appropriate. Certification and documentation of the qualifications shall be retained by the employer and shall be made available

[1] *ASME Code* refers to the ASME Boiler and Pressure Vessel Code.

[2] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

[3] For this Part of the Standard, the term *Inspector* refers to a "Qualified Inspector" and the term *Supervisor* refers to a "Qualified Inspector Supervisor."

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for review by the legal authorities and the ASME upon request.

6-1.2.6 Submit to the National Board an application for a Qualified Inspector, certifying that the applicant has the required experience and training and that qualified supervision will be provided to ensure that the Inspector satisfactorily fulfills the required functions.

6-1.2.7 Submit to the National Board an application for a Qualified Inspector Supervisor, certifying that the applicant has the required experience and training to provide supervision and other functions in accordance with the Qualified Inspection Organization Quality Program.

6-1.2.8 Notify the ASME Conformity Assessment Department of the termination of an inspection agreement with a Holder of an ASME Certificate of Authorization.

6-1.2.9 Provide a representative to participate in the shop or site reviews of organizations for which they provide Qualified Inspection services.

6-1.3 Qualified Inspection Organization Quality Program

6-1.3.1 A documented Quality Program shall be established, implemented, and maintained by the Qualified Inspection Organization in accordance with the requirements of this Standard. The Quality Program shall identify the activities to which it applies and shall provide for the planning, control, and accomplishment of activities affecting the quality of the organization's implementation of duties and activities as described in the applicable Parts of this Standard.

6-1.3.2 The Quality Program shall, at a minimum, include the following parts:

(a) Organization. The Program shall document the organizational structure, functional responsibilities, levels of authority, and lines of responsibilities for activities required for compliance with the requirements of this Standard.

(b) Program Description. The Program shall describe the scope of the activities for which the Program applies. The scope shall include all requirements of the QAI-1 Standard for which the Organization is accredited by the Society or for which the applicant is seeking Society accreditation as an accredited Qualified Inspection Organization. The Program shall document the policies and describe the process for the implementation of the requirements of the QAI-1 Standard.

(c) Document Control. The Program shall describe the process for the review and revision of the Program. Changes to the Program shall be controlled and the process for review and approval of changes shall be specified. All changes to the Program require review and acceptance by the Society before implementation. Further, the Program shall be controlled to ensure appropriate distribution to and use at the location(s) where the prescribed activity is performed.

(d) Training. The Program shall describe the process for the indoctrination and training of personnel.

(e) Audits. The Program shall describe the process for the audits as required by 6-2.2.5 and 6-1.8(d).

(f) Records. The Program shall describe the process for records management. The description shall include the requirements and the responsibilities for record identification, generation, distribution, and retention.

(g) Corrective Actions. The Program shall describe the corrective action process.

6-1.4 Administrative Requirements

The Qualified Inspection Organization must

(a) identify its Inspectors as employees of the organization. The organization must also demonstrate control over the Inspector's activities.

(b) have at least one Inspector and one Inspector Supervisor.

(c) identify any entity within its ownership structure that provides a service or product that may create a conflict of interest with its Qualified Inspection Organization work.

6-1.5 Structure of Entity for Qualified Inspection Organizations

The Qualified Inspection Organization must

(a) be a legal authority or be an organization recognized by a legal authority

(b) not be a sole proprietorship

(c) provide the formal name of the Qualified Inspection Organization and under what legal authority it was formed

(d) identify the owner or owners of the organization and, additionally, any other owners within the chain of ownership up to, and including, the ultimate parent or owner

6-1.6 Independence, Impartiality, and Integrity

6-1.6.1 General. The personnel of the Qualified Inspection Organization shall be free of any commercial, financial, and other pressures which may affect their judgments. Procedures shall be implemented to ensure that persons or organizations external to the Qualified Inspection Organization cannot influence the results of inspections carried out.

6-1.6.2 Independence. The Qualified Inspection Organization shall be independent to the extent that is required with regard to the conditions under which it performs its services. It shall meet the criteria described in 6-1.6.2.1 and 6-1.6.2.2.

6-1.6.2.1 The Organization and its staff responsible for carrying out the inspection shall not be the

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designer, manufacturer, supplier or installer, purchaser, owner, user or maintainer of the items that they inspect, nor the authorized representative of any of these parties and shall be independent of these parties.

6-1.6.2.2 The Organization and its staff shall not engage in any activities that may conflict with their independence of judgment and integrity in relation to their inspection activities.

6-1.7 Confidentiality

The Qualified Inspection Organization shall ensure confidentiality of information obtained in the course of its inspection activities. Proprietary rights shall be protected.

6-1.8 Organization and Management

The Qualified Inspection Organization shall

(a) have the capability to perform its technical functions satisfactorily

(b) define and document the responsibilities and reporting structure of the Organization

(c) have a technical manager, however named, who has the overall responsibility for overseeing inspection activities in accordance with this Standard

(d) perform annual audits of Supervisors

6-2 THE SUPERVISOR

6-2.1 Qualifications

The Supervisor shall be selected and designated as such by his employer. An Authorized Inspector Supervisor, if so selected and designated by his employer, shall be deemed as so qualified. A Qualified Inspector Supervisor shall also be qualified as a Qualified Inspector and shall have the additional qualifications specified in 6-2.1.1 through 6-2.1.4.

6-2.1.1 The Supervisor shall have passed an examination developed, promulgated, and administered by the National Board.

6-2.1.2 The Supervisor, subsequent to being qualified as an Inspector, shall have been engaged for at least 1 year in ASME Boiler and Pressure Vessel Code related activities such as inspection or examination under the provisions of the ASME Code or administration of inspection or examination activities under the ASME Code.

6-2.1.3 The Supervisor shall have knowledge of the ASME Code review procedures which shall include participating in at least two reviews as a Qualified Inspector, manufacturer's representative, or an observer.

6-2.1.4 The Supervisor shall have knowledge of the requirements of the applicable ASME Code Sections and this Standard.

6-2.2 Duties

The Supervisor shall perform the duties specified in 6-2.2.1 through 6-2.2.7.

6-2.2.1 The Supervisor shall maintain a record of Certificate Holder's shop and field sites where Inspectors assigned to the Supervisor are performing Code inspection activities. The Supervisor shall record the date of visits when related to the assigned supervisory duties.

6-2.2.2 The Supervisor shall maintain a record of those Inspectors assigned and a description of their assignments.

6-2.2.3 The Supervisor shall assist in maintaining the competency of the Inspector to an acceptable level through periodic arrangement of panel discussions of work-related topics, written communications of unique problems and their solution, informal question and answer discussion sessions, and other means deemed suitable. The Supervisor shall maintain documentation of such activities.

6-2.2.4 The Supervisor shall be responsible for the technical performance of the Inspector(s) assigned to the Supervisor. Nonconforming activities reported to the Supervisor shall be reported to the organization's management.

6-2.2.5 The Supervisor shall audit and document the performance of each Inspector at least once each year at approximately 12-month intervals and at additional times as requested by the Inspector. At the time of this audit, the Supervisor shall be accompanied by the Inspector.

6-2.2.6 The audit required in 6-2.2.5 shall be documented in writing and shall contain comments regarding the status of each item audited.

6-2.2.7 The Supervisor shall confirm that corrective action has been verified by the Inspector to ensure compliance with the ASME Code requirements.

6-3 THE INSPECTOR

6-3.1 Qualifications

Inspectors shall comply with the National Board "Rules for Qualified Inspectors," and hold a valid Certificate of Competency (see 6-1.1.1) where required and a valid National Board Certification as a Qualified Inspector. An applicant for designation as an Inspector shall have the characteristics defined in 6-3.1(a) through 6-3.1(g).

(a) Demonstrated ability to perform shop and field inspections and other inspection activities in accordance with the ASME Code to the satisfaction of the Organization employing him.

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(b) Satisfactory degree of expertise, experience, and background knowledge for the inspection of pressure equipment according to the complexity of the assignment.

(c) Knowledge of applicable Sections of the ASME Code, Addenda, and Code Cases.

(d) Knowledge of Quality Control Systems, programs, and shop and field procedures.

(e) Knowledge and ability to evaluate and monitor shop and field procedures and performance.

(f) Knowledge of the requirements for maintenance and retention of records.

(g) passing grade on an examination administered by the National Board, covering knowledge of, and familiarity with, the ASME Code.

An Authorized Inspector under Part 5, para. 5-3 of this Standard, if so appointed and designated by his employing Qualified Inspection Organization, shall be deemed so qualified as an Inspector.

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PART 7
Accreditation of Qualified Inspection Organizations

7-0 SCOPE

Part 7 of this Standard is for use with Section XII of the ASME Code,[1] including applicable Addenda and Code Cases and other Section(s) of the ASME Code when the respective Code Section refers to the Qualified Inspection Organization (QIO).

7-1 REQUIRED ACCREDITATION TO PROVIDE QUALIFIED INSPECTION SERVICES

Qualified Inspection Organizations shall be accredited by the Society[2] pursuant to the provisions set forth in this Part.

7-2 SCOPE OF ACCREDITATION

(a) The QIO Certificate of Accreditation shall identify the office location(s) from which the inspection service is controlled and state the scope of inspections by Code Sections and Divisions thereof, for which accreditation is granted. Certificates of Accreditation are issued for a 3-year period. The Society may, at its discretion, limit or extend the scope of inspection and remove or add locations.

(b) The Society may, at any time, make regulations concerning the issuance and use of Certificates as it deems appropriate, and all regulations shall become binding upon the Certificate Holders.

7-3 APPLICATION FOR ACCREDITATION

An organization desiring a QIO Certificate of Accreditation shall apply to the Society upon forms issued by the Society describing the basis for qualification as a Qualified Inspection Organization and the scope of activities to be accredited. Upon completion of a successful survey[3] and favorable action by the Society, the applicant shall be granted a QIO Certificate of Accreditation.

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] *Society* refers to The American Society of Mechanical Engineers.

[3] As used in this Standard, *survey* is defined as 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 the effectiveness of implementation. A survey should not be confused with surveillance or inspection activities performed for the purpose of process control or product acceptance.

7-4 EVALUATION FOR QIO CERTIFICATE OF ACCREDITATION

(a) Applicants applying for a new or renewed QIO Certificate of Accreditation require a survey at a location(s) where the applicant's QAI-1 and ASME Boiler and Pressure Vessel Code inspection activities are controlled. The applicant shall specify the location(s) at which the QAI-1 Quality Program will be fully demonstrated. It is not necessary to survey each office or location covered by the same program, provided documentation is made available to the Survey Team. The purpose of the survey is to evaluate the Applicant's QAI-1 Quality Program, including its implementation.

(b) The extent of the survey will be determined by the Society based on a review of the Applicant's intended scope of Code activities described in the application. The acceptance by the Society of the QAI-1 Quality Program shall not be interpreted to mean endorsement of the items or activities inspected by the Qualified Inspection Organization personnel.

(c) As a part of the accreditation process for a new or renewed QIO Certificate of Accreditation, the Qualified Inspection Organization shall provide a controlled copy of the QIO Quality Program required to be maintained in accordance with Part 6, para. 6-1.3 of this Standard to the Society.

(d) All changes to the QIO Quality Program shall be controlled. Copies of the changes to the QIO Quality Program shall be provided to the Society for review and acceptance before implementation.

(e) A Qualified Inspection Organization shall provide ASME Survey Team access to facilities, premises, and records necessary to assess conformance with this Standard.

(f) The required QIO Certificate of Accreditation to provide inspection services shall be granted only after the adequacy of the content and the implementation of the QAI-1 Quality Program has been satisfactorily demonstrated to an ASME Survey Team and the survey results acted upon by the Society.

7-5 ISSUANCE OF ACCREDITATION

Each QIO Certificate of Accreditation Holder shall have agreed that each Certificate is at all times the property of the Society, that it will be used according to the requirements of this Standard, and that the Certificate

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will be promptly returned to the Society upon demand, or when the QIO Certificate of Accreditation Holder discontinues the scope of inspection activities covered by the Certificate. The Holder of a QIO Certificate of Accreditation shall not permit any other party to use its Certificate. The Society reserves the absolute right to cancel or refuse to renew such accreditation, returning fees paid for the prorated unexpired term.

7-6 RENEWAL OF ACCREDITATION

Not later than 6 months prior to the date of expiration of the Certificate, the QIO Certificate of Accreditation Holder shall apply for the renewal of their accreditation and the reissuance of the QIO Certificate of Accreditation.

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PART 8
Qualifications and Duties for Certified Individuals

8-0 SCOPE

Part 8 of this Standard is for use with Sections I; IV; VIII, Division 1; VIII, Division 2; VIII, Division 3; X; and XII of the ASME Code[1] including applicable Addenda and Code Cases, when so referenced by the respective Code Section.

8-1 QUALIFICATIONS

A Certified Individual shall provide oversight to ensure that each use of the appropriate ASME Code Symbol is in accordance with the requirements of the applicable ASME Code Section. The Certified Individual shall

(a) be an employee of a Certificate Holder authorized for the application of one or more ASME Code Symbol Stamps

(b) be qualified and certified by the Manufacturer or the Assembler. Qualifications shall include as a minimum

(1) knowledge of the requirements of the applicable Code Section for the application of the appropriate Code Symbol

(2) knowledge of the Manufacturer's or Assembler's quality program

(3) training commensurate with the scope, complexity, or special nature of the activities to which oversight is to be provided

(c) comply with the National Board[2] "Rules for Certified Individuals" and hold a valid National Board Certification for the specific ASME Code Section activities the Certified Individual undertakes

(d) have a record, maintained and certified by the Certificate Holder, containing objective evidence of the qualification and the training program provided

(e) have sufficient and well-defined responsibility, the authority, and the organizational freedom necessary to perform the duties listed in 8-2

8-2 DUTIES OF THE CERTIFIED INDIVIDUAL

The Certified Individual shall

(a) verify that each item to which the ASME Code Symbol is applied meets all requirements of the applicable ASME Code Section

(b) review documentation for each item or lot of items to be stamped to verify that the requirements of the applicable ASME Code Section have been met

(c) sign the appropriate certification document as required by the applicable ASME Code Section

[1] *ASME Code* refers to The ASME Boiler and Pressure Vessel Code.

[2] The *National Board* refers to The National Board of Boiler and Pressure Vessel Inspectors.

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ASME QAI-1–2005 INTERPRETATIONS

Replies to Technical Inquiries
September 2002 — December 2004

FOREWORD

This publication includes all of the written replies issued between the indicated dates to inquiries concerning interpretations of ASME QAI-1, Qualifications for Authorized Inspection.

These replies are taken verbatim from the original letters except for a few typographical corrections and some minor editorial corrections made for the purpose of improved clarity. In some few instances, a review of the interpretation revealed a need for corrections of a technical nature; in these cases a corrected interpretation follows immediately after the original reply, bearing the original Interpretation Number with the suffix R and the original file number with an asterisk.

These interpretations were prepared in accordance with the accredited ASME procedures. ASME procedures provide for reconsideration of these interpretations when or if additional information is available which the inquirer believes might affect the interpretation. Further, persons aggrieved by this 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.

These replies apply to the latest Edition and Addenda at the time of the inquiry or the Edition and Addenda stated in the reply. Subsequent revisions to the Standard may have superseded the reply.

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Interpretation: QAI-03-02

Subject: ASME QAI-1–1995 edition up to and including ASME QAI-1–2003 edition; Part 5, 5-2, the Authorized Inspector Supervisor and 5-3, the Authorized Inspector

Date Issued: April 23, 2003

Question: May an ASME Accredited Authorized Inspection Agency (AIA) use the services of individuals qualified and designated under their QAI Quality Program, which are employed by a parent company or subsidiary?

Reply: Yes.

Interpretation: QAI-03-03

Subject: ASME QAI-1–1995 edition up to and including ASME QAI-1–2003 edition; Part 5, 5-2.2.5, Annual Audit of AI

Date Issued: March 15, 2004

Question: In the case where no ASME code work was performed by the Inspector within the last 12 months, is it permissible to meet the requirements in 5-2.2.5, to audit the Inspector assigned to an ASME shop or field site at least once each year, by evaluating his performance at other than a shop or field site?

Reply: Yes.

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ASME QAI-1 CASES

A Case is the official method of handling a reply to an inquiry when study indicates that the wording of the standard needs clarification, or when the reply modifies the existing requirements of the standard.

ASME has agreed to publish Cases issued by the QAI Committee as part of the update service to QAI-1. The text of proposed new and revised Cases appear on the QAI Committee Web page for public review. New and revised Cases, as well as announcements of annulments, then appear in the next Edition.

The QAI Standards Committee took action to eliminate Code Case expiration dates effective December 13, 2004. This means that all Code Cases listed in QAI-1–2005 and beyond will remain available for use until annulled by the ASME QAI Standards Committee.

The Case affected by this supplement is as follows:

Page	*Location*	*Change*
C-2	Case 3 (Case 1 in 1995 edition)	In Inquiry and Reply, reference to ASME QAI-1 updated

The change given above is identified on the page by a margin note, **(05)**, placed next to the affected area.

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QAI-1 Case 3
Qualification of Authorized Nuclear Inspector Supervisor (Concrete) and Authorized Nuclear Inspector (Concrete)

Approval Date: June 14, 1999

Inquiry: What alternatives to the rules in ANSI/ASME N626.2-1976, Qualification and Duties for Authorized Nuclear Inspection (Concrete); ANSI/ASME N626-1985, Qualifications and Duties for Authorized Nuclear Inspection Agencies and Personnel; and ASME QAI-1–2003 and earlier editions, Qualifications for Authorized Inspection, may be used for the qualification of the Authorized Nuclear Inspection Supervisor (Concrete) and the Authorized Nuclear Inspector (Concrete)?

Reply: It is the opinion of the Committee that as an alternative to the rules in ANSI/ASME N626.2-1976, ANSI/ASME N626-1985, and ASME QAI-1–2003 and earlier editions, including all applicable addenda, the rules listed below may be used for the qualification of the Authorized Nuclear Inspector Supervisor (Concrete) and the Authorized Nuclear Inspector (Concrete).

1.0 The Authorized Nuclear Inspector Supervisor (Concrete)

1.1 The Supervisor shall be selected and designated as such by the employer. The individual shall have qualified as an Authorized Nuclear Inspector Supervisor and as an Authorized Nuclear Inspector (Concrete).

2.0 The Authorized Nuclear Inspector (Concrete)

2.1 The candidate shall hold a valid State Certificate of Competency (where required) and a National Board Commission. The Authorized Nuclear Inspector (Concrete) shall also have the following additional qualifications:

2.1.1 The Inspector shall have qualified as an Authorized Nuclear Inspector.

2.1.2 The Inspector shall have a minimum of two years experience in design, construction, or inspection of major concrete structures; or satisfactorily completed at least 40 hours of documented training in a course, accepted by the National Board prior to the training, in the fundamentals of concrete construction and inspection.

2.1.3 The Inspector shall have passed an examination developed and administered by the National Board. Such examination shall encompass sufficient scope to ascertain the candidate's basic knowledge of concrete construction and inspection; and determine his knowledge of and ability to ascertain and interpret the requirements of Section III, Division 2 of the Code.

2.1.4 Demonstrated ability to perform concrete inspections to the satisfaction of the Authorized Inspection Agency employing the Inspector.

3.0

Responsibility for assuring qualifications of the Authorized Nuclear Inspector (Concrete) and the Authorized Nuclear Inspector Supervisor (Concrete) in accordance with this Case rests with the Authorized Inspection Agency employing and assigning the Inspectors or Supervisor. The Authorized Inspection Agency shall inform the Certificate Holder and/or Owner when an Inspector's or Supervisor's qualifications have been established by the provisions of this Case.

4.0

Use of this Case shall be documented in the AIA's Quality Program.

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