(3) The material was produced under the provisions of a Quality System Program that had been accepted by the Society or qualified by a party other than the Society (HAB-3820), in accordance with the requirements of the latest Section III Edition issued at the time the material was produced.

(f) Code Editions [including the use of specific provisions of Editions permitted by (b) and (e) above] and Cases used shall be reviewed by the Owner or his designee for acceptability to the regulatory and enforcement authorities having jurisdiction at the nuclear power plant site.

(g) Except as otherwise permitted by this Code and stipulated in the Scope of a certificate, the latest Code Edition shall become mandatory for Quality System Program (HAB-3800 and HAB-4500) and Quality Assurance (Article HAB-4000) requirements 6 months after the date of issuance.

HAB-1150 UNITS OF MEASUREMENT

U.S. Customary units, SI, or any local customary units may be used to demonstrate compliance with all requirements of this edition (e.g., materials, design, manufacture, examination, inspection, testing, and certification).

In general, it is expected that a single system of units shall be used for all aspects of design except where unfeasible or impractical. When Core Components are manufactured at different locations where local customary units are different from those used for the general design, the local units may be used for the design and documentation of that Core Component. Similarly, for proprietary Core Components or those uniquely associated with a system of units different from that used for the general design, the alternate units may be used for the design and documentation of that Core Component.

For any single equation, all variables shall be expressed in a single system of units. When separate equations are provided for U.S. Customary and SI units, those equations must be executed using variables in the units associated with the specific equation. Data expressed in other units shall be converted to U.S. Customary or SI units for use in these equations. The result obtained from execution of these equations may be converted to other units.

Production, measurement and test equipment, drawings, and other fabrication documents may be in U.S. Customary, SI, or local customary units in accordance with the fabricator’s practice. When values shown in calculations and analysis, fabrication documents, or measurement and test equipment are in different units, any conversions necessary for verification of Code compliance and to ensure that dimensional consistency is maintained shall be in accordance with the following:

(a) Conversion factors shall be accurate to at least four significant figures.

(b) The results of conversions of units shall be expressed to a minimum of three significant figures.

Conversion of units, using the precision specified above, shall be performed to ensure that dimensional consistency is maintained. Conversion factors between U.S. Customary and SI units may be found in Nonmandatory Appendix AA, Guidance for the Use of U.S. Customary and SI Units. Whenever local customary units are used, the manufacturer shall provide the source of the conversion factors that shall be subject to verification and acceptance by the Inspector.

Material that has been manufactured and certified to either the U.S. Customary or SI material specification may be used regardless of the unit system used in design.

All entries on a Data Report shall be in units consistent with the fabrication drawings for the Core Component using U.S. Customary, SI, or local customary units. It is acceptable to show alternate units parenthetically. Users of this Code are cautioned that the receiving Jurisdiction should be contacted to ensure the units are acceptable.

HAB-1200 GENERAL REQUIREMENTS FOR ITEMS AND INSTALLATION

HAB-1210 CORE ASSEMBLY

The Core Assembly shall require a Design Specification (HAB-3250), Design Report (HAB-3350), and other design documents specified in Article HAB-3000. Data Reports shall be as required in Article HAB-8000.

HAB-1220 MATERIALS

Materials shall be manufactured to the requirements of Article HHA-2000 or Article HHB-2000.

HAB-1280 INSTALLATION

HAB-1281 Activities and Requirements

The requirements pertaining to installation governing materials, machining, examination, testing, inspection, and reporting shall be in accordance with the applicable rules in Subsection HH, and certification shall be as required in Article HAB-8000.

HAB-1283 Services

Services such as handling, rigging, setting, temporary bolting, and temporary aligning may be performed by organizations that are not GC Certificate Holders as provided for in HAB-3125.
to beginning field installation. The information to be supplied by the Owner when making applications is given in forms issued by the Society. A written agreement with an Authorized Inspection Agency (HAB-8130) is required prior to application.

HAB-3240 PROVISION OF ADEQUATE SUPPORTING STRUCTURES

It is the responsibility of the Owner to ensure that intervening elements, foundations, and building structures adequate to support the items covered by this Subpart and Subsection HH are provided and to ensure that jurisdictional boundary interfaces for Code items are defined and compatible. Loads imposed upon structures outside the scope of this Subpart and Subsection HH by items covered by this Subpart and Subsection HH shall be defined in the Design Specification.

HAB-3250 PROVISION OF DESIGN SPECIFICATIONS

HAB-3251 Provision and Correlation

It is the responsibility of the Owner to provide, or cause to be provided, Design Specifications for Core Components and Core Assemblies. Either the Owner or through his designee, shall be responsible for proper correlation of all Design Specifications, and data from Construction Specifications shall be provided in sufficient documented detail to form the basis for Core Component machining or finishing and installation in accordance with this Subpart and Subsection HH.

HAB-3252 Contents of Design Specifications

(a) The Design Specifications shall contain sufficient detail to provide a complete basis for design in accordance with this Subpart and Subsection HH, and shall not result in a Core Assembly that fails to conform to the rules of this Subpart and Subsection HH. All Design Specifications shall include (1) through (11) below.

(1) the functions and boundaries of the items covered (HAB-3254)
(2) the design requirements for the Core Components and Core Assembly
(3) the environmental conditions, including radiation
(4) the Design class of the Core Components covered (HAB-2130)
(5) material requirements
(6) when functionality of a component is a requirement, the Design Specification shall make reference to other appropriate documents that specify the functional requirements
(7) the effective Code Edition and Code Cases to be used for design and construction
(8) design life
(9) corrosion effects
(10) construction surveillance required by the Designer
(11) loads from internal structures

(b) The Design Specification shall identify those components that require a preservice examination and shall include the following:

(1) Edition of Section XI to be used
(2) category and method
(3) qualifications of personnel, procedures, and equipment

HAB-3254 Boundaries of Jurisdiction

In order to define the boundaries of components with respect to adjacent components, intervening elements, and other structures, the Design Specifications shall include

(a) the locations of each such boundary
(b) the forces, moments, strains, or displacements that are imposed at each such boundary
(c) the structural characteristics of the attached components or structures, whether or not they are within this Subpart’s and Subsection HH, Subpart A’s and Subpart B’s jurisdiction when such components or structures provide constraints to the movement of components.

HAB-3255 Certification of the Design Specifications

The Design Specifications shall be certified to be correct and complete and to be in compliance with the requirements of HAB-3250 by one or more Certifying Engineers, competent in the applicable field of design and related nuclear power plant requirements and qualified in accordance with the requirements of Section III Appendices, Mandatory Appendix XXIII. These Certifying Engineers are not required to be independent of the organization preparing the Design Specifications. Document distribution for design and construction is shown in Table HAB-3255-1.

HAB-3256 Filing of Design Specifications

The Design Specifications in their entirety shall become a principal document governing design and construction of items. A copy of the Design Specification(s) shall be made available to the Inspector at the manufacturing site before construction begins, and a copy shall be filed at the location of the installation and made available to the enforcement authorities having jurisdiction over the plant installation before the Core Assembly is placed into service. Document distribution for construction is shown in Table HAB-3255-1.

HAB-3260 REVIEW OF DESIGN REPORT

(a) The Design Report that the Designer provides shall be reviewed by the Owner or his designee to determine that all the Design and Service Loadings as stated in the Design Specification have been evaluated, and that the
ARTICLE HAB-4000
QUALITY ASSURANCE REQUIREMENTS

HAB-4100 REQUIREMENTS

HAB-4110 SCOPE AND APPLICABILITY

(a) This Article sets forth the requirements for planning, managing, and conducting Quality Assurance Programs for controlling the quality of activities performed under this Subpart and Subsection III, and the rules governing the evaluation of such Programs prior to the issuance of Certificates for the design and construction of the Core Assembly. The Quality Assurance requirements for Material Organizations for material manufacture, Core Component manufacture, and installation are provided in HAB-3800. GC Certificate Holders are advised to consult other regulations for Quality Assurance requirements governing activities beyond the scope of this Division.

(b) As identified, modified, and supplemented in HAB-4120 and HAB-4134, GC Certificate Holders shall comply with ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Applications, Parts I and II.5

HAB-4130 ESTABLISHMENT AND IMPLEMENTATION

HAB-4131 Material Organizations

The requirements of HAB-4500 apply.

HAB-4134 GC Certificate Holders

HAB-4134.1 Organization. The provisions of ASME NQA-1, Requirement 1 shall apply.

HAB-4134.2 Quality Assurance Program.

(a) The provisions of ASME NQA-1, Requirement 2 shall apply and the system used to meet these requirements shall be described in the Quality Assurance Manual. The specific responsibilities of the quality assurance organization of the GC Certificate Holder shall be reviewed in accordance with the requirements of HHA-5220 or HHB-5220.

(c) The controls used in the Quality Assurance Program shall be documented in the Quality Assurance Manual. The Program need not be in the same format or sequential arrangement as the requirements in this Article, as long as all applicable requirements of this Article have been covered. A copy, including all changes that are made, shall be retained in both the Quality Assurance Manual and the Quality Assurance Program. The Owner shall notify the Inspector of any changes to the Program and shall maintain a record of the changes.

HAB-4133 Owner’s Quality Assurance Program

HAB-4133.1 The Owner shall maintain a Quality Assurance Program for the design and construction of the Core Assembly. For this purpose, the Owner may use a Quality Assurance Program accepted by the regulatory authority.

HAB-4133.2 The Owner shall maintain either a Quality Assurance Program or procedure accepted by the Inspector that describes how the Owner will meet their Code responsibilities, HAB-3200, including control of their designee(s).

HAB-4133.3 Owners performing activities that require an GC Certificate shall include the requirements of HAB-3800 or HAB-4100, as applicable, in its Quality Assurance Program, and obtain the appropriate Certificate(s).

HAB-4133.4 The Owner shall assure that organizations performing activities requiring a GC Certificate have a Quality Assurance Program meeting the requirements of HAB-3800 or HAB-4100, as applicable.
The provisions of ASME NQA-1, Requirement 4 shall apply, except that (a) procurement documents shall require suppliers to provide a Quality Assurance Program consistent with the applicable requirements of this Subpart and Subsection HH.

(b) this requirement does not apply to Authorized Inspection Agency services.

The provisions of ASME NQA-1, Requirement 4 shall apply, except that (c) ASME NQA-1, Requirement 4 shall apply, except that procurement documents shall require suppliers to provide a Quality Assurance Program consistent with the applicable requirements of this Subpart and Subsection HH.

This requirement does not apply to Authorized Inspection Agency services.

(f) documentary evidence that items conform to the requirements of this Section shall be available at the construction or installation site before use or installation. Requirements for documentary evidence are satisfied for material when the applicable rules of HAB-3860 for material certification are met. For stamped items, the requirements are satisfied by a Data Report.

The requirements of HAB-3125 shall be used for subcontracted services.
results of examinations and tests. The documents shall include space for a signature, initials, or stamp; the date that the activity was performed by the GC Certificate Holder’s representative; the signature, initials, or stamp of an Inspector; and the date on which those activities were witnessed. The examination checklist for construction of items shall be filled in and completed by the GC Certificate Holder.

(c) Mandatory hold points at which witnessing is required by the GC Certificate Holder’s representative or the Inspector shall be indicated in the controlling documents (HAB-4134.9). Work shall not proceed beyond mandatory hold points without the consent of the GC Certificate Holder’s representative or the Inspector, as appropriate.

HAB-4134.11 Test Control. The provisions of ASME NQA-1, Requirement 11 shall apply.

HAB-4134.12 Control of Measuring and Test Equipment.
(a) The provisions of ASME NQA-1, Requirement 12 shall apply.
(b) The GC Certificate Holder may perform periodic checks on equipment to determine that calibration is maintained. When periodic checking is used, discrepancies need only be resolved to the prior check, provided the discrepancy is discovered by the periodic check. The methods and frequency of periodic checking, when used, shall be included in the GC Certificate Holder’s Quality Assurance Program.

HAB-4134.13 Handling, Storage, and Shipping. The provisions of ASME NQA-1, Requirement 13 shall apply.

HAB-4134.14 Inspection and Test Status. The provisions of ASME NQA-1, Requirement 14 shall apply for inspections and tests, but not for operating status.

HAB-4134.15 Control of Nonconforming Items. The provisions of ASME NQA-1, Requirement 15 shall apply, except that the definition of “repair” given in Article NCA-9000 shall apply in lieu of the definitions of “repair” and “rework” given in ASME NQA-1.

HAB-4134.16 Corrective Action.
(a) The provisions of ASME NQA-1, Requirement 16 shall apply.
(b) The requirements shall also extend to the performance of the subcontractor’s corrective action measures.

HAB-4134.17 Quality Assurance Records.
(a) General. The provisions of ASME NQA-1, Requirement 17 shall apply except that the requirements for para. 400, “Classification”; para. 500, “Receipt Control of Records”; and para. 600, “Storage,” are not applicable. Such records shall be classified and maintained as required by this Subpart and Subsection HH.
(b) Records Index. The records shall be indexed. The records and the indices thereto shall be accessible to the Owner, Owner’s designee, and Inspector.
(c) Lifecycle Records. The records listed in Table HAB-4134.17-1 shall be classified as lifecycle records. The GC Certificate Holder shall be responsible for the retention and maintenance of these records while they are under his control. The Owner shall be responsible for retention and maintenance of those records that are transferred to him.
(d) Nonpermanent Records. The records listed in Table HAB-4134.17-2 shall be classified as nonpermanent records. The GC Certificate Holder shall be responsible for their retention for the period specified in Table HAB-4134.17-2. In no case need nonpermanent records be retained for longer than 10 yr after completion of the applicable Code Data Report.

HAB-4134.18 Audits.
(a) The provisions of ASME NQA-1, Requirement 18 shall apply.
(b) Results of audits shall be made available to the Authorized Nuclear Inspector for Core Components.
(c) The audit frequency shall be specified in the GC Certificate Holder’s Quality Assurance Manual. The GC Certificate Holder’s audit frequency shall be commensurate with his schedule of activities and shall be such that each ongoing Code activity is audited at least once annually.
HAB-4500  GRAPHITE AND COMPOSITE
MATERIAL ORGANIZATION
QUALITY SYSTEM PROGRAM
REQUIREMENTS

HAB-4550  QUALITY SYSTEM PROGRAM
REQUIREMENTS

HAB-4551  Responsibility and Organization

HAB-4551.1  General.
(a) The Material Organization shall establish a Quality System Program for the control of quality during manufacture or during other work it proposes to perform, and for the traceability of material under its control. The Program shall be planned, documented, implemented, and maintained in accordance with the requirements of HAB-4500.
(b) The establishment of the Program shall include consideration of the technical aspects and provide for planning and accomplishment of activities affecting quality. The Program shall provide for any special controls, processes, test equipment, tools, and skills to attain the required quality and for verification of quality.

HAB-4551.2  Scope and Applicability.
(a) The Quality System Manual shall define the specific activities included in the scope of the work the Material Organization proposes to perform, including any combination of
(1) material manufacture
(2) Core Component machining
(3) installation
(4) testing, examination, repair, or treatments required by the material specification or the specific applicable material requirements of this Subpart and Subsection HH, and certification of the results of such tests, examinations, or treatments
(5) receipt, identification, verification, handling, storage, and shipment of material
(6) approval and control of subcontracted services (HAB-4555.3)
(b) The Program shall include measures to comply with all requirements of this subarticle, to the extent necessary to ensure compliance with the requirements of this Subpart and Subsection HH.

HAB-4551.3  Organization.
(a) The organizational structure for executing the Program may take various forms, provided the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom.
(b) Persons or organizations responsible for defining and measuring the overall effectiveness of the Program shall
(1) be designated
(2) be sufficiently independent from the pressures of production
(3) have direct access to responsible management at a level where appropriate action can be initiated
(4) report regularly on the effectiveness of the Program
(c) The organizational structure, functional responsibilities, levels of authority, and lines of communication for activities affecting quality shall be documented. Persons or organizations responsible for ensuring that an appropriate Quality System Program has been established and verifying that activities affecting quality have been correctly performed shall have sufficient authority, access to work areas, and organizational freedom to
(1) identify quality problems
(2) initiate, recommend, or provide solutions to quality problems through designated channels
(3) verify implementation of solutions
(4) ensure that further processing, delivery, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred
(d) Individuals or groups assigned the responsibility of checking, auditing, or otherwise verifying that production and quality control activities have been correctly performed shall be independent of the individual or group directly responsible for performing the specific activity. Such persons shall not report directly to the supervisor with immediate responsibility for the work being verified.
(e) Management shall regularly review the status and adequacy of the Quality System Program.

HAB-4552  Personnel

HAB-4552.1  Indoctrination, Training, and Qualification of Personnel.
(a) Measures shall be established to ensure that all personnel performing or managing activities affecting quality are indoctrinated and trained. The assignment of personnel shall be at the discretion of the organization’s management. Indoctrination and training measures shall reflect the following requirements:
(1) Personnel to be indoctrinated or trained shall be identified.
(2) The extent of indoctrination and training shall be commensurate with the scope, complexity, and nature of the activity as well as the education, experience, and proficiency of the person.
(3) Personnel shall be indoctrinated in the general criteria, applicable codes, standards, company procedures, Quality System Program requirements, job responsibilities, and authority as they relate to a particular function.
(4) Training shall be provided, as needed, to achieve initial proficiency, maintain proficiency, and adapt to changes in technology, methods, and job responsibilities.
(b) All nondestructive examination personnel shall be qualified on the basis of education, experience, training, and examination in accordance with the requirements of HHA-5220 or HHB-5220.
HAB-4553 Program Documentation

HAB-4553.1 Quality System Manual.
(a) The Quality System Program shall be described and summarized in a Quality System Manual that shall be a major basis for demonstration of compliance with the rules of this Division.
(b) The Program documented in the Manual shall be implemented by written procedures that are maintained either separately or in the Quality System Manual.
(c) Detailed technical procedures and processes, such as those for nondestructive examination, are not considered part of the Manual; however, the controls of such procedures and processes shall be covered by the Manual.
(d) The Quality System Manual may be hard copy or electronic, provided the controls are described to ensure approved revisions are made available for use by the Material Organization personnel.

HAB-4553.2 Procedures, Instructions, and Drawings.
(a) Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances.
(b) These documents shall include or reference appropriate acceptance criteria for determined activities have been satisfied.

HAB-4553.3 Document Control. The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality, such as Quality System Program Manuals, purchase specifications, instructions, procedures, and drawings shall be controlled to ensure that the correct documents are being used at the location where the activity is performed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel.

HAB-4553.4 Quality Assurance Records. Records that furnish documentary evidence of quality shall be specified, prepared, controlled, and maintained. Records shall be legible, identifiable, and retrievable. Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, and disposition shall be established and documented.

HAB-4553.5 Records of Examinations and Tests. All characteristics required to be reported by the material specification, this Subpart, and Subsection HH shall be verified and the results recorded. Records shall be traceable to the document and revision to which an inspection, examination, or test was performed.

HAB-4555 Control of Purchased Materials and Services

HAB-4555.1 General.
(a) Measures shall be established to ensure that all purchased material and subcontracted services conform to the requirements of this Subpart and Subsection HH.
(b) These measures shall be designed to prevent the use of incorrect or defective material or materials that have not received the required examinations or tests.

HAB-4555.2 Sources of Material and Services.
(a) Material shall be furnished by a Material Organization [HAB-3820(a)], or by a GC Certificate Holder [HAB-3820(b) or HAB-3820(c)].
(b) Core Component machining or finishing shall be performed by a Material Organization [HAB-3820(a)] or by a GC Certificate Holder [HAB-3820(b) or HAB-3820(c)].
(c) Installation shall be performed by a Material Organization [HAB-3820(a)] or by a GC Certificate Holder [HAB-3820(b) or HAB-3820(c)].
(d) Services including performance and certification of operations, processes, the results of tests, examinations, or treatments required by the material specification or by this Subpart and Subsection HH shall be furnished by a Material Organization, by an approved supplier, or by a GC Certificate Holder.

HAB-4555.3 Approval and Control of Suppliers of subcontracted Services.
(a) The Material Organization or GC Certificate Holder shall be responsible for the approval and control of activities performed by suppliers of subcontracted services. Such control shall provide for source evaluation and selection, evaluation of objective evidence of quality, audit, and examination of items and services upon delivery, in accordance with requirements documented in the Material Organization’s or GC Certificate Holder’s Program.
(b) The Material Organization or GC Certificate Holder shall be responsible for establishing and verifying that the supplier’s controls applicable to the activities performed are adequate by either
(1) performing a survey of the supplier’s quality system and performing triennial audits covering applicable elements of the approved supplier’s established quality system that are consistent with the requirements of this...
subarticle, supplemented by annual evaluations of the approved supplier’s quality system, including a review of the history of conditions adverse to quality, nonconformances, and corrective actions, or

(2) having the supplier perform the activities in accordance with controls established by the Material Organization’s or GC Certificate Holder’s Program

(c) As an alternative to the survey and audit of subcontracted calibration services, a Material Organization, approved supplier, or GC Certificate Holder may accept accreditation by accrediting bodies recognized by the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), provided that the following requirements are met:

(1) A documented review of the supplier’s accreditation shall be performed and shall include verification:

(-a) the accreditation is to ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories, from an accredited body recognized by the ILAC MRA

(-b) the published scope of accreditation for the calibration laboratory covers the needed measurement parameters, ranges, and uncertainties

(2) The procurement documents shall specify:

(-a) that the service must be provided in accordance with the accredited ISO/IEC 17025 program and scope of accreditation

(-b) that the calibration certificate/report shall include identification of the laboratory equipment/standards used

(-c) that the calibration certificate/report shall include as-found calibration data when calibrated items are found to be out-of-tolerance

(-d) that the service supplier shall not subcontract the service to any other supplier

(-e) that the Material Organization, approved supplier, or GC Certificate Holder must be notified of any condition that adversely impacts the laboratory’s ability to maintain the scope of accreditation

(-f) additional technical and quality requirements, as necessary, based on a review of the procured scope of services, including, but not limited to, tolerances, accuracies, ranges, and industry standards

(3) At receipt inspection, the Material Organization, approved supplier, or GC Certificate Holder shall be responsible for validating that the calibration service conforms to all applicable requirements of this Subpart and Subsection HH.

HAB-4555.4 Procurement Document Control.

(a) Procurement documents shall include requirements necessary to ensure compliance with the requirements of this Subpart and Subsection HH.

(b) Procurement documents shall require material or subcontracted services to be furnished in accordance with the applicable requirements of this subarticle.
and properly adjusted at specific periods or use intervals to maintain accuracy within necessary limits. Periodic checks on equipment may be performed to determine that calibration is maintained.

(b) Calibration shall be against certified equipment having known valid relationships and documented traceability to nationally recognized standards, where such standards exist. If no known nationally recognized standards exist, the basis for calibration shall be documented.

(c) Control measures shall include provisions for measuring and test equipment identification and for determining calibration status by equipment marking or on records traceable to the equipment.

HAB-4558.3 Discrepancies in Measuring or Testing Equipment.

(a) When discrepancies in excess of tolerances for measuring or testing equipment are found at calibration, appropriate corrective action shall be taken, and material measured or tested since the previous calibration shall be reviewed to determine that all applicable requirements have been met.

(b) When periodic checks on equipment are performed to determine that calibration is maintained, potential material discrepancies need only be resolved to the previous check, provided

1. the methods used and frequency of periodic checking are described in calibration procedures
2. the calibration discrepancy was found by periodic check

HAB-4558.4 Inspection and Test Status. Measures shall be established so that the status and results of any required inspections, examinations, or tests can be determined at any time. Status shall be maintained through indicators such as physical location and tags, marking, shop travelers, stamps, inspection records, or other suitable means. The authority for application and removal of such indicators shall be specified.

HAB-4558.5 Control of Nonconforming Material.

(a) Adequate control measures shall be established to prevent the use of material that does not conform to the requirements of the material specification, this Subpart, and Subsection HH.

(b) Material with nonconformances shall be identified, segregated when practical, and reviewed for acceptance or rejection in accordance with documented procedures. The responsibility and authority for the disposition of nonconformances in these materials shall be defined.

(c) Measures that control further processing of nonconforming or defective material pending a decision on its disposition shall be established and maintained. These control measures shall extend to notification of other affected organizations, as appropriate.

HAB-4559 Audits and Corrective Action

HAB-4559.1 Audits.

(a) Audits shall be performed in accordance with written procedures or checklists by personnel not having direct responsibility in the areas being audited.

(b) Audit results shall be documented by auditing personnel for review by management having responsibility in the area being audited.

(c) Procedures shall include provisions for documentation of corrective action taken in response to deficiencies. Follow-up action, including re-audit of deficient areas, where indicated, shall be taken to verify implementation of such corrective actions.

(d) In addition to audits of Material Organizations and suppliers, a comprehensive system of planned and periodic internal audits shall be carried out to ensure compliance with all aspects of the Quality System Program and to determine the effectiveness of the Program.

(e) Internal audits shall be performed in accordance with the requirements of (a) through (c) above.

HAB-4559.2 Corrective Action.

(a) Measures shall be established to ensure that conditions adverse to quality, such as failures, malfunctions, deviations, defective material and equipment, nonconformances, and quality system deficiencies, are promptly identified and reported to appropriate levels of management. The measures shall also ensure that the cause of conditions adverse to established quality levels are determined and corrected.

(b) The identification of significant or recurring conditions adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

(c) These requirements shall also extend to the performance of the approved supplier’s corrective action measures.
ARTICLE HAB-5000
AUTHORIZED INSPECTION

HAB-5125 Duties of Inspector Supervisors
(a) Supervisors, in conjunction with Inspectors employed by the same Authorized Inspection Agency (HAB-5121), shall participate in the Society’s review of the applicant’s Quality Assurance Program (HAB-8160). In those cases where the Supervisor performs the functions of the Inspector, he may represent both during the review of the Program.

(b) A Supervisor designated by the Authorized Inspection Agency shall review and accept any proposed modifications to Quality Assurance Manuals before they are put into effect. The Inspector Supervisor shall audit the performance of the Inspector at least twice per year at locations where the GC Certificate Holder is actively engaged in work according to this Subpart and Subsection HH. The Supervisor shall be available as needed for consultation and support of the local inspection staff. The Supervisor shall maintain supervisory control over one or more Inspectors and shall perform all of the functions and maintain the records required of him in ASME QAI-1, Qualification for Authorized Inspection.

(b) The portion of a GC Certificate Holder’s Quality Assurance Program that involves supply or manufacture and supply of materials [HAB-3820(c)] shall be audited by the Supervisor at least once each year.

HAB-5130 ACCESS FOR INSPECTION AGENCY PERSONNEL

HAB-5131 Access to the GC Certificate Holder’s Facilities
(a) The GC Certificate Holder shall arrange for the Authorized Inspection Agency personnel to have free access at all times to those locations where Code activities, including those concerned with supply or manufacture of materials, are being performed on an item, when so requested. The GC Certificate Holder shall keep the Inspector informed of the progress of the work and shall notify him reasonably in advance when the item will be ready for any required tests or inspections.

(b) The GC Certificate Holder shall provide personnel to accompany the Inspector Supervisor during his required audits.
HAB-5132 Access to the Owner’s Facilities

The Owner shall arrange for the Authorized Inspection Agency personnel to have free access to the Owner’s facilities as required to perform duties under the Owner’s agreement with the Authorized Inspection Agency (HAB-5121).

HAB-5200 DUTIES OF INSPECTORS

HAB-5210 GENERAL INSPECTION DUTIES

(a) The Inspector who performs the detailed inspections in compliance with this Subpart and Subsection HH shall witness or otherwise verify all examinations and make all inspections required by this Subpart and Subsection HH. He shall also make any other inspections and witness or verify (including making measurements) any other examinations and additional investigations that, in his judgment, are necessary to ascertain whether the item being inspected has been constructed in compliance with the rules of this Subpart and Subsection HH. This shall but shall verify that the certified document has been certified by a approved Design Engineer. The Owner or his designee, Designer, or Certificate Holder, on whose behalf the document has been certified, shall provide objective evidence that the information reported in the Construction Reports shall not result in construction that fails to conform with the requirements of this Subpart and Subsection HH.

(b) The duties of the Inspector shall be interpreted by virtue of these rules to extend to any construction requirements beyond those of this Subpart and Subsection HH that may be set forth in the Design Specification (HAB-3250) or on Design Drawings and Construction Specifications (HAB-3340). However, such requirements shall not result in construction that fails to conform with the requirements of this Subpart and Subsection HH.

HAB-5220 CATEGORIES OF DUTIES FOR INSPECTORS

The duties of the Inspector shall include, but not necessarily be limited to, those given in (a) through (j) as follows:

(a) verifying the scope of work to be performed [HAB-5230(a)]

(b) monitoring the GC Certificate Holder’s Quality Assurance Program including subcontracted activities (HAB-5240)

(c) reviewing the GC Certificate Holder’s qualification records (HAB-5250)

(d) verifying materials (HAB-5260)

(e) witnessing or verifying in-process construction activities, examinations, and tests (HAB-5270)

(f) reviewing and signing Data Reports and Construction Reports (HAB-5290)

(g) reviewing drawings and inspecting in accordance with them (HAB-5290)

(h) monitoring the Code activities of the Owner

(i) performing all other duties specifically required in ASME QAI-1, Qualification for Authorized Inspection, as applicable

(j) assuring that Design Reports that are required by HAB-3352 are available

HAB-5230 SCOPE OF WORK, DESIGN SPECIFICATIONS, AND DESIGN REPORTS

(a) The Inspector shall verify that the scope stated in the Certificate includes the work to be performed.

(b) The Inspector shall verify that the Design Specifications, Design Drawings, Construction Specifications, Construction Reports, and Design Reports are on file and that they have been properly certified in accordance with HAB-3255, HAB-3360, and HAB-3380.

(c) The Inspector shall not be held responsible for the scope or adequacy of the Design Specifications, for the completeness or accuracy of the Design Report or calculations, for the information reported in the Construction Report, or for the qualification of Certifying Engineers certifying documents in compliance with the requirements of HAB-5210.

HAB-5240 QUALITY ASSURANCE PROGRAMS

HAB-5241 Stipulation of Inspections Prior to Issuance of Process Sheets or Controls

Prior to the issuance of process sheets or controls required by HAB-4134.9, the GC Certificate Holder shall review them and the applicable drawings with the Inspector, who shall then stipulate the inspections he intends to make in order to fulfill the requirements of HAB-5210.

HAB-5242 Monitoring of Quality Assurance Programs

(a) The Inspector shall monitor the performance of the GC Certificate Holder for conformity to the requirements of their Quality Assurance Program accepted by the Society. The Inspector shall verify that all changes to the Quality Assurance Manual have been accepted by the Authorized Inspection Agency before they are put into effect.

(b) The Inspector shall monitor the Owner’s progress in compiling supporting data needed to complete the ASME Data Report Form N-3 (see Section III Appendices, Mandatory Appendix V).

HAB-5243 Process Control Checklist

The Inspector shall indicate on the GC Certificate Holder’s process sheets or checklist his concurrence that compliance has been attained at each point stipulated by him (HAB-5241).
HAB-5250  QUALIFICATION RECORDS

HAB-5251  Review of Qualification Records

The Inspector shall review the qualification records of the GC Certificate Holder.

HAB-5255  Examination Procedures

The Inspector shall assure himself that the examination and testing procedures required by this Subpart and Subsection HH have been qualified. When there is a specific reason to question whether the examination or testing procedure requirements are being met, the Inspector may require requalification of the procedure.

HAB-5260  MATERIALS AND CORE COMPONENTS

HAB-5261  Inspection of Materials for Compliance

The Inspector shall assure himself that all materials used comply with all applicable requirements of this Subpart and Subsection HH. The GC Certificate Holder shall make available to the Inspector certified reports of the results of all tests performed in accordance with (a) and (b) as follows:

(a) the material specifications
(b) the requirements in Article HHA-2000 or Article HHB-2000, including certified reports of the results of all required tests and examinations performed.

HAB-5262  Dimensional Check

The Inspector shall satisfy himself that the item is being constructed within the tolerances required by the Design Specification, Design Drawings, Construction Specifications, this Subpart, and Subsection HH.

HAB-5270  EXAMINATIONS AND TESTS

The Inspector shall witness examinations and tests, when feasible; alternatively, he shall check the examination and test records to determine the acceptability of the items involved.

HAB-5290  DATA REPORTS AND CONSTRUCTION REPORTS

(a) The appropriate Data Reports prepared by the GC Certificate Holder shall be reviewed and signed by the Inspector only after they have been certified by a responsible representative of the GC Certificate Holder and after he has satisfied himself that all requirements of this Subpart and Subsection HH have been met and that each Data Report certified is a correct record. Certification by the Designer of the G-1 Data Report is also required prior to verification by the Inspector.

(b) The Inspector shall review and separately verify that the information contained in the Construction Report is valid and corresponds to the requirements of this Subpart and Subsection HH and that the Designer’s review and certification of the Construction Report have taken account of all requirements of this Subpart and Subsection HH.

HAB-5300  RESPONSIBILITIES OF THE AUTHORIZED INSPECTION AGENCY

The responsibilities of the Authorized Inspection Agency shall include, but not necessarily be limited to, those given in (a) through (h) as follows:

(a) Maintain a staff of Inspectors (HAB-5123) and Inspector Supervisors (HAB-5122).
(b) Make agreements with GC Certificate Holders and Owners for inspection service (HAB-5121 and HAB-8130). Notify the Society whenever such agreements are terminated (HAB-5121).
(c) Provide for participation in the Society’s review of the applicant’s Quality Assurance Program (HAB-5125).
(d) Provide for the review and acceptance of any proposed modifications to Quality Assurance Manuals before they are put into effect (HAB-5125).
(e) Review and accept the GC Certificate Holder’s method of marking material and Core Components.
(f) Review and accept the GC Certificate Holder’s provisions of positive identification and traceability of items.
(g) Determine by agreement with the GC Certificate Holder the sequence for completion of the Data Reports.
(h) Perform all other duties specifically required in ASME QAI-1, Qualifications for Authorized Inspection, as applicable.
When editions other than the referenced editions are used, the differences shall be reviewed to ensure that all technical requirements of the Code are satisfied.
ARTICLE HAB-8000
CERTIFICATES AND DATA REPORTS

HAB-8100 AUTHORIZATION TO PERFORM CODE ACTIVITIES

HAB-8110 GENERAL

Authorization to certify work provided in this Subpart and Subsection HH (see Table HAB-8100-1) will be granted by the Society for a 3-yr period pursuant to the provisions set forth in this Article.

HAB-8120 SCOPE OF CERTIFICATES

(a) The certificate (HAB-3120) will identify the shop or field facility covered and state the scope of activities for which authorization is granted. The Society may, at its discretion, limit or extend the scope of an authorization to any types or classes of items or to a specific location.

(b) A Certificate of Authorization will be issued by the Society to an organization for certifying a data report form.

(c) 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 a valid certificate.

HAB-8130 INSPECTION AGREEMENT REQUIRED

GC Certificate Holders and Owners shall possess an agreement with an Authorized Inspection Agency to provide inspection and audit services. The agreement with the Authorized Inspection Agency shall be made prior to application for a survey or, in the case of the Owner, an interview. GC Certificate Holders and Owners shall notify the Society whenever their agreements with an Authorized Inspection Agency are canceled or changed to another Authorized Inspection Agency.

HAB-8140 QUALITY ASSURANCE PROGRAM REQUIREMENTS

It is a requirement that the Owner and Certificate Holder have a Quality Assurance Program (Article HAB-4000) that has been evaluated and accepted by the Society.

HAB-8150 APPLICATION FOR CERTIFICATION

An Organization desiring a Certificate shall apply to the Society upon forms issued by the Society describing the scope of Code activities to be performed.

HAB-8153 Code Activities Prior to Obtaining a GC Certificate

Code activities performed prior to issuance of a GC Certificate shall be subject to the acceptance of the Inspector.

HAB-8160 EVALUATION

HAB-8161 Evaluation for a Certificate

(a) Applicants for a new or renewed certificate for design or construction of Core Components or Core Assemblies require a survey of their shop or field facilities. The purpose of the survey is to evaluate the applicant’s Quality Assurance Manual and the implementation of the Quality Assurance Program.

(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 Quality Assurance Program shall not be interpreted to mean endorsement of technical capability to perform design work such as system design or stress analysis, where the scope of the certificate includes such activities. Such capability is implied for the specific component involved by the certification of Design Reports (HAB-3360) by a Certifying Engineer.

HAB-8162 Evaluation for an Owner’s Certificate

(a) The Owner, after receipt of notification from the regulatory authority that an application for a construction permit or combined license for a specific plant has been docketed, shall obtain an Owner’s Certificate (HAB-3230) from the Society for unit(s) docketed concurrently for each nuclear power plant site prior to field installation. In lieu of a survey, the Owner will be interviewed by the Society to verify the Owner’s understanding of Code responsibilities (HAB-3220) and to obtain the Owner’s agreement to meet the requirements.

(b) The Owner’s Certificate (HAB-3230) shall be applicable to nuclear power plant unit(s) docketed concurrently for each site.

HAB-8170 ISSUANCE

Each GC Certificate Holder or G Certificate 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 Subpart and Subsection HH, and that the Certificate will be promptly returned to the Society upon demand, or when the GC Certificate...
Certificates of Authorization, Certificates of Authorization (Corporate), and Quality Assurance Program Certificate Holders

HAB-8180

RENEWAL

(a) Not later than 6 months prior to the date of expiration of any Certificate, the GC Certificate Holder or G Certificate Holder shall apply for a renewal of such authorization and the issuance of a new Certificate.

(b) A Certificate issued for a specific field site, or a Certificate that has been extended to a specific field site activity, is valid for the duration of the contract at the specified site or 3 yr, whichever occurs first.

(c) The Owner’s Certificate expires when all N-3 Data Reports for the units listed on the Certificate have been completed. Triennially, the Society shall review the status of construction and determine whether the Owner’s Certificate shall be renewed.

HAB-8200

NAMEPLATES

The Core Assembly shall not be issued with a nameplate. The G-1 Data Report shall take the place of the nameplate. The G-1 Data Report shall be traceable to the serial number of the vessel in which the Core Assembly is installed.

HAB-8400

DATA REPORTS

HAB-8410

GENERAL REQUIREMENTS

The appropriate Data Report, as specified in Table HAB-8100-1, shall be filled out by the G Certificate Holder, GC Certificate Holder, Material Organization, or Owner and shall be signed by the G Certificate Holder, GC Certificate Holder, Material Organization, or Owner and the Inspector for each item.

HAB-8411

Compiling Data Report Records

Data Reports (G-1, G-2, and G-4), which are the basis for approval of the final G-1 Data Report, may be compiled in any one of the following methods:

(a) by attaching each Data Report for items that make up that Core Assembly to its respective Data Report Form G-1, or

(b) by assigning each Data Report for items that make up the Core Assembly a unique identifying number and listing the numbers on Data Report Form G-1, or

(c) by attaching a drawing that uniquely identifies each item that makes up the Core Assembly to its respective Data Report Form G-1.

HAB-8412

Availability of Data Reports

All Data Reports and referenced supporting material shall be available to the Inspector and enforcement authority having jurisdiction at the location of the nuclear power plant site.

HAB-8420

OWNER’S DATA REPORT

The Owner who has obtained an Owner’s Certificate shall be responsible for completing one or more of Form N-3 (see Section III Appendices, Mandatory Appendix V). The Owner shall certify, by signing the form, that each GC Certificate Holder, G Certificate Holder, or Material Organization was the holder of the appropriate Certificate and that components and installation comply with the applicable requirements of this Division. Review of the completed Owner’s Data Report Form N-3 (see Section III Appendices, Mandatory Appendix V), including attached Data Reports for all components and installation as required to verify Code Compliance, shall be the authority of the Inspector to sign the Owner’s Data Report.