Aviation Source Approval and Management Handbook

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General Information

The Competition in Contracting Act (CICA, Public Law 98-369 and 10 United States (US) Code 2304), the Encouragement of New Competitors (10 USC 2319), the Federal Acquisition Regulation (FAR) Part 6 (Competition Requirements), and Defense Federal Acquisition Regulation Supplement (DFARS) Part 206 (Competition Requirements) prescribes the policy and procedures that are to be used to promote and provide for full and open competition, with some exceptions. As defined in FAR 2.101, "full and open competition, when used with respect to a contract action, means that all responsible sources are permitted to compete.

Public Law 108-136 amended 10 U.S.C. 2319 to establish that the head of a design control activity (DCA), rather than the contracting officer, is responsible for determining that Critical Safety Items (CSIs) or prospective CSI suppliers meet or could meet requirements. It also directed that the Secretary of Defense establish regulations stating that the head of a design control activity for aviation CSIs establish processes to identify and manage the procurement and Repair, Overhaul, Modification, and Maintenance (ROMM) of aviation CSIs, that the head of contracting activities enter into a contract only with sources approved by the design control activity, and that CSIs be accepted only if they meet all technical requirements established by the design control activity. In this Handbook the term 'Engineering Support Activity' (ESA) is synonymous with the term DCA.

FAR Part 9 (Contractor Qualifications) and DFARS Part 209.270 (Aviation Critical Safety Items) prescribe policies, standards, and procedures on contractor qualifications and Aviation Critical Safety Items.. The processes described in this Handbook focus on Source Approvals other than Qualified Products List (QPL) items and are intended to ensure that suppliers are capable of consistently producing and/or providing high quality, conforming items that meet design and manufacturing or ROMM requirements.

To implement the aviation CSI Public Law, the military Services and defense agencies worked together to develop an instruction under the auspices of the Joint Aeronautical Logistics Commanders, now called the Joint Aeronautical Commanders' Group (JACG). The JACG is an organization comprising the highest levels of leadership from each Service's aviation acquisition community and representatives from Defense Logistics Agency (DLA), Defense Contract Management Agency (DCMA), Federal Aviation Administration (FAA), National Aeronautics and Space Administration (NASA), and Department of Homeland Security. The CSI Instruction was issued by all Services and defense agencies under their respective regulation structures. Specifically, it was issued as SECNAVINST 4140.2, AFI 20-106, DA Pam 95-9, DLAI 3200.4, and DCMA INST CSI (AV) "*Management of Aviation Critical Safety Items*", and is hereafter referred to as the

Multi-Service/Defense Agency CSI Instruction. To supplement the instruction and provide implementing guidance regarding management and approval of sources for aviation parts, the JACG also sponsored the development of the Aviation Critical Safety Item Management Handbook as well as this Sourcing Handbook. Additionally, a set of Frequently Asked Questions (FAQs), including some which refer to sourcing, can be found in Appendix III of the JACG Aviation CSI Handbook.

For the purpose of this handbook, the Aircraft Airworthiness Authority for each respective service is the Naval Air Systems Command, Assistant Commander for Research and Engineering (AIR-4.0) for the Navy; US Army Aviation and Missile Command (RDMR-AE) for the Army; and the Technical Airworthiness Authority for the Air Force. The term Aircraft Airworthiness Authority is synonymous with DCA and ESA for the Army and Navy. For the Air Force, the terms DCA and ESA are synonymous with the Designated Air Force Single Manager for a Weapon System.

1.1 Types of Sources Considered for Approval

Unless otherwise established by the cognizant Service ESA, only sources in the categories listed below are to be considered for approval:

- System or subsystem prime contractor. System or subsystem prime contractors are approved sources for the items in their systems or subsystems, unless specifically disapproved by the cognizant Service ESA;
- Actual manufacturer (i.e., Original Equipment Manufacturer (OEM)) that supplies items to the prime Contractor where the cognizant Service ESA determines the prime Contractor provides no “value added” to the item. Section 4.7 of the JACG Aviation CSI Handbook provides specific guidance for evaluating OEM’s processes. The Service and DLA logistics organizations and Defense Contract Management Agency (DCMA) assist the cognizant Service ESA in assessing “value added”;
- Fully-licensed manufacturers of the prime contractor or of the OEM that provide substantiation of their licensing arrangement, as validated by and acceptable to the cognizant Service ESA;
- Fully-licensed repair/overhaul facilities of the prime contractor or of the OEM that provide substantiation of their repair/overhaul arrangement with the prime contractor, as validated by and acceptable to the cognizant Service ESA;
- Distributors approved by the cognizant Service ESA who provide traceability that the items they are supplying were produced by the system prime contractor, OEM, or a cognizant Service ESA-approved alternative source according to technical and quality requirements and are unchanged in any way. Approval of a distributor is based upon the traceability to an approved source and approval of the distributor will be removed from the approved

source list if the distributor changes their proposed source after approval. Additional guidance and a possible source of distributor accreditation criteria may be found in FAA Advisory Circular 00-56A, *Voluntary Industry Distributor Accreditation Program*, which describes a voluntary system for the accreditation of civil aircraft parts distributors for parts and products installed on type-certificated products. Also, ASA-100, *Quality System Standard*, is a commercially available dealer/distributor approval standard which the FAA determined meets and/or exceeds their accreditation criteria; and SAE AS9120, *Quality Management Systems - Aerospace Requirements for Stocklist Distributors*, a commercially available standard which includes ISO 9001:2000 quality management system requirements and specifies additional requirements for a quality management system for the aerospace industry and is applicable to stocklist distributors;

- Sources identified on a Qualified Products List (QPL), Qualified Products Database (QPD) or Critical Item Procurement Requirements Document (CIPRD) where the cognizant Service ESA coordinated on the approval.
    - QPLs for Federal and Defense specifications and standards can be accessed at http://assist.daps.dla.mil/quicksearch/fsc_quicksearch.cfm. Type "QPD" in the title box and select the Federal Supply Classification (FSC) for the item of interest from the dropdown list. From the resulting list of QPLs, select a specific QPL for additional information. In the resulting "Overview" block, click on the "Qualification" link for a list of applicable part numbers (P/Ns) and national stock numbers (NSNs) (if applicable). Select a P/N and the QPL sources for that P/N will be displayed.
    - Contact your DLA engineering support (Form 339) focal point for access to CIPRDs.
- Sources identified on source controlled drawings are considered approved, unless determined by the cognizant Service ESA to be otherwise. See Service-specific policy/guidance for further details on how sources listed on source controlled drawings should be managed. (See Section 1.4, below, for further discussion of sources identified on control drawings.) Any additional quality assurance provisions established by the ESA for these sources or situations must be incorporated in contracts;
- Sources controlled within ESA approved Qualified Supplier List programs for standard parts identified as Critical Application Items (CAIs) or Non-Critical, when approved by the ESA. These programs shall, as a minimum, take into account the requirements of Section 7.4 of the JACG CSI HB to insure that hardware complies with technical requirements. This includes the areas of Quality Management, Document Control, Purchasing Control, Traceability, Lot Control, Manufacturing Process Control, Inspection, Test Control, Calibration Control, Corrective Actions & Control of Non-conforming Material, Storage/Packaging/Shipping, Internal Audits, Personnel Training/Qualification, Records Control & Retention, and Product Control. Qualified Supplier List

programs will define a list of approved vendors, both manufacturers and their authorized distributors, who will be the only qualified suppliers of competitively procured CSI hardware. Only material manufactured by qualified manufacturers will be acceptable from qualified distributors. Qualified Supplier List programs for standard hardware shall require the review of a manufacturer's and/or authorized distributor's quality system, on-site surveys and regular and recurring audits to verify day-to-day implementation of the quality system, and evaluation of test results for CSI hardware.

- Alternate sources (which may include FAA certificate/approval holders or organic government facilities) for CSIs or CAIs approved by the cognizant Service ESA or its delegate. (See the Multi-Service/Defense Agency CSI Instruction for CSI and CAI definitions.) Non-critical items may require cognizant Service ESA approval according to Service-specific policy. This category includes distributors who are making changes (such as adding Item Unique Identifications) to new items (used or surplus items are not considered within this category). Source Approval Request (SAR) packages from these prospective distributors must obtain the unmodified parts from approved sources and/or provide all SAR package documentation required to obtain approval for that source, in addition to the documentation required for the modifications they are performing; and
- Sources proposing to supply items based upon reverse engineering, Parts Manufacturer Approval (PMA) test and computation, or similar techniques must be approved by the cognizant Service ESA regardless of criticality to ensure that the alternate proposed design is validated. Alternate items SAR process is discussed more in Chapter 3.

> **Note**: Sources proposing Reengineering efforts are not applicable to this document. See Section 1.9.

1.2 CSIs from Unapproved Sources in Existing Inventory

On occasion, CSIs from an unapproved source are found in the supply system. In this case, the Integrated Materiel Manager (IMM) will freeze stock and notify the cognizant Service ESA(s). The cognizant Service ESA(s) will define testing requirements to verify that the product conforms to technical requirements and will review and approve the results. If a critical characteristic exists that cannot be tested in the item or assembly's final form, the item is unapproved (e.g., Non-destructive test (NDT) on bare metal but the item is coated or painted), unless otherwise approved by the ESA for use. For unapproved CSIs that have already been installed, operational performance history should be considered in determining whether or not to allow continued use of the installed items. Testing requirements for CSIs from unapproved sources are addressed in Section 4.9.3. of the JACG Aviation CSI Handbook.

1.3. Other Services' Approved Sources (Source Reciprocity)

In addition to promoting commonality and consistency in procedures, terminology, and standards, SAR policies and guidance also present opportunities for efficiency and cost effectiveness across the military Services. For example, the Multi-Service/Defense Agency CSI Instruction encourages each Service to recognize sources of common use CSIs that have been approved by other Services, particularly where approval procedures are comparable and the basis for initial approval is available to other Services. This is known as *source reciprocity*. Sources approved by one Service for items that are common use items should be recognized across all Services provided:

- the defined item requirements meet the most stringent requirements required of the item by any Service (as determined by the cognizant Service ESA for assigned items);
- the source approval requirements of the original approving Service were comparable to or greater than those required by each Service;
- each cognizant Service ESA had an opportunity to review all information supporting the request for approval and the determination that the source was acceptable and each cognizant Service ESA concurred with the conclusions; and
- there is compliance with the procedural requirements of the Multi-Service/Defense Agency CSI Instruction.

Other Service ESAs should consider waiving First Article Test (FAT) or Product Verification Audit (PVA) requirements for the same item from the same product/ROMM supplier if the supplier meets source reciprocity requirements (refer to Section E.2.f of the Multi-Service/Defense Agency CSI Instruction) or if FAT or PVA was performed and found to be acceptable within the past 3 years by the cognizant Service ESA.

1.4. Sources Identified on Control Drawings

Control drawings are used to establish an item's technical design and performance requirements and to identify suppliers that were determined to be capable of meeting these requirements at the time the drawing was released or updated. There are several types of Control Drawings, including Source Control Drawings, Vendor Item Drawings (also called Vendor Item Control Drawings), Specification Control Drawing, and similar variations. Control drawings can be used as a basis to develop, find, or help qualify new sources when appropriate.

Suppliers listed on source control drawings were considered capable of manufacturing the item at the time the drawings were released and are generally considered

approved, unless the cognizant Service ESA determines otherwise. Refer to Service-specific guidance on how source controlled drawing suppliers are to be managed. However, suppliers listed on vendor item drawings and specification control drawings are *suggested* sources of supply (reference ASME Y14.24, *Types and Applications of Engineering Drawings*) and therefore need to submit a SAR package. Unfortunately, the terminology is not always used consistently across industry.

Sources listed on control drawings may not be current or continue to be valid. Drawings are not always updated simply to add, modify, or remove sources if there is no technical change to the item itself. As a consequence, suppliers listed on control drawings may no longer be in business, may no longer have an interest in or capability to produce the product, may have experienced quality problems, may not be cost effective, or may not be able to meet schedule timelines. Therefore, procuring activities should validate that:

- available source control drawings are the most current version;
- listed suppliers are still in business and will produce the item;
- the system prime contractor, major subsystem contractor, or OEM for the item still approve the source(s); and
- all system prime contractor, major subsystem contractor, or OEM approved sources are listed on the source control drawing.

If the procuring activity discovers that there is a system prime contractor, major subsystem contractor, or OEM approved source(s) other than those on the source control drawing, then ESA should evaluate for possible approval.. If sources other than those listed on the source control drawing are approved, then an Engineering Change Notice (ECN) or Engineering Order (EO) must be created for the drawing in question to identify the new source for the source control drawing. Then the item's Acquisition Method Suffix Code (AMSC) remains "B." This code denotes that acquisition of the part is restricted to the OEM and/or source(s) specified on the 'source control,' altered item,' or 'selected item' drawings. (See DFARS PGI 217.7506 SPARE PARTS BREAKOUT PROGRAM for proper code to apply and Section 3.5.1 for additional information regarding source controlled drawings.) If sources other than those listed on the control drawing need to be found or approved, proprietary information contained on the drawing will not be released. The ESA should additionally consider whether any additional technical data is required to approve a new supplier for a source controlled item.

1.5. Historical Sources of Supply

When a legacy item is determined to be CSI, historical sources of supply (i.e., sources that supplied the item prior to the CSI designation) of that item may be affected if the item had been previously purchased and is currently in the supply system. Before designating a legacy item as CSI, the cognizant Service ESA should determine whether

these historical sources are to be retained. For CAIs, a similar approach may be applied on a case by case basis.

If the legacy item is a common use item, the disposition of historical sources should be coordinated among the user communities via the Common Use Item Coordination Process described in Section 2.5.2 of the JACG Aviation CSI Handbook. If proper coordination is not accomplished in advance, the cognizant IMM will typically freeze stock from unapproved sources. In cases where materiel from unapproved sources of supply is in the supply system, a course of action will be jointly developed by the IMM, cognizant life cycle managers, and cognizant Service ESAs in order to maintain airworthiness while minimizing operational impacts.

When reviewing historical sources for a newly identified common use CSI, the cognizant Service ESA should identify whether other Services may have approved sources for the CSI and consider implementing source reciprocity discussed in Section 1.3, above. If the criteria for source reciprocity are satisfied, the cognizant Service ESA should consider waiving full source approval requirements. This guidance is based on the growing degree of similarity among the Services' source approval processes promoted by the Multi-Service/Defense Agency CSI Instruction, Section E.2.a., and this Handbook. If the source meets the reciprocity requirements in Section 1.3 and no additional technical requirements are required, also consider waiving FAT or PVA requirements.

1.6. Local Purchase and Repair

A local purchase is the direct purchase of an item covered by the Department of Defense (DoD) *Coordinated Acquisition Program* (DFARS 208.70) by other than the organization assigned Coordinated Acquisition contracting responsibility or IMM responsibility. A local repair is a repair performed by a maintenance level not normally authorized to perform the repairs for an item. Local purchase or repair of CSIs is only authorized if justified by unusual and compelling urgency (as described in FAR, Part 6.302-2, *Unusual and Compelling Urgency*, and DFARS Part 208.7003-1, *Assignment Under the IMM*) and when approved by the cognizant Service ESA. When any Federal Logistics Information System (FLIS) cataloged items are procured locally, the buying activity must notify the cognizant IMM and comply with all ESA-approved CSI procurement requirements, including use of approved sources and restrictions on use of surplus material. Facilities performing local repairs must notify the cognizant IMM and comply with all ESA-approved CSI repair requirements.

1.7. Service Depots and Other Government Facilities

Service depots and other Government facilities are authorized to manufacture CSIs under certain conditions. Specifically, they may be sources for routine, repetitive,

production lot manufacturing of CSIs only if the cognizant Service ESA confirms they meet all alternate source qualification requirements.

Depots and other Government facilities are also authorized to manufacture CSIs in limited quantities (one or a few) on a "one-time basis" without undergoing the full alternate source qualification process only if certain conditions and criteria specified in paragraph E.2.j.(2) of the Multi-Service/Defense Agency CSI Instruction have been satisfied.

Government manufacture of CSIs on a one-time manufacture basis and via alternate source qualification is discussed in detail in Chapter 7.

1.8. Sources of Surplus Materials

In some instances, purchase of surplus material may be the most efficient and cost effective means to meet a requirement for an item. As used here, the term *surplus material* refers to items originally purchased and accepted by the Government and subsequently sold or disposed of by the Defense Reutilization and Marketing Service (DRMS).

Note: Use of surplus parts for routine procurement increases the risk of receiving counterfeit parts.

When offers for surplus CSI material are received, the cognizant Service ESA will evaluate the offer and determine if the material is acceptable for use. Service-specific direction and guidance on surplus offers should be applied. Unless otherwise specified by cognizant Service ESA, the following factors must be considered:

- Origin of the materials
  - the proposed item was originally manufactured by an approved source at the time of manufacture and the manufacturer's approval for that item has not subsequently been revoked
- Traceability, including manufacturing records
- Condition/Configuration
  - the item is the correct revision
  - the item is unused in any way
  - the item is not repaired, recycled, remanufactured, reconditioned, or has not been previously dispositioned as nonconforming by the system or subsystem prime contractor, OEM, other supplier or the Government
  - the item fully conforms to all critical characteristics as identified in item technical data requirements, contract, or other cognizant Service ESA instruction

  - the remaining shelf life or other time critical aspects of the item are acceptable to the cognizant Service ESA
- Cost of test & evaluation to determine acceptability
  - the test & evaluation cost should be provided to the IMM for additional evaluation to determine acceptability
- Availability of technical data and testing facilities

See Exhibit D for a checklist for surplus procurements and Exhibit G of the JACG Aviation CSI Handbook for an example contract clause for surplus procurements.

For CAI items, the IMM may review an offer for unused material that DLA has not rejected after review where the item:

- is traceable to an original government contract number,
- the parts are in the original unopened packaging,
- the items were manufactured to the current configuration of tech data,
- there is no history of Product Quality Deficiency Reports (PQDRs), and
- the items do not have a current demilitarization (DEMIL) code of C, D, E, F and G.

However, if the above conditions are not all met, then the ESA must review the surplus offer. For non-critical items, the IMM will request and validate surplus documentation as applicable to the requiring Service or Agency procedures.

1.9. Reverse Engineering and Reengineering

1.9.1 *Reverse engineering* is the process of replicating an item in all respects (i.e., functionally, dimensionally, materials, and processes) by physically examining and measuring existing items to develop the technical data (physical and material characteristics) required for competitive procurement. Normally, as part of a product development plan, reverse engineering will not be cost effective unless the items under consideration are urgently needed to maintain operational readiness, are of a high dollar value, or are procured in large quantities. The decision to pursue a government funded reverse engineering effort must be authorized by both the head of the contracting activity and the cognizant Service ESA, following the direction issued by DFARS, Part 217.7504, *Acquisition of Parts When Data Is Not Available*. Coordination among the Services is required when reverse engineering common use items. (See Chapter 4 of this Handbook and Section E.3.h of the Multi-Service/Defense Agency CSI Instruction for further discussion of reverse engineering requirements.)

Reverse engineering may be considered if the following criteria are met:

- There is an overwhelming readiness need and all other methods of support are unavailable or prohibitive,

- a Business Case Analysis demonstrates cost savings commensurate with potential safety or performance risk,
- the government must be in possession of sufficient data or be provided sufficient data to perform a risk assessment or assess the reverse engineered design.

A review by the appropriate engineering personnel is required when considering reverse engineering. Representatives from the impacted program office and/or the procuring activity may also be necessary for configuration and funding concerns when conducting the above analysis.

1.9.2 Reengineering is the process of examining and measuring an existing item to develop a new design that is identical in fit, but allows the form to be modified to result in equivalent or improved overall functionality of the item or other quantifiable benefit (e.g., reduced cost, ease of maintenance, improved supply base, etc.) Because reengineering is the process of establishing a new design, it does not fall under the source approval process. The new design should instead be qualified under the engineering change process. Due to the inherent risk associated with the reengineering process and the safety concerns related to CSI components, reengineering should be entered into as a last resort.

1.10. Parts Manufacturer Approval (PMA) Source of Supply

Title 14 of the Code of Federal Regulations (14 CFR) 21.303(a) requires that any person producing replacement parts for sale for installation on a type-certified product must have a PMA. A PMA is a combined design and production approval for replacement parts for FAA certified aircraft.

PMA parts cannot be automatically approved for use in military applications because the Military Services' operational environment, maintenance procedures, flight envelope, and similar factors may be different from those for the same parts in the civil sector. Therefore, source approval requirements apply to components produced by FAA PMA holders for the government.

The FAA approves PMA sources on the basis of one of three principles:

- Identicality with a Licensing Agreement - The license agreement is proof that the design of the part is the same in every respect as a part approved under a type certificate.
- Identicality without a Licensing Agreement - The source must prove that their part and the data used to manufacture the part are identical to the OEMs part. The source proves identicality by providing the OEMs data, which verifies identicality in dimensional and material characteristics, special

processes and coatings, and any other test and acceptance criteria. Identicality to another PMA is not allowed per FAA regulations.

- Test and Computation - The source must demonstrate that the functional design of the proposed part is at least equal to that of the original type certified (TC), supplemental type certificate (STC), or technical standard order (TSO) approved original part. The source provides to the FAA part design data, including materials, processes, test specifications, system compatibility, maintenance instructions, and part interchangeability, as well as a test and substantiation plan to show part airworthiness. More Service/Agency CSI reverse engineering considerations are provided in Chapter 4.

See the FAA Order 8110.42C, Parts Manufacturing Approval Procedures dated 23 June 2008 for more FAA PMA information.
http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgOrders.nsf/0/D1D550BBC2C82DD386257472005724EF?OpenDocument

Approved PMA parts may require new part numbers regardless of how the PMA part was developed because a vendor will not be asking to produce a part to the OEM blueprints, but rather to their own manufacturing data. This will not apply to parts produced under license agreement as these parts are identical to the OEM blueprints. However, parts produced without license agreements or developed through reverse engineering may have their own unique part number, (PMA parts may use the same part number with the OEM permission) requiring unique configuration control (though they can be linked under a single stock number). As creation of a unique part number will require cataloging to maintain configuration control, a cost analysis must be performed before technical evaluation of a PMA source is undertaken. Cost analysis must be performed between the IMM, procuring activity (if different), and the cognizant Service ESA before technical evaluation of a PMA source is undertaken to ensure all activities involving cost are considered.

While the PMA process is a FAA process, it may not be used as a sole basis for source approval for government used items not covered by a FAA Type Certificate. PMA holders requesting to be approved for non-type certified parts used by the government will need to apply for approval per the requirements of Exhibit A.

Chapter 2

Procuring Activity Responsibilities in Source Management

Procuring activities perform the following source management activities:

- Ensure that all contracts for CSIs are in compliance with all sections of this handbook as all CSIs require source approval unless the requirement is waived by the cognizant Service ESA.
- Ensure contracts for items requiring source approval are awarded only to approved sources unless the requirement is waived by the cognizant Service ESA.

  Note: Requirements on Active Solicitation. Due to time constraints and lead times involved, the Government cannot guarantee expedited processing of SARs submitted in response to a solicitation announcement in the Federal Business Opportunities (FedBizOpps). Once a solicitation appears in the FedBizOpps, there may not be enough time to process a SAR for the current solicitation. Pursuant to FAR 9.202(e), the contracting officer is not required to delay a proposed award to provide a potential offeror an opportunity to demonstrate its ability to meet the standards specified for qualification. However, the cognizant Service ESA must still review the package so that if approved, the source will be eligible for future contract awards.

  There are items requiring source approval for which the Government does not own the technical data that specifies the manufacture or ROMM, or the data that the Government owns has not been maintained. Sources for these items must be limited to the prime, OEM, or an alternate supplier identified by the prime or OEM, as approved by the ESA.
- Ensure contracts contain all technical and quality requirements stipulated by the cognizant Service ESA.
- Review quality performance history of CSI approved sources prior to award to identify indicators of potential problems needing investigating prior to contract award.
- Review quality history of CSI NSNs to identify indicators of potential technical documentation problems with the item.
- Ensure the supplier is not on the excluded parties list system (https://www.epls.gov/) or other internal problem-tracking system.

Chapter 3

Source Approval Requests (SAR)

Source approval requirements and processes addressed in this Handbook are not intended to restrict competition, but rather to ensure that proposed sources are capable of consistently producing acceptable items while increasing competition for manufacturing source approved items in addition to ROMM of items. These processes are also used to qualify sources in cases where the pre-approved sources (e.g., the prime contractor and/or OEM) will no longer produce a quote.

A *Source Approval Request (SAR)* contains information about a prospective new supplier. A SAR package includes all the technical data needed to demonstrate that the prospective supplier can competently manufacture or perform ROMM of the item requiring source approval to the same level of quality or better than the system prime contractor, major subsystem contractor, or OEM.

Suppliers that have not been formally approved by a cognizant Service ESA to directly supply specific CSIs to the Government are required to submit SAR packages. These contractors are considered *alternate sources*. System prime contractors, major subsystem contractors, and OEMs are not required to submit SAR packages to the Government in order to qualify a prospective subcontractor, unless otherwise required by the ESA.

3.1. SAR Risk Management

When the Government assumes responsibility for direct procurement of items requiring source approval and/or CSIs, from sources other than the prime contractor, the Government assumes certain risks. In effect, the Government is responsible for the risk, not the prime contractor.

Cognizant Service ESAs should analyze the technical risk of direct procurement from a source other than the prime contractor and determine/verify the qualification requirements and Quality Assurance (QA) requirements needed to reduce that risk to an acceptable level. (See the Multi-Service/Defense Agency CSI Instruction, Section E.2.a (7). Risk analysis includes but is not limited to assessment of the following elements:

- The criticality and complexity of the manufacturing, ROMM and inspection processes that are required to support production/repair of the item. Failure Modes, Effects, and Criticality Analysis (FMECA) data may aid in the determination of critical processes and characteristics, and the sensitivity of the processes to the techniques and skill level of manufacturing personnel;

- The item's critical characteristics, required QA controls, and qualification requirements;
- The design life limits and expected service life of the item;
- The quality history for the component;
- Prime contractor's "value-added" in the manufacturing or ROMM process; (Value added is defined as any oversight, process, operation, or technical data provided by the prime contractor that would have to be replaced by the Government. Examples include: QA; supply of raw material and forgings; providing data not shown on component drawings such as machining, feed rate and cutting speeds, machining impacts, casting/forging information, design life, etc.; Material Review Board (MRB) disposition; material and process specifications; special tooling and fixtures; master tooling calibration; and providing personnel at the subcontractor's facility to perform engineering and quality management services.);
- Availability of any special equipment, tooling, fixtures, and/or jigs; (This information may be obtained from the cognizant DCMA representative.);
- Review of upcoming design changes through Engineering Change Proposals (ECPs), changes in design, the component improvement program, and engineering development program.

3.2. SAR Development and Contents

A SAR should include all data required to manufacture or ROMM, and describe the item; indicate if the proposed source has ever (and if so, when they last) supplied the subject or similar item to the prime contractor, OEM, civil sector, civil agencies, foreign governments, or the DoD.

If the service or agency desires to target items with the largest potential for savings through competition, the procuring activity can develop a target list to determine where to focus the effort. If a Service or Agency decides to develop a target list, this does not preclude a potential source from submitting a SAR package for a particular item. A procuring activity can develop a target list of potential items for which establishment of an alternate source(s) would be in the best interest of the government. This target list can be used to focus development of SAR packages to increase the number of sources for items where there is potential for benefit.

The procuring activity informs all interested suppliers of basic qualification criteria by providing them with the requirements for source approval. Exhibit A provides the minimal contents for a SAR package as well as detailed guidance to contractors on how to assemble a SAR package that will satisfy the requirements for each Service/Defense Agency. In addition to these requirements, an individual Service or DLA may require additional content. The websites for this information are included in Exhibit B of the JACG Aviation CSI Handbook. Meetings with suppliers to answer their specific questions

relative to the approval process for alternate sources may also be conducted by the procuring activity. The individual Service or DLA should consider including DCMA as a source of information and data for the ESA decision process. SARs from potential sources (and DLA Form 339 requests when SARs are submitted to DLA) are routed to the cognizant Service ESA for review and disposition.

The cognizant Service ESA will consider all SARs for potential approval. Based upon individual Service procedures, the cognizant Service ESA may determine that certain sections of the SAR are not required for their review; however, legal precedents require that all SAR packages be processed consistently. Therefore, if a section is excluded, a statement as to why must be included within the SAR. A SAR for the manufacturing of an item is similar to a SAR for ROMM of an item; further detail is provided below in Section 3.5.2 below.

3.3. Integrated Materiel Manager (IMM) Responsibilities

The IMM is the activity or agency that has been assigned wholesale integrated materiel management responsibility for the DoD and participating Federal Agencies. Each Service/Defense Agency has multiple IMMs. The applicable IMM for a given part is identified by the Source of Supply (SOS) code recorded in the Federal Logistics Information System (FLIS).

- The IMM responsibilities include cataloging, requirements determination, procurement, distribution, overhaul, repair, and disposal of materiel.

3.4. SAR Review

The cognizant Service ESA's review of a SAR focuses on adequacy of technical data, proper identification of critical characteristics (if identified by the cognizant Service ESA), capabilities of manufacturing or ROMM process sources/sub-tier suppliers, proper definition of qualification requirements to ensure equivalent performance of items, identification of Quality Assurance requirements, and verification of Government/Contractor testing capabilities. The cognizant Service ESA will also assess the capability of the prospective source to manufacture or ROMM and deliver the item in accordance with technical requirements. As part of this process, the Service, DLA logistics organizations, and DCMA may provide assistance or information to the cognizant Service ESA in assessing the capabilities of the supplier in the manufacture or ROMM of items requiring source approval.

3.4.1. Cognizant Service ESA Responsibilities

The cognizant Service ESA is responsible (unless otherwise stated in Service-specific guidance) for receiving SARs, tracking and evaluating SARs for their activity, and returning the SARs to either the procuring activities or the supplier (as applicable), ensuring at all times that precautions are taken to prevent access by unauthorized personnel to any proprietary data in the packages.

The cognizant Service ESA may require support from a variety of specialists, to include but not limited to quality assurance, reliability and maintainability, manufacturing and production, technical disciplines, logistics, and configuration management. The engineer reviews the SAR and any comments from assigned specialists and evaluates the engineering characteristics of the part, design change activity, field experience with the item, and the source's quality assurance and manufacturing and/or ROMM history with the item. It is important to ensure that precautions are taken to prevent access by unauthorized personnel to any proprietary data within the SAR package. The engineer then reviews the available information, assesses the risks, and makes the approval or disapproval decision. Normally, the SAR review process must be accomplished within 180 days, unless otherwise negotiated with the procuring activity or as documented in Service specific guidance. The cognizant Service ESA is responsible for the SAR review, considering the comments provided by any other reviewers, assessing the risks, and approving or disapproving the new source based on their technical justification. When a new source (for either manufacturing or ROMM) is approved, it is important that it be added to the Service's listing of approved sources.

In addition, the cognizant Service ESA is responsible for tailoring the Quality Assurance Provisions (QAP) to the specific requirements of the SAR item during the SAR review or at contract award. While QAPs and contract data requirements lists (CDRLs) can be tailored for each items requiring source approval, it is important that different suppliers of the same part follow the same QAPs and CDRLs. Refer to Service-specific guidance for a detailed definition of engineering responsibilities for SAR QAP and CDRL requirements.

Contact your Service CSI point of contact (POC) (listed in Section 1.6 of the JACG Aviation CSI Handbook) for information about your cognizant Service ESA focal point.

3.5. Technical Review

The objective of the technical review is to determine whether the proposing supplier has the capability to consistently produce the item to the required specifications, and to ensure that the available technical data is adequate to manufacture or ROMM the required item. (Note: If the technical data to be used are not owned by the Government, the prospective source must provide certification that authorizes use of

the proprietary data). The cognizant Service ESA determines and verifies the minimum qualification requirements and the QA requirements that proposing suppliers must meet in order to manufacture or ROMM a specific item for the DoD. Consideration should be given to contacting DCMA as a source of information concerning QA requirements based on current knowledge of the proposing supplier's capabilities. The approval decision should consider both supplier capability and risk. Supplier capability is evaluated based on the SAR review. Risk is evaluated utilizing Section 3.1 above.

The SAR technical review covers three broad functional areas: engineering, manufacturing/repair/overhaul processes, and quality assurance. The technical review is the final decision point for determining whether a source can produce a conforming item requiring source approval from the available technical data. A checklist for use as a guide for the technical review of a SAR package is provided in Exhibit B.

3.5.1. Engineering Review

3.5.1.1 Drawings. Drawing reviews are conducted from a manufacturing or ROMM perspective to determine if the SAR contains data of sufficient quality to allow a competent supplier to manufacture or ROMM items that will be of equal or better quality to those previously procured. Often times, the government owns the data rights for drawings, and thus the drawings being used by the proposed supplier were provided by the procuring activity. To ensure that the data provided is satisfactory, the following sequential steps are performed by the cognizant Service ESA to review a drawing.

3.5.1.1.1 Perform a top-down breakdown of the item to identify all required drawings, parts lists, specifications, etc. Note that each prime contractor or PMA holder will have unique drawing practices specific to their designs.

3.5.1.1.2 Determine that all sheets of each drawing are included and are current and legible.

3.5.1.1.3 Determine if all identified detail and subassembly drawings, to include drawings for forgings and castings if applicable, parts lists, etc. required to manufacture and test the item are contained in the SAR. If the SAR is for an assembly, verify interface of components for form and fit.

> **Note:** Suppliers may only use the prime contractor or DoD approved forging or casting sources for specific forgings/castings.

3.5.1.1.4 Determine if all required drawings for special/master tools and/or fixturing are referenced in the SAR.

3.5.1.1.5 Ensure the cover pages of all required prime contractor or OEM specifications are included, or if other than Prime/OEM specifications are being used (e.g. PMA holder, alternate item, etc.), then complete specifications need to be provided.

3.5.1.1.6 Verify that ALL important processes, tests, and inspections (for examples of important processes, tests, and inspections, see Exhibit C of the JACG Aviation CSI Handbook) are called out in the drawing package by reference to specifications and that suppliers for these processes are identified. Only approved sources may be used.

3.5.1.1.7 Review the drawings and verify that all required dimensions, instructions and notes are documented. If any discrepancies are detected in drawings, the correction will be written as part of the specification in any resultant contract or documents referenced in the contract.

3.5.1.1.8 Review other data and check for discrepancies:

- between the actual drawing revision levels and those cited on other correspondence or purchase orders,
- concerning aircraft usage/application (ensure the proposed part number/revision is not obsolete and is the preferred replacement)
- involving part numbers, configuration dash numbers, stock numbers, right or left designation, etc.,
- involving development/ownership and rights to the use of any required special tooling and master models, and
- involving data marked as proprietary and the included documentation demonstrating the rights to use that data.

3.5.1.2 Source Control Drawings (SCDs) and Other Control Drawings. *Control* drawings are used to establish an item's technical design and performance requirements and to identify suppliers that were determined to be capable of meeting these requirements at the time the drawing was released or updated. There are several types of Control Drawings, including Source Control Drawings, Vendor Item Drawings (also called Vendor Item Control Drawings), Specification Control Drawing, and similar variations.

SCDs are a special type of drawing, clearly annotated with the legend "Source Control Drawing". SCDs differ from other types of drawings because they generally identify the only source(s) that the prime contractor has approved to manufacture the item shown on the drawing. (See Section 1.4 for further explanation of control drawings.). Therefore, suppliers listed on source control drawings are considered capable by the Prime/OEM of manufacturing the item and are generally considered approved by the Government, unless the cognizant Service ESA determines otherwise. In the case that the Government has created a source control drawing, then the suppliers listed on that

source control drawing are considered capable of manufacturing the item and are generally considered approved. However, suppliers listed on vendor item drawings and specification control drawings are *suggested* sources of supply (reference ASME Y14.24, *Types and Applications of Engineering Drawings*). Unfortunately, the terminology is not always used consistently across industry.

Quality inspection and approval procedures must be stated on the SCD or in a document referenced on the drawing. *It is important to remember that SCDs in most cases do not disclose complete design information.*

SCDs identify the only commercial or supplier items that the prime contractor has reviewed and approved to provide the performance, installation, and interchangeable characteristics required for one or more specific critical application. As a general rule, if the prospective supplier is not listed as an approved source on the source control drawing, DoD should not procure the items from that supplier. Even for an otherwise competitive procurement, no other supplier may legally produce that item and assign it the prime contractor's part number. The alternative to procuring SCD items from suppliers listed on the SCD is for the prospective supplier to submit their item to the prime contractor for qualification and potential addition to the SCD as an approved source. Additionally, the prospective supplier may submit a source approval request to the Government to provide their own P/N.

If the procuring activity discovers that there is a system prime contractor, major subsystem contractor, or OEM approved source(s) other than those on the source control drawing, then ESA approval of that source is required. If sources other than those listed on the source control drawing are approved, then an Engineering Change Notice (ECN) or Engineering Order (EO) must be created for the drawing in question to identify the new source for the source control drawing. Then the item's Acquisition Method Suffix Code (AMSC) remains "B." This code denotes that acquisition of the part is restricted to the OEM and/or source(s) specified on the 'source control,' altered item,' or 'selected item' drawings. (See DFARS PGI 217.7506 SPARE PARTS BREAKOUT PROGRAM for proper code to apply and Section 3.5.1 for additional information regarding source controlled drawings.) If sources other than those listed on the control drawing need to be found or approved, proprietary information contained on the drawing will not be released.

3.5.1.3 Currency of Data. Determine if all documents in the SAR and on each sheet thereof are at the most current revision level available to the government and are consistent throughout the SAR. The most current revision level available to the government includes Engineering Change Proposals (ECP), Notice of Revisions (NOR), Design Change Notices (DCN), Engineering Change Orders (ECO), Engineering Orders (EO), Change in Designs (CID), etc. The procuring activity will assure that any resultant contract cites the correct revision of the component/assembly drawing.

3.5.2. Manufacturing, Repair, Overhaul, Maintenance and Modification (ROMM) Review

3.5.2.1 SAR Categories

The language in this section is for the review of manufacturing/ROMM SARs that are submitted by the actual manufacturer/ROMM provider or their representative. The actual manufacturer/ROMM provider is defined as that supplier with plant equipment and personnel to manufacture/ROMM, on the premises, the item for which approval is requested. The SAR process defined herein does not apply to distributors because the Dealer/Distributor is not an approved source, but rather is an authorized Dealer/Distributor to an approved source. If a Dealer/Distributor requests approval to provide parts from a source that is not yet approved by the Government, then the Dealer/Distributor must also provide full SAR package data for the prospective manufacturer for the category submitted. Surplus offers are not covered by these procedures.

3.5.2.1.1 SAR Category I, Actual Item. These SARs are received from suppliers who have manufactured or performed ROMM on the exact item, using OEM technical data, for the prime contractor, OEM, another service, civil agencies, foreign governments, or for the civil sector under FAA PMA identicality. The item will be produced and evaluated against the ESA approved technical data package.

To evaluate these SARs, the cognizant Service ESA should determine if the SAR adequately verifies that the supplier previously manufactured or performed ROMM on, and delivered quantities of the identical item for the prime contractor, OEM, or another DoD activity within the past 3 years for CSIs or 7 years for CAIs; has the current capability to produce identical items of consistent quality; and can manufacture or performed ROMM on them.

The engineering evaluation should ensure that the SAR adequately describes all essential manufacturing or ROMM processes required to produce the subject item; determine if the supplier's manufacturing, repair, or overhaul experience for the item is current; and determine if the SAR shows that the supplier has the capability and equipment to perform all required manufacturing, repair, or overhaul processes and adequately control any sub-contracted processes.

> **Note:** For ROMM, there must be evidence that the supplier has written its plan to the appropriate technical data package (TDP) (e.g. the publication number, revision, and date of the TDP), as determined by each Service. Any sequences of operations/procedures that deviate from the appropriate TDP should be noted as such.

If it is determined that the proposed supplier's experience is not current or the SAR does not adequately document the supplier's ability to perform the required processes,

the cognizant Service ESA should specify the deficiencies in their comments, and return the SAR to the procuring activity or the supplier, as applicable, with a cover letter summarizing the deficiencies.

3.5.2.1.2 SAR Category II, Similar Item. These SARs are received from suppliers who have not previously manufactured or performed ROMM on the subject item, but have manufactured or performed ROMM on items similar in complexity, design, criticality, manufacturing and/or ROMM processes, materials, and application for the prime contractor, OEM, another service, civil agencies, foreign governments, or for the civil sector under FAA PMA identicality. The item will be produced and evaluated against the ESA approved technical data package.

> **Note:** A similar item in this context is one whose design, application, operating parameters, material, and manufacturing processes required are similar to those of the item for which source approval is being sought. Multiple items having similar features, materials, etc. can be used to show manufacturing/ROMM capability in lieu of one similar item.

To evaluate these SARs, the cognizant Service ESA should determine if the SAR adequately describes all essential manufacturing or ROMM processes required to produce the subject item; documents the supplier's capabilities to perform and/or control the processes needed to produce the subject item (e.g., equipment lists, approved process vendors, part suppliers, and qualified personnel); and documents the supplier's ability to produce the similar items with acceptable quality.

The cognizant Service ESA will determine if the similarity SAR satisfactorily demonstrates the supplier's ability to produce the subject item to specifications without compromise of the design intent.

The cognizant Service ESA will also evaluate item design, qualification, durability, and fatigue/life limiting factors and determine the extent of qualification testing that may be required. Testing will be used to verify that the item produced by the new source will provide equal life and performance to items currently operating in the field.

3.5.2.1.3 SAR Category III, New Manufacturer of Item This category covers offerors who do not meet Category I or II criteria but have the OEM's technical data and intend to produce to the ESA approved technical data package.

To evaluate these SARs, the cognizant Service ESA should determine if the SAR adequately describes all essential manufacturing or ROMM processes required to produce the subject item; document the supplier's capabilities to perform and/or control the processes needed to produce the subject item (e.g., equipment lists, qualified subcontractors, and qualified personnel); and document the supplier's ability to produce the items with acceptable quality.

The cognizant Service ESA will determine if the SAR satisfactorily demonstrates the supplier's ability to produce the subject item to specifications without compromise of the design intent.

The cognizant Service ESA will also evaluate item design, qualification, durability, and fatigue/life limiting factors and determine the extent of qualification testing that may be required. Testing will be used to verify that the item produced by the new source will provide equal life and performance to items currently operating in the field.

3.5.2.1.4 SAR Category IV: Alternate Item – These are SARs received from an offeror who is proposing an alternate part as the equivalent to the OEM part. These can be reverse engineered, but not reengineered components. Reengineering is the creation of an alternative design or manufacturing process and should be addressed via Engineering Change Process MIL-HDBK-61A, *Configuration Management Guidance*. Reverse engineering is discussed in more detail in Sections 1.9 and Chapter 4 below and may require a new NSN be assigned. Alternate items may only be considered when the Section 1.9 criteria are met.

FAA PMA items approved under “test & computation” fall under this category as the new design must be verified.

3.5.2.2 Manufacturing Process/Operation (Op) Sheets and ROMM Process Plans. For manufacturing SARs, the manufacturing operation sheets, which are generally referred to as "process sheets", "operation sheets", or "op sheets", must be reviewed to ensure that they reflect the step by step manufacturing procedures for producing the subject item. If dimensions, measurements, etc. are not accounted for on the manufacturing or ROMM process sheets but included on separate Inspection Method Sheets (IMS), then those IMS should also be submitted in the SAR.

For CSI parts the proposed vendor must provide the actual “stamped” Process/Op sheets for the manufacture of the part as well as any proposed differences for parts to be provided to the DoD. The actual “stamped” sheets are the actual Process/Op sheets that were used in the manufacture of the subject item or similar item, which are stamped, initialed, etc., that the processes were performed properly. CAT III and CAT IV SAR packages will not contain stamped Process/Op sheets. For suppliers who are subcontracting out all or a portion of the manufacture of the item, the actual manufacturer/subcontractor needs to provide process/op sheets. Process/Op sheets that state that a purchase order was sent to a sub-tier supplier and then the part was received and packaged is not considered sufficient.

For ROMM SARs, a detailed ROMM process plan (a.k.a. maintenance plans or work instructions) must be reviewed to ensure that it addresses the step-by-step ROMM procedures to repair or overhaul the subject item.

3.5.2.3 Manufacturing Op Sheet and ROMM Process Plan Verification. If the proposing supplier previously manufactured or performed ROMM on the identical item for the prime contractor (i.e., Category I SAR), the supplier must provide complete op sheets (or process plans for ROMM), and verify that they are the same op sheets (or process plans for ROMM) that were used to produce the item for the prime contractor. If approval is requested based on similarity (i.e., Category II SAR), complete op sheets (or process plans for ROMM) for the similar item must be provided. The process operation sheets (or process plans for ROMM) for the similar item must demonstrate the proposing supplier's comprehension of all the processes and operations needed to manufacture, ROMM, and inspect the approval item. For any category SAR, a mere summary of manufacturing or ROMM stations is not sufficient, nor is a summary description of a manufacturing or ROMM operation such as "mill and drill all holes per blueprint" acceptable. The op sheets and ROMM process plans must describe (to a level of detail necessary to demonstrate the source's understanding of the proper sequence of processes and the controls necessary to maintain the critical characteristics) the processes performed (by both the prospective source and its supplier(s)) to produce the item. For example, the detailed operation sheets must describe the drilling sequence, type, dimensions, and location of each individual hole.

The cognizant Service ESA will review the proposed process operation sheets (or process plans for ROMM) for the subject item to ensure that the processes and process sequences proposed appear acceptable to produce the subject item.

> **Note:** Many suppliers consider their op sheets or ROMM process plans competition sensitive and have been reluctant to disclose this information. Operation sheets and process plans are considered proprietary data; therefore, DoD personnel will ensure that adequate safeguards are taken to prevent this or any other proprietary data from being disclosed to third parties. Op sheets and process plans are not to be reproduced by the Government.

Supplier Op sheets and ROMM process plans must provide detailed manufacturing or ROMM information including, but not limited to, the operation number and title, machine used and parameters, specifications and tolerances, subcontracted processes, special tooling, and in-process inspection requirements.

Op sheets and process plans must provide a legend to explain the notations on the sheets, (e.g., * = critical, S = subcontracted, I = inspect in-process, etc.). Any process performed by an outside supplier/outside source must be clearly distinguishable in the op sheets or ROMM process plans.

3.5.3. Quality Assurance Review

The cognizant Service ESA will review and refine, as required, the qualification/QAP requirements for the item and include these changes as enclosures to the formal disposition letter.

The DFARS, PGI 217.7506, Part 3-303.4c, *Technical Evaluation Phase*, makes the approval of a new source contingent upon capability to introduce adequate quality controls. Approval of a potential new source requires that: (1) a potential new source can satisfactorily perform the quality control responsibilities currently performed by the prime contractor, (2) the Government can satisfactorily perform the quality control responsibilities currently performed by the prime contractor, or (3) the prime contractor will perform the quality control services to the new source for the government.

If neither the Government nor the potential new source have demonstrated the capability to assume the quality control responsibilities performed by the prime contractor during the manufacture of the subject item, and the prime contractor will not provide their quality control services to potential new sources of the subject item, then alternate or competitive procurement of the item is not feasible.

Specific Quality Assurance (QA) requirements should be based on guidance specified in FAR, Part 46, "Quality Assurance", and DFARS, Part 246, "Quality Assurance", and on individual service instructions. Inspections and testing (including who witnesses, location of where done, etc.) should be limited to only those necessary for quality, reliability and safety and to eliminate non-value added requirements. Refer to Chapter 4 of the JACG Aviation CSI Handbook, Quality Management, for a detailed discussion of CSI quality concerns.

The cognizant Service ESA should consider the following questions for future contract planning:

- Is there sufficient information in the SAR to validate the First Article Test (FAT) requirement? If so, is it feasible and cost effective for the FAT to take place at the contractor's facility versus a Government facility?
- Is a Production Lot Test (PLT) required? If so, is it feasible and cost effective for the PLT to take place at the contractor's facility, witnessed and accepted by the Quality Assurance Specialist (QAS) vice a Government facility?
- What type and extent of QAS involvement is needed for any required acceptance testing (i.e., should the QAS verify, witness, or perform the acceptance tests)?

Based on the answers to these questions, the appropriate testing/QA requirements should be selected and tailored to the specific requirements of the item in question.

Where structural fatigue testing is required, the cognizant Service ESA's will specify the test requirements and procedures in the response to the SAR or at time of award.

The supplier's quality history should be reviewed to assess their ability to produce items requiring source approval at the required quality level. This review should cover the contractor's previous quality performance in producing the required item or any similar items, and/or performance on other Government contracts. The QA data should be examined for indications of the supplier's ability to perform the required manufacturing operations, the quality of supplier personnel and training, the effectiveness of corrective actions, etc. Sources for quality history information include:

- Non-conforming material reports (e.g., Product Quality Discrepancy Reports (PQDRs) where the report narratives, the nature of the deficiencies, or quantity of reports indicate there may be supplier quality concerns);
- Material Review Board (MRB) data;
- Field data (e.g., Engineering Investigations, Material Deficiency Reports, etc.);
- Corrective Action Request (past and current);
- Deviation requests. (See the Multi-Service/Defense Agency CSI Instruction, Sect. E.2.a (7)); and
- DCMA quality history information.

The SAR should be reviewed to ensure that it includes a QA requirement for the contractor to provide 100% inspection or 100% verification of the critical characteristics specified in the TDP/contract, unless approval to use sampling or statistical process control (SPC) has been authorized by the cognizant Service ESA and specified in the TDP/contract. The terms 'inspection' and 'verification' are occasionally used as if they are synonymous, but for the purposes of this handbook they connote different expectations.

- 'Inspection' is the evaluation by observation and judgment accompanied, as specified, by the physical act of measurement, testing, or gauging to assess conformance with specified requirements. In practice, Government inspection means either the physical act of measuring, testing, and gauging products or witnessing someone else's actual measurement, testing, and gauging of products.
- 'Verification' involves the confirmation through review of objective evidence that specified requirements have been fulfilled. Objective evidence includes the records, data, analyses, and similar documentation that demonstrate inspections and tests were performed as required, procedures were followed, equipment and individuals were properly certified, and inspection and test results were factual and quantifiable, where appropriate.

Inspection requirements must ensure that operations are tracked and verified. These include a documented sequence of manufacturing and process operation, and work instructions that identify characteristics. Means for identification of the manufacturing and appraisal status will be provided at the completion of each pertinent operation (i.e.,

those that generate, affect, control, or evaluate a characteristic) and provisions for maintaining lot integrity must be provided. Criteria for acceptance and rejection will be provided for all critical characteristics. IMS must be submitted for approval as part of the FAT.

Inspection requirements in SARs should be reviewed to:

- Verify proper use of a sampling plan based on the criticality of the characteristic to be inspected, with appropriate levels of inspection, sampling, and acceptable quality levels per acceptable non-Government standards such as ANSI/ASQC Z1.4- (latest issuance) Sampling Procedures and Tables for Inspection by Attributes.
- Ensure that critical characteristics can be inspected and have clear accept/reject criteria.
- Ensure that critical characteristics are not affected by unincorporated drawing changes.

Traceability of CSIs is essential. Actual or potential field problems with CSIs must be traceable back to the source of manufacture or ROMM, and to the processes/materials that were used during production. The objective is to ensure that marking requirements will permit item traceability back to the source of manufacture and the specific contract, and that the data can be used to identify suspect parts that have already been fielded.

In addition to traceability to the source and contract, CSIs must be marked with unique serial numbers, unless impractical or determined otherwise by the cognizant Service ESA. If serialization is required, the SAR must specify the method of marking. The location, marking content, size, and application process will be per the drawings and/or technical data package. When serialization is not required on a CSI, some form of distinguishable identification should be applied (e.g., lot or batch indicator, contractor and part identifier, etc.). Serialization is addressed further in Section 7.5.4 of the JACG CSI Handbook.

All contractor test and inspection data should be maintained as part of the contractor data file. Serialized items should be traceable back to the material certification and/or qualification testing done on the basic forging, billet, etc.

Other items affecting QA that require review are: any discrepancies and inconsistencies among different sections of the SAR; similarity cases where the prime contractor of the similar item is different than the prime contractor for the subject item, and therefore may require further analysis to verify true similarity of processes and materials; and performance history of proposed suppliers by reviewing field failure data (e.g., Joint Deficiency Reporting System (JDRS), Product Data Reporting and Evaluation Program (PDREP), Excluded Parties List System data review), results of FAT/PLT, cross-service complaints, and QA status reports.

3.6. SAR Disposition

After all data in the SAR have been reviewed, the cognizant Service ESA will consider the comments and recommendations of any other reviewers and assess whether: the SAR contains complete data; the supplier is a viable alternate source; there are adequate, controllable quality assurance provisions; and critical characteristics specified in the SAR are complete and technically adequate. As part of this decision, all discrepancies or concerns should be documented in the disposition letter to the procuring activity (or SAR POC as identified in Service-specific guidance).

Upon receipt of the cognizant Service ESA disposition of a SAR, the procuring activity (or SAR POC as identified in Service-specific guidance) then advises the supplier whether the SAR was approved or disapproved. If a site survey is required prior to source approval, the approval/disapproval letter should not be sent until after completion of the site survey.

3.7. Government Quality Assurance and Test Requirements

If a supplier is technically approved via the SAR review process, the cognizant Service ESA should ensure any previously identified contractor and Government quality assurance/test requirements (e.g., FAT, First Piece Layout (FPL), PLT, mandatory inspection requirements, etc.) and/or test reports are provided to the procuring activity prior to contract award for inclusion in the CDRL / DD Form 1423. CSI Quality Management is discussed in Chapter 4 of the JACG Aviation CSI Handbook.

It may be necessary to specifically identify item characteristics or tests for the Government QAS to inspect or witness. When this is the case, the procuring activity will provide the QAS with a Quality Assurance Letter of Instruction (QALI), which controls the extent, method, and duration of the inspection. Inspection instructions should be specific and cover the minimum number of inspections and/or tests that are required to verify the quality of the item. Avoid generalities such as “inspect all characteristics not classified as minor”. Excessive inspection requirements increase costs and/or impose needless workload on the QAS. Exhibit F of the JALC Aviation CSI Handbook contains instructions for issuing a QALI, as well as a sample QALI. Suppliers are contractually obligated to provide components or assemblies that meet all drawing and specification requirements, even if the characteristics on the drawings are not specifically identified as critical or major.

Chapter 4

Reverse Engineering Process

A notional reverse engineering process for government funded/initiated items is depicted in Figure 4.1. Detailed procedures for each numbered block are described below. As indicated on the flowchart, program reviews should be performed at the end of each principal phase of the reverse engineering process to assure compliance to the process and to evaluate the need for continuing reverse engineering on the item. Government manufacturing via one-time manufacturing authorization is addressed in Section 7.2.

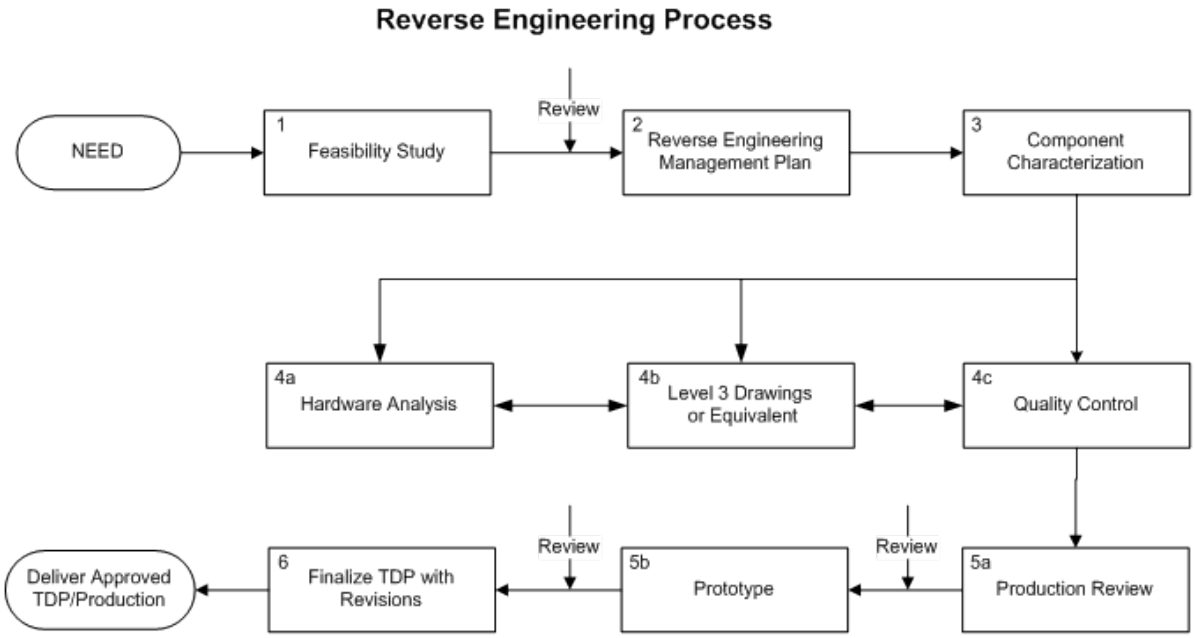

Figure 4.1 Reverse Engineering Process

Block 1. Conduct a feasibility study to answer functional/economic questions. Data required include a criticality determination, availability of an existing OEM TDP to include proprietary data issues; review and resolve proprietary data issues; determine if a substitute item is available; missing data requirements and testing requirements; and prepare a preliminary reverse engineering cost-estimate and schedule.

Block 2. Develop a Reverse Engineering Management Plan (REMP) for each candidate to document the urgency; to ensure that a logical sequence of events approved by the cognizant Service ESA is followed to prevent delays or misinterpretations in the overall program objectives; and to define who will fund the effort.

Block 3. Gather data for each candidate item to ensure functional integrity is maintained. Conduct a thorough data analysis of the OEM TDP and other alternate data sources to determine whether data are missing; identify sample items (e.g., A or F condition) for analysis; resolve any additional proprietary data issues; and review testing requirements.

Block 4.a. Perform an analysis of hardware and/or embedded software i.e. microcode, firmware, etc. to develop any missing data required for Level 3 drawings or equivalent.

Block 4.b. Level 3 drawings or Computer Aided Design/Computer Aided Manufacture (CAD/CAM) TDPs are the result of the reverse engineering process and contain the documented parameters necessary to reproduce the selected candidate. Recorded parameters necessary to define the nominal design and establish tolerances may include dimensions, materials, electrical requirements and other specifications.

Block 4.c. Perform a quality control analysis and document it on the Level 3 drawings (or equivalent) and candidate production representative units to certify their compliance with original candidate specifications. Quality Assurance Provisions (QAPs) and quality control documentation are all items to be considered. Besides determining producibility, consideration should be given to value engineering or other product improvement ideas to correct deficiencies found in the initial component analysis.

Block 5.a. Perform a Production Review (PR) to determine and approve/disapprove the economics of producing the reverse engineered item and whether it should be manufactured organically or outsourced to a supplier. This review will result in a “build to” TDP from which a prototype unit can be manufactured for FAT to include packaging and preservation (Packaging, Handling, Storage & Transportation (PHS&T)).

Block 5.b. After successful prototype completion, conduct a review to finalize the TDP with any revisions. Ensure that other inspections, tests, or evaluations that need to be conducted, in addition to prototype, are conducted on reverse engineered designs (e.g., fit checks, fatigue tests, interface evaluations, tolerance evaluations, etc.).

Block 6. Compile the final TDP and deliver to the Government tasking agency reflecting the reverse engineering of the candidate item, which is a Government owned deliverable. A cognizant Service ESA-approved PLT involving test of a production unit may be required to determine if the reverse engineered item meets all required specifications.

Chapter 5

Alternate Source Site Survey

Site surveys can be a critical element of the alternate source qualification process and are specific to the location and the Commercial and Government Entity (CAGE) code of the supplier, but should be strongly considered for CSIs. Site surveys provide insight into a supplier's capabilities; answer basic questions relating to the manufacture, ROMM, inspection, production, testing, and delivery of an item. Site survey results help the cognizant Service ESA determine the level of Government supervision required to ensure that quality items are delivered. While the site survey is an important function of the approval process, lack of a site survey should not be the sole reason for rejecting a SAR package from a potential alternate source.

Site surveys should be performed if any of the following apply:

- for suppliers who have not previously manufactured or performed ROMM on CSIs; or
- as required by the cognizant Service ESA, if the supplier has not performed ROMM on, or manufactured and delivered the actual CSI or similar CSIs in production quantities and/or had a site survey within the past three years; or
- as required by the cognizant Service ESA, if there has been a change in company location, ownership, and/or name since the last delivery of the actual or similar critical items and the cognizant Service ESA engineer determined that documentation provided by the company to describe the nature of the change is not sufficient; or
- as required by the cognizant Service ESA, if the supplier has not performed ROMM on, or manufactured and delivered the actual item or similar items in production quantities and/or had a site survey; or
- as required by the cognizant Service ESA, if quality issues have been identified.

If a site survey is required prior to source approval, notification to the procuring activity or supplier, as applicable, is required prior to source approval. In these cases, the company cannot be added as an approved source of supply until the site survey is completed and thus the source approval/disapproval letter should not be sent until the site survey has been completed. However, the technical evaluation of the SAR can be completed prior to completion of the survey.

The lead activity or agency for the site survey (survey initiator) will negotiate specific survey dates with the supplier. The survey typically lasts no more than three working days and must be completed prior to SAR approval and contract, unless specifically authorized by the cognizant Service ESA. As appropriate, the lead activity will coordinate the scheduling of surveys with other Services.

The site survey team will minimally consist of an engineer or equipment specialist with manufacturing and/or industrial experience and quality assurance personnel from the interested Service(s). Other personnel may be required to support a survey if there are specific details that need to be addressed (e.g., availability of specific tooling, equipment, jigs, repair or overhaul issues, etc.). The lead activity will gather input from all survey team members and publish the formal site survey report.

A formal report of each survey is prepared by the lead activity within ten days of completion of the survey. The report consolidates the comments, observations, and recommendations of all team members and provides a schedule for follow-up actions, if required. Copies of the formal report are provided to team members and sent to the supplier via the integrated material manager activity. A copy of the report and any corrective actions will be included in future SARs from the supplier. Working papers will be retained by the survey lead for reference to support future SAR submissions from the supplier.

Site survey teams also conduct pre- and post-survey contractor briefings. Any concerns or findings are shared with the company at the exit brief. Typically, the company has 30 days to address any major concerns.

5.1. Site Survey Checklist

Exhibit C contains a Site Survey Checklist that can be tailored for a variety of survey requirements including source approval, site surveys, pre-award surveys, Supplier Interface and Oversight Program (SIOP) surveys, etc. The checklist may be tailored for a particular inspection, and should be provided to the supplier prior to the visit. The checklist has three main parts:

- Part 1 contains an introduction with instructions for completing the checklist. It also provides general questions about the facility (location, size, points of contact, DoD contracts/parts, etc.), as well as a form for listing all visit participants.
- Part 2 is a comprehensive list of questions that cover: (1) Production and Contract History, (2) Production Engineering and Planning, (3) Industrial Resources and (4) Quality Assurance Program Compliance. The checklist should be completed as fully as possible so that it can serve as a record of review to help preclude duplicate effort for other purposes (e.g., even though a site survey may have been initiated for a source approval request, it may also suffice as a CSI or quality program review).
- Part 3 is a Finding Report containing two forms – one for individual findings, and one to be used as a summary of findings. Detailed instructions and definitions are provided. These forms may also be used to track follow-up actions and corrective actions, if desired.

5.2. Pre-Award Surveys

Site surveys are conducted to provide insight into a supplier's capabilities; answer basic questions relating to the repair, overhaul, manufacture, inspection, production, testing, and delivery of items. Pre-award surveys for potential sources of repair, overhaul or manufacture should be performed for item-specific issues (i.e., complex items, problematic items, etc.) to verify requirements in solicitation and for suppliers who have previously repaired, overhauled or manufactured items in production quantities for DoD but the actual item requires operations, processes, or inspections not previously demonstrated by the supplier. Pre-award surveys may be completed for suppliers when their SAR includes information that is incomplete or unclear. This includes changes in capabilities, processes, specialized staff, manufacturing or quality problems, or issues unresolved from a previous survey. When a pre-award survey is required as the result of a SAR review, the decision to perform the survey will be included in the disposition letter from the cognizant Service ESA, and the procuring activity will issue a letter to DCMA documenting the QALI requirements. The DCMA Pre-award Survey Request Form (SF1403) provides a means for requesting a survey.

5.3. Joint Repository for Past Site Surveys

To promote inter-Service efficiency a common repository for past site surveys is being developed. Until the common repository is completed, contact your service CSI representative to obtain a copy of completed surveys.

Chapter 6

Source Validation and Disqualification

The Government must ensure sources of supply retain their capabilities over time. Prime contractors and OEMs retain their approval, unless revoked by the cognizant Service ESA for technical and/or quality reasons or by the procuring activity for contractual and/or legal reasons (such as OEM debarment). Alternate sources must successfully complete an initial source approval process and maintain their qualifications over time. A system of controls using site surveys, contract quality assurance requirements, DCMA oversight, and product testing contribute to ensuring the capabilities of approved sources are maintained.

6.1. Revalidation of Sources of Supply

Revalidation is not synonymous with re-qualification.

Sources of supply that have not provided a specific item requiring source approval within three years of an anticipated solicitation must be revalidated as an approved source by the cognizant Service ESA. Before performing the revalidation, the cognizant Service ESA will determine to what extent a review is to be conducted. Revalidation ensures sources remain capable of delivering satisfactory items. Generally, prime contractors and certain OEMs will not need revalidation, even if they have not delivered (or performed ROMM on) the specific items requiring source approval within 3 years. However, revalidation of prime/OEMs may be considered if there have been issues such as product quality concerns, manufacturing process changes, manufacturing location changes, manufacturing facilities transfers, financial concerns, or if a new source is being approved by the prime contractor. Any revalidation process should include dialogue with the cognizant DCMA Quality Assurance Representative (QAR) and the IMM. Refer to Sections E.2.c. and d. of the Multi-Service/Defense Agency CSI Instruction for additional information.

The Integrated Material Manager (IMM) is responsible for notifying the cognizant Service ESA when a revalidation of an approved source is required. The cognizant Service ESA would be notified when:

- the source has not manufactured or performed ROMM on the specific items requiring source approval for the DoD within three years prior to an anticipated solicitation; or
- there are concerns regarding product quality; or
- manufacturing or ROMM process changes have occurred.

6.2. Re-qualification of Sources of Supply

Re-qualification is not synonymous with revalidation. Re-qualification is a requirement placed on suppliers that have been formally removed from a Service's list of approved sources for any reason, including but not limited to technical, quality, and/or contractual issues. Re-qualification may require submission of a complete source approval request meeting current Service requirements. Deviations or submissions of partial packages must be approved by the cognizant Service ESA.

6.3. Notification of Removal as Approved Source

Suppliers must be promptly notified if they are no longer considered an approved source (e.g., if the item was recently determined to be a CSI), in accordance with FAR 9.207(b*), Changes in Status Regarding Qualification Requirements.* This notification must be submitted to the supplier via a notification letter from the procuring activity (or SAR POC as identified in Service-specific guidance). At a minimum, the letter should:

- advise that the procuring activity cannot acquire items from that source to satisfy requirements for the subject item;
- provide the reason(s) the source was removed; and
- identify the action(s) required by the source to become an approved source for the subject item.

Chapter 7

Government Manufacture of Critical Items (CIs)

Critical Items (CIs) are considered in this document to include both CSIs and CAIs.

Service aviation depots and other Government facilities may be authorized by the cognizant Service ESA to manufacture aviation CIs. In order to be considered for CI manufacturing, Government manufacturing facilities should have extensive organic production facilities, resident aviation engineering staff, an established cognizant Service ESA-approved quality program, and an established CI management program approved by the cognizant Service ESA.

Service aviation depots and other Government facilities may be authorized to manufacture CIs via two methods: alternate source approval and one-time manufacturing. Alternate source approval is used for routine, recurring production and is *process oriented* to ensure airworthiness and repeatability via process controls and documentation. One-time manufacturing is used when there is an urgent need for a limited quantity of CIs to meet immediate production or fleet operational requirements and there is either no approved source or the turnaround time from approved sources is unacceptable. One-time manufacturing is *item oriented* to ensure airworthiness via conformance with design requirements.

Authorization for one-time manufacture of an item must not be used to circumvent alternate source approval requirements for repeat or routine production.

7.1. Government Manufacturing Authorization via Alternate Source Approval

A Government facility (e.g., Service aviation depot) may be granted alternate source approval once the cognizant Service ESA confirms the facility meets all requirements established for alternate source approval for commercial facilities. The cognizant Service ESA may decide to employ an abbreviated SAR review process; however, at a minimum, a manufacturing plan should be reviewed and approved that includes:

- product level drawings or equivalent;
- manufacturing process sheets;
- proper quality assurance requirements;
- identification of raw material; and
- tracking method to be utilized during manufacturing.

The cognizant Service ESA should determine if qualification testing prior to contract award or FAT after award should be accomplished. Following the successful completion

of testing, any proposed changes to the source's manufacturing plan should be reviewed and approved by the cognizant Service ESA.

Non-aviation depot Government facilities are required to submit a formal SAR for cognizant Service ESA review and approval per Chapter 3 above, in order to be a candidate as an alternate source for recurring production, unless Service-unique procedures provide other guidance.

When a Service aviation depot or other Government facility has satisfied the alternate source approval criteria, that source should be added to the Service's approved source list as an approved source (if applicable), just as if they were a non-Government facility. See Service-specific guidance on adding Government facilities to approved sources list. This will provide notification to the procuring activity, and will allow the procuring activity to include the depot/facility in future solicitations and contract awards.

7.2. Government Manufacturing via One-Time Manufacturing Authorization

7.2.1 CSI

Authority for one-time manufacturing of a CSI may be granted by the cognizant Service ESA to a Service aviation depot or other government facility only when the conditions stipulated by the Multi-Service/Defense Agency CSI Instruction, paragraph E.2.j.(2) are satisfied.

If a CSI produced under the one-time manufacturing authority does not meet original manufacturer requirements or has not been fully qualified, the cognizant Service ESA will establish and ensure publication of applicable operating procedures, restrictions, and limitations as well as applicable maintenance, inspection, tracking, and disposal requirements.

During one-time manufacturing, quantities in excess of the immediate need may be manufactured where additional items are necessary for testing (e.g., first article, fatigue strength, other destructive tests) or the economics of production or item usage indicate this is clearly advantageous to the Government. The authority for one-time manufacture must not be used to circumvent alternate source approval requirements for repeat or routine production. This one-time manufacturing requirement does not apply to items produced to support research, development, test, or evaluation. Parts produced in accordance with the one-time manufacturing procedures must be coded, tracked, and disposed of as military-unique CSIs.

7.2.2 CI, other than CSI

Government facilities are authorized to manufacture CIs other than CSIs in limited quantities (one or a few) on a “one-time basis” without undergoing the full alternate source approval process.

The cognizant Service ESA should confirm:

- there is an urgent requirement for the item that cannot be satisfied by a previously approved source;
- the technical requirements for the item have been fully established;
- the resulting items are equivalent to or better than the items manufactured by the formally approved source(s);
- the quality and manufacturing attributes are traceable from raw material point of origin to finished goods; and
- any special testing or data requirements established by the cognizant Service ESA have been satisfied.

When an item produced under this one-time manufacturing authority does not meet original manufacturer requirements or has not been fully tested, the cognizant Service ESA should establish and ensure publication of applicable operating procedures, restrictions, and limitations as well as applicable maintenance, inspection, tracking, and disposal requirements.

Appendix I
Acronyms

AMC	Acquisition Method Code
AMSC	Acquisition Method Suffix Code
AMSE	American Society of Mechanical Engineers
CAD	Computer Aided Design
CAGE	Commercial and Government Entity
CAI	Critical Application Item
CAM	Computer Aided Manufacture
CAT	Category
CCB	Configuration Control Board
CDRL	Contract Data Requirements List
CFR	Code of Federal Regulations
CI	Critical Item
CICA	Competition in Contracting Act
CID	Change in Design
CIM	Critical Item Management
CIPRD	Critical Item Procurement Requirements Document
CNC	Computer Numerically Controlled
CSI	Critical Safety Item (For this Handbook, CSI refers to AVIATION CSI.)
DCA	Design Control Activity (Synonym: Engineering Support Activity (ESA))
DCMA	Defense Contract Management Agency
DCN	Design Change Notice
DFARS	Defense Federal Acquisition Regulation Supplement
DLA	Defense Logistics Agency
DoD	Department of Defense
DRMS	Defense Reutilization and Marketing Service
ECN	Engineering Change Notice
ECO	Engineering Change Order
ECP	Engineering Change Proposal
EI	Engineering Investigation
EO	Engineering Order
ESA	Engineering Support Activity (synonym: Design Control Activity (DCA))
FAA	Federal Aviation Administration
FAQ	Frequently Asked Questions
FAR	Federal Acquisition Regulation
FAT	First Article Test

FAX	Facsimile
FedBizOpps	Federal Business Opportunities
FLIS	Federal Logistics Information System
FPL	First Piece Layout
FMECA	Failure Modes, Effects, and Criticality Analysis
FSC	Federal Supply Classification
GFM	Government-Furnished Material
IMM	Integrated Materiel Manager
IMS	Inspection Method Sheet
ISO	International Organization for Standardization
JALC	Joint Aeronautical Logistics Commanders
JDRS	Joint Deficiency Reporting System
LES	Local Engineering Specification
LPS	Local Process Specification
MCR	Manual Change Revision
MEO	Maintenance Engineering Orders
MRB	Material Review Board
M&TE	Measurement and Test Equipment
NADCAP	National Aerospace and Defense Contractors Accreditation Program
NASA	National Aeronautics and Space Administration
NDI	Non-destructive Inspection
NDT	Non-destructive Test
NIST	National Institute of Standards & Technology
NOR	Notice of Revision
NSN	National Stock Number
OEM	Original Equipment Manufacturer
OP Sheet	Manufacturing Process/Operations sheet
PGI	Procedures, Guidance and Information
P/N	Part Number
PCO	Procurement Contracting Officer
PDREP	Product Data Reporting and Evaluation Program
PHS&T	Packaging, Handling, Storage & Transportation
PLT	Production Lot Test
PMA	Parts Manufacturer Approval
POC	Point of Contact
PQDR	Product Quality Deficiency Report
PR	Production Review
PVA	Product Verification Audit
QA	Quality Assurance

QAD	Quality Assurance Document
QALI	Quality Assurance Letter of Instruction
QAM	Quality Assurance Manual
QAP	Quality Assurance Provisions
QAR	Quality Assurance Representative
QAS	Quality Assurance Specialist
QPD	Qualified Products Database
QPL	Qualified Products List
QM/P	Quality Manual/Procedure
R&O	Repair & Overhaul
RCC	Requirements Control Card
REMP	Reverse Engineering Management Plan
ROMM	Repair, Overhaul, Maintenance and Modification
RPPOBP	Replenishment Parts Purchase or Borrow Program
S/N	Serial Number
SAR	Source Approval Request
SCD	Source Control Drawing
SIOP	Supplier Interface & Oversight Program
SOS	Source of Supply
STC	Supplemental Type Certification
SPC	Statistical Process Control
TC	Type certified
TDBD	Top Down Breakdown
TDP	Technical Data Package
T/M/S	Type/Model/Series
TSO	technical standard order
URL	Uniform Resource Locator

Exhibit A

Source Approval Request Package Contents Guide For New Manufacture

A.1. Purpose

The purpose of this Exhibit is to provide additional guidance for preparing a Source Approval Request (SAR).

A.2. Definitions

This information pertains to items identified as requiring source approval. These alternate source approval procedures apply only to new, manufactured items. This exhibit does not address ROMM or surplus items.

- A CSI, as defined in Public Law 108-136 "National Defense Authorization Act for Fiscal Year 2004", Section 802, Quality Control in Procurement of Aviation Critical Safety Items and Related Services, is:

  "A part, assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapon system if the part, assembly, or equipment contains a characteristic any failure, malfunction, or absence of which could cause:

  - a catastrophic or critical failure resulting in the loss of or serious damage to the aircraft or weapon system;
  - an unacceptable risk of personal injury or loss of life; or
  - an uncommanded engine shutdown that jeopardizes safety."

- DoD-STD-2101 defines a critical characteristic as:

  "A characteristic that analysis indicates likely, if defective, to create or increase a hazard to human safety, or to result in failure of a weapons system or major system to perform a required mission."

  A CAI, as defined in the Multi-Service/Defense Agency CSI Instruction is: "An item that is essential to weapon system performance or operation, or the preservation of life or safety of operating personnel, as determined by the military services."

A.3. Guidance

a. For items not coded full and open competition, only those sources previously approved by the Government will be solicited. The time required for approval of a new supplier is normally such that award cannot be delayed pending approval of the new source.

If a potential offeror can demonstrate to the satisfaction of the contracting officer that the potential offeror (or its product) meets the standards established for source approval or can meet them before the date specified for award of the contract, a potential offeror may not be denied the opportunity to submit and have considered an offer for a contract solely because the potential offeror is not currently approved.

Please note that if evaluation of the source approval request cannot be processed in time to meet logistics support requirements, award will be made to a currently approved source. The request can still be processed for consideration against future requirements.

The submission of complete documentation as specified in this guide is essential for consideration of the source approval request. If the documentation is inadequate or incomplete, the submitter will be notified of deficiencies for potential resubmittals.

b. Source Approval Categories -- there are basically four conditions under which Source Approval Requests (SARs) will be categorized:

- **SAR Category I, Actual Item**. - These SARs are received from suppliers who have manufactured or performed ROMM on the exact item to the OEM technical data for the prime contractor, OEM, another service or, a civil sector under FAA PMA identicality. The item will be produced and evaluated against the ESA approved technical data package.
- **SAR Category II, Similar Item**– These SARs are received from suppliers who have not previously manufactured, repaired, or overhauled the subject item, but have manufactured or performed ROMM on items similar in complexity, design, criticality, manufacturing/repair/overhaul processes, materials, and application for the a) Prime Contractor, OEM, or another service using OEM data, or b) civil sector under FAA PMA based on identicality. The item will be produced and evaluated against the ESA approved technical data package.

- **SAR Category III, New Manufacturer of Item** - This category covers offerors who do not meet Category I or II criteria but have the OEM's technical data and intend to produce to the ESA approved technical data package.
- **SAR Category IV, Alternate Item -** These are SARs received from an offeror who is proposing an alternate part as the equivalent to the OEM part. These can be reverse engineered, but not reengineered components. Reengineering is the creation of an alternative design or manufacturing process and should be addressed via Engineering Change Process MIL-HDBK-61A, *Configuration Management Guidance*. Reverse engineering is discussed in more detail in Section 1.9 and in Chapter 4 of the main body of this Handbook and may require a new NSN be assigned. Alternate items may only be considered when the Sourcing Handbook Section 1.9 criteria are met.

c. If a dealer/distributor (non-manufacturing source) of the item is seeking approval as a source, the category to which the actual manufacturer belongs will apply for purposes of approval procedures. This is because the Dealer/Distributor is not approved as an approved source, but rather as an authorized Dealer/Distributor to an approved source. The actual manufacturer is defined as that supplier with plant equipment and personnel to manufacture, on the premises, the item for which approval is requested. Therefore, the name, address and Commercial and Government Entity (CAGE) code of the supplier (actual manufacturer) is required and must be provided for consideration of source approval together with all data supporting the category for which approval applies. Approval of a dealer/distributor is based upon the traceability to an approved source and approval of the dealer/distributor will be removed from the approved source list if the distributor changes their proposed source after approval. **The source evaluation/approval procedures apply only to newly-manufactured items. Surplus offers are not covered by these procedures.**

d. To reduce the time required for processing a SAR, it is important for the potential supplier to provide ALL of the required information when submitting a SAR. Submission of a complete SAR is the best method for obtaining timely review. Additional information, documentation and/or samples may be required for any SAR category to allow for further evaluation of the submitting company's request; however, the submission of the requested information does not guarantee approval. In some cases, qualification parts may be required as determined by the technical evaluation to be used for testing which may include, but not be limited to, performance and/or endurance testing. Regardless of the SAR category, a site survey of the facility may be conducted to further evaluate the requestor's capabilities.

e. A SAR package should be submitted for one (1) part or assembly per request. However, a supplier may request permission from the ESA to submit one SAR for a family of parts made to the same drawing or specification.

f. The SAR information and documentation can be submitted in two formats, Compact Disk (CD) or hard copy. The preferred method for SAR documentation is digitally on CD. If the data are submitted via a contractor produced CD, it can only be accepted in .PDF format.

> **Note:** Many suppliers consider this information competition sensitive and have been reluctant to disclose. DoD personnel will ensure that adequate safeguards are taken to prevent this or any other proprietary data from being disclosed to third parties.

g. FAA PMA approved manufacturers must submit their SAR under the appropriate SAR category. PMA items approved through identicality where the supplier has manufactured the actual item should be submitted under SAR Category I, Actual Item. PMA items approved through identicality where the supplier has manufactured a similar item, should be submitted under SAR Category II, Similar Item. Suppliers who have PMA approval for the subject part by identicality but have never actually manufactured the subject item or a similar item should be submitted under SAR Category III. PMA items approved under "test & computation" should be submitted under SAR Category IV, Alternate Item as the new design must be verified.

A.4 CSI Source Approval Request Contents Checklist

Category I: Actual Item
Category II: Similar Item (Equivalent)
Category III: New Manufacturer of Item
Category IV: Alternate Item

SAR Element	Required Element Description	CAT I	CAT II	CAT III	CAT IV
*	**A TABLE OF CONTENTS IS REQUIRED FOR ALL SARs**				
A	**Cover Letter**	X	X	X	X
B	**Technical Data Rights Certification Statement**	X	X	X	X
C	**Supplier Brochure & Correspondence**	X	X	X	X
D	**Quality Assurance Documentation**	X	X	X	X
E	**Subject Item Drawings**	X	X	X	X
F	**Subject Item Specifications**	X	X	X	X
G	**Sub-tier Supplier List**	X	X	X	X
H	**Quality History**	X	X	X	X
I	**Similar Item Drawings**		X		
J	**Similarities/Differences of Subject/Similar Items**		X		
K	**Purchase Orders & Shipping Documents**	X	X		X
L	**Process/Operations Sheets (POS/Op Sheets) and Travelers**	X	X	X	X
M	**Inspection Method Sheets (IMS)**	X	X	X	X
N	**Prime Contractor's Quality Rating System Report**	X	X	X	X
O	**Licensee Agreement (if agreement exists)**	X	X	X	X
P	**Value Added (By Prime or OEM)**	X	X	X	X
Q	**Government / Prime Contractor Surveys**	X	X	X	X
R	**Pre-Qualification Test Plans**	X	X	X	X
S	**Test Results**	X	X	X	X
T	**Master Tooling Certifications**	X	X	X	X
U	**Government Quality Assurance Compliance**	X	X	X	X
V	**FAA PMA Letter or Supplement (If PMA applicable)**	X	X	X	X
W	**Alternate Item Source Component Purchase Orders**				X
X	**Statistical Data**				X
Y	**Reverse Engineering Management Plan**				X
Z	**Alternate Application Environment**				X

A.5. Detailed Descriptions of Each SAR Element

The contractor should first select which category is appropriate for the part it is seeking approval to manufacture. The contractor must provide a package containing all required SAR elements (as defined below) for the category selected.

Each lettered paragraph below corresponds to a SAR element in the above table. If a requirement does not exist for a specific part (e.g. no test plan required) then provide a statement to that fact.

> **Note**: Approval to supply an assembly is not an automatic approval to manufacture all tier components unless the SAR clearly demonstrates the supplier's ability and intent to manufacture the subcomponents of the assembly. If the tier component is a source controlled item, or if the government does not have the data rights for the tier item, the government cannot grant approval to manufacture the tier item. If not submitted as part of the assembly SAR, a separate package must be submitted for each component. If the SAR includes a request to be added to the approved parts list to manufacture subpart numbers, identify the additional parts by part number.

Requirements for each SAR element are as follows:

A. COVER LETTER - A cover letter stating a supplier's request to become an approved source for a particular part must include the following information and enclosures:

1. The part number and dash number, if applicable, original part Prime Contractor/OEM name and CAGE code, NSN, nomenclature, and weapon system (i.e. engine model (Type/Model/Series), aircraft designation).
2. The applicant company's name, address, CAGE, telephone number, FAX number, and email/EDI address, and website (if applicable).
3. The category of SAR being submitted, as defined above.
4. A description of the company's quality program (i.e., MIL-I-45208, MIL-Q-9858, ANSI/ISO 9000 series documents, AS9100 and the identification of the reviewing/approving organization and date for the quality program).
5. If available, provide a list of relevant certifications (i.e. NADCAP), such as casting/forging, plating, grinding of high-strength steel, NDI, etc.
6. A statement that the contractor is willing to provide a technical briefing on the SAR package submittal to the procuring activity or at any of the cognizant Service Engineering Support Activities (ESA's) if required.

B. TECHNICAL DATA RIGHTS CERTIFICATION STATEMENT – This is a certification of rights to use technical data in the format provided below, signed on company letterhead signed by an authorized binding company official. This is a certification that the data were obtained by legal means and the company has the rights to use the data supplied in the SAR for manufacturing purposes. If proprietary data are involved, a statement from the owner of that data that conveys the rights to specifically use that piece of data must be provided.

Note: This also applies to the use of data the Government possesses but does not have the right to use in competitive manufacturing.

The following is an example of a technical data rights letter.

EXAMPLE: TECHNICAL DATA RIGHTS CERTIFICATION LETTER

I am an officer and employee of the above name legal entity with the responsibility for investigating the facts upon which this certification is made.

To the best of my knowledge and information obtained from my recent investigation:

a. I certify that the technical data submitted as a part of my company's request for approval as potential source for the purpose of obtaining a contract were obtained by legal means by my company, without breach of any contractual or confidential relations pertaining to said technical data by my company, its current or recent employees; and

b. I certify that my company, its current or recent employees did not obtain or receive any technical data marked with a company's proprietary rights legend or a Government limited rights legend from any U.S. Governments agency or employee or other third parties that were used in the preparation of or were incorporated into the request for approval or its supporting technical data other than as described herein; and

c. I certify that my company has the legal right to use said technical data to manufacture the below identified part for the United States Government. To the extent that said technical data are marked with a company's proprietary rights or a Government limited rights legend or are otherwise believed to be or have in the past been the proprietary data of another company, the following documents which are attached hereto and made a part of the certification have formed the basis for claiming legal right to use said technical data. Such documentation must clearly cover the data necessary for source approval.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER THE TITLE 18, UNITED STATES CODE, SECTION 1001.

THIS CERTIFICATION APPLIES TO:

NSN_____P/N_____

***Note:** If SAR package is for multiple NSNs, all NSNs must be listed.*

(signature)_____ (date)_____
(typed or printed name & title)__

C. SUPPLIER BROCHURE AND CORRESPONDENCE - A company brochure and a synopsis outlining the applicant firm's capabilities, facilities (such as location,

number of buildings, sq. footage, etc.), experience, and equipment list should be provided. For all equipment used in the manufacture of the qualification part, outline the accuracy, size, capability and precision of the equipment. This information should be updated as facility and facility operations change. As a potential source for parts, the proposed supplier and its sub-tier suppliers may be required to demonstrate adequate engineering expertise and manufacturing/production capabilities to manufacture, inspect, and test the subject component/item/assembly in accordance with all applicable drawings, material, process, and test specifications. An onsite inspection of these elements may be required by the Government or its designee.

D. QUALITY ASSURANCE DOCUMENTATION - Provide a synopsis of the proposed supplier's quality program capabilities and reporting system. A copy of the company's quality assurance manual and all referenced documentation must be provided. Quality assurance documentation should include a listing and copies of any independent approvals and certifications of quality programs, special manufacturing processes, etc. If provided electronically (preferred), it is requested in .PDF format. A copy of the supplier's QA manual and all referenced documentation may be kept at the procuring activity.

E. SUBJECT ITEM DRAWINGS - Provide all data required to manufacture, assemble and test the subject item. The subject item drawings typically include references to materials, processes, specifications, and may include data relating to mandatory inspections and inspection intervals. In addition to drawings (casting, forging, detail, assembly, source controlled, masters, airfoil data, schematics, etc.), data should include configuration (revision), parts list, any unincorporated Engineering Order (EO), Engineering Change Proposal (ECP), Notice of Revision (NOR), Design Change Notice (DCN), or Change in Design (CID), Requirements Control Card (RCC) and Quality Assurance Document (QAD), etc. For CAT IV, Alternate Item packages, if the vendor possesses or utilizes OEM drawings, complete copies of those drawings must also be included in the package

F. SUBJECT ITEM SPECIFICATIONS - Provide a complete listing of applicable specifications identified on the subject item drawings and a copy of the title page of the latest revision of each specification. For CAT IV, Alternate Item packages, where OEM or commercial specifications are not utilized, complete copies of internal specifications will be provided. For internal specifications, identify the commercial equivalent specification (if known/available). The list will be presented by specification title and number sequence and will include superseded documents, and will include the vendors who will use/implement each specification. The specification title page will be used to verify that the proposed supplier possesses all the required specifications. For CAT IV,

Alternate Item packages, if the vendor possesses or utilizes OEM specifications, complete copies of those specifications must also be included in the package

G. SUB-TIER SUPPLIER INFORMATION - Identify the sub-tier suppliers, if any, that the potential supplier intends to use. If no sub-tier suppliers will be used, state here that all work will be performed in house. Sub-vended processes should be denoted as critical or non-critical. All sub-tier suppliers should be listed in this section and a statement should be included verifying that these suppliers are currently OEM or government approved. For assemblies, identify suppliers of sub-components. Sub-components that are CSIs or CAIs must only be supplied by government approved CSI and CAI suppliers. If the potential supplier proposes the use of sub-tier suppliers who are not OEM or government approved, please submit complete documentation substantiating the capabilities and qualifications of the sub-tier supplier. It should be noted, however, that additional approval testing (as specified by the cognizant Service ESA) may be required in this circumstance.

H. QUALITY HISTORY – For the proposing supplier's CAGE code provide a summary of Deficiency Reports experienced in the past 3 years for all items. In addition, provide a summary of Deficiency Reports for the subject and/or similar item for all proposed sub-tier suppliers. For the subject and/or similar item, provide a summary of (including but not limited to) internal deficiencies, commercial deficiencies, FAA Service Bulletins, Material Review Board (MRB) items, statistical reports of nonconformances, nonconforming material rejection reports, and scrap rates. In addition, provide data relative to sub-tier suppliers, actions and resolutions when applicable, on previous contracts. If there is no quality history, state as such.

The summary will include at a minimum the following data: P/N, Nomenclature, Feature, deficiency, quantity, date, and corrective action.

> **Note**: Nonconformances are not necessarily perceived as an increase in risk when considering alternate source qualification. In fact, identification of nonconformances can illustrate a successful quality assurance program.

I. SIMILAR ITEM DRAWINGS - For Category II SARs, provide all data required to manufacture, assemble and test the similar item(s). This information includes drawings (casting, forging, detail, assembly, source controlled, masters, airfoil data, schematics, etc.), configuration (revision), parts list, any unincorporated Engineering Order (EO), Engineering Change Proposal (ECP), Notice of Revision (NOR), Design Change Notice (DCN), or Change in Design (CID), Requirements Control Card (RCC) and Quality Assurance Document (QAD), etc. The similar item drawings will typically include references to

materials, processes, specifications, and may include data relating to mandatory inspections and inspection intervals.

J. SIMILARITIES AND DIFFERENCES BETWEEN SUBJECT AND SIMILAR ITEMS – For CAT II SARs, the SAR must identify the specific similarities and differences in materials, coatings, design, manufacturing processes, operating environment, etc. between the similar item and the subject item. A matrix comparison is the preferred method.

K. PURCHASE ORDERS AND SHIPPING DOCUMENTS – Provide copies of at least one purchase order(s) and any amendments from the prime contractor, OEM, Government or other customers based upon the SAR category submitted. For Cat I or II, the purchase orders must be from the prime contractor, OEM, Government, foreign government, or commercial customer. This information should indicate when the supplier last produced the subject item or an item of similar manufacturing complexity (for Category II SARs). For Cat IV, provide copies of purchase orders and shipping documents (if applicable) for sales to/from commercial customers or OEM, as well as purchase orders and shipping documents to/from PMA holder and actual manufacturer of PMA part (if different). If you have never provided the part to any customer, identify this in your package. All documents in this section should be dated, and shipping documents should account for all items ordered. All financial information should be removed from these documents. It is important that documented performance is recent in order to adequately reflect the current manufacturing capabilities of the proposed supplier. Therefore, contract performance documentation included in SARs must be submitted no later than three (3) years for CSI and no later than seven (7) years for CAI after the date of last delivery, as evidenced by latest shipping document. The threshold should apply on the date the SAR is received by the procuring activity or IMM. If a contract was terminated, the reason for termination should be included in this section. The data provided in this section should be for the same contract(s) as those provided in SAR Elements L and M.

L. PROCESS/OPERATION SHEETS (POS/OP SHEETS) AND TRAVELERS - Provide a detailed step-by-step account of the procedures necessary in the proper sequence to manufacture the subject or similar item depending on the SAR category. The sheets must indicate operation number, description, tolerance (specification), location, sub-tier suppliers, manufacturing software data file name, etc. necessary to control manufacturing operations and be signed/stamped off by in-process operator and/or inspector. For Category I packages, copies of the actual sheets used for production of the subject item must be submitted. For Category II packages, copies of the actual sheets used for production of the similar item must be submitted as well as detailed proposed op sheets for manufacture of the subject item in order to

demonstrate the proposing supplier's comprehension of the required manufacturing processes. For Category III packages, proposed POS/OP sheets must be provided. For Category IV packages, submit either the actual manufacturing process operation sheets and any proposed changes from the original FAA-PMA or other approved process operation sheets, or the proposed operation sheets for new items. The data provided in this section pertaining to manufacturing history should be for the same contract(s) as those provided in SAR Elements K and M. The data provided must be from the actual manufacturer.

Note: Route sheets that may be enclosed in this section are not to be considered a replacement for detailed operation sheets. Lack of detailed process/operations sheets pertaining to manufacturing history in the SAR is cause for disapproval of the supplier's SAR.

M. INSPECTION METHOD SHEETS (IMS) - Provide the inspection sheets for the production of the subject or similar item. This information should include the nomenclature, part number, characteristics inspected, special instructions, zone, tolerances and actual measurements, inspection tooling/method, frequency and inspector's stamp. Provide the actual inspection sheets with the production data for Category I. Provide the actual inspection sheets with the production data for the similar item for Category II. Provide proposed inspection sheets for subject item in Categories II, III, & IV. IMS may be included as an integral part of the POS/OP sheets in SAR Element L. The data provided in this section should be for the same contract(s) as those provided in SAR Elements K and L.

N. PRIME/OEM CONTRACTOR'S QUALITY RATING SYSTEM REPORT – Provide the proposing supplier's quality system report or rating from the prime contractor and/or OEM responsible for the subject item. Any manufacturing process certifications or approvals should be included along with any independent approvals and certifications provided by independent evaluators (e.g., NADCAP for special processes, AS 9100, etc.). If no rating from the subject part prime contractor/OEM is available, alternate quality ratings from another prime contractor and/or OEM should be submitted. If the company has not manufactured any items for a prime contractor/OEM and thus no quality rating is available, state as such.

O. LICENSEE AGREEMENT (If applicable) - A copy of the licensee agreement between the proposed contractor and the prime contractor/OEM must be provided if the submitting contractor has such an agreement with the subject item prime contractor/OEM. If a copy cannot be provided, at a minimum a redacted portion showing the details of MRB activity, data rights, configuration control, source control, etc.

P. VALUE ADDED (BY PRIME OR OEM) - Identify any value added provided by the prime contractor in the manufacture of the item. Value added is considered any action, manufacturing or inspection process, data, instructions, or equipment that is essential to the manufacture of the item, but is not documented in the data package. Examples of value added are the use of OEM qualification of sources for forgings, castings, raw materials; the use of OEM tooling, fixtures, gages or inspection master hardware; the use of OEM MPS, IMS, or other process related data not referenced on the part drawing(s); quality assurance of sub-tier suppliers of significant processes all as related to the performance of manufacture.

Q. GOVERNMENT/PRIME CONTRACTOR SURVEYS – If applicable, provide a copy of the latest survey report (survey, findings, and corrective actions) performed by a government agency and survey report (survey, findings, and corrective actions) performed by the prime contractors/OEMs within the past seven years. If there are none, state as such. This section can include any available DoD technical evaluations of the proposing supplier's production capability, quality assurance procedures, industrial resources, material purchasing, and sub-tier supplier controls.

R. PRE-QUALIFICATION TEST PLANS - If testing is required, all proposed test plans necessary to completely qualify the part must be submitted for approval prior to beginning testing. Testing may be at the contractor's expense. The pre-qualification test/inspection procedures proposed and independent test laboratories proposed to be used have to be identified by Name, CAGE, address and telephone number. Test requirements are part specific.

S. TEST RESULTS – If testing has already been conducted, provide part specific test results. If testing has not been conducted, comply with element R.

T. MASTER TOOLING CERTIFICATIONS – Provide certification of access to and the right to use any required master tooling, special tooling/test equipment, mylars (stable base drawings), glass layout, and loft data/contour data as applicable to the latest item drawing revision. Include proof of calibration for all equipment/tooling requiring calibration. State if no master tooling or calibration is required.

U. GOVERNMENT QUALITY ASSURANCE COMPLIANCE – Provide a statement that the prospective supplier will comply with all government imposed quality assurance provisions, testing requirements, etc. as identified in the solicitation or contract for the subject item.

V. FAA PMA LETTER or Supplement (If PMA applicable) – If purchase orders and shipping documents for sales to/from PMA holder and actual

manufacturer of PMA part were provided, include the FAA letter or supplement. The FAA PMA letter, method of approval and documentation provided to and from the FAA should describe the basis of the FAA's PMA approval and show applicability to the subject item platform and model.

W. ALTERNATE ITEM SOURCE COMPONENT PURCHASE ORDERS – Include the original source component purchase orders and certificates of conformance for the actual manufacturer components used to derive alternate item source design.

X. STATISTICAL DATA - Include the statistical data from the actual manufacturer components used to derive alternate item source design. If the part is in production, provide the statistical control data.

Y. REVERSE ENGINEERING MANAGEMENT PLAN – A reverse engineering management plan must be provided which describes the approach used to develop the specifications. The plan must describe all aspects of the proposed reverse engineered design, materials, critical characteristics, critical inspection processes, and critical manufacturing processes to satisfy requirements and how these were derived.

> **Note:** If the proposed source has not begun a reverse engineering effort, the source should provide the reverse engineering management plan prior to submittal of the SAR package.

Z. ALTERNATE APPLICATION ENVIRONMENT – For parts with a commercial application as described in element W, provide commercial operating mission, including environment, weight, safety assessments.

1

Exhibit B
Example of SAR Review Checklist

SAR PACKAGE CONTROL NUMBER:

RECOMMENDATIONS:

SUPPLIER:	APPROVAL:	DISAPPROVAL:	CONDITIONAL:
ITEM:	APPROVAL:	DISAPPROVAL:	CONDITIONAL:

EVALUATING ACTIVITY:

DATE RECEIVED:	DUE:	RELEASED:
SCREENED BY:	ORG:	PHONE:
EVALUATED BY:	ORG:	PHONE:

I. TDP INFORMATION

A: PROPOSED SUPPLIER (NAME/CAGE): /

B: SUBJECT ITEM NOMENCLATURE:

C: SUBJECT ITEM (PRIME/OEM) PART NUMBER / REVISION: /

D: ALTERNATE ITEM PART NUMBER / REVISION:

E: NATIONAL STOCK NUMBER (NSN):

F: TYPE MODEL SERIES (T/M/S):

G: NEXT HIGHER ASSEMBLY:

H: SUBJECT ITEM PRIME CONTRACTOR (NAME/CAGE): /

I: ITEM CRITICALITY:

CRITICAL SAFETY ITEM (CSI): (Y/N)

CRITICAL APPLICATION ITEM (CAI): (Y/N)

NON-CRITICAL: (Y/N

J: SUBMITTED SAR CATEGORY (Y/N):	CAT I:	CAT II:
	CAT III:	CAT IV:

K: IS A DESIGN CHANGE PENDING:

ABOVE INFO PER (LTR REFERENCE):

L: SIMILAR ITEM NUMBER(s): (if applicable)

M: SIMILAR ITEM PRIME CONTRACTOR(s) (NAME/CAGE): /

II. PACKAGE INVENTORY

SAR SCREENER: ORG/CODE:

PHONE: E-MAIL:

*NOTE AND EXPLAIN ANY PACKAGE INVENTORY ITEMS NOT INCLUDED IN THE SAR

	(SCREENER INITIAL)		
	YES	NO	N/A
A. Cover Letter			
B. Technical Data Rights Certification Statement			
C. Supplier Brochure & Correspondence			
D. Quality Assurance Documentation			
E. Subject Item Drawings			
F. Subject Item Specifications			
G. Sub-tier Supplier List			
H. Quality History			
I. Similar Item Drawings			
J. Similarities/Differences of Subject/Similar Items			
K. Purchase Orders & Shipping Documents			
L. Process/Operations Sheets (Op Sheets) & Travelers			
M. Inspection Method Sheets (IMS)			
N. Prime Contractor's Quality Rating System Report			
O. Licensee Agreement (if agreement exists)			
P. Value Added (By Prime or OEM)			
Q. Government / Prime Contractor Surveys			
R. Pre-Qualification Test Plans			
S. Test Results			
T. Master Tooling Certifications			
U. Government Quality Assurance Compliance			
V. FAA PMA Letter or Supplement			
W. Alternate Item Source Component Purchase Orders			
X. Statistical Data			
Y. Reverse Engineering Management Plan			
Z. Alternate Application Environment			
NOTES & COMMENTS: (indicate item)			

III. SAR TECHNICAL EVALUATION (evaluator to complete and initial)

A. COVER LETTER	(EVALUATOR INITIALS)		
	YES	NO	
1. Does the cover letter match the data presented in the package?			
2. Is the supplier willing to provide a technical briefing?			
NOTES & COMMENTS:			

B. TECH. DATA RIGHTS CERTIFICATION STATEMENT	(EVALUATOR INITIALS)		
	YES	NO	
Based upon the data rights certification letter from the proposed supplier:			
1. Did the supplier legally obtain the tech data used in the SAR?			
2. Does the supplier legally have the rights to use the tech data?			
NOTES & COMMENTS:			

C. SUPPLIER BROCHURE AND CORRESPONDENCE	(EVALUATOR INITIALS)		
	YES	NO	
1. Does the supplier have the facilities for the necessary processes?			
2. Are there any special concerns to be noted? (If YES, explain)			
NOTES & COMMENTS:			

D. QUALITY ASSURANCE DOCUMENTATION	(EVALUATOR INITIALS)		
	YES	NO	
1. Is the Quality Assurance Manual (QAM) provided with the SAR package?			
2. Is all QAM referenced documentation (sub-tier procedures, etc.) included?			
NOTES & COMMENTS:			

E. SUBJECT AND ALTERNATE ITEM DRAWINGS			
1. Subject Item Drawings (Only applicable to Cat IV when proposed supplier possesses or utilizes Prime/OEM drawings)			
	(EVALUATOR INITIALS)		
a. Drawing Package	YES	NO	
1) Is a current Parts Lists included?			
2) Are the drawings for the latest revision?			
3) Are all drawings sheets/frames included?			
4) Are all Forgings and/or Casting drawing included?			
5) Are all drawings legible? (If NO, list drawings/sheets/frames required)			
6) Are any drawings marked "SOURCE CONTROLLED" or "SPECIFICATION CONTROL"? (If YES, list below.)			
	(EVALUATOR INITIALS)		
b. Raw Material:	YES	NO	
1) Is the material(s) identified?			
2) List material(s):			
	(EVALUATOR INITIALS)		
c. Item Dimensions:	YES	NO	
1) Top Down Break Down (TDBD) performed? (List missing data.)			
2) Are there any Critical Dimensions marked on the drawing? (If YES, list)			
	(EVALUATOR INITIALS)		
d. Manufacturing/ROMM Processes:	YES	NO	
1) Are any processes controlled by specification or Technical Manuals? (IF YES, list)			
2) Are there any Critical processes? (If YES, list)			
	(EVALUATOR INITIALS)		
e. Special Tooling:	YES	NO	
1) Is there any special tooling required? (If YES, list)			
2) Is the tooling owned by the proposed supplier?			
3) Is the tooling available to the proposed supplier?			
4) Does the proposed supplier have use rights from the prime?			
5) Will the proposed supplier build tooling?			
6) Are drawings available?			
	(EVALUATOR INITIALS)		
	YES	NO	
f. Do any of the data in the SAR contain proprietary statements or markings?* (If YES, list)			
*This is a non-technical issue which the ESA will resolve before contract award.			
NOTES & COMMENTS:			

2. Alternate Item Drawings (For CAT IV Only)	(EVALUATOR INITIALS)		
	YES	NO	N/A
a. Is a current Parts Lists included?			
b. Are the drawings for the latest revision?			
c. Are all drawings sheets/frames included?			
d. Are all Forgings and/or Casting drawing included?			
e. Are all drawings legible? (If NO, list drawings /sheets/frames required)			
f. Are any drawings marked "SOURCE CONTROLLED" or "SPECIFICATION CONTROL"? (If YES, list below.)			
g. Does the alternate item drawing identify raw materials?			
h. List material(s):			
i. Do the raw materials on the Alternate Item drawing match the subject item drawings?			
j. Top Down Break Down (TDBD) performed? (List missing data.)			
k. Do the dimensions on the alternate item drawing match the dimensions on the subject item drawing?			
l. Are there any Critical Dimensions marked on the alternate item drawing? (If YES, list)			
NOTES & COMMENTS:			

F. SUBJECT ITEM SPECIFICATIONS:	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. List all specifications referenced in drawings (from Section E) (list in comments or attached sheet):			
2. Are all Prime/OEM/Commercial specifications (cover page only) included?			
3. Are all non-Prime/OEM/Commercial specifications in their entirety included?			
4. Are all applicable specifications for all sub-assemblies included?			
NOTES & COMMENTS:			

G. SUB-TIER SUPPLIER INFORMATION:	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Is a statement provided by the proposed supplier stating that all sub-tier suppliers are Prime/OEM/Government approved?			
2. Is each required specification matched with an approved sub-tier supplier?			
3. Is the proposed supplier certified for the remaining processes?			
NOTES & COMMENTS:			

H. Quality History	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Is there a summary of Deficiency Reports for the CAGE code provided?			
2. Is there a summary of Deficiency Reports provided for the sub-tier suppliers?			
3. Is there a summary of Deficiency Reports provided for the similar item?			
4. Is a summary of other quality history provided?			
5. Was corrective action for the deficiencies provided? (List any concerns below)			
6. Evaluate summary of QA Deficiency Reports and note any concerns below. If issues noted in summary of deficiency reports, pull and evaluate full Deficiency Reports and analyze.			
7. Have there been any major quality problems with either item? (If YES, identify)			
NOTES & COMMENTS:			

I. SIMILAR ITEM DRAWINGS (For Cat II Only)	(EVALUATOR INITIALS)		
	YES	NO	
1. Is a parts list(s) included?			
2. Are all drawing sheets/frames included?			
3. Are all Forging and/or Casting Drawings included?			
4. Are drawings legible? (If NO, list drawings/sheets/frames required)			
5. Is the material identified?			
List material(s):			
NOTES & COMMENTS:			

J. SIMILARITIES/DIFFERENCES BETWEEN SUBJECT/SIMILAR ITEMS	(EVALUATOR INITIALS)		
(Explain any NO answers), (If multiple similar items submitted, at least one similar item must comply with each question below)	YES	NO	
1. Are the items similar in size/shape?			
2. Are the items similar in function?			
3. Do the items operate in similar environments?			
4. Are the items made of the same material?			
5. Do the items require similar Manufacturing/Inspection/ROMM processes?			
6. Are the items similar in surface finish?			
7. Are tolerance requirements similar?			
NOTES & COMMENTS:			

K. PURCHASE ORDERS and SHIPPING DOCUMENTS	(EVALUATOR INITIALS)		
	YES	NO	
1. Was the order completed within the last 3 years (for CSIs)?			
2. Was the order completed within the last 7 years (for CAIs)?			
3. Is a complete copy of the Purchase Order (including latest amendment) included?			
4. Is a complete copy of Shipping Documents included?			
5. Was the order completed (and not terminated)? (If NO, explain)			
NOTES & COMMENTS:			

L. PROCESS/OPERATION SHEETS (POS/OP SHEETS) and TRAVELERS	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Is flow of the subject part clearly documented on the traveler?			
2. Are the manufacturing operations detailed and in the proper sequence?			
3. Are ALL operation sheets included? (Travelers or Routers alone are NOT sufficient)			
4. Can the proposed supplier control the special processes required of the item?			
5. Are process/operation sheets complete?			
6. Are proposed process/operation sheets included for a category II package?			
7. Do POS/OP sheet dimensions comply with drawing dimensions?			
8. Were the Process/Op sheets and/or travelers written by proposed supplier?			
a. Are the proposed supplier's name, address, and CAGE on top of every page?			
b. Are sub-tier suppliers identified by name, address, and CAGE in each applicable operation?			
c. Do sub-tier supplier steps clearly identify process or procedure?			
d. Do POS/Op sheets give detailed dimensions, callout specific drawing references, and/or include operation sketches as called out?			
e. For assemblies:			
1) Are sub-component suppliers identified?			
2) Are sub-component suppliers Government approved?			
NOTES & COMMENTS:			

M. INSPECTION METHOD SHEETS (IMS)	(EVALUATOR INITIALS)		
Explain any concerns below.	YES	NO	N/A
1. Are complete IMS included?			
2. Are the IMS detailed and in the proper sequence?			
3. Are IMS dimensions within drawing dimensions?			
4. Are actual measurements noted as well as drawing dimensions? If not, the cognizant Service ESA should verify the data provided on the IMS to ensure that all were required by the prime contractor/other Service. Include findings in comment section below.			
5. Are units of measure called out on IMS?			
6. Are units of measure on the IMS the same as on the drawing?			
7. Does the supplier adequately document inspections?			
NOTES & COMMENTS:			

N. PRIME CONTRACTOR'S QUALITY RATING SYSTEM REPORT	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Was a Quality Rating from a Prime/OEM provided?			
2. Is the submitted Quality Rating from the past 12 months?			
DATE:			
3. Is the rating satisfactory?			
4. Does the rating show any negative trends? Explain any concerns below.			
NOTES & COMMENTS:			

O. LICENSEE AGREEMENT (If Applicable)	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Was a Licensee Agreement referenced as a basis for approval?			
2. Will the Prime/OEM retain configuration control of the item?			
3. Does the Licensee Agreement describe that the prime/OEM will provide technical support to the Licensee?			
4. Is the Licensee required to purchase only from Prime/OEM approved suppliers?			
5. Will the prime/OEM provide support in case of a mishap involving a licensed item?			
6. Is the Prime/OEM required to approve Class I ECPs and major deviations/waivers?			
7. Is the Prime/OEM required to approve Class II ECPs and minor deviations/waivers?			
8. Does the License agreement delegate MRB authority?			
(Explain any concerns below)			
NOTES & COMMENTS:			

P. VALUE ADDED (BY PRIME OR OEM)	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Did the supplier list any value added that the prime or OEM provides? Explain any concerns below.			
NOTES & COMMENTS:			

Q. GOVERNMENT/PRIME CONTRACTOR SURVEYS:	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Has a DoD site survey been conducted within the past 7 years? If so, date:			
2. Have there been any other surveys by other government agencies? If yes, who?			
3. Have there been any surveys performed by the prime contractor within the past 7 years? If so, date:			
4. Is a copy of the survey included in the SAR?			
5. Were findings noted?			
6. Were supplier survey results acceptable?			
7. Was effective correction action (CA) taken by supplier?			
8. Is a follow up site survey or Pre-Award survey necessary? (Explain)			
NOTES & COMMENTS:			

R. PRE-QUALIFICATION TEST PLANS	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Was further testing required?			
If YES, did the supplier provide test plans?			
2. Were the test plans adequate?			
3. Explain any concerns below.			
NOTES & COMMENTS:			

S. TEST RESULTS	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Has qualification or other testing already been completed?			
2. Was level of testing adequate?			
3. Were test results provided?			
If yes, were they acceptable?			
NOTES & COMMENTS:			

T. MASTER TOOLING CERTIFICATIONS	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Is any special tooling required?			
2. If yes, does the supplier possess or have access to the special tooling?			
3. Explain any concerns below.			
NOTES & COMMENTS:			

U. GOVERNMENT QUALITY ASSURANCE COMPLIANCE	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Can the supplier comply with all quality assurance provisions and testing requirements as listed in the solicitation/contract?			
2. Explain any concerns below.			
NOTES & COMMENTS:			

V. FAA PMA LETTER or Supplement	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Was the proposed supplier approved by the FAA?			
2. Does the letter show the platform and model that the item was approved for?			
3. Does the using Service(s) use the same or military derivative version of the same platform and model?			
4. Has information been provided which describes the basis for the FAA's PMA approval and is it consistent with the category submitted?			
5. Has the proposed supplier provided design packages and test results?			
6. Is the proposed supplier the actual manufacturer or a dealer/distributor? *(note in comments section below)*			
7. Has the proposed supplier provided the approved item in sufficient quantity to develop a statistically sound supplier history?			
8. Explain any concerns below.			
NOTES & COMMENTS:			

W. ALTERNATE ITEM SOURCE COMPONENT PURCHASE ORDERS	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Were the source component parts used for the reverse engineering purchased from the Government?			
If YES, when:			
2. If parts not purchased from Government, were they purchased from the Prime, OEM, or Government approved supplier?			
If YES, who:			
If YES, when:			
3. Were the source component parts purchased to the latest revision of the Prime/OEM data?			
4. Explain any concerns below.			
NOTES & COMMENTS:			

X. STATISTICAL DATA	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Does the statistical data used to derive the alternate item source design appear acceptable?			
2. Explain any concerns below.			
NOTES & COMMENTS:			

Y. REVERSE ENGINEERING MANAGEMENT PLAN	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Does the plan included provide acceptable detail?			
2. Does it adequately describe all aspects of the proposed reverse engineering design, materials, critical characteristics, critical inspection processes, and critical manufacturing processes?			
Explain any concerns below.			
3. Will the proposed plan allow for successful reverse engineering of the subject item?			
Explain any concerns below.			
NOTES & COMMENTS:			

Z. ALTERNATE APPLICATION ENVIRONMENT	(EVALUATOR INITIALS)		
	YES	NO	N/A
1. Was the commercial environment information provided with adequate detail?			
2. Does the commercial application operate in similar environments?			
3. Does the commercial application experience similar loads and/or weights?			
4. Does the commercial application undergo similar safety assessments as would be performed in military environment?			
NOTES & COMMENTS:			

IV. ENGINEERING EVALUATION OF SUBJECT ITEM

(evaluator to complete and initial)	(EVALUATOR INITIALS)		
	YES	NO	N/A
A. Are there any known engineering changes (CIDs, ECPs, DCNs, EOs, etc.) proposed but not yet released in-work affecting the item?			
B. Are there any engineering investigations that affect this item? (If YES, provide details)			
C. Has the supplier demonstrated the capability to perform and comply with all the special processes and specification required for the manufacture of the item?			
D. If item C is NO, has the proposed supplier listed prime approved sub-tier suppliers?			
E. Are there any performance characteristics, which cannot be verified by Non-destructive Inspection (NDI)/NDT?			
F. Are all critical characteristics and processes IDENTIFIED?			
G. Would you specify any substantiation or qualification requirements for this item? (If YES, identity)			
H. Evaluate the potential failure modes and the effect of each in COMMENTS below.			
I. Are there any other matters of concern? (Identify)			
NOTES & COMMENTS:			

PACKAGE CONTROL NUMBER:

CONCLUSIONS & RECOMMENDATIONS:

Note: Use additional comment sheets as needed.

<<<The reviewing activity may add any information deemed necessary.>>>

Exhibit C

Site Survey Checklist

Manufacturing, Repair & Overhaul (R&O), and Quality Assurance (QA)

DEPARTMENT OF DEFENSE

UNIVERSAL SITE SURVEY CHECKLIST

DoD Site Survey Number:

INSTRUCTIONS: This plan is to serve as a guideline for Department of Defense (DoD) personnel conducting vendor site surveys. The categories listed should be selected in accordance with the solicitation or procurement document quality requirements. Areas highlighted in blue are marked to allow the Vendor to provide required information prior to commencement of the site survey.
This report, when completed, will become a permanent record of the survey activity.

DoD Site Survey Number = (MFR CAGE Code) - (Lead Service AR/AF/NA/DC) - (month and last two digits of year) e.g. 81996-AR-0804.

CHECKLIST CATEGORIES

Quality Manual/Procedure/etc. Section and Paragraph - List/identify all areas where the requirement is established in the Contractor's Quality Manual, procedures, or other document(s).

Evidence - Witness or verify compliance with the requirement. List at least one specific Part Number, Serial Number, Certification Number, Purchase Order Number, etc. as applicable. Write "N/A" in the block if the element is not applicable and "NR if the element was not reviewed

Pass/Fail - Indicate whether the Quality program and evidence satisfies the review element.

COMPANY NAME:	ADDRESS	
PURPOSE OF VISIT: Quality Audit	START DATE:	COMPLETION DATE:

CONTRACT/SOLICITATION/ETC. NO.	PCO	NSN or PART NUMBER(S)

COMPANY POINTS OF CONTACT	TITLE

GENERAL INFORMATION	
PRODUCTS OR SERVICES OFFERED	
TOTAL PLANT AREA SQUARE FEET	
NO. OF BUILDINGS	
IS FACILITY OWNED OR LEASED?	
NO. OF PRODUCTION EMPLOYEES	
NO. OF DESIGN ENGINEERS	
NO. OF MANUFACTURING ENGINEERS	
NO. OF QUALITY ASSURANCE PERSONNEL	
OTHERS	

EDUCATION AND EXPERIENCE LEVEL (Average years)	
PRODUCTION	
ENGINEERS	
QUALITY	
REMARKS	

List of Attendees			
Name	Organization	Phone Number	E-mail Address

		DoD Site Survey No. _____
	Department of Defense Universal Site-Survey Checklist	
Item No.	**Review Item**	**Tab**
1.0	Production/Contract History	
1.1	Company Brochure Yes /No	
	Company Web Page:	
1.2	What parts have been produced/overhauled/repaired for the U. S. Government, and when	
	See attached list	
	What parts have been produced/overhauled/repaired for the OEM.	
1.3	For whom were the items produced/overhauled/repaired:	
1.4	List OEM Quality rating(s):	
1.5	Quality Management System standard (list applicable specification/certification(s) and attach certificate(s))	
	Third/second/self-certified	

Item No.	**Review Item**	**Evidence**	**Pass/Fail**	**Tab**
2.0	Production Engineering and Planning			
2.1	Production Planning Quality Manual/Procedure (QM/P), etc. Section and Paragraph.			
2.1.1	1) Policy and procedures in place for production/ROMM planning			
	2) Is staffing of production/ROMM planning adequate			
2.1.2	Historical Records			
	1) Are historical data records maintained			
	2) Are Service peculiar aircraft logs maintained			
	3) Other aircraft log records (identify)			
2.1.3	Prime furnished data			
	1) Is the vendor on prime approved distribution list for specifications and/or drawing revisions			
	2) ROMM Manuals			

Item No.	Review Item	Evidence	Pass/Fail	Tab
2.1.4	Government furnished data			
	1) Are contractor's procedures adequate to verify compliance to depot/NAVAIR/AMCOM/AFMC technical publications, Local Engineering Specifications (LES)/Local Process Specifications (LPS)/Engineering Change Proposals (ECP), Maintenance Engineering Orders (MEO), and Manual Change Revisions (MCR)			
	Remarks:			
	2) Are contractor's procedures adequate to verify currency of drawings, depot/NAVAIR/AMCOM/AFMC technical publications, LES, LPS, ECP, MEO and MCRs			
	Remarks			
2.2	Production Control QM/P:			
2.2.1	Who does the scheduling on new parts:			
2.2.2	Serialization			
	1) Are Critical Safety Items (CSIs) serialized or identified by lot/batch number for traceability			
	2) Is there a procedure for coordinating serial number (S/N) assignment with the procuring activity			
	3) Does S/N or lot/batch identifier provide traceability to inspection/process that involve Critical Characteristics			
	4) Are S/Ns controlled to prevent duplication			
	5) Are S/Ns reported to PCO in accordance with contractual requirements			
2.2.3	Do records provide the degree of traceability required by the contract for verification of the following:			
2.2.3.1	Material			
2.2.3.2	Manufacture			
2.2.3.3	Special Processes			
2.2.3.4	Personnel Certification			
2.2.3.5	Variability Control Charts (if applicable)			
2.2.3.6	Assembly			
2.2.3.7	Inspection of Critical Characteristics			
2.2.4	Do the routers/shop travelers identify the parts to which they apply			
2.2.4.1	Serial Number or Lot/Batch			
2.2.4.2	Contract Number			
2.2.4.3	Purchase Order Number			
2.2.4.4	Sub-Vendors Identification			
2.2.4.5	Specifications Used			
2.2.4.6	Tooling Used			

Item No.	Review Item	Evidence	Pass/Fail	Tab
2.2.5	Production Lot Identification for Traceability to Customers			
	1) Are production lots identified so they can be traced to customers			
2.2.6	Does the routing/shop traveler document specify:			
2.2.6.1	Critical operations/processes			
2.2.6.2	Operations/process that must be done in proper sequence			
2.2.6.3	Operations/process where sequence is not necessary			
2.2.6.4	Critical Characteristics			
2.2.7	Is lot size count maintained:			
2.2.7.1	Are changes due to scrap, split lots, and parts held for disposition documented			
2.2.7.2	How:			
2.2.8	Process Control			
2.2.8.1	If SPC or other quality techniques have not been authorized for critical characteristics, is 100% inspection in place for government identified critical characteristics?			
2.2.8.2	If Statistical Process Control is in place for critical characteristics, was SPC approved by the procuring activity?			
2.2.9	Delivered non-conforming CSIs			
2.2.9.1	Is there a procedure for notification to the Administrative and Procuring Contract Officers (ACO & PCO) of any delivered non-conforming CSIs as soon as practicable, but no later than 72 hours?			
2.2.9.2	Do procedures require that the contract, part, and serial numbers be identified if non-conforming parts are delivered			
2.2.10	Purchasing Records			
2.2.10.1	Do vendor purchase orders (POs) identify critical characteristics?			
2.2.10.2	Do vendor purchase orders (POs) reference QE-STD-1 and/or other applicable Critical Item program documents?			
2.2.10.3	Are POs available for review by the appropriate Government Official			
2.2.11	Retention of Records			
	1) Are procedures in place that require all Critical Item records be maintained for at least ten years after final payment.			

Item No.	Review Item	Evidence	Pass/Fail	Tab
2.2.12	Government Furnished Material (GFM)			
	Do the contractor's procedures include:			
2.2.12.1	Examination upon receipt to detect transit damage			
2.2.12.2	Inspection for completeness and proper type			
2.2.12.3	Periodic inspection and precautions to assure adequate storage conditions are maintained, to guard against damage from handling and deterioration during storage, and to segregate it in a secure, controlled area			
2.2.12.4	Functional testing, as required by contract, to determine satisfactory operation			
2.2.12.5	Identification and protection from improper use or disposition			
2.2.12.6	Verification of Quantity			
2.2.12.7	Procedures to report damaged/non-conforming GFM and to segregate it in a secure, controlled area pending disposition instructions			
2.2.13	Contractor Scrap Rate			
	1) What is the contractor scrap rate? %			
2.3	Production/Manufacturing Methods and Processes QM/P:			
2.3.1	List of in-house processes (e.g. MPI, LPI, x-ray, brazing, welding, heat treat, shot peen, metallurgical lab, chemical lab, plating processes (identify), other coating capabilities (identify), etc.), along with the process/spec number, approving authority and date:			
2.3.2	Are there established and documented procedures for internal audits of in-house processes			
2.3.3	Are in-house process audits scheduled			
2.3.4	Are all in-house process audit findings and corrective actions documented			

Item No.	Review Item	Evidence	Pass/Fail	Tab
2.4	Engineering Capabilities QM/P:			
2.4.1	Drawings, Specifications and Government Specifications/Standards, Overhaul and Repair procedures			
	1) Where are they kept:			
	2) How are they updated			
	3) Are they controlled			
	4) Are old revisions retained, marked accordingly, and properly segregated			
	5) Are the drawings stored in a controlled environment (e.g. climate, fireproof)			
	6) Is there a procedure for specifically addressing conflicts in critical characteristics that require notification of the procuring activity			
2.4.2	Material Review Board Actions			
	1) How are MRBs handled:			
	2) Do you have separate secured MRB storage areas (Gov/Civ)			
	3) Are non-conforming critical characteristics dispositioned properly			
	4) Are there documented procedures in place for proper disposition of non-conforming critical characteristics to the procuring activity			
2.4.3	Engineering Changes			
2.4.3.1	How are they handled:			
2.4.3.2	When are they introduced to the floor:			
3.0	Industrial Resources			
3.1	Facilities and Equipment QM/P:			
3.1.1	Capabilities:			
3.1.1.1	Facilities List			
3.1.1.2	Equipment List:			
3.1.1.3	Special Test Stands/Capabilities:			
3.1.1.4	What percentage of production capability %			
3.1.2	Maintenance			
3.1.2.1	What type of facilities and equipment maintenance plan do you have in place			
3.1.2.2	What are the procedures for performing/scheduling maintenance?			
3.1.3	General Housekeeping			
3.1.3.1	Does the quality manual have a cleanliness requirement?			
3.1.3.2	Does the facility meet the established cleanliness requirement?			

Item No.	Review Item	Evidence	Pass/Fail	Tab
3.2	Facility Test Equipment and Tooling QM/P:			
3.2.1	Who controls and operates test equipment:			
3.2.2	Who manufactures your special tools and fixtures			
3.2.3	How are the tooling and fixtures stored and maintained:			
3.2.4	Is any tooling within the facility owned by the Prime (Sikorsky, Boeing, etc.) Yes/No			
	1) If yes, is the Prime's tooling intended to be used on Government contracts? Yes/No			
3.2.5	Is any tooling within the facility owned by the Government? Yes/No			
3.2.5.1	If yes, how is the tooling stored and segregated?			
3.2.5.2	If yes, is tooling used only on specified contract?			
3.2.6	Is tooling identified on detailed process/operation sheet			
3.2.7	Tolerance of Measurement and Test Equipment (M&TE)			
3.2.7.1	Does M&TE discriminate to the degree necessary to assure the accuracy of the critical characteristics			
3.2.7.2	Is M&TE capable of meeting the total tolerance spread (where applicable)			
3.3	Certification of Personnel			
3.3.1	Are personnel certified to perform work and/or inspection on CSIs			
3.3.2	Is there a system for tracking personnel certifications			
3.3.3	Training			
3.3.3.1	Is there a structured and documented training program?			
3.3.3.2	Is there a structured apprentice program?	Yes/No		
3.4	Automation QM/P:			
3.4.1	Does the facility have a Computer Aided Design/Machining (CAD/CAM) system?	Yes/No		
3.4.1.1	If yes, what CAD/CAM system and version is used?			
3.4.1.2	Who manages the CAD/CAM system:			
3.4.1.3	Who has control of the CAD/CAM system:			
3.4.2	Who does the Computer Numerically Controlled (CNC) programming:			
3.4.3	Are back-ups of CNC masters made/kept in different location in case of fire	Yes/No		
3.5	Configuration Management QM/P:			
3.5.1	Are procedures established and maintained for configuration baselines?			
3.5.2	Do Maintenance and Overhaul requirements address all current configurations and upgrades			
3.5.3	Do government and commercial products require segregation?	Yes/No		
3.5.4	If yes, are government and commercial products segregated?			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.0	Quality Assurance Program Compliance			
4.1	Organization QM/P:			
4.1.1	To whom does quality report?			
4.1.2	Does the contractor have a written quality policy and procedures detailing responsibilities for each major or critical function			
4.1.3	Does the contractor maintain the following functions as part of the inspection or quality program			
4.1.3.1	Design or Engineering			
4.1.3.2	Incoming Inspection			
4.1.3.3	In-process Inspection			
4.1.3.4	Final Inspection			
4.1.3.5	Quality audit function performing internal audits			
4.1.3.6	Quality audit function performing initial sub-tier supplier audits			
4.1.3.7	Quality audit function performing production sub-tier supplier audits			
4.1.3.8	Does the contractor operate separate quality systems for government and commercial products or do they fall under one quality system? Explain.			
4.1.3.9	Does contractor have a procedure to ensure that the customer is notified of all changes in the quality system which affects that customer's contracts?			
4.1.3.10	Other: (Describe)			
4.2	Engineering, Drawings & Changes QM/P:			
4.2.1	Does the contractor have written instructions or procedures for incorporating customer's contract specifications into shop work orders			
4.2.2	Are there adequate procedures for submitting deviations or other variation requests			
4.2.3	Does the engineering or quality department alert the purchasing department of special requirements to be imposed upon sub-tier suppliers?			
4.2.4	Is there a system to control the issue of drawings and specifications?			
4.2.5	Is there a system to ensure all drawings and specifications are updated to the latest revision?			
4.2.6	Does the contractor have a positive method to recall and replace drawings and specification with latest changes?			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.2.7	Manufacturing Planning			
4.2.7.1	Are critical characteristics measured and annotated prior to passing the inspection points			
4.2.7.2	Who are the Configuration Control Board (CCB) members:			
4.2.7.3	Are changes to planning that affect critical characteristics processed through internal CCB and approved via the Contracting Officer			
4.2.7.4	Are changes to planning that do not affect critical characteristics processed and approved by the internal CCB			
4.2.7.5	Is planning frozen for critical items per contract requirements?			
4.2.7.6	Are critical characteristics identified			
4.2.7.7	Are inspection points annotated			
4.2.7.8	Are procedures for changing critical characteristics frozen planning flowed down to subcontractors			
4.3	Measuring and Test Equipment (M&TE) QM/P:			
4.3.1	Are written procedures and methods for the calibration, control of M&TE available?			
4.3.1.1	Is there a recall system to assure that calibrated M&TE are recalibrated on or prior to expiration			
4.3.1.2	Are records maintained for the calibration of each M&TE used to accept products			
4.3.1.3	Are all M&TE identified with a calibration label?			
4.3.1.4	Do procedures state how calibration frequencies are determined?			
4.3.1.5	Do procedures state that production tools used for inspection/acceptance/validation are under recall system?			
4.3.1.6	Are procedures in place to ensure that personally owned M&TE are not used to perform acceptance inspection?			
4.3.2	Are calibration standards maintained and are they accurate for their intended use			
4.3.2.1	Are the calibration standards used traceable to the National Institute of Standards and Technology (NIST) or other cognizant Service ESA approved standards?			
4.3.2.2	Are certificates of compliance available attesting to NIST (or other cognizant Service ESA approved standard) certification?			
4.3.2.3	Are there procedures for internal notification of out of tolerance conditions?			
4.3.2.4	Is calibrated M&TE used in controlled environments which ensure accurate measurements?			
4.3.2.5	Are there instructions available for operating inspection equipment?			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.4	Control of Purchases & Receipt Inspection QM/P:			
4.4.1	Are there systems for the company to identify externally approved Sub-Tier Suppliers (e.g. Prime approved sources, customer approved sources, etc.)?			
	How:			
4.4.2	Are lists of externally approved sub-tier suppliers available to the purchasing personnel?			
4.4.3	Does the Quality Department review purchase orders to ensure all necessary quality requirements are specified?			
4.4.4	Does the Quality Department review purchase orders to ensure that approved sub-tier suppliers are specified?			
4.4.5	Do existing purchase orders contain requirements for the following (as applicable):			
4.4.5.1	Mercury-Free Material			
4.4.5.2	Government Source Inspection			
4.4.5.3	Heat Codes and Traceability			
4.4.5.4	Material Certifications			
4.4.5.5	Marking			
4.4.5.6	Item criticality			
4.4.6	Are purchase orders available to the incoming inspection department?			
4.4.7	Does the incoming inspection department have access to the drawing revision as called out on the purchase order?			
4.4.8	Are written inspection instructions and acceptance standards issued to the incoming inspector			
4.4.9	Are procedures in place to verify sub-tier suppliers' product prior to use or processing?			
4.4.10	When mechanical and chemical tests are required by contract, are the reports checked to assure test results conform to specifications			
4.4.11	Is incoming materiel traceable to the mechanical and chemical test reports (Heat Number, Heat Code, etc.)?			
4.4.12	Are there established schedules and frequencies for performing material verification checks?			
4.4.13	Are records kept to show acceptance and rejection criteria of incoming materials			
4.4.14	Are records kept to show acceptance and rejection of incoming materials			
4.4.15	Are materials properly identified as to inspection status			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.4.16	Are non-conforming materials identified as such and held in a segregated and secured area until disposition can be made?			
4.4.17	Are sampling levels adjusted according to inspection history			
4.4.18	Are process averages maintained in order to control Acceptable Quality Level (AQL) assignments			
4.4.19	Does contractor have a written procedure to ensure material traceability by sub-tier suppliers			
4.4.20	Are contractor's purchase orders made available for review by the Government			
4.5	Special Processes QM/P:			
4.5.1	Does the contractor have adequate written procedures for control of special processes, in-house and/or at sub-tier suppliers (e.g., welding, brazing, NDT-PT, MT, UT, & plating, etc.)?			
4.5.2	Does the contractor have procedures to ensure that approved special process suppliers are used, as required by the customer			
4.5.3	Are adequate methods provided to ensure compliance to special processes and respective specifications?			
4.5.4	Are special process operator(s) (such as welders and NDT examiners) qualification records maintained			
4.5.5	Are special process operator(s) (such as welders and NDT examiners) qualification records available to the customer for review?			
4.5.6	Have there have been reviews, certifications, and approvals of special processes by independent review organizations (e.g., NADCAP) or approvals by Prime/OEM companies			
4.6	Control of Manufacturing and In-Process Inspections QM/P:			
4.6.1	Do work instructions specify tooling, operation sequence, methods and technical requirements			
4.6.2	If a manufacturing lot consists of multiple heats, are individual heats segregated or identified to preclude loss of material traceability			
4.6.3	Are there instructions to provide for control and maintenance of material identification and markings during the manufacturing operations			
4.6.4	Are the supplier's scrap control procedures written and defined?			
4.6.5	Is first production piece and/or in-process inspection being applied?			
4.6.6	Are there written inspection instructions with acceptance standards issued to each inspection station			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.6.7	Are all inspection records on file			
4.6.8	Are non-conforming materials or items identified and promptly segregated from acceptable materials/items?			
4.6.9	When non-conforming materials or items are segregated from acceptable materials/items, is the reason for the non-conformance described?			
4.6.10	Is reworked material submitted for re-inspection?			
4.7	Audits			
4.7.1	Are procedures for internal audits of CSI frozen manufacturing planning established and documented			
4.7.2	Is the proposed supplier required to conduct internal audits, when applicable?			
4.7.3	Are internal audits scheduled (e.g. start of production, annually thereafter)			
4.7.4	Are all audit findings and corrective actions documented			
4.7.5	Are external audits performed on-site at subcontractor facilities?			
4.7.6	If no, are audits conducted via mail questionnaires?			
4.8	Final Inspection of Completed Material QM/P			
4.8.1	Are written inspection instructions and acceptance standards provided to final inspection			
4.8.2	Are drawings and/or specifications available to final inspection?			
4.8.3	Are procedures in place to ensure that final inspection uses the contract specified drawing revision?			
4.8.4	Are contract marking requirements verified at final inspection (nameplates, material traceability marking, etc.)?			
4.8.5	Are Inspection Method Sheets used to verify that all required inspections have been accomplished (including documentation & certification)			
4.8.6	Are the inspection records adequate?			
4.8.7	Are materials adequately identified as to inspection status			
4.8.8	When the contract allows for sampling inspection , is the supplier using a sampling plan as approved by the customer?			
4.8.9	When sampling is used, are process averages maintained in order to control AQL assignments			
4.8.10	When sampling is used, are sampling levels adjusted according to inspection history			
4.8.11	Are inspection stamps controlled			

Item No.	Review Item	Evidence	Pass/Fail	Tab
4.9	Packing, Storage, and Delivery QM/P:			
4.9.1	Are there adequate written instructions for packaging, marking, and shipping provided the shipping personnel			
4.9.2	Are the customer marking instructions issued to the shipping personnel			
4.9.3	Is there a checklist to ensure all required documentation and software items are included with each shipment			
4.9.4	Are interior and exterior containers properly marked to the contract requirements/clauses to identify the content			
4.9.5	Are shelf-life items properly identified and controlled (e.g., first-in, first-out control)			
4.9.6	Is the storage area adequate to prevent deterioration or damage			
4.9.7	Are military packaging tests performed when required by contract and documented			
4.9.8	Are military packaging test results documented?			
4.9.9	When clean room conditions are required by the contract is adequate control exercised			
4.9.10	Are stored raw materials properly segregated, by type, class, etc., and identified for traceability			
4.9.11	Are delivery and shipping records maintained by or crossed referenced by heat, batch, lot, etc. to ensure forward traceability and material recovery			
4.9.12	Do instructions ensure that proper preservation is applied to completed item			
4.10	Non-conforming Material and Corrective Action QM/P:			
4.10.1	Are there adequate procedures for submitting deviations, or other variation requests			
4.10.2	Are there written procedures specifying definitive time frames for handling defective materials and reporting corrective action - MRB Weekly			
4.10.3	Are customer complaints recorded and readily accessible			
4.10.4	Is action taken to promptly document and correct all conditions of non-conforming materials to the government			
4.10.5	Are non-conforming materials promptly identified and segregated			
4.10.6	Are customer complaints and records of defective materials maintained for feedback data to prevent recurrences and effect quality improvement			
4.10.7	Are there procedures in place to mutilate material condemned following MRB review, as required by the contract?			

SUB-TIER SUPPLIER QUALIFICATION				
Item No.	**Review Item**	**Evidence**	**Pass/Fail**	**Tab**
5.1	Do records provide the degree of traceability required by the contract for verification of the following:			
5.1.1	Component Procurement was for New, Sealed and Unused ?			
5.1.2	Was Stock traceable to the OEM?			
5.2	Certification(s)of Conformance and attach certificate(s))			
5.2.1	Does the Supplier have AS 9100 Certificate?			
5.3	Quality Manual			
5.3.1	Were the component dimensional characteristics obtained from a statistically significant sample?			
5.3.2	Are critical characteristics measurements (Kpc) monitored via SPC?			
5.3.3	Are critical characteristics measurements (CpK) monitored?			
5.3.4	If any CpK values changes are corrective actions taken?			
5.3.5	Are initial production CpK values submitted to the cognizant Service ESA?			

Finding Report

DEPARTMENT OF DEFENSE		
SITE SURVEY REPORT		
Survey Finding Number_____ **Classification_____**		
INSTRUCTIONS: This report form is to serve as a record of findings noted by Department of Defense (DoD) personnel conducting vendor Site surveys and may be used for follow-up of corrective actions. This form, when completed, will become a permanent record of the survey activity and will not normally be distributed to other non-DoD activities.		
Finding Number = (DoD Site Survey Number) - (sequential number, beginning with 01) e.g. 81996-AR-0804-05.		
Finding Classifications:		
Critical - A non-conformance that negatively impacts a critical characteristic or that would result in hazardous or unsafe conditions for individuals using, maintaining or depending upon the supplies or services, or is likely to prevent performance of a major end item, or major part thereof.		
Major - A non-conformance, other than critical, that is likely to result in failure or to materially reduce the usability of the supplies or services for their intended purpose.		
Minor - A non-conformance that is not likely to materially reduce the usability of the supplies or Services for their intended purpose, or operation of the supplies or services.		
Observation - A condition or circumstance which does not currently meet the aforementioned criteria, but holds the potential of causing a deficiency in the future, or a finding that could be of value for quality improvement.		
Title:	Item No:	Date:
Finding:		
Auditor's Signature:		Date:
Auditee's Signature:		Date:
Corrective Action:		
Corrective Action Submitted By:		Date:
Corrective Action Accepted By:		Date:
Corrective Action Verification (DoD):		Date:
Remarks:		

Site Survey Summary

DEPARTMENT OF DEFENSE	
UNIVERSAL SITE SURVEY SUMMARY **Site Survey Number** _____	
Findings	
Critical	
Major	
Minor	
Observations	
Total	
Remarks:	

Exhibit D

Surplus Procurements Checklist

The following information should be submitted with offers of SURPLUS SUPPLIES.

(1) The SURPLUS SUPPLIES are new, unused, and were manufactured by (insert name, CAGE code, and address) under government contract number (insert government contract number):

(2) The SURPLUS SUPPLIES were purchased by the offeror from the Government selling agency or other source identified below. If the supplies were purchased from the Government by a source other than the offeror, identify that source. (If complete information is not available, attach an explanation as to when, where and how the property was acquired). Provide the following:

SELLING AGENCY _____
CONTRACT DATE _____
CONTRACT NUMBER SOURCE_____

(3) The SURPLUS SUPPLIES --

(i) [ ] have, [ ] have not been altered, modified or refurbished;

(ii) [ ] have, [ ] have not been 100% inspected for correct part number and for absence of corrosion or any defects; and

(iii) [ ] do, [ ] do not contain cure-dated components.

(4) The SURPLUS SUPPLIES --

[ ] will, [ ] will not be reconditioned, refurbished or altered. If the supplies contain cure-dated components, identify components to be replaced and the applicable rebuild standard. If the SURPLUS SUPPLIES are to be reconditioned or altered, attach complete description of the work to be done.

For SURPLUS SUPPLY ITEMS identified by manufacturer's code and part number, furnish the following information:

(1) Identify the applicable specification/drawings in possession of the offeror:

SPEC./DRAWING NO. _____
REVISION (IF ANY) _____

DATE _____

(NOTE: The offeror is responsible for furnishing supplies conforming to the requirements of the purchase description, even though the applicable specifications/drawings are not available.)

(2) The offeror [ ] has, [ ] does not have the SURPLUS SUPPLIES. If the offeror does not have the SURPLUS SUPPLIES, attach an explanation as to how the offered quantities will be secured, their present location, the basis for the information provided in paragraph (a)(1) above, and where a pre-award survey of the supplier may be performed.

(3) If SURPLUS SUPPLY ITEMS have data plates attached, furnish copy of information contained thereon.

(4) If the SURPLUS SUPPLY ITEMS are marked with serial/part numbers, indicate these numbers:

If the SURPLUS SUPPLY ITEMS are not marked with serial/part numbers, the offeror must be able to identify the items by manufacturer's drawings or other data acceptable to the Government inspector.

(5) The offered SURPLUS SUPPLY ITEM(s) --

[ ] have, [ ] have not been previously packaged, and

[ ] are, [ ] are not in their original package. If the original package is being used, state here all markings and data, including contract number, cited on the package.

The offeror agrees that in the event of award and notwithstanding the provisions of this solicitation, inspection and acceptance of the SURPLUS SUPPLIES will be performed at origin or destination subject to all applicable provisions for origin or destination inspection.

Failure to provide the information requested by this clause may require rejection of the offer for failure to meet the requirements of the solicitation.