

AIRESEARCH MANUFACTURING COMPANY OF ARIZONA

QUALITY CONTROL GENERAL INSTRUCTION

NOTICE

QCGI NO. 137
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PAGE 1 OF 5

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SUBJECT: Quality Assurance Program Supplement
For ERDA-Brayton Isotope Power System
(BIPS)

1.0 PURPOSE

1.1 To assure compliance with ERDA Quality Assurance Specification SNS-1, Rev. 1. The requirements of that specification are to be considered "quality requirements" in the sense in which that term appears in various internal AiResearch procedures, such as Quality Control Procedure (Q.C.P. 2.16, paragraphs 1.1, 4.1.2, etc.

NOTE: Compliance with SNS-1 in its entirety is required and is generally accomplished by AiResearch's Single Standard Quality Control System as described in the General Quality Program Plan, QC-048, Rev. 4. In the event of conflict between this QCGI and QC-048, Rev. 4, this QCGI shall take precedence.

2.0 DETAILED INSTRUCTIONS

2.1 Training (SNS-1, Para. 2.4). General compliance with this requirement is accomplished by:

- (a) Quality Control Procedure (Q.C.P.) 1.15, Procedural Control, Work Instructions, and Qualification of personnel

2.2 Certification of Personnel (SNS-1, Para. 2.5) General compliance with this requirement is accomplished by:

- (a) Q.C.P. 1.15, Procedural Control, Work Instructions, and Qualification Of Personnel
- (b) Q.C.P. 7.0, Qualification Of Nondestructive Testing Personnel

2.2.1 Whenever qualification of personnel is required for methods or processes other than those covered by Q.C.P. 7.0, such qualification shall be accomplished in accordance with applicable specifications.

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2.0 DETAILED INSTRUCTIONS (Continued)

2.3 Quality Reviews (SNS-1, Para. 3.2) General compliance with this requirement is accomplished by:

- (a) Q.C.P. 1.50, Quality Assurance Engineering
- (b) Q.C.P. 13.1, Manufacturing Quality Engineering - Process Control
- (c) Q.C.P. 13.2, Manufacturing Quality Engineering - Quality Planning
- (d) Q.C.P. 13.3, Inspection Instructions - Manufacturing And Procurement Quality Assurance

2.3.1 In complying with the above procedures particular attention shall be paid to assuring that:

- (a) The design lends itself to testing at various levels of assembly and the testing process is adequate to yield the required information without degradation of the hardware quality.
- (b) Processes specified are well established and proven, or that qualification of them is provided.
- (c) Cleanliness and contamination specifications for materials and processes are consistent with design requirements and provide assurance that contamination at any point in the program cannot affect use or performance.

2.4 Traceability And Identification (SNS-1, Para. 4.) General compliance with this requirement is accomplished by:

- (a) Operational Procedure (O.P.) 4,100, Identification For Traceability Requirements
- (b) Operating Instruction (O.I.), 3.1, Identification For Traceability Requirements.

2.5 Purchase Order Requirements (SNS-1, Para. 5.3.2) General compliance with this requirement is accomplished by:

- (a) Q.C.P. 2.16, Definition Of Quality Requirements On Requisitioning/Purchasing Documents
- (b) Document 72-8599 Supplemental Purchase Order Conditions

2.0 DETAILED INSTRUCTIONS (Continued)

2.5.1 Particular attention shall be paid to assuring that the procurement documents contain the following provisions (when applicable) of SNS-1, para. 5.3.2.c: item (1), Changes; item (5), Age Control and Life - Limited Products; item (14), Parts and Processes Involving Proprietary Information.

2.6 Receiving Inspection/Control Of Procured Articles And Materials (SNS-1, Para. 5.6/5.10) General compliance with this requirement is accomplished by:

- (a) Q.C.P. 2.3, Source Inspection - Product Acceptance at Source
- (b) Q.C.P. 2.10, Receiving Inspection
- (c) Q.C.P. 2.11, Inspection Of Government Furnished Property (GFP)
- (d) Q.C.P. 2.12, Pre-Inspection Review Of Incoming Materials
- (e) Q.C.P. 2.13, Raw Stock, Raw Castings, And Raw Forgings Inspection

2.6.1 Receiving inspection personnel shall pay particular attention to assuring compliance with SNS-1, para. 5.6. (7), Age Control (when applicable), and 5.6. (9), Random Chemical Analysis and Physical Tests.

2.7 Process Qualification (SNS-1, Para. 6.4) General compliance with this requirement is accomplished by:

- (a) AiResearch Material And Process Specification Index. Each specification contains the requirements for qualification of the process and periodic verification of continued conformance. Specifications PC-5001 and FP-5045 are cited as typical.

2.7.1 Basic changes (i.e., changes which would alter the characteristics - physical, chemical, metallurgical, etc. -- of the parts) to processes and/or equipment shall not be made without notification to ERDA.

2.8 Cleanliness And Contamination Control (SNS-1, Para. 6.5) General compliance with this requirement is accomplished by:

- (a) Product cleaning specifications, listed on page 5 of the AiResearch Material And Process Specification Index.

2.0 DETAILED INSTRUCTIONS (Continued)

2.8 (b) O.P. 4.39, Protective Closures and Material Handling

(c) Facilities cleanliness is assured by the specification for Janitorial Sub-Contract, especially pages C-4, C-5, and C-6.

2.9 Workmanship Standards (SPS-1, Para. 6.7) General compliance with this requirement is accomplished by:

(a) O.P. 4.25, Quality Standards

(b) Q.C.P. 1.18, Preparation, Publication, and Revision Of Quality Standards.

2.10 Contractor Quality Assurance Actions (SNS-1, Para. 7.2.5)

(a) Q.C.P. 4.0, Assembly Surveillance

* (b) Q.C.P. 4.1, Preparation of Power Systems Assembly Inspection Instructions and Assembly Traveler.

(c) Q.C.P. 6.0, Inspection Surveillance Of Acceptance Tests and Qualification Tests.

2.10.1 In complying with the above procedures particular attention shall be paid prior to testing to:

(a) Verify that applicable inspection and test documents are complete, unambiguous and available.

(b) Insure that requirements for selection and control of articles to be tested have been implemented.

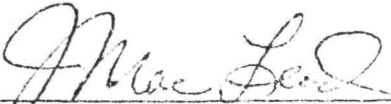
(c) Verify that articles are identified.

(d) Verify configuration of articles.


(e) Verify that test equipment, including any ground support equipment (GSE) required, is as specified in the Test Instructions (TI).

2.0 DETAILED INSTRUCTIONS (Continued)


- 2.10.1 (f) Verify that test equipment is calibrated and such calibration will be effective and sustained during the test period.
- 2.10.2 During testing, particular attention shall be paid to:
- (a) Insure that testing is accomplished in accordance with test specifications and procedures.
 - (b) Insure accurate and complete recording of data and test results.
 - (c) Document rework, repair or modification occurring during the test operation.
 - (d) Document nonconformances and participate in their dispositions.
- 2.10.3 Subsequent to testing, particular attention shall be paid to:
- (a) Insure proper disposition of articles.
 - (b) Report any additional nonconformances and participate in their dispositions.
 - (c) Insure that remedial and preventive action has been accomplished relative to nonconformance.
 - (d) Verify that test results and reports are accurate, complete, and traceable to the tested articles.



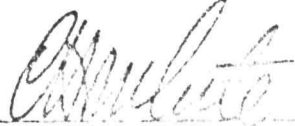
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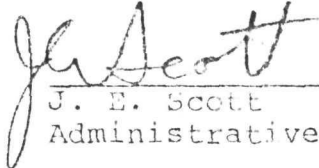
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