

DEPARTMENT OF ENERGY
WELD EVALUATION PROJECT
QUALITY ASSURANCE PROGRAM

Revised May 19, 1986

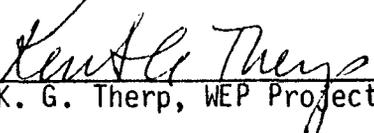
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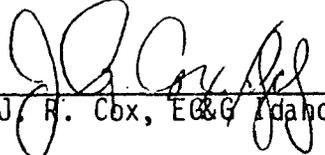
DEPARTMENT OF ENERGY
WELD EVALUATION PROJECT
QUALITY ASSURANCE PROGRAM

Reviewed by:



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5-20-86
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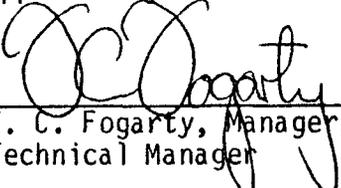
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DEPARTMENT OF ENERGY WELD EVALUATION PROJECT QUALITY ASSURANCE PROGRAM

This document defines the Quality Assurance Program for the Department of Energy (DOE) Weld Evaluation Project (WEP). It implements the requirements of 10 CFR 50 Appendix B as defined by ANSI/ASME NQA-1 and supplements thereto that apply to the Tennessee Valley Authority (TVA), Watts Bar Nuclear Plant Unit 1 weld evaluation program conducted by the WEP. The Quality Assurance Program is divided into 18 elements that correspond to the 18 sections of ANSI/ASME NQA-1; 1983 edition with addenda 1a 1983 and 1b 1984.

1. Purpose and Scope

To describe the policy, requirements, and responsibilities for the establishment of an organizational structure. This document implements the requirements of ANSI/ASME NQA-1 that apply to the Tennessee Valley Authority (TVA), Watts Bar Plant Unit 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 WEP shall be organizationally structured to assure that personnel with quality program responsibilities have sufficient organizational freedom and authority to implement the program requirements.
- 2.2 The organizational structures, functional responsibilities, level of authority, and lines of communication for activities affecting quality shall be prescribed and delineated in writing.

3. Requirements and Responsibilities

- 3.1 The EG&G Idaho Technical Project Manager is responsible for providing management direction for all WEP activities. This includes the management direction for the Project Manager, the Program Operation Evaluation (POE) manager, the managers of organizations subcontracted to support the task, and for the various DOE support entities, national laboratories and their contractor organizations. The management organization structure of WEP is shown in Figure 1.
- 3.2 The Project Manager is responsible for providing on-site management direction for the various project organizations, including Administrative and Clerical, Project Support Activities, Examination Preparation/Data Analysis Engineering, Employee Concern/Quality Indicator Assessment, Inspection/Examination, and Safety Significance Evaluation Engineering. The Project Manager is also responsible for establishing and implementing a quality program that includes the following provisions:
 - a. Identification of quality performance criteria that will assure that the objectives of the task are achieved.

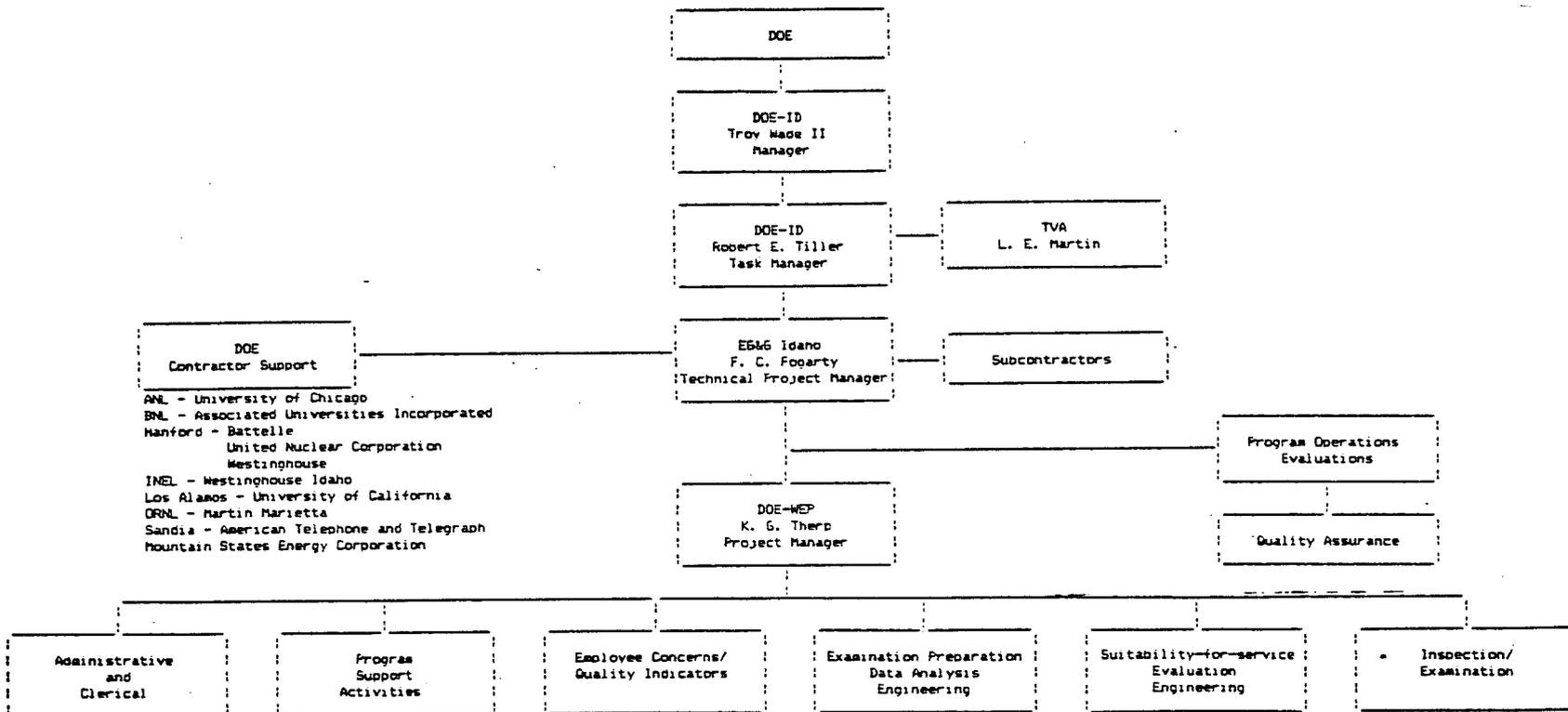
ORGANIZATION

- b. Establishment of measures to monitor the performance of the organization and to cause corrective action to be taken when performance criteria are not satisfied.
 - c. The retention of responsibility assigned by the quality program for activities delegated to others.
- 3.3 The Principal Administrator is responsible for providing all administrative and secretarial support required for the WEP activities.
- 3.4 The Project Support Activities (PSA) Manager is responsible for managing the planning and budgets, records maintenance and documentation control, and project reporting activities. The PSA Manager is also responsible for preparing the Project Management and Quality Program Plans, and for coordinating WEP and TVA support activities.
- 3.5 The Examination Preparation/Data Analysis Engineering Manager is responsible for:
- a. Preparing work authorization documents and the associated work instruction packages, examination procedures, and compliance standards.
 - b. Developing sampling plans, including identifying homogeneous groups population and selecting the samples evaluation.
 - c. Performing root cause and generic problem analysis.
- 3.6 The Employee Concerns/Quality Indicators Assessment organization is responsible for:
- a. Maintenance of the master list of WEP identified homogeneous groups.
 - b. Maintenance of homogeneous groups formulated from employee concerns and basis for formulation.
 - c. Preparation of assessment plans for initial WEP formulated groups.
 - d. Preparation of data for closure of each employee concern, within DOE/WEP work scope.
- 3.7 The Inspection/Examination Manager is responsible for the reexamining of welds and reviewing the associated TVA weld program documentation in accordance with the subject quality program requirements and for personnel training and certification.

- 3.8 The Suitability-For-Service Evaluation Engineering Manager is responsible for reviewing and approving the functional safety analysis of deviations identified by the examination process in accordance with the subject quality program requirements.
- 3.9 The Quality Assurance Engineer is responsible for independently assessing the WEP activities to verify (by audits and overviews) the accuracy of assessment and compliance with the subject quality program requirements.

The Quality Assurance Engineer reports directly to the Program Operation and Evaluation (POE) Manager at EG&G Idaho, who reports directly to the Technical Project Manager.

Figure 1 MEP Organization



1. Purpose and Scope

To establish a Quality Assurance Program that satisfies the requirements of ANSI/ASME NQA-1 Basic Requirement 4 and Supplement 2-1 as they apply to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 The Quality Assurance Program requirements described by this document shall be implemented prior to initiating related quality activities, and maintained until the evaluation task has been completed.
- 2.2 All aspects of activities affecting the integrity of the evaluation process shall be considered in the preparation of this Quality Assurance Program and changes thereto. The requirements for the various elements of this program are identified in subsequent sections of this plan. Attachment 1 lists the implementing procedures that invoke the quality assurance program requirements.
- 2.3 Indoctrination and training shall be provided as necessary to assure that suitable levels of proficiency are achieved and maintained for personnel involved in quality related activities.
- 2.4 Physical verification and inspection shall be preplanned to assure that all necessary requirements have been considered. This planning shall reflect all test equipment, tools, processes, controls, and skills required for satisfactory completion of the verification process.

3. Requirements

- 3.1 The Project Manager is responsible for establishing and implementing the Quality Assurance Program described by this document. The document and all subsequent changes to it shall be approved by him prior to issue.
- 3.2 The Inspection/Examination Manager shall establish a personnel training program that satisfies the technical requirements for the task. Auditable records documenting this training and certification shall be maintained.

QUALITY ASSURANCE PROGRAM

QP 2

- 3.3 Each WEP manager shall define the management assessment criteria to be used in the selection of personnel for that group. All personnel shall be evaluated against the applicable criteria prior to selection, and the results of the evaluation documented.
- 3.4 The managers of organizations implementing the quality assurance program, or portions thereof, shall regularly assess and document the performance of their respective organizations to verify that implementation has been adequate and effective.

QUALITY ASSURANCE PROGRAM

ATTACHMENT 1

IMPLEMENTATING PRACTICE FOR
QUALITY ASSURANCE PROGRAM REQUIREMENTS

<u>Quality Assurance Program Requirement</u>	<u>Implementation Practices</u>
QP1	N/A
QP2	N/A
QP3	SP 3.3.1
QP4	SP 3.4.1
QP5	SP 3.1.8, SP 3.2.1
QP6	SP 2.1.1, SP 2.1.2
QP7	SP 3.4.1, SP 3.4.2, SP 3.4.3
QP8	SP 3.4.5
QP9	SP 3.1.8
QP10	SP 3.1.8, SP3.4.8
QP11	SP 3.1.4
QP12	SP 3.4.4
QP13	SP 1.4.1, SP 3.4.2
QP14	SP 3.4.3
QP15	SP 3.4.6, SP 3.4.7, SP 3.2.2
QP16	SP 3.4.8
QP17	SP 2.1.1
QP18	SP 3.4.9

a. deleted.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the review and approval of design analyses performed for the purpose of evaluating the safety significance of deviations identified by the examination process. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 3, pertinent to the evaluation of the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

2.1 The functional safety analysis performed by TVA of components associated with deviations identified by the examination process will be reviewed and concurred with by WEP.

3. Requirements and Responsibilities

3.1 The SSEE Manager shall:

- a. Prepare a procedure for and cause all safety significance analyses to be reviewed to verify that the design loads are identified, the stresses on the components are correctly calculated, and the conclusions relative to suitability for service is appropriate.
- b. Review and concur with all suitability-for-service evaluations.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the preparation, review, and control of procurement documents. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 4, that pertain to acquisition of items and services in support of the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

2.1 Documents used for procurement shall include a description of the requirements necessary to assure the quality of the item or service to be furnished.

2.2 To the extent necessary, procurement documents shall require suppliers to have a quality assurance program consistent with the applicable requirements of this quality program.

3. Requirements and Responsibilities

3.1 The manager authorizing the procurement shall assure that appropriate quality verification requirements are specified or referenced in documents used to procure items or services.

3.2 The Project Support Activities Manager shall establish and implement a written procedure that identifies the specific requirements for procurement document preparation, approval, change control, and retention.

1. Purpose and Scope

To establish the policy, requirements and responsibilities for preparation, review, and approval of instructions and procedures used to control activities affecting quality. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 5, that pertain to control of activities associated with the Tennessee Valley Authority (TVA), Watts Bar Plant Unit 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 Activities affecting quality shall be prescribed by and performed in accordance with documented instructions and procedures appropriate to the circumstances of the activities.
- 2.2 Instructions and procedures shall contain or reference quantitative/qualitative acceptance criteria necessary to determine satisfactory achievement of prescribed activities.

3. Requirements and Responsibilities

- 3.1 The Examination Preparation/Data Analysis Engineering Manager shall assure that examination packages are prepared for use by the Inspection/Examination Group. These packages shall contain all instructions procedures, specifications, and criteria necessary to determine item conformance.
- 3.2 The Inspection/Examination Manager shall assure that all inspection activities are completed as prescribed by the examination package, and establish instructions or procedures for examination package control.
- 3.3 WEP Project Support Activities shall institute a system to assure change control to instruction, procedures, and drawings, and shall assure that reviews and approvals are commensurate with those obtained for original issue.

1. Purpose and Scope

To establish the policy, requirements and responsibilities for the control of documents that specify quality requirements or prescribe activities affecting quality. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 6, that are pertinent to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Documents that specify quality requirements or prescribe activities affecting quality shall be prepared, issued, and changed in a controlled manner. Prior to release, such documents (including changes) shall be reviewed for adequacy and approved by authorized personnel.

3. Requirements and Responsibilities

3.1 The Project Support Activities (PSA) Manager shall establish and implement a written procedure for the control of documents that specify quality requirements or prescribe activities affecting quality. This procedure shall address the following:

- a. The identification of all WEP documentation requiring control.
- b. The requirements for the preparation, review, approval, and issuance of documents and changes thereto.
- c. The verification that controlled documents are complete, correct, and properly authorized prior to release and distribution.

3.2 All WEP managers shall identify the documents under their purview requiring control, and comply with the applicable requirements established for the control of these documents by the PSA Manager.

CONTROL OF PURCHASED ITEMS
AND SERVICES

QP 7

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for control of purchased items and services. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 7, pertinent to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

The quality of purchased materials, equipment, and services shall be controlled to assure conformance to procurement document requirements. Controls shall provide for the following, as appropriate: source evaluation and selection, evaluation of objective evidence of quality furnished by the supplier, inspection and audit at the source, and receiving inspection of items or services upon delivery or completion.

3. Requirements and Responsibilities

- 3.1 The manager authorizing the procurement of items or services shall identify the verification controls necessary to assure conformance with specified requirements.
- 3.2 The Project Support Activities Manager shall establish the procedures necessary to implement the verification controls identified by the procurement document and to assure that the required verification is complete prior to authorizing final payment.
- 3.3 The Inspection/Examination Manager shall establish and implement written procedures that assure timely completion of receiving inspection specified by the procurement documentation.

IDENTIFICATION AND CONTROL
OF ITEMS1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the identification and control of items that affect quality. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 8, pertinent to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Controls shall be established to assure that only correct and accepted items are used for activities that affect quality. Identification shall be maintained either on the items or in documents traceable to the items.

3. Requirements and Responsibilities

- 3.1 The Project Support Activities (PSA) Manager shall establish and implement a written procedure for the identification and control of items that affect quality.
- 3.2 The WEP managers shall specify those items under their purview that require identification and control, and they comply with the applicable requirements established by the PSA Manager for the control of those items.

1. Purpose and Scope

To establish the policy, requirements and responsibilities for the control of processes that affect the quality of items or services. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 9, that pertain to nondestructive examination associated with the Tennessee Valley Authority (TVA) Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Visual inspection and nondestructive examination shall be performed by qualified personnel using approved material and approved qualified procedures in accordance with specified requirements.

3. Requirements and Responsibilities

3.1 The Inspection/Examination (IE) Manager shall assure that written procedures are established for visual inspection and nondestructive examination, and implementation is performed in accordance with approved procedures by examiners qualified in the required discipline. Procedures shall include but not be limited to

- a. Description of the required equipment
- b. Process parameters to be controlled and recorded
- c. Equipment calibration requirements
- d. Requirements for personnel and equipment qualifications
- f. Evaluation criteria and other requirements of the applicable codes and standards
- g. Approved material.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for inspection of items or activities for conformance to the specified requirements. This document implements the requirements of ANSI/ASME NQA-1, Basic Requirement 10, that pertain to inspection activities associated with the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Inspection performed to determine compliance of items and activities to examination program requirements shall be performed by qualified personnel in accordance with approved inspection planning. Inspection plans shall be prepared and followed, and shall specify characteristics to be inspected, inspection sequence (if important), methods to be employed, acceptance criteria, and the documentation of inspection results.

3. Requirements and Responsibilities

3.1 The Examination Preparation/Data Analysis Engineering Manager shall assure that examination packages are prepared for all inspection activities. These instructions shall include, as appropriate, the following information:

- a. Prerequisite conditions that must be satisfied prior to inspection, when applicable
- b. The characteristics to be inspected, the inspection sequence (if important) and the inspection method to be employed
- c. The acceptance criteria for each characteristic to be examined
- d. The sampling practice(s) to be used, if sampling inspection is planned to determine acceptability of a group or lot of items
- e. Indication that the required technical reviews of the planning instructions have been completed

INSPECTION

- f. Provisions for final review for package closeout and filing.
- 3.2 The Inspection/Examination Manager shall assure:
- a. That qualified personnel with no past affiliation with TVA activities are assigned inspection responsibilities
 - b. That all inspection activities are completed in accordance with instructions
 - c. That inspection documentation is being properly completed, and that the instructions are being closed out and filed upon completion
 - d. That the documentation adequately correlates the item examined with the inspector identification and the date of examination.
- 3.1 That the inspection process is under control by establishing a surveillance/overcheck program which requires reinspection of a specified fraction of the examinations initially performed

1. Purpose and Scope

To establish the policy, requirements, and responsibilities pertaining to testing conducted to demonstrate that items, structures, systems, and components perform satisfactorily in service. This document implements the requirements of Basic Requirement 11 and Supplement 11S-1 of ANSI/ASME NQA-1 that relate to the conduct and control of testing associated with the Tennessee Valley Authority (TVA), Watts Bar Nuclear Plant Unit 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Testing shall be conducted in accordance with written procedures, test methods and characteristics to be tested shall be identified. Results shall be documented and evaluated for conformance to established acceptance criteria.

3. Requirements and Responsibilities

3.1 The Project Manager assures that:

- A. Tests required to verify that item(s) conform to specified requirements are planned and executed.
- B. Test methods to be used and characteristics to be tested are specified.
- C. Test results are documented and evaluated to verify conformance with the acceptance criteria.

3.2 The Employee Concern and Quality Indicator Assessment Manager shall assure that the tests are planned, performed, and documented in accordance with the requirements specified by the project manager.

CONTROL OF MEASURING AND
TEST EQUIPMENT

QP 12

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the control of measuring and test equipment. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 12, that pertain to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 The calibration and use of measuring and test equipment shall be controlled as necessary to assure that the accuracy of measurements obtained satisfy specified requirements.
- 2.2 Organizations providing calibrated measuring and test equipment for use in the evaluation process shall establish and maintain a calibration program that satisfies MIL-STD-45662 and/or ANSI N45.2 requirements.

3. Requirements and Responsibilities

- 3.1 The Inspection/Examination (IE) Manager shall assure that organizations providing calibrated and measuring test equipment have established and maintained a calibration program that satisfies MIL-STD-45662 and/or ANSI N45.2 requirements.
- 3.2 The IE Manager shall establish and implement a written procedure which will:
 - a. Assure that measuring and test equipment used for verification of conformance has been properly calibrated by an approved agency and is the correct instrument type.
 - b. Inform the EP/DAE Manager of any inspection equipment found to be out of calibration.
 - c. Assure tagging or segregation of all equipment if accuracy is suspect or calibration has expired, and prevent its use until recalibrated.

CONTROL OF MEASURING AND
TEST EQUIPMENT

- d. Assure that all measuring and test equipment is handled, transported, and stored in a manner that will not adversely affect the calibration or physical condition of the equipment.
- 3.3 The Examination Preparation/Data Analysis Engineering (EP/DAE) Manager shall:
- a. Specify the appropriate measuring and test equipment required for inspection
 - b. When notified of out-of-calibration inspection equipment, evaluate and document the assessments that are made to determine the validity of previous inspection or test results and acceptability of items previously inspected or tested with equipment found to be out-of-tolerance during calibration
 - c. deleted

HANDLING, STORAGE AND
SHIPPING

QP 13

1. Purpose and Scope

To establish the policy, requirements and responsibilities for the handling, packaging, preservation storage and shipping of inspection equipment. This document implements the requirements of ANSI/ASME NQA-1, Basic Requirement 13, that apply to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Handling, packaging, preservation, storage and shipping of equipment shall be controlled as appropriate to prevent damage or loss.

3. Requirements and Responsibilities

Each WEP manager shall identify all equipment assigned to the group that requires control, establish the measures to be taken to prevent damage or loss of this equipment, and assure these measures are followed.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for identification of inspection status. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 14, that apply to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

The documentation necessary to establish the evaluation status of all items inspected by the WEP shall be maintained.

3. Requirement and Responsibilities

The Inspection/Examination Manager shall develop and implement a procedure that will assure that inspection documentation provides sufficient information to establish the evaluation status of all items that have been inspected.

CONTROL OF NONCONFORMING
ITEMS

QP 15

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the control of nonconforming items. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 15, that are pertinent to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

2.1 Items or services procured for the WEP that do not conform to specified requirements shall be controlled to prevent inadvertent use. These controls shall provide for the identification, documentation, segregation, evaluation, and disposition of nonconforming items, and for the notification of affected organizations.

2.2 TVA management shall be notified of all Watts Bar Plant 1 items, components and systems that do not conform to the criteria established for the weld evaluation project. The control and disposition of the subject items shall be the responsibility of TVA.

3. Requirements and Responsibilities

3.1 Nonconformances related to activities or services within the WEP organization.

3.1.1 The Inspection/Examination Manager shall establish and implement a written procedure for the control of nonconforming WEP items, which includes the following:

- a. A description of the method(s) for identifying and segregating nonconforming items.
- b. The procedure for documenting the nonconformance including the requirements for notification of affected WEP groups and for distribution of the report for item disposition.

CONTROL OF NONCONFORMING
ITEMS

- c. The procedure for verifying that the conditions of the disposition have been satisfied, finalizing the report, and closing out the status log.
- 3.1.2 The Inspection/Examination Manager shall establish and implement a written procedure for the disposition of WEP items, which includes:
- a. A requirement that disposition be accomplished by a Material Review Group (MRG) consisting of, as a minimum, a quality engineer and the cognizant WEP group representative.
 - b. The identity of personnel authorized to participate as MRG members and the limits of their authority.
 - c. Assurance that the final disposition is documented and that reinspection of repaired or reworked items has been specified along with appropriate acceptance criteria.
 - d. Justification for the acceptability of a nonconforming item dispositioned "repair" or "use as is."
- 3.2 Deviations identified as a result of the WEP reexamination.
- 3.2.1 The Inspection/Examination Manager shall establish and implement a written procedure describing the requirements for documenting Watts Bar Nuclear Plant Unit 1 components that have been identified as deviant as a result of reexamination and for the reporting of these deviations to TVA and the Suitability-for-Service Evaluation Engineering (SSEE) group.
- 3.2.2 The SSEE manager shall establish and implement a written procedure describing the requirements for:
- a. Review of the TVA analysis of WEP-identified, deviant engineered weld characteristics
 - b. Identification, status, and disposition approval of deviant, engineered weld characteristics that, when analyzed, resulted in an adverse impact to a safety-related weld/component.

1. Purpose and Scope

To establish the policy, requirements and responsibilities for prompt corrective action for conditions adverse to quality. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 16, that are pertinent to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 Conditions adversely affecting the quality of the Weld Evaluation Project shall be identified promptly and corrected as soon as practical.
- 2.2 The cause of conditions that adversely affect the Weld Evaluation Project shall be determined and corrective action taken to preclude recurrence. The identification, cause and corrective action associated with adverse conditions shall be documented and reported to the Project Manager.
- 2.3 Follow-up action shall be taken to verify that corrective action has been implemented and has effectively reduced the likelihood of recurrence.

3. Requirements and Responsibilities

- 3.1 All WEP Managers shall establish and implement a surveillance program that will assure the timely identification of conditions adverse to quality associated with their respective groups. The cognizant manager shall evaluate conditions identified as adverse to quality, assign action to correct the condition and, as appropriate, to prevent its recurrence. All adverse conditions and the associated corrective action shall be documented and reported to the Project Manager.
- 3.2 The Quality Assurance Engineer shall establish a procedure that will verify that action taken to prevent recurrence of conditions adverse to quality have been implemented.
- 3.3 The Project Support Activities Manager shall request corrective action for supplier-caused nonconforming conditions and follow-up, as appropriate, to assure successful implementation of corrective action by suppliers.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for the preparation and maintenance of quality records. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 17, that pertain to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

Sufficient records shall be specified, prepared, and maintained to furnish objective evidence of quality. Such records shall be legible, identifiable, retrievable, and protected against damage, deterioration or loss. Requirements and responsibilities for records control shall be established and documented. The control system shall include record transmittal, distribution, retention, maintenance, and disposition.

3. Requirements and Responsibilities

3.1 The Project Support Activities Manager shall establish and implement a written procedure for maintenance of quality records that addresses the following:

- a. The identification of records to be maintained and the minimum retention time
- b. The establishment of a records indexing system that includes, as a minimum, the description of contents and storage location
- c. A description of the methods for controlling the handling, filing, retrieval, and checkout
- d. Provisions for physical protection necessary to prevent damage
- e. The methods for filing supplemental information and for disposing of superseded records
- f. Measures to preclude access to quality records storage by unauthorized personnel

QUALITY RECORDS

- g. Measures to minimize the risk of records damage or destruction from natural disasters, environmental conditions, or vermin
 - h. Provisions for the replacement, restoration, or substitution of lost or damaged records.
- 3.2 The managers of WEP organizations that generate, supply and maintain quality records shall establish a system for the protection of quality records from damage or loss while such records are in their possession.

1. Purpose and Scope

To establish the policy, requirements, and responsibilities for verifying that quality activities are being performed as specified, using the audit process. This document implements those requirements of ANSI/ASME NQA-1, Basic Requirement 18, that pertain to the Tennessee Valley Authority (TVA), Watts Bar Plant 1 Weld Evaluation Program conducted by the Department of Energy (DOE) Weld Evaluation Project (WEP).

2. Policy

- 2.1 Planned and scheduled audits shall be performed to verify compliance with all aspects of the quality assurance program and to determine its effectiveness. These audits shall be performed in accordance with written procedures or checklists by personnel who do not have direct responsibility for performing the activities being audited.
- 2.2 Audit results shall be documented and reported to and reviewed by the Project Manager. Follow-up action shall be taken where indicated.
- 2.3 Personnel performing audits shall be trained and qualified in accordance with the requirements of ANSI/ASME NQA-1, Supplement 2S-3, Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel.

3. Requirements and Responsibilities

- 3.1 Audits of the Weld Evaluation Project shall be conducted in accordance with the requirements of Section QP-18, "Quality Audits," of the EG&G Idaho Quality Manual.