

SOURCE APPROVAL INFORMATION BROCHURE FOR ADDITIVE MANUFACTURING

Source Approval Request (SAR) Requirements for Manufacturers



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Introduction

The following is the U.S. Navy's Additive Manufacturing (AM) Source Approval Request (SAR) Brochure ("SAR Brochure") covering the additive manufacture of parts within both Naval Aviation and Maritime systems.

Pursuant to this SAR Brochure, Naval Supply Systems Command Weapon Systems Support (NAVSUP WSS) will review, and where appropriate, approve SARs from manufacturers seeking to provide the U.S. Navy with AM parts.

Manufacturers seeking SAR approval will use this SAR Brochure for guidance in providing to NAVSUP WSS engineers relevant technical data, traceability documentation, etc. needed for AM pre-award source approval.

Manufacturers should note that approval pursuant to this SAR Brochure will usually require additional separate AM process qualification and materials qualification with U.S. Navy engineering authorities outside NAVSUP WSS. These outside engineering authorities will be engineers of the Naval Air Systems Command (NAVAIR) for aviation parts and engineers of the Naval Sea Systems Command (NAVSEA) for maritime parts.

All U.S. Navy AM approvals and qualifications, whether for aviation or maritime parts, will reflect a risk-based "consequence-of-failure" approach to AM. In other words, approvals/qualifications will be given in accordance with the risk categories established by NAVAIR and NAVSEA shown below. Such risk categories reflect classification levels specified in NAVAIR Instruction 4790.41 (also see ASTM F3572 table A1.) and in NAVSEA AM Guidance (per 05T/2018-024).

It should also be noted that a manufacturer which submits satisfactory technical data, traceability documentation etc. to be approved for one of the categories below will receive what is considered conditional source approval. Such conditional approval will not become unconditional approval until such manufacturer passes any/all testing requirements in the Quality Assurance Provisions (QAP) of an awarded contract, such as First Article Testing (FAT) and/or Production Lot Testing (PLT).)

Source Approval Steps: Pre-award

NAVAIR/NAVSEA

- ✓ Process Qualification

NAVSUP WSS

- ✓ Source Approval Request
- ✓ Site Survey

Post-award

DCMA

- ✓ First Article Test

Process Qualification Requirements by Classification Level

Process qualification requirements are defined based on the classification level. (Note that NAVAIR and NAVSEA use different terms for their respective classification levels. However, as shown below, the levels align. For example, “NAVAIR Class Level I” is equivalent to “NAVSEA Severity Level 7, N/A.”)

NAVAIR Class Level I/NAVSEA Severity Level 7, N/A

Sources approved to manufacture Class I/Severity Level 7, N/A parts must demonstrate that they have and will use AM equipment per the Technical Data Package (TDP).

NAVAIR Class Level II/NAVSEA Severity Level 6-7

Sources approved to manufacture Class II/Severity Level 6-7 parts must demonstrate that they have and will use the AM equipment per the TDP as well as have a Basic Quality Management System, per DFARS Part 246, in place. This approval will permit manufacturers to manufacture other Class II/ Severity Level 6-7 parts with the same material and process. Class II/ Severity Level 6-7 item source approval is material and process specific.

NAVAIR Class Level III/NAVSEA Severity Level 4-6

Sources approved to manufacture Class III/ Severity Level 4-6 parts must demonstrate that they have and will use the AM equipment per the TDP, meet applicable Process and Material Qualification requirements, as well as have a Higher Level Quality Management System, per DFARS Part 246 in place. This approval will permit manufacturers to manufacture parts with the same material, process, machine model and qualification requirements. Class III/ Severity Level 4-6 item source approval is material, process, and machine model specific.

NAVAIR Class Level IV/NAVSEA Severity Level 1-4

Sources approved to manufacture Class IV/ Severity Level 1-4 parts must meet all of the Class III/ Severity Level 1-4 requirements as well as pass a First Article Test (FAT) approved by the cognizant engineer. Class IV/ Severity Level 1-4 item source approval is part, material, process, and machine serial number specific and pertains only to the part the manufacturer manufactures that passes the FAT.

Note: The AM TDP will have technical requirements associated with these classification levels indicating technical approval/qualification requirements. A TDP is the complete set of technical data needed to manufacture a part (drawing, parts list, specifications, etc.). TDPs will be in compliance with MIL-STD-31000.

Process Qualification - The standardization of AM processing technology (Installation Qualification, Operational Qualification, Performance Qualification), is necessary to develop confidence of sufficient quality to meet airworthiness and/or functional requirements, as applicable. See this SAR Brochure at Section K Process Qualification.

AM Source Approval Process Overview

Requirements to provide AM parts to the Navy depend in part on the type of vendor. This document considers three type of vendors – as-built (initial) suppliers, post-processing as-built (final) manufacturers, and additive as-built (final) manufacturers. As-Built (Initial) is defined as: In an additive manufacturing process, the configuration of an item as initially additively manufactured (e.g. as-printed), prior to any post printing modifications. (The as-built (initial) configuration may define geometry with included features such as support structures intended to be removed post processing, or incomplete features such as threaded holes, intended to be added in post processing.) [MIL-STD-31000C Sec 3.1.31.3] As-built (final) is defined as the configuration of an item in its final manufactured state. [MIL-STD-31000C 3.1.31.2]

1. As-built (initial) Supplier:

- What they DO:
 - Print the part as-built (initial) in-house.
 - Act as the as-built (initial) provider to an As-built (final) as-built (final) manufacturer.
- What they DON'T DO:
 - Contract directly with the Government.
 - Provide added value outside of the printing process (e.g., post-processing, managing sub-tier suppliers, final inspection).

2. Post-Processing As-built (final) Manufacturer:

- What they DO:
 - Contract directly with the Government.
 - Receive the as-built (initial) from a qualified as-built (initial) supplier.
 - Perform all added value outside of printing the as-built (initial) (e.g., post-processing, managing sub-tier suppliers, final inspection).
 - Deliver the finished component.
- What they DON'T DO:
 - Print the as-built (initial).

3. Additive As-built (final) Manufacturer:

- What they DO:
 - Contract directly with the Government.
 - Print the part as-built (initial) in-house.
 - Perform most of the post-processing.
 - Managing sub-tier suppliers.
 - Perform final inspection.
 - Deliver the finished component.
- What they DON'T DO:
 - Rely on external suppliers for as-built (initial) printing or core manufacturing steps.

Requirements for providing AM parts to the Navy vary by vendor type, as shown below.

Required Steps	Vendor Types		
	As-built (initial) Supplier	Post-Processing As-built (final) Manufacturer	Additive As-built (final) Manufacturer
AM SAR			X
Spares SAR (non-AM)		X	
Site Survey		X	X
AM Process Qualification*	X		X
Identification of Process-Qualified As-built (initial) Supplier*		X	
Proof of As-built (initial) Supplier's Process Qualification (Recommended)		X	

***Process Qualification Requirement:** As necessary per NAVSEA/NAVAIR TDP. The TDP will call out the requirement for process qualification to print the as-built (initial) part.

AM Source Approval Request (SAR) Overview

The Navy uses the SAR process to evaluate a manufacturer's capabilities in order for the vendor to become an approved source of supply for Class I/Severity Level 6-7, N/A through Class IV/Severity Level 1-4 parts. A SAR from a manufacturer is expected to demonstrate evidence of the manufacturer's ability to produce an item with acceptable quality, traceability, and sub-vendor control. As noted above, SARs will be reviewed by classification level. Manufacturers are required to submit a unique SAR for each classification level, by part (as applicable) requiring approval.

SARs are intended only for companies which are actual manufacturers being awarded the government contract. The actual manufacturer is the company with plant equipment and personnel who will perform the physical fabrication processes that produce the as-built (final) part for the government. The actual manufacturer must produce the part in-house. It is acceptable for the actual manufacturer to outsource/subcontract the post processing of the fabricated component; however, the subcontractor must have a value add less than 50% of the contract.

Note one exception to the paragraph above: distributors are permitted to supply critical Naval items if clear traceability to a source approved by an Engineering Support Activity (ESA) is provided. For AM parts, distributors will be permitted to submit SARs on behalf of manufacturers, as long as all information that a manufacturer would have to submit is submitted by such a distributor. If a distributor makes such a submission, approval of the SAR represents approval of the manufacturer, not the distributor. Distributors will never be considered approved.

Business Opportunities (For additional registration information, see Attachment A and DD Form 2345)

Listed below are several sources for finding AM business opportunities (and non-AM opportunities).

FedBizOpps, Federal Business Opportunities, is the single government point-of-entry (GPE) for Federal government procurement opportunities over \$25,000. Government Procurement Contracting Officers (PCOs) are able to publicize business opportunities by posting information directly to FedBizOpps via the Internet. The website to access FedBizOpps is: <https://sam.gov/content/opportunities> -

DIBBS, DLA Internet Bid Board System, is a web-based application that provides the capability to search for, view, and submit secure quotes on Requests For Quotations (RFQs) for Defense Logistics Agency (DLA) items of supply. DIBBS also allows users to search and view Request For Proposals (RFPs), Invitations For Bid (IFBs), previous contract awards and other procurement information related to DLA. The website to access DIBBS is: <https://www.dibbs.bsm.dla.mil/>

NECO, Navy Electronic Commerce Online is the Navy website that provides business opportunities for commercial vendors to access information regarding Navy procurements. The website to access NECO is: <https://www.neco.navy.mil/>. Vendors should register with NECO to submit bids and receive daily procurement opportunities. NECO registration requires a valid Commercial And Government Entity (CAGE) Code, which can be obtained from the System for Award Management (SAM) website. The website to access SAM is: <https://www.sam.gov>

AM SAR Categories

Process qualification requirements are defined based on the classification level. Manufacturers can submit SARs for parts within the Classification Level that aligns with their process qualification. The Navy accepts Category I and Category II SARs as defined below.

- I. **Category I, Actual Item:** The proposing manufacturer has produced the exact same item for the Original Equipment Manufacturer (OEM) or for another U.S. Government activity within the past 3 years for Critical Safety Items (CSIs) or past 5 years for Critical Application Items (CAIs)*.
- II. **Category II, Similar Item:** The proposing manufacturer has not produced the subject item but has produced a similar item or items for the OEM or another U.S. Government activity. Similarity comparison includes classification level, complexity, design, criticality, manufacturing processes, materials, application and operating environment, quality assurance and inspection.

Occasionally, a manufacturer submitting a SAR may have never manufactured the subject item or any similar items for an OEM or any government activity, but does have the appropriate capability (equipment, staff, procedures, quality system, and technical data) required to manufacture the subject item according to the technical requirements. In this situation, NAVSUP WSS may work with the manufacturer to identify one or multiple items that can be combined to submit a Category II SAR.

*Critical Application Item and Critical Safety Item are the standardizing terms currently used by the three Military Services and the Defense Logistics Agency (DLA).

Critical Application Item (CAI) - 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.

Critical Safety Item (CSI) - A part, assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapons system that contains ~~a~~ one or more characteristics where any failure, malfunction, or absence of such characteristic ~~which~~ could cause: a catastrophic or critical failure resulting in the loss or serious damage to the aircraft or weapons system, an unacceptable risk of personal injury or loss of life, or an uncommanded engine shutdown that jeopardizes safety. CSIs are a subset of CAIs.

Site Survey

Site surveys can be a critical element of the pre-award approval process and are specific to the location and the CAGE code of the manufacturer. A site survey is strongly considered for critical items. Site surveys provide insight into a manufacturer's capabilities relating to the manufacture, inspection, production, testing, traceability, quality, sub-vendor control and delivery of item. Site survey results help the Navy and other Department of Defense (DoD) Service ESAs determine the level of Government surveillance required to ensure that quality items are delivered. While the site survey is an important part of the approval process, the absence of a site survey should not be the sole reason for rejecting a SAR from a potential source.

The manufacturer submitting an AM SAR should indicate whether a site survey has been performed by the U.S. Government and include the dates of the survey, surveying activity, relevant items and any quality or capability changes that have been implemented since the survey. Site surveys are always performed at the site of the as-built (final) manufacturer, not the distributor or as-built (initial) supplier.

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

- For manufacturers who have not previously manufactured critical items; or
- As required by the cognizant Service ESA, if the manufacturer has not manufactured and delivered the actual or similar critical items 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 manufacturer's 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 manufacturer to describe the nature of the change is not sufficient; or
- As required by the cognizant Service ESA, if quality issues have been identified.

When a site survey is required, the manufacturer will be notified, and a site survey must be completed prior to source approval. In these cases, the manufacturer cannot be added as an approved source of supply until the site survey is completed and thus a source approval/disapproval letter should not be sent until the site survey has been completed. The evaluation of the SAR can, however, be completed prior to completion of the survey.

The lead activity or agency for the site survey (survey initiator) will work out specific survey dates with the supplier/as-built (final) manufacturer. The survey typically lasts no more than three (3) working days and must be completed prior to SAR approval and contract, unless specifically authorized by the cognizant Service ESA. The lead activity will coordinate the scheduling of surveys with other DoD Services, as appropriate.

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

Source Approval Request Contents Guide

Section	Description	Cat I	Cat II
-	Table of Contents	X	X
Capability to Manufacture			
A	Cover Letter	X	X
B	Manufacturer Brochure & Capabilities	X	X
C	Technical Data Rights Certification Statement	X	X
D	Licensee Agreement (If Applicable)	X	X
E	Master Tooling Certifications (If Required)	X	X
F	Statement of Value Added by Prime/OEM	X	X
Quality Assurance			
G	Government Quality Assurance Compliance	X	X
H	QA Manual & QA System Certifications (If Applicable)	X	X
I	Government/OEM Surveys and Reports	X	X
J	Quality History	X	X
Technical Data			
K	Process Control Documents (PCD)	X	X
L	Process Qualification	X	X
M	Process Performance Data	X	X
N	Subject Item Tech Data Verification	X	X
O	Subject Item Specifications	X	X
P	Comparative Analysis of Subject & Similar Items		X
Q	Similar Item Product Definition Data Set		X
Traceability			
R	Contract Purchase Orders and Shipping Documents (WAWF/iRAPT)	X	X
S	Material and Process Purchase Orders and Certifications	X	X
T	Process Operation Sheets and Travelers	X	X
U	Inspection Method Sheets	X	X

Requirements for each SAR section are as follows:

A. COVER LETTER

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

1. The applicant manufacturer's name, address, CAGE, telephone number, FAX number, email address, and website (if applicable).
2. For the subject item include the part number (including dash number, if applicable), Product Definition Data Set (PDDS) revision, original part Prime Contractor/OEM name and CAGE code, National Stock Number (NSN), nomenclature, and weapon system (i.e. engine model (Type/Model/Series), aircraft/ship designation).
3. The category of SAR being submitted, as defined above.
4. A statement that the contractor is willing to provide a technical briefing on the SAR submittal to the procuring activity or at any of the cognizant ESAs if required.

B. MANUFACTURER BROCHURE & CAPABILITIES

A company brochure and a synopsis outlining the manufacturer's capabilities, facilities (such as location, number of buildings, square footage, etc.), experience, and equipment list should be provided. For all equipment used in the manufacture of the subject item, outline the accuracy, size, precision of the equipment, and capability (such as material type, process category, feedstock specifications and form, and suppliers). This information should be updated as facility and/or operations change. A completed capabilities form per Enclosure 1, is to be included. The manufacturer 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 PDDS, material, process, and test specifications. An on-site inspection of these elements may be required by the Government.

C. TECHNICAL DATA RIGHTS CERTIFICATION STATEMENT

This is a certification signed on company letterhead by an authorized binding company official. It must include a certification that the data was obtained by legal means, and the company has the rights to use the data supplied in the SAR for manufacturing purposes. If another company's proprietary data is to be used, a statement from the owner of that data that conveys the rights to specifically use that 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.

EXAMPLE: Technical Data Rights Certification Letter

I am an officer and employee of the above named 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. Government's 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 the SAR is for multiple NSNs, all NSNs must be listed.*

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

D. LICENSEE AGREEMENT (if applicable)

A copy of any licensee agreement that may be required for qualified use of necessary software, equipment, material, etc. (e.g. operating programs or a machine maintenance plan). If a full copy cannot be provided, at a minimum a redacted version showing the details of data rights, configuration control, source control, etc. must be included.

E. MASTER TOOLING CERTIFICATIONS (if applicable)

If Government or OEM controlled master tooling is required to produce or inspect the subject item, provide certification of access to and the certification of the right to use any required master tooling, and special tooling/test equipment, as applicable to the latest item revision. Include proof of calibration for all equipment/tooling requiring calibration. If no master tooling or calibration is required, state as such.

F. VALUE ADDED

Provide a statement identifying any specific value to be added by the Government or Design Control Authority (DCA) in the manufacture of the item. Value added is 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. An example of value added is the Government performing a fit check on a finished article. If there is no value to be added by the Government or DCA, provide a statement confirming the Government or DCA will not add value to the subject item during or after the manufacturing process.

G. GOVERNMENT QUALITY ASSURANCE COMPLIANCE

Provide a statement that the prospective manufacturer will comply with all Government-imposed QAPs, testing requirements, etc. as identified in any solicitation or contract for the subject item. This statement of compliance must be signed by an authorized binding company official.

EXAMPLE: Government Quality Assurance Compliance Statement

To: SAR Recipient,

As an authorized binding company official, I certify that any resultant contract for the subject item to be manufactured by (Company Name) will be manufactured in accordance with all Quality Assurance Provisions imposed by the Navy. (Company Name) operates using a compliant quality system and has the appropriate and required quality controls in place to manufacture the subject item in accordance with all Quality Assurance Provisions imposed by the Navy.

(Signature)_____ (date)_____
(typed or printed name & title)

H. QUALITY ASSURANCE (QA) DOCUMENTATION

Provide a synopsis of the manufacturer's quality program capabilities and reporting system. A copy of the manufacturer's QA manual and all referenced documentation must be provided. Quality assurance documentation must 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 manufacturer's QA manual and all referenced documentation may be kept at the procuring activity. A Quality Rating System (QRS) report from any Prime Contractors/OEM must be included if available.

I. GOVERNMENT/OEM 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 any OEMs within the past seven years. If there are none, state as such. This section can include any available DoD technical evaluations of the manufacturer's production capability, quality assurance procedures, industrial resources, material purchasing, and sub-tier supplier controls.

J. QUALITY HISTORY

Provide a summary of Product Quality Deficiency Reports (PQDRS) for all items under the manufacturer's CAGE code issued within the past 3 years. In addition, provide a summary of deficiency reports for the subject and/or similar item for all proposed sub-tier suppliers within the same time period. For the subject and/or similar item, provide a summary of internal deficiencies, commercial deficiencies, Federal Aviation Administration (FAA) Service Bulletins, Material Review Board (MRB) items, statistical reports of nonconformance, 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, it should be specifically stated.

The summary must include, at a minimum, the following data: part number, nomenclature, feature, deficiency, quantity, date and corrective action.

Note: Nonconformances can reflect an increase in risk when considering source approval, but if reasonable in number and significance, they do not always reflect such an increase. For example, a manufacturer's identification of nonconformances can indicate a successful quality assurance program.

K. PROCESS CONTROL DOCUMENTS (PCD)

PCD help ensure a vendor can deploy and maintain a process that delivers a quality part. Manufacturers which receive source approval must prepare and maintain PCD that record their internal procedure for performing the Additive Manufacturing process. It is the responsibility of the cognizant Government engineer (CE)/authorized representative (AR) (see the definitions immediately below) to approve a manufacturer's PCD if it can be shown that their process meets the requirements outlined in the process control specifications as defined by NAVAIR/NAVSEA. Once the manufacturer's process is qualified, the PCDs are fixed and any changes to the PCD, with a potential impact to a key process variable (NAVAIR)/to essential

elements (NAVSEA), will require requalification prior to the change being implemented into production. Any changes to a manufacturer's PCD must be approved by the Government CE/AR to maintain such manufacturer's status as an approved vendor for that specific part. For example, the PCD must address the aspects of the Laser Powder Bed Fusion (LPBF) AM process as prescribed in SAE AMS7003, or NAVSEA LPBF Technical Publication (S9074-A2-GIB-010_AM-PBF).

Cognizant Engineer: The NAVAIR engineer or department assigned responsibility and authority to perform and approve the basic design engineering and procurement support for specific parts of a system, subsystem, part or component. As used within the context of this document, "cognizant engineer" is assumed to have delegated Technical Authority (TA) for a given component. (Source: NAVAIR SWP-AA10-013)

NAVSEA AM Authorized Representative: An AM authorized representative is specifically authorized to approve equipment, material, or procedures within the scope of the NAVSEA Technical Publication for NAVSEA. AM Authorized representatives are Naval Surface Warfare Center Carderock Division, NAVSEA, or individuals explicitly approved by NAVSEA. [Source: S9074-A2-GIB-010_AM-PBF]

L. PROCESS QUALIFICATION (process, machine Serial Number (S/N), energy source, material)

Indicate the specification to which the manufacturer has qualified their AM equipment.

M. PROCESS PERFORMANCE DATA

Provide the test report developed during the process qualification per SAR Section L using the PCD in SAR Section K.

N. SUBJECT ITEM TECH DATA VERIFICATION

Verify the capability to utilize the provided TDP. This can be in the form of screenshots of all included attachments.

O. SUBJECT ITEM SPECIFICATIONS

Provide a complete listing of applicable specifications (such as a Process Specification or Technical Publication) identified on the subject item PDDS as well as a copy of the title page of the latest revision of each specification. If the PDDS requires specifications that have been superseded, cancelled or replaced, identify the original requirement and replacement and include the cover page for the current requirement.

Identify all required raw material and assembly components that will be purchased. Identify all special processes. List each material and each process along with an appropriate sub-vendor qualified to provide the material or service. See Enclosure 2 for an example.

Note: Listing sub-vendors provides evidence of the applicant's ability to identify appropriate requirements and demonstrate subcontractor controls. The applicant will be

permitted to use sources other than those listed here until process sheets are locked upon completion of First Article Test (FAT).

If any special processes will be performed in-house, identify such processes.

All processes must be denoted as critical or non-critical in accordance with DOD-STD-2101. If any assembly components are CAI, CSI, or Source Controlled per OEM PDDS, proposed suppliers must be Navy approved sources.

If the manufacturer seeking source approval proposes the use of suppliers who are not OEM or government approved, complete documentation substantiating the capabilities and qualifications of the sub-tier supplier must be submitted. It should be noted, however, that additional approval testing (as specified by the cognizant Service ESA) may be required in this circumstance.

P. COMPARATIVE ANALYSIS OF SUBJECT & SIMILAR ITEMS

For Category II (Similar Item) SARs, identify similarities and differences between the subject item and the completed similar item. Relevant characteristics to identify include, but are not limited to, criticality, material, size, shape, function, manufacturing processes, tolerance, finish, quality assurance and inspections, application, and operating environment. See Enclosure 3 for an example.

Q. SIMILAR ITEM PRODUCT DEFINITION DATA SET (PDDS)

For Category II SARs, provide all data required to manufacture, assemble and test the similar item(s). This information includes PDDS (additive manufacturing process, detail, assembly, source controlled, masters, airfoil data, schematics, etc.), configuration (revision), parts list and 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 PDDS will typically include references to materials, processes, specifications, and may include data relating to mandatory inspections and inspection intervals. Additional details related to the AM process parameters may be included to support comparative analyses.

R. CONTRACT PURCHASE ORDERS AND SHIPPING DOCUMENTS

Provide complete copies of purchase order(s) and any amendments for the subject item or similar item depending on SAR category. The purchase orders must be from the Prime Contractor, OEM, or Government. This information must indicate when the manufacturer last produced the subject item or an item of similar manufacturing complexity (for Category II SARs). Shipping documents should include evidence of lot acceptance by the customer. For government contracts, form DD250 or Invoicing, Receipt, Acceptance and Property Transfer (iRAPT) (formerly Wide Area Work Flow (WAWF)) receiving report should be signed or marked as "accepted" by the Defense Contract Management Agency (DCMA) Quality Assurance Representative (QAR). All documents in this section must be dated and shipping documents must account for all items ordered. All financial information may 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 manufacturer. Therefore, contract performance documentation included in SARs must cover a period of performance no

more than three (3) years for CSI and no more than five (5) years for CAI after the date of last delivery, as evidenced by latest shipping document. This period of performance threshold applies to the date the SAR is received by the procuring activity. If a contract was terminated, the reason for termination must be included in this section. The data provided in this section must be for the same contract as those provided in SAR Sections S, T, and U.

S. MATERIAL AND PROCESS PURCHASE ORDERS & CERTIFICATIONS

Provide a list of all processes and materials used for the completed contract along with the specifications, sub-vendors and certification numbers. See Enclosure 4 for an example. Provide copies of purchase orders to all sub-vendors for material and processes. Purchase orders must be traceable to the original contract. Job numbers or order numbers must be indicated to show traceability. Certifications of material and completed processes, including inspection results, are required and must be traceable to the contract. The data provided in this section must be for the same contract as those provided in SAR Sections R, T, and U.

T. PROCESS/OPERATION SHEETS & TRAVELERS

Process/Operations Sheets & Travelers are the procedures required to manufacture the subject or similar item and must be provided. For Category I SARs, copies of the completed sheets used for production of the subject item must be submitted. For Category II SARs, copies of the completed sheets used for production of the similar item must be submitted. The sheets should indicate operation number, description, tolerance, specification, location, sub-vendors, certification numbers, item quantities and dates necessary to control manufacturing operations and must be signed/stamped by in-process operator and/or inspector. For CSI Category II SARs, proposed Operation Sheets to manufacture the subject item must be submitted in order to demonstrate the proposing manufacturer's comprehension of the required manufacturing processes. The data provided in this section pertaining to manufacturing history must be for the same contract as those provided in SAR Sections R, S, and U. The data provided must be from the as-built (final) manufacturer.

Note: Route sheets may be enclosed by the manufacturer in this section but are not to be considered a replacement for detailed operation sheets. The absence or omission of detailed process/operations sheets pertaining to manufacturing history in the SAR is cause for rejection or disapproval of the SAR.

U. INSPECTION METHOD SHEETS (IMS)

Provide the inspection sheets for the production of the subject or similar item. This information must include the nomenclature, part number, characteristics inspected, item quantities, dates, special instructions, zone, rejection/acceptance criteria, 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. If IMS are included as an integral part of the Operation Sheets in SAR Section S, show location on Operation Sheets and provide a detailed description of how in-process/final inspections are performed as well as the personnel (operator/inspector) performing the inspection. The data provided in this section must be for the same contract as those provided in SAR Sections R, S, and T.

Enclosure 1: NAVSUP INTERESTED VENDOR FORM

[https://public.navsup.navy.mil/public/ops\\$public.business_vendor_form_new](https://public.navsup.navy.mil/public/ops$public.business_vendor_form_new)

Ensure “Machining – Additive Manufacturing” is selected as a capability. Please provide additional details as necessary for AM Capability in the “Additional Capability Description” section.

Enclosure 2: SUBJECT ITEM SPECIFICATIONS (example)

Item / Part Number	Material / Process/ Hardware	TDP Specification	Current/ Superseding Specification (if applicable)	Proposed Subvendor (If required)
	Additive Manufacturing Wire DED	S9074-A4-GIB-010/AM- WIRE DED	N/A	
	Additive Manufacturing LPBF/AlSiMg	NAWCADLKE-BL41200- DDR-001	N/A	
	Passivate	MIL-S-5002	QQ-P-35	
	Cadmium Plate	QQ-P-416	AMS-QQ-P-416	
	Bushing	BR4035	AS-4035	

Enclosure 3: COMPARATIVE ANALYSIS OF SUBJECT & SIMILAR ITEMS

This list is an example. Comparative Analysis submitted should be tailored to the specific types of items required, i.e. Fasteners, Gears, Electronics.

Description/ Characteristic	Subject item	Similar item
Part Number		
NSN		
Nomenclature		
Prime Contractor/OEM		
Application/Platform		
Criticality		
Feedstock Material & Type		
Material Properties*		
Size (Min/Max length or diameter)		
Complexity		
Tightest Tolerance		
Surface Roughness		
Threads		
Heat Treat		
Finish Treatment		
Joining (Welding/Brazing)		
In-Situ Monitoring		
Nondestructive Testing		
MPI		
FPI		
Hardness		
Salt Spray		
Ultrasonic		
Energy Source Type		
Layer Height		
Machine Model/Type		
AM Qualification Material Properties*		
Material modality		
AM Process Category		
Build Platform Material		
In-process grinding, machining, and cleaning		

* Provide relevant material property data per the PDDS and the process qualification document results

Enclosure 4: MATERIAL AND PROCESS PURCHASE ORDERS & CERTIFICATIONS (example)

Include the actual certifications for the previously manufactured item (Subject Item for Category I SAR or Similar Item for Category II SAR)

Item / Part Number	Material / Process	Required Specification / Current Specification	Process/Material Subvendor	Purchase Order # or In-House I.D.	Certificate of Conformance Number
[insert PN]	Additive Manufacturing Wire DED	S9074-A4-GIB-010/AM-WIRE DED	[Insert Printed Part Supplier]	PO# XXXXX	[Insert document number]
[insert PN]	Additive Manufacturing LPBF/AlSiMg	NAWCADLKE-BL41200-DDR-001	[Insert Printed Part Supplier]	PO# XXXXX	[Insert document number]
[insert PN]	Passivate	MIL-S-5002	[Insert Post-Processing Subvendor]	PO# XXXXX	[Insert document number]
[insert PN]	Titanium Alloy Weld Rod	AWS A5.16/5.16M	[Insert raw material Supplier]	PO# XXXXX	[Insert document number]

Attachment A: REGISTRATION INFORMATION

There are two (2) programs available for requesting **NAVAIR engineering PDDS and publications**.

US/Canada Joint Qualified Contractor

Technical data may be requested under the US/Canada Joint Qualified Contractor Program, per the Department of Defense Directive (DoDD) 5230.25, Withholding of Unclassified Technical Data from Public Disclosure.

To purchase NAVAIR publications and engineering PDDS under this program, a current, signed, certified DD Form 2345, "Militarily Critical Technical Data Agreement" must accompany your request. This certification is obtained through the Defense Logistics Information Service (DLIS). If you have purchased data in the past, you may still have an active certification. For further information please contact DLIS:

United States/Canada Joint Certification Office
Defense Logistics Information Service
74 Washington Avenue North, Suite 7
Battle Creek, Michigan 49017-3084
Commercial: 1-800-352-3572, 616-961-7431/4358
email address: www.dlis.dla.mil/jcp

Upon receipt of your certification from Defense Logistics Information Systems (DLIS) forward a copy to Naval Air Technical Data and Engineering Service Command (NATEC) along with the following information:

For NAVAIR publication requests provide the publication number(s) and title(s); or part number of the components for which you need the publication. For engineering PDDS requests, provide the PDDS number(s), manufacture CAGE code number(s), and the revision level if known. Also include your mailing address; email address, phone number and a point of contact.

The request and certification can be sent via email to: nani_qualifiedcontractor@navy.mil and/or faxed to 619-545-2722; you can also mail the data to NATEC at the following address:

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
Code 3.3A21
NATEC NAS North Island
P.O. Box 357031 Bldg. 90
San Diego, CA 92135-7031

Programs available for requesting **NAVSEA** engineering PDDS and publications will be included in future revisions of this document. Please contact the contract officer for required data.

Freedom Of Information Act (FOIA)

Technical data can be requested under the Freedom Of Information Act (FOIA), per SECNAVINST 5720.42, Department of the Navy Freedom Of Information Act (FOIA) Program. Per the SECNAV instruction the minimum requirements of a FOIA request are as follows:

- The request must be in writing and cite or imply FOIA.
- The requester must reasonably describe the records (publications and/or PDDS) being sought, so that NATEC can conduct a search with reasonable effort.
- The requester should include a statement regarding willingness to pay all fees or those up to a specified amount or request a waiver or reduction of fees.

Your FOIA request can be sent via email to: nani_foia@navy.mil and/or faxed to 619-545-2722; you can also mail the data to NATEC at the following address:

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
Code 3.3A21
NATEC NAS North Island
P.O. Box 357031 Bldg 90
San Diego, CA 92135-7031

Research, review and duplication fees are calculated in accordance with the SECNAVINST 5720.42. For further information regarding FOIA, visit the NAVAIR FOIA Web Site: <http://www.foia.navair.navy.mil>.

How do I get a CAGE Code?

To start New CAGE Code Registration." You must first have or obtain a [Data Universal Number \(DUNS\)](#). Once you have obtained a DUNS Number from D&B, you are eligible for a CAGE Code through the new [\(SAM\) System for Award Management will start replacing the \(CCR\) Central Contractors Registration.](#)

If requested over the phone, DUNS is provided immediately.

The process to request a D-U-N-S® Number by telephone takes between 5 and 10 minutes.

For U.S., Puerto Rico, and US Virgin Islands Requests only: 1-866-705-5711

Alaska and Puerto Rico: 1-800-234-3867 (Select Option 2, then Option 1) Monday - Friday 7 AM to 8 PM C.S.T.

For Hearing Impaired Customers Only call 1-877-807-1679 (TTY Line)

The following information will need to be provided:

Legal Name

Trade style, Doing Business As (DBA), or other name by which your organization is commonly recognized

Physical Address, City, State and Zip Code

Mailing Address (if separate)

Telephone Number

Contact Name

SIC Code (Line of Business) [2012 SIC/NAICS Codes](#)

Number of Employees at your location

Headquarters name and address (if there is a reporting relationship to a parent corporate entity)

Is this a home-based business?

Webform requests take 1 - 2 business days.

If you already have the necessary information on hand **the online registration takes approximately one hour** to complete, depending upon the size and complexity of your business or organization.

**MILITARILY CRITICAL TECHNICAL DATA AGREEMENT
INSTRUCTIONS FOR COMPLETING DD FORM 2345**

MAIL THE ORIGINAL COMPLETED COPY OF THIS FORM, AND A COPY OF YOUR COMPANY'S INCORPORATION CERTIFICATE, OR STATE/PROVINCIAL BUSINESS LICENSE, OR SALES TAX IDENTIFICATION FORM OR ANY OTHER DOCUMENTATION WHICH VERIFIES THE LEGITIMACY OF THE COMPANY TO THE BATTLE CREEK, MI ADDRESS INDICATED AT THE TOP OF THE DD FORM 2345.

Item 1. **(Type of submission)** mark only one box.

Item 2.a. **(Name)** Enter full legal company name, or parent company (if applicable), or institution.

Item 2.b. **(Address)** The address, street address included, of the entity applying for "certified contractor" status is required in Item 2.b. If a P.O. Box is used for mailing purposes, include street address as well.

Item 2.c. **(Name of subsidiary/division/department)** Enter the name of the subsidiary, division, or department applying for "certified status". If not applicable, state none or leave item blank.

Item 2.d. **(CAGE Code)** Enter CAGE Code. If you do not have a CAGE Code, leave blank.

Item 3 **(DATA CUSTODIAN)** enter the full name, business telephone number, and title of the individual who will receive military critical technical data for the company and be responsible for its further dissemination. **A position designation may be used only when conditions described in Item 5.a. are prerequisites for holding that position.**

Item 4 **(DESCRIPTION OF RELEVANT BUSINESS ACTIVITY)** Describe the business activity of the entity identified in Item 2.a. in sufficient detail for the U.S. or Canadian agency controlling the data to determine whether the military critical technical data that you may request is related to your stated business activity. For example, state that you design and construct high-pressure, high volume hydraulic pumps for use in connection with aircraft control surfaces; do not state simply "hydraulic pumps." **Provide concise statements within the space provided, if necessary, a continuation page may be used.**

Item 5.a. **(CITIZENSHIP/RESIDENCY STATUS)** If the location of the entity is the United States, the individual named in Item 3.a. must be a U.S. citizen, or a person admitted lawfully for permanent residence into the United States. If the location of the entity is in Canada, the individual named in Item 3.a. may be either a Canadian or U.S. citizen or a person admitted lawfully for permanent residence into Canada.

Item 6. **(CONTRACTOR CERTIFICATION)** This must be the original signature of a person who can obligate the entity to a contract.

*****MUST INCLUDE ALONG WITH YOUR COMPLETED DD FORM 2345 A COPY OF YOUR COMPANY'S INCORPORATION CERTIFICATE, OR STATE/PROVINCIAL BUSINESS LICENSE, OR SALES TAX IDENTIFICATION FORM OR ANY OTHER DOCUMENTATION THAT VERIFIES THE LEGITIMACY OF THE COMPANY*****

Before you can be eligible for any solicitation or contract you must be registered with “System for Award Management” (SAM).

What is SAM?

The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from this page. User guides and webinars are available under the Help tab.

Use the link below to access this site and follow the instructions for registration.

<https://www.sam.gov/portal/SAM/#1#1>

Websites that will aid in the review of open solicitations include:

- Navy Electronic Commerce Online
<https://www.neco.navy.mil/>
- Federal Business Opportunities (FED BIZ OPPs)
<https://sam.gov/content/opportunities>
- Defense logistics Agency / DLA Bid Board System (DIBBS)
<https://www.dibbs.bsm.dla.mil/default.aspx>