CiDRA External Provider Quality Standards

1.0 Purpose:

To outline minimum requirements for CiDRA External Provider Quality System. All external providers or potential external providers shall maintain a system that meets these requirements and will be evaluated to an extent for which the requirements are met.

2.0 Scope:

These requirements will be conveyed to external providers or potential external providers during the quotation and purchase order process. The quality of CiDRA designed parts, subassemblies, and special processes shall be governed by this document.

3.0 Related Documents:

3.1 Drawing Specifications
3.2 EI0005 - Material Certification & Part Marking Requirements for Incoming Product
3.3 Quotations
3.4 Purchase Orders
3.5 Deviation Acceptance Form – QF-13-02

4.0 Raw Material Control:

4.1 Raw material shall be stored and identified by the external provider to prevent unauthorized use of unapproved and incorrect use of approved material. Unapproved material shall be segregated from approved material in a holding area.

4.2 CiDRA-furnished raw material must be kept segregated and clearly identified as the property of CiDRA while in the supplier's possession.

5.0 Process Control:

5.1 The external provider shall maintain a part/assembly in-process identification system, which consists of appropriate marking of parts/assemblies and associated documents. Inspection stamps, if used, must be traceable to individual inspectors.

5.2 The following process operations require applicable document acceptance per EI0005:

- Heat Treat
- Fluorescent Penetrant Test
- Magnetic Particle Test
- Ultrasonic Testing
- Stress Relief
- Bonding
- Proof/functional/pressure testing
- Hardness testing
- Plating
- Passivation
- Coating
- Welding
- Ionic Contamination Testing
- Electronic Functional Testing

6.0 Inspection Tools and Gages Control:

6.1 An effective system shall be maintained by the external provider for the control of the accuracy of measuring equipment, test equipment and calibration standards traceable to N.I.S.T. to assure conformance of services and products to design requirements and specifications. The requirements for this control system are applicable to any item that is used as a method of final acceptance on CiDRA parts.

6.2 The external provider's procedure shall include all equipment or devices that are used to measure, gage, test or otherwise examine the product to determine compliance to CiDRA requirements.

6.3 The procedure shall include the following as minimum:

- Traceability to material standards requirements
- Calibration system
- Disposition of obsolete and inaccurate inspection test equipment
- Calibration environment
- Gage accuracy
- Certifications of outside calibration sources

6.4 Documented information shall be maintained in accordance with the controlled procedures which indicate the status of the individual test and measuring equipment, calibration date, and due date for calibration and by whom calibrated. The equipment shall also be labeled with the same information. If size limits labeling, the equipment container shall be labeled. Serial-numbered equipment shall have the serial number noted on all documents.

6.5 A controlled area should be used for the storage of all portable tools and gages.

6.6 Obsolete or inaccurate equipment shall be identified and segregated. Obsolete or inaccurate stationary equipment shall be clearly labeled to prevent its use for material acceptance.

7.0 Inspection Tools and Gages Assigned to External Providers:

The external provider is responsible for maintaining the calibration (where applicable) and condition of the tooling. If any discrepancies arise concerning the tooling, the external provider is required to notify CiDRA Quality Assurance Department.

8.0 First Piece Inspection:

The external provider will perform the first piece inspection for every process operation upon initial set-up and after any subsequent set-up or process change. The first piece must be 100% inspected by the external provider and accepted prior to moving to subsequent operation. The actual dimensions must be recorded on the external provider's first piece inspection report.

9.0 In-process Inspection:

Per the external provider's developed Quality Plan, the external provider will check subsequent pieces, preferably at definite intervals, to ensure product conformity to all specifications. CiDRA may require the recording of certain designated in-process dimensions or the recording of statistical data.

10.0 Nondestructive Testing (NDT) if required by CiDRA:

NDT sources require CiDRA approval. In addition to this approval, NDT sources may require specific approval for the applicable CiDRA customer. The external provider who subcontracts NDT requirements shall assure that CiDRA approves the NDT source, shall supply all applicable documents to the NDT source, and shall assure that the NDT process is performed at the proper sequences on the items.

11.0 Statistical Process Control:

The use of Statistical Process Control (SPC) techniques may be required to demonstrate process capability. In such cases, the process control plan must be approved by CiDRA Quality Assurance. Information regarding submittal and approval requirements may be obtained from the CiDRA Quality Assurance.

12.0 Nonconforming Material:

12.1 The external provider shall establish and maintain a system for the identification and segregation of nonconforming parts/assemblies. In the event of any nonconforming condition, the external provider must submit a CiDRA Deviation Acceptance Form and obtain approval prior to shipment of any nonconforming material to CiDRA.

12.2 Material found to be nonconforming should be identified and controlled to prevent from becoming intermingled with conforming material.

12.3 External providers shall request review of any nonconformance reported against them.

12.4 Serial numbered parts shall have the serial numbers noted on all correspondence.

12.5 Data obtained from the nonconformance reports will be used in the External Provider Performance Appraisal.

13.0 Final Inspection/First Article Reports:

13.1 Final Inspection/First Article reports are required to be completed by the external provider prior to the initial and subsequent shipments. When a drawing revision(s) has been issued and/or when significant change(s) has occurred within the supplier's process, those change(s) will be noted on the external provider's Inspection Report.

13.2 The Final Inspection/First Article report is required to confirm that all characteristics of a part (including all drawing and Purchase Order notes) have been inspected and verified by the external provider's inspection personnel. The first article should be clearly identified with a tag, and correspond with entries on the inspection checklist.

13.3 Details of the inspection checklist shall consist of the following entries:

- Part/assembly number, operation sheet and serial numbers as applicable
- Purchase order number
- Number of parts/assemblies
- All drawing characteristics with method of inspection (visual, tools, gages, etc.)
- Entries to verify these inspections (actual readings when applicable)
- Statement that each applicable inspection/test has been performed and the results are within requirements.

- Confirmation that surfaces are free of damage, corrosion, machining chips or tool marks and other contamination.
- Copy of completed and CiDRA accepted Deviation Acceptance Form (QF-13-02) if applicable

13.4 The use of sampling in lieu of 100% inspection may be permissible as long as sampled features were controlled by process definition. Some key characteristics may require 100% inspection and Documentation. These requirements will be listed within the Purchase Order or Drawing notes.

14.0 Part Identification:

All marking and numbering shall be applied per CiDRA drawing requirements. If no method or location is called out, contact CiDRA purchasing for written instructions or operation sheet/drawing changes before shipment.

15.0 Certifications and Additional Documentation:

15.1 All certifications of work completed must be signed and dated as per CiDRA specification EI0005. In addition, the name and title of the person signing must be typed or printed adjacent their signature.

15.2 All required certifications must be supplied with every shipment.

16.0 Software Control:

The external provider shall maintain a software control system that establishes the requirements for the control and verification of software used for manufacturing and acceptance of CiDRA products.

17.0 Preservation, Packaging and Shipment Control:

17.1 The external provider shall maintain a system that will provide effective preservation, packaging, and shipping and is responsible for assuring that all items shipped to CiDRA are preserved, packaged and marked in accordance with the applicable specification and/or Purchase Order requirements.

17.2 The external provider shall ensure that all necessary documents are enclosed with the shipment. Items shall be adequately protected against corrosion, contamination, and damage during shipment and handling.

18.0 Source Inspection (if required by the CiDRA Purchase Order):

18.1 The applicable purchase order may indicate the requirement for Source Inspection. When indicated, the external provider will contact the CiDRA buyer to arrange for the site visit. This request should include the external provider name, plant location, CiDRA purchase order number, part number, part name, quantity, type of inspection required, and date when the parts will be available for source inspection. All operations, including final inspection and entire documentation package review, must be completed by the external provider prior to any arrangements for the site visit.

18.2 Facilities where Source Inspection is performed must have an adequate area specifically set aside for CiDRA Source Inspection. The area shall be well lighted, neat and clean with all the necessary equipment for the required inspection immediately available.

18.3 Items presented for CiDRA Source Inspection must be inspected and classified as acceptable to all CiDRA requirements by the external provider's Quality Control or designated representative prior to the scheduled Source Inspection visit.

18.4 The following completed applicable documents shall be presented with the items to be source inspected:

- Purchase order/supplement
- Complete set of operation sheets/drawings noted on purchase order
- Specifications
- Special process, tests, and material certifications
- External provider's detailed final inspection report
- Nonconforming material/corrective action reports and CiDRA accepted Deviation Request Form(s).

18.5 Any nonconformance detected during Source Inspection will be a subject to a mandatory corrective action process.

19.0 Documented Information Retention:

All CiDRA external providers should retain documented information for a minimum 2-year period from the date of shipment.

20.0 Changes Affecting Product Integrity:

CiDRA must be notified of any changes in management, processing, strikes, lockouts, etc. that could affect product quality or delivery.

Revision History

REV	ECO	CHANGED BY	DATE	DESCRIPTION
01	P02-0001	G. Daigle	1/4/02	Initial Release
02	P02-0008	J. Biondi	1/24/02	Additional supplier requirements
03	P02-0115	B. Karpinski	5/13/02	Revised section 5.2 and18.0
04	P02-0195	B. Karpinski	10/24/02	Added Section 18.5
05	E08-0063	B. Karpinski	7/15/08	CIDRA logo update.
06	E16-0036	B. Karpinski	9/14/16	Revised document name. Implemented "external provider" and "documented information" term throughout the document.