

APPENDIX B.

QUALITY CLAUSES

The letter(s) appearing after Quality Requirement on the face of this order designate(s) specific Quality Assurance requirements in this Attachment that apply to this order. These requirements are in addition to all other attachments, instructions and terms and conditions of purchase contained in this order or made a part thereof by reference.

This attachment establishes Goodrich ISR Systems Albuquerque (ISR-ABQ) quality and reliability requirements relative to procurement. It is designed to inform suppliers of their responsibility in assuring that supplier and services conform to Engineering, Quality, Reliability and other contractual requirements.

In case of discrepancies between requirements herein and detail specifications or drawings, the detail specification or drawing shall govern. Should discrepancies be noted, they are to be documented and the buyer notified at once.

The provisions listed below shall be made part of this purchase order when referenced on the face of the order. Only those listed by letter on the PO shall apply.

These requirements and the execution thereof shall be in addition to and not in derogation of other purchase order requirements. Electronic (soft) copies of required documentation is an acceptable approach and may be emailed to ISR-ABQ Buyer.

Unless specifically stated, all military specifications and standards referenced herein shall be the issue in effect on the date of quotation for this order, unless prior approval has been granted, in writing by ISR-ABQ.

A. MECHANICAL/PCB INSPECTION

A copy of the supplier's inspection report(s) shall be provided with shipment showing the complete Part Number(s), Revision(s), Method of Inspection, Drawing Number & Revision, and Serial Number(s), if applicable for the items on the inspection report(s).

D. SUPPLIER QUALITY SYSTEM REQUIREMENTS

Conformance to the provisions of the Quality Program specification noted on the face of this order is required.

G. GOVERNMENT SOURCE INSPECTION

Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government inspection can be accomplished. Shipment(s) against this order must be accompanied by documentation indicating compliance with this requirement.

H. GOVERNMENT SOURCE INSPECTION (NASA)

Government inspection by NASA or NASA's delegated representative is required. All work on this order is subject to inspection and test by the government at all times (including the period of performance) and places; and, in any event, prior to shipment. The government representative who normally services your plant should be notified upon receipt of this order and forty-eight hours in advance of the time articles or possesses are ready for inspection or test. Shipment(s) against this order must be accompanied by documentation indicating compliance with this requirement.

I. GOVERNMENT SOURCE ACTION

On receipt of this order, promptly furnish a copy to the Government Representative who normally services your facility or, if none, to the nearest Army, Navy, Air Force, or Defense Supply Agency inspection office. In the event the representative or office cannot be located, our purchasing agent should be notified immediately.

J. GOVERNMENT SURVEILLANCE

During performance of this order, your Quality Control or inspection system and manufacturing processes are subject to review, verification and analysis by authorized government representatives. Government inspection or release of product prior to shipment is not required unless you are otherwise notified. You shall provide a copy of this order to your government representative upon his request.

K-1. ISR-ABQ SOURCE INSPECTION/VERIFICATION

All items furnished on this order shall be inspected and/or verified by ISR-ABQ prior to shipment. Contact ISR-ABQ Purchasing Dept. (505-345-9031) upon receipt of order to permit adequate inspection/verification scheduling. Shipment(s) against this order must be accompanied by documented evidence indicating compliance with this requirement.

K-2. SFS PRE-CAP INSPECTION/VERIFICATION

All items on this order require pre-cap inspection/verification by ISR-ABQ. Contact ISR-ABQ Purchasing Dept. (505-345-9031) at least 3 working days prior to scheduled inspection. Shipment(s) against this order must be accompanied by documented evidence indicating compliance with this requirement.

L. MATERIAL TRACEABILITY-CHEMICAL & PHYSICAL TEST REPORTS

Traceability to the materials called out on the drawing parts list is required on this order.

This requirement can be satisfied by either one of the following methods.

- a. A copy of the actual chemical & physical test results for the lot being shipped or the period the lot was produced. Manufacturer's name and the heat treat/lot/batch number must also be furnished.
- b. A statement that the actual chemical & physical test results for the lot being shipped are on file and available on request. The manufacturer's name and the heat treat/lot/batch number must also be furnished

M. SINGLE LOT DATE CODE - MINIMUM LOT SIZE

A single lot date code per part number is required on this order.

If all the parts for one part number cannot be supplied in a single lot date code, then they shall be supplied in lots no smaller than quantities listed below:

Microcircuits		250 pcs
Hybrids		50 pcs
Gate Arrays		50 pcs
Transistors	JAN, JANTX, JANTXV	500 pcs
Transistors	JANS, SCDs	250 pcs
Diodes	JAN, JANTX, JANTXV	1000 pcs
Diodes	JANS, SCDs	500 pcs
Resistors/Capacitors		1000 pcs
Crystals/EMI Filters		100 pcs
Relays		50 pcs
Other Parts		250 pcs

Smaller lots of a single lot date code will only be accepted if:

- The order quantity is the last shipment against a PO and the remaining quantity is smaller than the minimum lot size specified. The last quantity shall be supplied in a single lot date code.
- The PO line item order quantity is less than the minimum lot size indicated.

Any other deviations from the minimum lot date code size must be authorized by ISR-ABQ Purchasing prior to shipment.

N. DEALER/DISTRIBUTOR QUALITY REQUIREMENTS

Quality provisions of this document govern operating systems of dealers and distributors for assuring that materials and parts meet ISR-ABQ design, quality and related contract requirements.

ISR-ABQ Rights are reserved to assign quality assurance representatives to facilities of suppliers or any level of sub-supplier as necessary to ensure that requirements are met.

Dealer/Distributor Procurement Control shall ensure that material was manufactured, inspected and tested by sources as specified and in accordance with ISR-ABQ requirements. Procurement documents shall require that sources agree to conform to the quality system requirements specified by ISR-ABQ purchase order. MIL-FED STD material such as AN, JAN and NAS shall be obtained from Federal Qualified Products List (QPL) sources.

Product Protection shall comply with handling, preservation, packaging, packing and shipping requirements, and practices shall ensure that original quality is maintained. Commercial practices shall not be considered to relieve the dealer/distributor of the responsibility to assure delivery of material in acceptable condition.

Stock Control shall assure that material quality is verified and maintained. Items shall be from current production and traceable to the date received. Supplier and product identity markings shall be as required by drawings and specifications. Unless identities are specified by ISR-ABQ, supplier part numbers shall be used. Special test or screening necessary to substantiate conformance to ISR-ABQ requirements shall be recorded. Nonconformance material shall be segregated and withheld from delivery submitted to ISR-ABQ unless negotiated in advance. Limited life material shall be marked, stored and controlled as required by drawings and specifications.

Corrective Action by the manufacturer shall be available through the dealer/distributor upon request and shall include, if required, a failure analysis report and all efforts necessary to remedy the cause and prevent recurrence.

Documentation such as inspection records and test reports, as well as that required by drawings, specifications and procurement documents, shall be furnished upon ISR-ABQ request.

O. SELLER ACCEPTANCE INSPECTION

Each shipment against this order must include documentary evidence of hardware acceptance by manufacturer's inspection organization. This evidence may be:

1. A copy of Seller's inspection report indicating Seller's acceptance inspection findings for items on this order or,
2. A signed, stamped or typed/written name, title and dated indicating acceptance by Seller's inspection organization on the shipping documents (Certificate of Compliance). Copies of such data will be retained by the Seller for 3 years from the date of final payment.

P-1. DATA - TEST SUMMARY

Parts shipped against this order must be accompanied by evidence of manufacturer's compliance with all test requirements. Such evidence shall include one (1) copy of the manufacturer's test summary of tests performed to ISR-ABQ's requirements, and shall be verified by the manufacturer's Quality organization. Copies of all such data shall be retained by the Seller for three (3) years from the date of final payment.

P-2. DATA – ACCEPTANCE TEST(S)

Parts shipped against this order must be accompanied by evidence of manufacturer's compliance with all test requirements. Such evidence shall include one (1) copy of the manufacturer's lot traveler and all acceptance test(s) data recorded by the manufacturer to ISR-ABQ's requirements, and shall be verified by the manufacturer's Quality organization. Copies of all such data shall be retained by the Seller for three (3) years from the date of final payment.

P-3 DATA – ACCEPTANCE TEST(S) W/O LOT TRAVELERS

Parts shipped against this order must be accompanied by evidence of manufacturer's compliance with all test requirements. Such evidence shall include one (1) copies of all acceptance test(s) data recorded by the manufacturer to ISR-ABQ's requirements, and shall be verified by the manufacturer's Quality organization. Copies of all such data and the manufacturer's lot traveler shall be retained by the Seller for three (3) years from the date of final payment.

Q. MANUFACTURING/PROCESS CONTROL

ISR-ABQ Purchasing must be notified immediately of and request approval for changes in design of products, any required manufacturing or process changes, relocation of a manufacturing or processing facility, or interruption of 90 or more days in production of the items on this PO. Production cannot continue after the occurrence of one or more of the above without permission in writing from ISR-ABQ Purchasing.

R. ELECTROSTATIC DISCHARGE SENSITIVE SUPPLIES

Piece Parts supplied on this order shall be shipped enclosed in ESD protective material.

S. STORAGE/PACKING FOR MOISTURE SENSITIVE PARTS

Pieces parts supplied on this order shall be shipped with "dry pack" material and a humidity/moisture indicator.

T. CONTROL OF NON-CONFORMING SUPPLIES

The Seller shall provide and maintain an effective system for control of nonconforming supplies including procedures for its identification, segregation and disposition. Such nonconforming supplies shall be identified to prevent the use, shipment or commingling with conforming supplies. Acceptance may be authorized only by ISR-ABQ's Material Review Board.

U. CERTIFICATE OF CONFORMANCE

The supplier shall certify that parts and/or material meet all requirements of the purchase order and/or drawings and specification requirements. One (1) copy of this certification, signed, stamped or typed/written name, date and title by the supplier's representative, shall be included with each shipment. This certification may be included on the supplier's packing sheet. Electronic (soft) copy of this emailed to ISR-ABQ buyer is acceptable.

The Certificate of Conformance shall show traceability to the parts and materials required by the Drawing Parts List, when the Parts List is specified on the Drawing.

The Certificate of Conformance shall state the parts and materials by their complete Part Number(s) in addition to the Lot Date Code(s)/Lot Number for parts and materials being certified.

The Certificate of Conformance shall state the manufacturer cage code or manufacturer address with the Part Number(s) being certified.

V. First Article Inspection

Supplier is to conduct a first article inspection in accordance with AS9102:2000 Aerospace First Article Inspection Requirement using forms 1, 2, and 3. Forms other than those contained in the Appendix of AS9102 may be used; however they must contain all "Required" and "Conditionally Required" information per AS9102 Appendix A. Only program Quality Engineering can accept deviations from this requirement. Electronic (soft) copy of this emailed to ISR-ABQ buyer is acceptable.

This requirement is a 100% inspection of the article ordered plus all component parts and subassemblies used on the article. Supplier is to submit a complete report identified as ' First Article Inspection Report ' with the article it represents.

W. IDENTIFICATION OF LIMITED/CALENDAR-LIFE MATERIALS

The Seller shall identify each item, package, or container of limited-calendar materials with the lot number and expiration date, storage temperature and special handling conditions, in addition to the normal identification requirements of name, part or code number, type, size, quantity, etc. If an item is too small to include any of the above information, then the C of C shall include that information not marked on the material.

X. CALIBRATION SYSTEM - ANSI/NCSL Z540-1/ISO/IEC 17025

The Seller shall have available and utilize correct gaging, measuring and test equipment of required accuracy and precision. Calibration must be conducted at regularly scheduled periods in accordance with ANSI/NCSL Z540-1/ISO/IEC 17025. Records of such calibration shall be maintained and made available for review, and shall be traceable to NBS or NIST.

Z. SPECIAL REQUIREMENTS

This clause imposes additional requirements not covered in any of the above stated clauses. The details of these requirements will be specified in the body of the purchase order (to include instructions for direct shipments from subcontractors to government activities, when required by Prime PO/contract).

AA. RECORD/DATA RETENTION

Records shall be retained in a safe, accessible location for a period of three (3) years after final payment unless otherwise stated in procurement document.

AB. SUPPLIER NON-CONFORMANCES

The supplier shall establish, implement, and maintain a documented closed-loop system for controlling non-conformances. This system shall include provisions for recording, analysis, remedial action, recurrence control, verification, and feedback of data on articles and materials which do not conform to drawings, specification or other requirements. Special emphasis shall be placed on tracking, trending and resolving repetitive non-conformances.

AC. TAPE AND REEL

Devices shall be shipped in tape and reel packaging. Each lot date code and value must be readily identifiable on each reel. One lot date code per reel.

AD. PRINTED CIRCUIT BOARDS

Clause AD applies when the printed circuit board drawing calls out W0153. Purchasing is automatically notified of any changes to W0153, and is responsible for notifying supplier of any and all changes.

AE. PROHIBITED MATERIALS

Zinc or cadmium are prohibited as final finishes. Tin with a purity of greater than 97% is also prohibited. This requirement applies to all exposed surfaces. If the product does not meet this requirement, the supplier must request and obtain ISR-ABQ approval prior to acceptance of this purchase order.

AG SPECIAL PACKAGING

Parts delivered on this line item shall be packaged in individual ESD safe containers adequate to protect the device body and leads from normal shipping and handling damage.

AF-1. AGE CONTROL

The lot date code of material shipped on this line item shall be no older than 1 year from the date of shipment. The lot date code shall be marked on the part or part packaging or associated paperwork. The format shall include as a minimum 2 digit year and 2 digit week, YYWW.

AF-3. AGE CONTROL

The lot date code of material shipped on this line item shall be no older than 3 years from the date of shipment. The lot date code shall be marked on the part or part packaging or associated paperwork. The format shall include as a minimum 2 digit year and 2 digit week, YYWW.

AF-5. AGE CONTROL

The lot date code of material shipped on this line item shall be no older than 5 years from the date of shipment. The lot date code shall be marked on the part or part packaging or associated paperwork. The format shall include as a minimum 2 digit year and 2 digit week, YYWW.

AF-7. AGE CONTROL

The lot date code of material shipped on this line item shall be no older than 7 years from the date of shipment. The lot date code shall be marked on the part or part packaging or associated paperwork. The format shall include as a minimum 2 digit year and 2 digit week, YYWW.

AL. LOT DATE CODE

Lot date code required. The lot date code shall be marked on the part or part packaging and associated paperwork. The format shall include as a minimum 2 digit year and 2 digit week, YYWW.

AM. ELECTRONIC DATA

Please provide any requested data electronically. The preferred format is PDF, ASCII, or Microsoft Word, Excel, etc. Paper copies are not required, when the data is provided electronically.

AN. SPECIALTY METALS

All materials must comply with DFARS 252.225-7014 Alternate I, Preference for Domestic Specialty Metals.

AP. ASTRONAUT SAFETY

For use in manned space flight; materials, manufacturing, and workmanship of the highest quality standards are essential to astronaut safety.

AQ. FLIGHT CRITICAL

The Certificate of Conformance shall indicate the supplier's awareness that the items being supplied are Flight Critical by including "Flight Critical Item(s)" on the provided Certificate of Conformance.

AR. MANUFACTURER & LOCATION

The Certificate(s) of Conformance & Packing Slip(s) shall specify the Manufacturer and Location of Manufacturer by Address, City, State and Country (if non-U.S.) on the Certificate(s) of Conformance & Packing Slips provided for the parts numbers being certified.

A Country of Origin document may be supplied in substitution for the Manufacturer by Address requirement on the Certificate of Conformance & Packing Slip.

CC. Parts shall be provided from the Manufacturer Cage Code(s) specified. The C. of C. shall state the manufacturer cage code for each part number/item being certified.

SP-1. SECOND TIER SUPPLIER'S EVALUATION (This clause shall be considered for all MD, PB, TD and AN POs)

Group I	Products or services that are either complex or have critical application and for which conformance to contract requirements cannot or should not, for economical reasons, be fully determined on receipt or products/services requiring direct shipment from the supplier to the government
Special Process	A Special Process is defined as processes in which inspection and/or testing cannot fully verify the results of the process or conformance of the product. Examples include but not limited to: Painting, Anodizing, Heat Treating, Plating, Welding, Soldering, Brazing, Gluing, Splicing, Casting, Coatings in general, etc.
Second Tier Supplier	Second Tier Supplier's are suppliers of Goodrich's direct supplier. They are suppliers to our suppliers.

The supplier shall determine the extent and use of second tier supplier(s) for special processes and/or Group I purchases related to this order. All second tier supplier's that will be performing a special process or providing a Group I product/Item related to this order must be submitted to Goodrich procurement quality for approval purposes. Information shall include Supplier's name, address, point of contact and phone.

Second tier supplier's that provide services or products that fall into the category of a Group I purchase and/or special processes as defined above, must be initially audited by the first tier supplier. The audit will provide documented objective evidence of the second tier supplier's capability and conformance to Goodrich specification(s), Drawings and Procedures. Evidence shall be in the form of process audit results that include actual process parameters documented and/or inspection records of actual product characteristics. Goodrich will be notified of proposed dates of audit(s). Audit results will be submitted to Goodrich for review and acceptance by Procurement Quality.

“@”. NON-FLIGHT MATERIAL

This clause is to be used if no clauses apply, i.e., for non-flight materials. This will alert Receiving personnel that the material is to be delivered directly to the person specified on the “Deliver To” line on the PO. An “@” clause shall not be assigned to a “flight” account. Purchase Requisitions with the “@” clause shall be signed for approval by Quality (PQE).

“\”. (Backslash) VISUAL INSPECTION ONLY (normally engineering model/prototype items)

This clause is to be used when only a visual inspection is to be performed by Receiving Inspection. Verify the package for damage, and count the quantity received if the cost is over \$75.00, verify one part for correct identification, and obvious physical damage and deliver to stock.

“^”. (Up-caret) CALIBRATION

This clause is to be used for test equipment, mechanical tools or gauges. This will alert Receiving personnel to notify the calibration lab upon receipt of the items. Calibration lab personnel will review these items for possible need for calibration controls.

Goodrich ISR-ABQ Quality Assurance Alert Clauses

The following clauses will be applied to the purchase order for Goodrich ISR-ABQ internal communication to Receiving Inspection.

BTP-1. BUILD TO PRINT – PROHIBITED MATERIAL USE

- No XRF required by Goodrich ISR-ABQ
- Goodrich ISR-ABQ receiving inspection to label items as:
 - BTP use only
 - Prohibited Materials
 - Non-Transferable

CDPM-1. CUSTOMER DIRECTED PROHIBITED MATERIAL USE

- No XRF required by Goodrich ISR-ABQ. R/I can put “N/A” for the XRF step on the TRACER
- Goodrich ISR-ABQ receiving inspection to label items as:
 - CUSTOMER DIRECTED PROHIBITED MATERIAL USE
 - Prohibited Materials By Design
 - Non-Transferable

- Note: Label an area, container box, crate, pallet, etc. if parts are too big to fit in a stockroom colored bin!

