



A Subsidiary of Syracuse Research Corporation

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## *Supply Chain Manual*

Revision Date: 4/5/10

**Approved By:**

A handwritten signature in blue ink, appearing to read 'Sue Werner', written over a horizontal line.

Sue Werner  
SRCTec Purchasing Manager

A handwritten signature in blue ink, appearing to read 'Robert Bernhardt', written over a horizontal line.

Robert Bernhardt  
SRCTec Quality Manager

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## Document Revision History

<b>Date</b>	<b>Item</b>	<b>Description</b>
10/10/08	Entire Document	Initial Release
12/2/08	Entire Document	Updated based on supplier feedback and internal meetings.
11/09/09	Entire Document	Clarification, added significant definition to section 18.
12/21/09	Entire Document	Removed all Proprietary Statements.
4/5/10	Section 13, 15, and 16	Updated based on supplier feedback and internal meetings.

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## 1. Purpose

The purpose of this manual is to communicate SRCTec's supply chain requirements and expectations to suppliers. It is the intent of SRCTec to do business with suppliers who are able to provide parts/materials/processes and services consistently to specifications, at a competitive price, and in accordance with the defined delivery schedule. The manual is intended to direct suppliers in their understanding of SRCTec's requirements regarding specific management, communication, and reporting processes in conjunction with Supplier Quality Clauses (SQC's).

*Note: The [blue underline](#) text is hyperlinked to forms or examples.*

## 2. Scope

The contents of this manual apply to all direct SRCTec suppliers of production material and services.

## 3. Definitions

APQP	Advanced Product Quality Planning
ASL	Approved Supplier List
CoC	Certificate of Conformance
COTS	Commercial Off the Shelf
Deviation	Non-conformance determined prior to manufacturing
DO and DX	Rated orders. Rated orders take preference over all unrated orders as necessary to meet required delivery dates. DX rated orders take preference over DO rated orders Ref: <i>DPAS Regulation 15 CFR 700 Ref 700.3</i>
FAI	First Article Inspection
FASA	First Article Submission Authorization
LOC	Letter of Contract
MDR	Material Disposition Request
MRB	Material Review Board Class 1 – A non-conformance that affects form, fit, or function.
PO/CO#	Purchase Order / Change Order #
RCA	Request for Change Authorization
Repair	Restoring the functional capability of a defective article in a manner that precludes compliance of the article with applicable drawings or specifications.
Rework	Reprocessing non-complying articles, through the use of original or equivalent processing, in a manner that assures full compliance of the article with applicable drawings or specifications.
RMA	Return Material Authorization
SCAR	Supplier Corrective Action Request

SCD	Spec Controlled Drawing
SQC	Supplier Quality Clause
SRCTec Controlled Product	Supplier is design authority, SRCTec controls via Spec Controlled Drawing
SRCTec Engineered Product	SRCTec is the design authority
Waiver	Non-conformance found after manufacturing
WDR	Waiver/Deviation Request

#### 4. **Communication**

- a) Your SRCTec Buyer is your primary Point of Contact.
- b) Please do not contact Syracuse Research Corporation (SRC), directly, regarding SRCTec purchase orders.
- c) Additionally, you may communicate with:
  - a. Quality Engineering
  - b. Manufacturing Engineering
  - c. Purchasing Manager
- d) Copy your buyer on ALL communication
- e) Please advise SRCTec of key personnel changes, plant shutdowns, vacations, holidays, summer hours, etc.
- f) **Do not assume anything! When in doubt, please call.**

#### 5. **Supplier Development**

SRCTec will provide assistance, at its discretion, to suppliers having trouble meeting expectations set by SRCTec. SRCTec will assist in:

- Resolution of critical issues
- Improvement activities
- Conduct specific training when a need has been identified and approved by SRCTec

#### 6. **Quality System Requirements**

The supplier shall maintain a Quality System that is compliant to ISO 9001 or it must be approved by SRCTec Quality Assurance.

SRCTec encourages suppliers to develop fundamental quality systems that provide for continuous improvement and emphasize defect prevention while reducing variation and waste.

While SRCTec does not currently require certification to ISO 9001; suppliers are strongly encouraged to use the ISO 9001 standard as the basis for their quality system development.



## **7. Supplier Evaluation and Selection**

SRCTec evaluates and selects suppliers based on their ability to supply product/services in accordance with specified requirements.

For new Suppliers, SRCTec will issue a supplier survey which will aid in the evaluation of the suppliers' ability to provide product/services in accordance with specified requirements. The evaluation process may involve an onsite visit. If the evaluation is acceptable, then the supplier is added to the Approved Supplier List (ASL) with the status of "Conditional". Production parts/materials/processes and services will only be purchased from suppliers on the SRCTec ASL.

## **8. Supplier Status and On-going Monitoring**

### Supplier status and definition:

- Approved – A supplier that meets SRCTec's evaluation criteria and has demonstrated acceptable performance as determined by data analysis of past performance and ongoing evaluation of supplier performance.
- Conditional – A supplier that meets SRCTec's evaluation criteria, but either does not have past performance data to demonstrate acceptance, or whose past performance is below acceptable criteria.
- Disapproved - A supplier that does not meet SRCTec's evaluation criteria, or has demonstrated performance that is unacceptable. Suppliers with a status of "Disapproved" pose a risk to SRCTec and our customers and, therefore will not be eligible to quote on future business. At SRCTec's discretion, the supplier may be engaged in a development plan which is mutually agreed upon. Once all activities are completed and approved by SRCTec, the supplier's status will be changed to "Conditional". When the supplier has demonstrated acceptable performance for at least one quarter, the status will be changed to "Approved".

SRCTec continuously monitors supplier performance. A supplier's status may be changed based on performance trending.

SRCTec issues supplier scorecards on a quarterly basis. Only suppliers which have delivered product during that quarter will receive a scorecard.

The Supplier's Rating is comprised of a weighed score in the following areas:

Quality.....	40%
Delivery.....	40%
Timely Responses to SCARs.....	20%



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SRCTec may request to perform on-site supplier assessments as necessary. The purpose of the assessment may include, but are not limited to, increased capacity, capabilities, corrective action implementation, and delivery / quality issues.

## **9. Purchase Order/Letter of Contract Review**

Suppliers shall perform a complete purchase order (PO) or Letter of Contract (LOC) review. The PO/LOC is to be acknowledged (signed) and returned to the respective buyer by the due date specified. By signing the PO/LOC, the supplier is stating that all requirements will be met as written, including the SCM, any SQC's, first article inspection (FAI) requirements, delivery dates etc. If there are any exceptions to the PO/LOC contact the buyer for resolution prior to acceptance

In cases that involve a LOC to PO transition, the supplier is responsible to review the PO to ensure the requirements are acceptable, as sometimes they can differ. If there are differences that are unacceptable, contact your buyer for resolution prior to accepting the PO.

The Supplier shall always work to the latest CO of the PO or LOC. **No exceptions.** Contact your respective buyer if there are any questions in regards to the current PO/CO.

If SRCTec does NOT receive acknowledgement by the due date as described for the PO or LOC, the Supplier's scorecard could be negatively impacted.

## **10. Use of Sub-Tier Suppliers**

The supplier is responsible for ensuring that all applicable requirements are flowed down to appropriate sub-tier supplier(s), and that process/product changes are managed and communicated as described in section 18 – Managing Changes Process.

## **11. Advanced Product Quality Planning (APQP)**

When a supplier is selected to supply product, SRCTec may begin APQP activities with Suppliers. APQP is designed to obtain supplier input in the early stages of planning. It also is a tool that communicates product quality expectations and verifies that suppliers have adequate processes in place to assure smooth start-ups. SRCTec's requirement for APQP will be identified and communicated.

SRCTec will work closely with suppliers in the development and implementation of all documents and processes for suppliers unfamiliar with APQP.

SRCTec may conduct a Readiness Review at the supplier's facility. This review will include inspections of the supplier's documents and processes associated with the production of parts for SRCTec.

Where military specs are called out on drawings, etc, suppliers can use the following website for the latest revision:

<http://assist.daps.dla.mil/quicksearch/>

## 12. **MRB Authority and Waiver / Deviation Request (WDR)**

Material Review Board (MRB) Authority is as follows:

Design Activity	MRB Authorization
SRCTec (SRC)	Independent MRB authority is not granted for products with non-conformances to P.O., drawings or specifications which exist at the time of shipment.
Supplier (COTS)	Independent MRB authority is not granted for products with nonconformances to SCD, final product acceptance requirements, or P.O. which exist at the time of shipment.

For any repaired or non-conforming product, suppliers are to complete the Waiver / Deviation Request ([WDR](#)) form and submit it to your SRCTec buyer. SRCTec will notify the supplier of the disposition and a copy will be sent. Need to id WDR form as a link. The submittal of WDR is considered the suppliers signature/authorization.

The Supplier shall include a copy of the approved WDR with all shipments of products covered by that WDR. The WDR number must also be documented on the Supplier's certificate of compliance (CoC.)

SRCTec's approval of the WDR will be based on how the deviation(s) from specifications impact the form, fit and function of the product as well as its impact on further assembly and/or integration.

The supplier shall inform SRCTec if PO ship dates are affected.

## 13. **Re-Submission of Product**

### Reworked/Replacement Product

Product being resubmitted for acceptance must reference the SRCTec Material Disposition Request (MDR) number on the new CoC and packing slip. If the MDR number is not known, the Supplier shall contact their SRCTec buyer to obtain that information. All SQCs that were listed on the original PO will be applicable to the

product being resubmitted.

All rework/replacement material must be packaged separately from new material and labeled as rework or replacement material. "Rework" or Replacement" must be written on the CoC.

#### DD1149 Form

This form is required for any change of location / responsibility for government owned material and, as such will accompany all government owned material that SRCTec returns to a supplier. The requirement for the DD1149 will be indicated in the "Property Administrators Office Use Only" block on the Shipping Notice. The supplier is responsible to complete their portion of the form and return it with the product. If there are any questions, please contact your buyer.

#### RTV Material Label

A returned Material Address Label, form [SCM-F-005](#), is to be completely filled out with the required information, printed, and applied to the outside of the shipping container. Lack of or incomplete information will result in returned material to the supplier and will negatively impact the supplier's performance rating.

#### **14. First Article Submission Process**

*(This only applies when Supplier Quality Clause 09A1 –09A4 is applied to the P.O.)*

09A1	Level 1: Delta First Article Inspection – FASA, sample(s), and supporting data submitted to SRCTec.
09A2	Level 2: Complete First Article Inspection – FASA, sample(s), and supporting data submitted to SRCTec.
09A3	Level 3: Documentation/Other First Article Inspection – FASA only, submitted to SRCTec.
09A4	Level 4: Complete First Article Inspection – FASA, sample(s), and supporting data reviewed at suppliers manufacturing location.

Suppliers are required to obtain approval for production parts prior to shipment through the First Article Inspection (FAI) Approval process. The purpose of the FAI process is to verify that a supplier's **production process** is capable of producing parts that meet SRCTec's specifications.

Suppliers shall conduct an FAI on product utilizing **manufacturing equipment, tooling and processes** that will be used in production. The Supplier will then submit sample parts and documentation from this FAI run for approval by SRCTec, prior to manufacturing further product. If the supplier chooses to run additional product, they do so at their own risk, unless otherwise agreed upon, in writing, by SRCTec.

First Article due dates are determined and communicated to the Suppliers on the PO.



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The First Article package shall consist of all required documentation and samples must be clearly identified.

The following is the minimum requirement for FAI submissions. *Italicized* headings are to be used as the tab sections in the FAI submission package. If a section is not applicable (i.e. Process Capability Studies) then label that section “Intentionally Left Blank”.

***FAI Checklist***

- The [FAI Checklist](#) is to be used and submitted with the FAI package.

***Copy of Purchase Order***

- Include a copy of the most current Purchase Order.

***Copy of Waiver/Deviation Request (if applicable)***

- A copy of an approved WDR must be included.

***Drawings***

- The part drawing(s) along with referenced specifications. Drawings must be submitted with each FAI.
- Each dimension, test requirement and note must be identified with a numbered balloon ([see example](#)).

***Dimensional Results***

- Suppliers must use the [First Article Inspection Dimensional Results Form](#) provided by SRCTec.
- Actual results must be provided for all dimensions, notes and other specifications on the part drawing.
- The dimensional layout must correspond to the ballooned drawing ([see example](#)).

***Test Results***

- Suppliers must record final test results on the First Article Inspection Dimensional Results Form. Copies of all tests shall be included in the FAI package.
- If the Supplier is “Qualifying by Similarity”, for the entire product or part of a product (i.e. environmental), that documentation must be approved by SRCTec, in writing, prior to submission and included in the FAI package.

***Process Capability Studies***

- Process Capability Studies must be completed for all special characteristics as identified by SRCTec, if applicable. The capability index required will be determined between SRCTec and the supplier.

***First Article Submission/Authorization (FASA) form.***

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- Include the completed signed original [FASA](#).

### **Certificate of Compliance (CoC)**

- Include a copy of the CoC per required information in Section 15 of this manual.

### **Shipping Label**

- Include a copy of the shipping label that will be used in production. Reference section 16 for the required information.

### **Samples**

- Suppliers are required to submit sample parts with each First Article Submission.
- The required sample size will be called out on the PO. Each part is to be identified as a FAI part.
- Samples from tooling should be submitted for each mold or cavity if applicable.
- Each container of sample part(s) must be identified as containing First Article samples. The required information is part number, revision level, date parts were produced, and supplier name.
- The supplier is required to keep 1 sample (identified properly) at their facility for the life of the product. The supplier is to keep the latest revision level and can scrap any previous revisions. SRCTec considers this SRCTec property and must be readily available.

First Articles Inspections shall not be submitted to SRCTec if any dimensions or test results do not meet part drawing requirements. The Supplier shall make every attempt to implement corrective action for any out of spec condition. However, suppliers shall contact SRCTec if they are unable to meet the part drawing. A [WDR](#) must be submitted and approved prior to FAI shipment.

## **15. Certificate of Compliance (CoC)**

The Supplier shall submit a Certificate of Compliance stating that all products in the shipment meet all requirements and all specifications defined on the Purchase Order.

The C of C shall contain the following, at a minimum:

- Seller's/Manufacturer's name
- Seller's/Manufacturer's address
- SRCTec PO Number
- Part Number and Revision Level (or equivalent)
- Quantity Shipped
- Per Part Drawing – serial numbers, lot numbers, or date coding
- Signature of an authorized Seller's/Manufacturer's Quality Assurance Representative
- MDR Number, if applicable. (See 08A & B)
- "Test Data available upon request", if applicable. (see 09D)



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**SRCTec Engineered Product (SRCTec is the design authority)**

This requirement applies to changes made to production processes/tooling/designs that have been approved through the FAI process for SRCTec engineered product.

Suppliers must request approval from their respective Buyer of any planned changes to the design, manufacturing process or facility for products supplied to SRCTec

A Request for Change Approval (**RCA**) is to be filled out and submitted to your Buyer.

Upon notification of RCA approval by SRCTec, the supplier is required to submit a First Article Inspection unless otherwise specified.

Note: In some cases, depending on the complexity and effects of the change, the supplier will be asked to benchmark the current product prior to the change, and inspect/test product to the same parameters after the change. The two sets of data are to be analyzed for equivalency.

Below are some examples of changes requiring approval:

The use of a new material (to include equivalent materials): if the material is changed, a complete re-qualification as well as a First Article may be required.

Production from new or modified tooling (except perishable tooling), dies, molds, patterns etc. including additional or replacement tooling: this applies to tools, which due to their unique form or function, can be expected to influence the integrity of the final product.

Production following upgrade or rearrangement of existing tooling or equipment: upgrade means the reconstruction and/or modification of a tool or machine or to increase capacity, performance or change its existing function. This is not to be confused with normal maintenance, repair or replacement of parts for which no change in performance is expected. Rearrangement is defined as activity that changes the sequence of product/process flow from that already approved in the FAI submission.

Production from tooling and equipment moved to another plant site: this includes any new or used tooling or equipment used for production which will be moved and/or transferred between existing or new facilities.

Change in sub-suppliers: SRCTec must be notified of a sub-supplier change. We strongly encourage our suppliers to manage changes within their sub-suppliers, and involve SRCTec in those changes.

Changes in test/inspection methods: changes in test methods or equipment, to include facility changes where current product is tested/ inspected, must be re-evaluated for equivalency.

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**NONE OF THE ABOVE CHANGES CAN BE IMPLEMENTED PRIOR TO SRCTec'S WRITTEN APPROVAL.**

**SRCTec Controlled Product (Supplier is design authority, SRCTec controls via Spec Controlled Drawing)**

This requirement applies to changes made to production processes/tooling/designs that have been approved through the FAI process for SRCTec controlled product

**Class 1 Changes**

Suppliers must request approval from their respective buyer of any planned changes to the design, manufacturing process or facility that would cause products supplied to SRCTec to be non compliant to the SRCTec specifications or otherwise affect form, fit or function. Suppliers are not authorized to proceed without approval.

A Request for Change Approval (**RCA**) is to be filled out and submitted to your Buyer.

Note: When applicable, changes in approved acceptance test procedures (ATP) are always a class one change due to the potential impact to form, fit or function.

Upon notification of RCA approval by SRCTec, the supplier is required to submit a First Article Inspection unless otherwise specified.

Note: In some cases, depending on the complexity and effects of the change, the supplier will be asked to benchmark the current product prior to the change, and inspect/test product to the same parameters after the change. The two sets of data are to be analyzed for equivalency.

**Class 2 Changes**

Suppliers must notify their respective buyer of any planned changes to the design, material, manufacturing process or facility that do not affect compliance to SRCTec specifications or otherwise impact form fit or function. Suppliers may proceed with the change understanding that SRCTec reserves the right to reclassify the change within 15 working days and require the supplier to meet the requirements of the class one change.

**Commercial off the Shelf (COTS)**

Suppliers are responsible to notify their SRCTec buyer of any changes in the product which affects form, fit, or function. The notification shall be submitted using the RCA form, at time of implementation, but no later than 30 days prior to shipment.

An FAI submission may be required.



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**NONE OF THE ABOVE CHANGES CAN BE IMPLEMENTED PRIOR TO SRCTec'S WRITTEN APPROVAL.**

**19. SRCTec Supplied Property**

Suppliers shall exercise care with SRCTec supplied equipment. The supplier is responsible for the identification of all equipment as well as good maintenance practices. If test or measuring equipment is supplied, it is the supplier's responsibility to maintain proper calibration records, identification thereof and to report calibration findings/records to SRCTec. Please route any correspondence through your Buyer. Do not go through a SRCTec Test Engineer.

SRCTec must be notified immediately if product was shipped from any equipment found to be out of calibration. **A containment plan must be developed and submitted to SRCTec within 1 business day. Reference CA Guidelines in section 21 – Supplier Corrective Action Request (SCAR).**

**20. Product Improvements**

Should a supplier wish to make an improvement to a part / drawing, an [RCA](#) must be submitted and approved **prior** to implementation.

**21. Supplier Corrective Action Request (SCAR)**

SCAR Process

If SRCTec discovers nonconforming material, we may issue a [SCAR](#). Nonconforming material may be discovered during incoming inspection, audit, assembly or customer returns.

When non-conforming material or material that is considered suspect is dispositioned by SRCTec, as Return to Vendor (RTV), the supplier shall supply an RMA number **within 2 business days** of the request. Failure to do so will negatively impact the suppliers performance rating.

SRCTec may find it necessary to sort or rework non-conforming/suspect material to avoid potential shutdown of its production lines. SRCTec reserves the right to re-claim costs incurred due to poor quality and/or late deliveries.

**Within 1 business day** of supplier notification of non-conforming product, suppliers must:

- 
- Implement product containment in their facility
  - Inform SRCTec of the impact on shipments
  - Identify short term corrective actions
  - Send initial SCAR responses for Problem Description and Immediate Containment Activity

Final SCAR response is required within 10 business days of issuance.

SRCTec will review the final SCAR response and provide the supplier with a decision on closure. Rejection of the SCAR response requires resubmission, with discrepancies corrected, no later than business 5 days of notification of rejection.

### SCAR Expectations

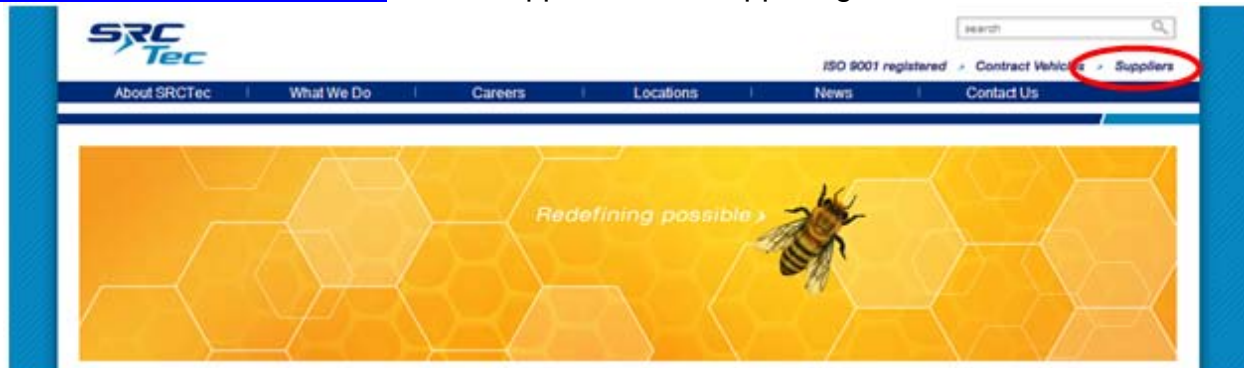
SCAR responses must be in the format supplied by SRCTec. If additional time is required to complete the SCAR, please request additional time PRIOR to the due date.

For assistance in completing a SCAR please see [CA Guidelines](#).

## **22. Questions/Comments**

If there are any questions about this manual or if further explanation is required, please contact your Buyer.

The latest revision of this manual is in electronic format and is available to Suppliers at <http://www.srctecinc.com>; click "Suppliers" in the upper right corner.



It is the responsibility of the Supplier to work to the latest revision of this manual at the time of quote.