FIRST ARTICLE REQUIREMENTS

(AFMCI 64-110, AFMCI 23-102 AND FAR Part 9, Sub Part 9.3) (Additional instructions on page 3)

1. DATE: 29 Jun 02

2. PR/MIPR NUMBER:

3. PART NUMBER: 4060689

4. NSN: 2840-01-230-8563

5. FIRST ARTICLE QUANTITY

THE FIRST ARTICLE IS 3 UNIT(S) OF LOT/ITEM 1

AND WILL BE: [ ] PART OF PRODUCTION QUANTITY [X] IN ADDITION TO PRODUCTION QUANTITY

6. ARTICLES

[ ] WILL [X] WILL NOT SERVE AS MANUFACTURING STANDARD

7. LONG LEAD TIME ITEMS

[ ] REQUIRED [X] NOT REQUIRED

(See FAR 52.209-3 or -4, alternate II)

8. SPECIAL REQUIREMENT/PRODUCTION FACILITIES *(See FAR 52.209-3 or -4 Alternate I)*

[X] REQUIRED [ ] NOT REQUIRED

"The First Article offered must be manufactured at the facilities in which that item is to be produced under contract, or if the First Article is a component not manufactured by the contractor, such component must be manufactured at the facilities in which the component is to be produced for the contract. A certification to this effect must accompany each First Article which is offered."

9. TEST/INSPECTION REQUIREMENTS

A. [X] CONTRACTOR TESTING [ ] GOVERNMENT TESTING

Performance or other characteristics which the First Articles must meet are identified in drawing 4060689 and specifications identified therein.

B. The detailed technical requirements for First Article approval tests are contained in Block 12 of this form and LPF-QAR-003.

(Cite Spec and Para number)

C. [X] TEST PLAN REQUIRED

(1) DD Form 1423 ELIN A001

(2) Delivery due 30 calendar days from date of contract.

(3) Number of days for government approval/disapproval 45 days.

D. Contractor's notification to ACO and PCO *(Requesting Activity)* of test time and location due 10 days prior to start of testing.

E. [X] TEST REPORT REQUIRED

(1) DD Form 1423 ELIN A002

(2) Due 120 calendar days from date of contract.

(3) Forward to PCO and OC-ALC/TICLA, 3001 Staff Dr., Ste. T69, Tinker AFB, OK 73145 Attn: FA Monitor

(4) Government written notice of approval/disapproval due 60 days after receipt of contractor's report.

F. FIRST ARTICLE DELIVERY:

(1) Due within _____ calendar days from date of contract.

(2) Notify _____ calendar days prior to shipment.

(3) Delivered to government at

(Set Forth Consignee and Address)

(4) Government written notice of approval/disapproval within ____ days after receipt of first article package.

G. Estimated cost of government testing/inspection evaluation.
$ 500

10. DISPOSITION OF FIRST ARTICLES

[ ] Approved First Articles will be forwarded to _____

[X] 1 *(insert quantity)* First Articles will be expended in testing. Residual components of disapproved First Articles [ ] will be returned to the contractor/ [ ] will be retained by _____ pending disposition instructions from the contractor.

[ ] First Articles will be installed on aircraft/equipment to determine Proper fit/function. Approved article will remain on the aircraft/equipment and will not be forwarded to USAF Supply, but will be considered part of the contract quantity.

[ ] Disapproved First Articles will be returned to the contractor/ will be retained by _____ pending disposition instructions from the contractor.

[ ] On purchase requests designated as direct shipments, the following disposition will apply. (NOTE: Always applicable on Foreign Military Sales (FMS)).

a. Approved First Articles will be returned to the contractor for shipment with production item.

b. Disposition of disapproved First Articles will remain the same as marked above.

[X] Other Disposition: See block 12 of this form

ENTRE/MPRK FAPCA/24/AUG 02

11. CONDITION(S) FOR WAIVER OF FIRST ARTICLE APPROVAL

a. [X] Offerors who have previously furnished production quantities of the same or similar article to the prime contractor for delivery to the X Government, X DoD, X Air Force.

b. [ ] Offerors currently in production of the same or similar article for a _____ Government, _____ DoD, _____ Air Force contract and who have received First Article approval under the existing contract.

c. [X] Offerors who have previously furnished production quantities of the same or similar article to the X Government, X DoD, X Air Force, provided articles thus furnished, have exhibited satisfactory performance in service in the opinion on the Air Force.

d. [X] Provided not more than 36 months have elapsed since completion of the contract.

e. [ ] First Article testing will not be waived.

f. [X] See Remarks in block 12 below.

NOTE TO BUYER: UNDER CONDITIONS A AND C ABOVE, THE COGNIZANT ENGINEERING ACTIVITY WILL DECIDE WHETHER OR NOT THE ITEM HAS EXHIBITED SATISFACTORY PERFORMANCE IN SERVICE AND PREPARE AND RETAIN SUPPORTING DOCUMENTATION TO FULLY JUSTIFY THE DECISION. The buyer must solicit dual prices *that is, both with and without requirement for first article approval)* AND MUST FURNISH THE COGNIZANT ENGINEER ACTIVITY WITH THE FOLLOWING INFORMATION ON THE PREVIOUSLY SUPPLIED ARTICLE:

A. PROCURING OFFICE	B. CONTRACT NUMBER	C. DATE OF CONTRACT	D. SPECIFICATION NUMBER AND REV.

12. REMARKS

9.B. First article test requirements shall be per LPF-QAR-003 and the following:

a. All three first articles shall be inspected in accordance with the requirements of paragraphs 3.1, 3.2, 3.3, 3.4, and 3.5 of LPF-QAR-003.

b. After completion of inspections per 9.B.a above, one article shall be destructively tested/evaluated in accordance with the requirements of paragraph 3.6 of LPF-QAR-003.

10. Disposition of first Articles:

a. Approved first article(s) will be retained at the contractor's facility for reconditioning (if necessary) with final acceptance the same as for production items. If a first article is expended in testing, approval of first article will constitute acceptance.

b. Disapproved first article(s) shall be retained at the contractor's facility, unless specified otherwise by the PCO.

11. The cognizant Government engineering authority shall be the final authority for determining if a contractor meets the conditions of waiver identified in 11.a or 11.c.

First article testing is waived if the offeror is the prime contractor, Pratt & Whitney.

This is a critical part used in the F100 series turbine engine. Poor quality parts will have an adverse effect on mission capability and system safety. For this reason, First Article Testing is required to insure first time manufacturers or manufacturers that have not produced the item within three years manufacture parts in accordance with the drawing and specification requirements.

13. COGNIZANT ENG ORGANIZATION RESPONSIBLE FOR CONDUCTING AND/OR APPROVING TEST *(Name, Organization, Phone)*	14. PR INITIATOR *(Name, Organization, Phone)*
Tyrone Giles, OC-ALC/LPFRA, DSN 884-8692	

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ OTHER ____
D. SYSTEM/ITEM F100-PW-200/-220 Engines	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	Contractor's Configuration Management Plan	Nsn-2840-01-230-8563 Noun: 1st-Stage Turbine Stator Metallic Seal Pre-Production / First Article Plan

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80858 / T		DSCR-JLTB

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
SD	A	1Time	30DAC
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		N/A	N/A

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

16. REMARKS

Nsn-2840-01-230-8563 , Part# 4060689 (77445).

Block 4. Tailored:

The Contract Awardee shall provide a plan for approval that ensures all drawing and specification requirements are complied with prior to First Article sample manufacture. The Plan shall include the "equipment and facilities" used to verify all drawing(s), specifications, and process requirements. As a minimum, the Plan shall address the following criteria:

(a). A list of all drawing dimensions, surface texture, etc..., to be inspected and the equipment to be used for verification of each dimension, surface texture, etc... An actual drawing(s) shall be submitted with the Plan that correlates the dimensions on the drawing(s) to those identified on the list.

(b). A plan to verify that all non-destructive inspections are met.

(c). A plan to verify that all visual inspection requirements are met.

(d). A plan to verify material properties which shall include material properties, metallurgical properties, and chemical compositions.

(e). A plan to ensure that all manufacturing processes are performed by the Original Equipment Manufacturer(OEM), Pratt and Whitney, certified vendors.

(f). A plan to ensure that the forging / casting source is OEM approved for the specific forging / casting requirement, as applicable.

(g). The Plan shall identify all external sources for applicable material and process requirements.

(h). The Plan shall identify GFE, GFM, and Tooling requirements if applicable.

(i). The Plan shall identify all aspects of Quality Assurance such as policies, organization, planning, procedures control, responsibilities, and interfaces including calibration, inspection and testing related criteria.

Additional guidelines for this Plan are contained in LPF-QAR-003.

Block 7. The "Pre-Production / FAT Plan" shall be submitted to OC-ALC for evaluation and approval. Copy shall be submitted to the PCO and DCM Office.

Block 14. Distribution as follows: Copy of the contract shall be provided with the Plan to;

1. DCM - QAR , Vendor DCM Office
2. Defense Supply Center Richmond (DSCR)
   Attn: DSCR-JLPA-P1V
   8000 Jefferson Davis Highway
   Richmond, VA 23297-5878
3. OC-ALC/TICLA
   3001 Staff Drive, Suite T69
   Tinker AFB, OK 73145-3031
   Attn: FA Monitor

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
DCM - QAR Vendor DCM	0	0	1
DSCR-JLPA PCO Richmond, VA	0	0	1
OC-ALC/TICLA Tinker AFB, OK	0	2	0
15. TOTAL →	0	2	2

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Joseph Lesyk	08-26-2002	Joseph Lesyk	08-26-2002

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ OTHER ____
D. SYSTEM/ITEM F100-PW-200/-220 Engines	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A002	Test / Inspection Report	Nsn-2840-01-230-8563 Noun: 1st-Stage Turbine Stator Metallic Seal First Article Test / Inspection Report	18. ESTIMATED TOTAL PRICE

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80809B / T		DSCR-JLTB

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
SD	A	1Time	30DATC
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		See Block 16	N/A

16. REMARKS

Nsn-2840-01-230-8563 , Part# 4060689 (77445).

Block 4. Tailored:

The First Article Test / Inspection Report shall satisfy all the requirements in the approved Pre-Production / First Article Test Plan. All drawing requirements must be satisfied including dimensions, visual inspections, non-destructive inspections, manufacturing processes, as well as material requirements. The Test Report shall identify the sub-vendor(s) utilized to perform the manufacturing and inspection processes as well as proof that the sub-vendor(s) are OEM(Pratt and Whitney) certified to perform the processes. A copy of the process sheets used to manufacture the First Articles shall be included in the Test Report.

Additional guidelines for the Test Report are contained in LPF-QAR-003.

DID-Element 10.2.6.4.2 Test / inspection results. Shall include certification(s) of material and process(es), material shall be acquired and external process(es) to be performed by Pratt and Whitney approved sources and labs.

Block 7. The Report shall be submitted to OC-ALC for an evaluation and approval. Copy shall be submitted to the PCO and local DCM Office.

Block 11. Report is due no later than 120-days after contract award.

Block 14. Distribution as follows: Copy of the contract and drawing(s) shall be provided with the First Article Test Report to:

1. DCM - QAR , Vendor DCM Office
2. Defense Supply Center Richmond(DSCR)
   Attn: DSCR-JLPA-P1V
   8000 Jefferson Davis Highway
   Richmond, VA 23297-5878
3. OC-ALC/TICLA
   3001 Staff Drive
   Suite T69
   Tinker AFB, OK 73145-3031
   Attn: FA Monitor

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
DCM - QAR Vendor DCM	0	0	1
DSCR-JLPA PCO Richmond, VA	0	0	1
OC-ALC/TICLA Tinker AFB, OK	0	2	0
15. TOTAL →	0	2	2

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Joseph Lesyk Joseph Lesyk	08-26-2002	Joseph Lesyk Joseph Lesyk	08-26-2002

INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12-M for detailed instructions.)

FOR GOVERNMENT PERSONNEL

Item A. Self-explanatory.

Item B. Self-explanatory.

Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as "Provisioning,""Configuration Management," etc.

Item D. Enter name of system/item being acquired that data will support.

Item E. Self-explanatory (to be filled in after contract award).

Item F. Self-explanatory (to be filled in after contract award).

Item G. Signature of preparer of CDRL.

Item H. Date CDRL was prepared.

Item I. Signature of CDRL approval authority.

Item J. Date CDRL was approved.

Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.

Item 2. Enter title as it appears on data acquisition document cited in Item 4.

Item 3. Enter subtitle of data item for further definition of data item (optional entry).

Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.

Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g., Statement of Work paragraph number).

Item 6. Enter technical office responsible for ensuring adequacy of the data item.

Item 7. Specify requirement for inspection/acceptance of the data item by the Government.

Item 8. Specify requirement for approval of a draft before preparation of the final data item.

Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref. DoDD 5230.24).

Item 10. Specify number of times data items are to be delivered.

Item 11. Specify as-of date of data item, when applicable.

Item 12. Specify when first submittal is required.

Item 13. Specify when subsequent submittals are required, when applicable.

Item 14. Enter addressees and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.

Item 15. Enter total number of draft/final copies to be delivered.

Item 16. Use for additional/clarifying information for Items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14.; Desired medium for delivery of the data item.

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing, and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply the data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use the data shall be governed by the pertinent provisions of the contract.

1. This document provides guidelines for the preparation of first article test plans/test reports for F100 engine parts where referenced within the first article data of a contract.

2. FIRST ARTICLE QUANTITY. The quantity of first articles shall be per the contract. The quantity of articles allowed for destructive testing, in accordance with the contract, shall be tested per the first article procedure in its entirety, to include the destructive testing. The remaining articles shall only be tested per the nondestructive portions of the procedure.

3. TESTING REQUIREMENTS.

3.1. Testing shall consist of, but shall not be limited to, the verification of the following.

3.1.1. Dimensional conformance including finish requirements.

3.1.2. Conformance to non-destructive inspection requirements (FPI, Ultra-sonic, Eddy Current, X-ray, visual)

3.1.3. Conformance of material properties to include mechanical, metallurgical and chemical.

3.1.4. Conformance to other required processes, specifications, and standards listed on the drawing including sub-tier specifications and standards, special requirements as described in the engineering instructions (EI), quality plans, etc.

3.2. First articles shall be serialized. Serial Numbers are to be identified prior to commencement of testing unless otherwise specified.

3.3. Dimensional Inspection.

3.3.1. All dimensions, as listed on the assembly drawing and detail drawings, to include drawing notes, shall be measured where possible on all first articles 100% (no sampling allowed).

3.3.2. A tabular format shall be used with drawing dimension, tolerance, measurement, and instrument/gage/tooling/serial number used.

3.3.3. All tooling and gaging used for inspection and acceptance/rejection of first articles shall have calibrations from a laboratory traceable to NIST and in accordance with ISO 10012-1 (formerly MIL-STD-45662), listed in a (tooling & gaging table) table, table shall include nomenclature, serial number, calibration frequency, next calibration date, range, least increment, and accuracy. Listing shall also include alignment tools and constraint fixtures.

3.3.4. Inspection results shall be presented in a table showing the feature measured, dimension and tolerance, actual reading and gage serial number used.

3.4. Nondestructive Inspections (NDI), including Fluorescent Penetrant Inspections (FPI), Ultrasonic Testing (UT), Eddy Current (EC), Radiographic Testing (x-ray), and visual inspections, shall meet the following:

3.4.1. All first articles shall receive 100% of the inspections identified on the QAD. Sampling shall not be allowed.

3.4.2. NDI shall be per the applicable specification(s).

3.4.3. Sources used shall be Pratt&Whitney approved per the OC-ALC/LPFR letter granting source approval to the contractor.

3.4.4. NDI results shall be presented in a table showing the feature inspected, acceptance/rejection criteria used, results and gage/master serial number used. In cases where photographic standards within a VIS specification are applied to an NDI, the inspection report shall include a copy.

3.4.5. Inspection Masters/Transfer Masters shall have current calibrations. A copy of the calibration(s) shall be included into the report.

3.4.6. Level III or Level II inspectors, as applicable, shall be required. A copy of the inspector's certification(s) shall be included into the report.

3.5. Visual Inspections shall include:

3.5.1. Specific visual inspections per a Pratt&Whitney Visual Inspection Standard (VIS) document shall be called out of the applicable VIS and cited as specific inspections.

3.5.2. Visual inspection results shall be presented in a table showing the feature inspected, acceptance/rejection criteria used, results, and gage/master serial number used (as applicable).

3.5.3. In cases where photographic standards within the VIS are used, the inspection report shall include a copy.

3.6. Material properties testing shall include mechanical properties, metallurgical properties, and chemical composition tests, as applicable, per the material specifications and the following:

3.6.1. Composition, heat treat condition, and other characteristics/properties, as listed in the technical requirements section, acceptance section, and/or quality sections of the specification(s) so as to verify that the materials and processes are sound, clean, and free of imperfections detrimental to the performance of the part or assemblies.

3.6.2. In some cases a material suppliers certification will not be sufficient and the Contractor shall have redundant testing performed.

3.6.3. Metallurgical microanalysis, as applicable, for raw materials, weldments, brazements, and coatings shall be conducted. Results shall include the complete laboratory report including photomicrographs.

3.6.4. Mechanical testing, as applicable, per manufacturing specifications and the drawing(s).

3.6.5. In cases where the applicable specifications require test reports, these shall accompany the First Article Test Report (FATR).

4. SUBMITTAL.

4.1. The First Article Test Plan (FATP) shall be delivered to the Contracting Officer in accordance with the schedule as listed in the contract, or Form DD1423. The FATP shall provide a detailed description of specific testing instructions to be used. Generalized instructions will not be acceptable.

4.2. The First Article Test Report (FATR) shall be delivered to the Contracting Officer in accordance with the schedule as listed in the contract, or Form DD1423. All laboratory test results, including those resultant from testing conducted at the contractor's facility and including sub-vendor testing, shall be provided with the FATR in their complete form as provided by the testing laboratory(ies).

5. DISPOSITION OF PARTS.

5.1. When required by the contract, the remnants from destructive testing shall be delivered with the First Article Test Report.

5.2. When required by the contract and following the completion of non-destructive testing, one article shall be delivered to the Contracting Officer and packaged in accordance with contract requirements. Marking on the package shall be **UNSERVICEABLE - Condition Code "R"**. Deliver this part with the First Article Test Report. The other(s) shall be handled in accordance with the contract.

6. GENERAL REQUIREMENTS.

6.1. All First Articles and all Production Articles shall be fabricated from material whose metallurgical state is in compliance with the drawing requirements, as well as all sub-tier specifications and standards referenced therein.

6.2. All First Articles and all Production Articles shall be new manufactured under this contract. No items manufactured under previous contracts shall be delivered without approval.

6.3. The subcontractors previously identified by the contractor as sources to be employed, to include laboratory testing, shall be the only sources used. If the contractor wishes to employ a subcontractor other than previously identified, they shall substantiate that the new source is OEM approved for the specific testing required. A change in the address of a source shall be construed as a change of source. Employment of alternate sources shall only be authorized by OC-ALC/LPFR.

6.4. Engineering Instructions shall take precedence over all other technical instructions.

---------- **END OF DOCUMENT** ----------

QUALIFICATION REQUIREMENTS FOR MANUFACTURE OF F100 ENGINE PARTS

P/N: Rev: 0
NSN: 20-Dec-01

I. HARDWARE DESCRIPTION

A. Nomenclature:

B. Function:

C. Material Composition:

II. REFERENCE DOCUMENTS

A. LPF-QAR-004: "General Quality Assurance Requirements For F100 Engine Components."

III. JUSTIFICATION FOR QUALIFICATION REQUIREMENTS

Ref.: FAR Subpart 9.2, AFMCFAR Subpart 5309.2

The following paragraphs provide the justification for qualification requirements for this part.

A. Criticality of Part:

This is a Critical Application Item (CAI) used on the F-15 and F-16 aircraft primary propulsion system, the Pratt & Whitney F100 engine. Failure of this part can result in secondary damage to the engine and subsequent mission abort.

B. Complexity of Part:

This part is not complex to manufacture, however, it is used in a critical location and must therefore require strict process control and quality standards.

C. Government Risk:

The following paragraphs document the reasons why the risk to the government of buying this part from an unqualified source is compound.

1. The probability of an unqualified source producing an unsatisfactory part is moderate.

2. The probability of an unqualified source failing to produce within schedule is moderate.

3. A high potential exists for an unqualified source to underestimate the manufacturing difficulty and miss critical delivery schedules.

4. Untimely delivery critically impacts end item overhaul/repair schedules. Failure to deliver on schedule may result in additional high cost emergency procurements.

5. An inferior part can cause extensive damage to the end item resulting in a high cost of repair.

D. There are no costs incurred by an offeror for qualification testing and testing evaluation under the requirements of paragraphs VI.A or VI.B. However, the offeror's development of a Source Approval Request (SAR) package to be submitted for Government evaluation may cost as much as $2500. In addition, the cost incurred by offerors for Government evaluation of their SAR submitted under the requirements of paragraphs VI.A or VI.B may be as much as $1,200. This cost may be borne by the Government if it is in the best interest of the Government to qualify alternate sources.

IV. JUSTIFICATION FOR QUALIFICATION PRIOR TO CONTRACT AWARD

Ref.: AFMCFAR Subpart 5309.2

The following paragraphs provide the rationale for requiring a demonstration of the qualification requirements prior to contract award.

A. The risk of default by the contractor must be minimized as the shortest combined administrative and production lead-time is over 18 months.

B. The technical risk must also be minimized due to the criticality of the part (Reference the section "Criticality of Part" in paragraph III.A).

C. The manufacturing and processing techniques are critical to performance and reliability (Reference the section "Criticality of Part" in paragraph III.A).

D. The risk to the government in determining a potential vendor's capability without an actual demonstration of that capability must be minimized. The expertise that is required to manufacture this part is not commonly available or easily obtained and therefore must be demonstrated. (Reference the section "Complexity of Part" in paragraph III.B).

V. DATA AND DOCUMENTATION REQUIREMENTS

The following paragraphs document the data that must be submitted with a request for source approval. All documentation submitted shall be the latest revision published. Documentation shall be bound (preferably a three ring binder) with a table of contents and corresponding sections tabbed.

A. The potential Offeror must substantiate that they possess latest revision of the following data by providing a copy in the source approval package, or must provide DCAS or other government representative written verification that the potential vendor has the latest revision of the following data:

1. Drawing Number: (Including all sub-assembly or detail drawings specified on this drawing number)

2. No QAD for top level drawings. As applicable, include the QAD for each sub-assembly or detail part listed on the above drawing.

3. All applicable specifications called out on the drawing, and/or assembly and detail drawings, and on the QAD (as applicable). These include:

   a) Process Specifications
   b) Inspection Processes
   c) Material Specifications

B. The potential Offeror's Quality Assurance System must meet or exceed the requirements described in the attached document LPF-QAR-004.

C. The vendor shall supply a list of all manufacturing and inspection processes that will be performed, both in-house or by sub-vendors. The vendor shall substantiate that sources to be employed for any significant process, including themselves, with the exception of conventional metal removal processes, are currently approved by Pratt & Whitney for the specific process required or another OEM for an equivalent process. The vendor must supply the name and address of each certified vendor to be used. In all cases where process approval is relative to an OEM process specification other than Pratt & Whitney, the vendor shall provide the complete specification and demonstrate the equivalence of the specifications.

VI. SUBSTANTIATION OF MANUFACTURING CAPABILITY

The following paragraphs document the methods to be used to substantiate a vendor's capability to manufacture this item.

A. A vendor who has manufactured the item for the prime contractor or for other US DoD users of the same item within the last five years may be approved as a source for the part provided that the vendor was responsible for all material procurement, inspection, and finishing of the end item, i.e., the prime manufacturer did not add any value to the end item. The vendor must submit evidence of the scope of work for the part indicating that they had primary responsibility for all operations necessary for the completion of the part for delivery to the customer. This evidence shall include MANUFACTURING PROCESS SHEETS.

B. Other vendors will be considered for approval on the basis of their ability to manufacture a similar item for the prime contractor, US DoD, or a NATO country. The following conditions must be met for approval by similarity:

   1. Submit evidence of the successful manufacture and sale of the similar item, to include purchase orders and shipping documents reflecting production quantities within the last five years. This evidence must document that the vendor had primary responsibility for all operations necessary to produce the similar item, and that the similar item was accepted by the customer. Also include a summary of quality deficiencies experienced within the last two years of production of the similar item(s) with coordination from the Q. A. manager.

The vendor shall provide SPECIFIC similarities and differences between the subject part and the similar part.

2. The vendor shall substantiate that the similar component(s) submitted will satisfy the following criteria:

   a) Fabricated of the same alloy or an alloy from the same alloy family, e.g. Alpha Titanium's, Inconels, Austenitic Stainless Steels.

   b) Illustrates the ability of the vendor, in conjunction with their sub-vendors, to perform all significant processes to be employed and maintain requisite tolerances and surface finish requirements.

   c) The data must also show that the manufacturing and inspection/test processes for the similar part demonstrate the full range of difficulty required for the subject part. Included in this data shall be complete MANUFACTURING PROCESS SHEETS for the similar item.

3. A first article requirement may be included in any contract resulting from approval based upon similarity. The estimated cost of first article testing is $1,500.00. These tests may include material properties analysis, dimensional analysis, and possibly rig test. At least three first articles would be required with one first article requiring destructive testing.

VII. RESPONSIBLE ENGINEERING ORGANIZATION

The responsible organization for establishing these qualification requirements is the F100 Engine Engineering Branch, within the Fighter Propulsion Division of the Oklahoma City Air Logistics Center, Tinker Air Force Base, Oklahoma.

GRIZELDA LOY-KRAFT, Chief
F100 Engineering Source Approval
Fighter Propulsion Division
Propulsion Directorate

Expires in
7 years

1 APPLICATION

These requirements apply to all F100 engine parts.

2 PURPOSE

This document establishes the minimum technical requirements that prospective sources must satisfy to obtain engineering approval of their quality system. All documentation provided as evidence of compliance with requirements specified herein must be in English. Engineering source approval shall be valid for five years from the date of the OC-ALC letter notifying the contractor of engineering source approval.

3 REQUIREMENTS

3.1 The Offeror must provide a Quality Assurance Manual that accurately portrays their current quality assurance system. The Quality Assurance System must meet or exceed the requirements as described in this document. Additionally, the Quality Assurance System must satisfy one of the following:

3.1.1 Certified to ISO 9002 by the American National Standards Institute (ANSI) or the International Standards Organization (ISO) in Geneva, Switzerland, or

3.1.2 Previously certified within the last three (3) years to MIL-I-45208A plus paragraphs 3.1 through 3.5, 5.1, 5.2, 6.1, and 6.2 of MIL-Q-9858A by the DCMC or other appropriate government Quality Assurance Representative, or

3.1.3 Approved by the Original Equipment Manufacturer (OEM).

3.2 Proof of certification/approval must be provided and must be dated within the last three (3) years. The decision to approve or disapprove the Quality Assurance System shall only be made after a thorough review of the Offeror's Quality Assurance Manual by the cognizant engineering authority, OC-ALC/LPFR.

3.3 Copies of the latest document(s) which describe and govern the quality assurance system in effect at the Offeror's facility(ies). If provided within the last year and no significant changes have been incorporated this requirement may be waived. However, OC-ALC/LPFR as the cognizant engineering activity for the F100 engine reserves the right to request an additional copy in the event the previous submittal cannot be located.

3.4 P&W documentation identifying the specific conditions/restrictions (i.e., specific P/Ns, components, processes, or material this status applies to, production testing required for material release, testing the LCS supplier is authorized to perform, etc.) imposed by P&W with regard to Laboratory Control at Source (LCS) Supplier status if Offeror is a P&W-approved LCS Supplier. The fact that a sub-vendor is a P&W LCS Supplier shall not relieve the Supplier of the responsibility of conducting follow-on quality assurance surveillance to ensure that sub-vendors are providing conforming material.

3.5 Evidence that the emphasis in quality assurance planning is placed upon controlling processes to preclude generation of non-conformance's and is supplemented by sufficient inspections or tests to assure effective process control.

3.6 Offeror procedures/specifications governing the control of significant processes proposed for use in the fabrication of the approval item for assuring that:

3.6.1 Only Purchaser approved sources are used for raw material, significant processes, and major sub-components and adequate consideration is given to a source's capability and performance prior to placing an order.

3.6.2 The quality acceptance standards imposed in routine production acceptance both in-house and by sub-vendors are complete and approved by P&W and the test methods employed in routine production acceptance are sufficient to verify compliance with these standards.

3.6.3 Fabrication performed in-house and by sub-vendors is accomplished in accordance with work instructions specified in manufacturing process sheets, schedules, and/or technical control plans which define the exact sequence of all production operations and all process variables and all critical parameters of manufacturing operations which may directly affect material structure, mechanical properties, surface finish and/or direction or lay of the cutting action. The procedure shall also assure that work instructions have been approved by the customer.

3.6.4 All inspection of characteristics, which serves as the basis for final acceptance of a characteristic, including in-process inspections, are performed in accordance with work instructions specified in inspection method sheets which define all characteristics specified on the applicable P&W drawings and Quality Assurance Documents (QAD's), the classification of each characteristic, the Acceptable Quality Level (AQL) for each classification of characteristic, sample size, frequency of inspection, the specific inspection methodology to be utilized, and the required instrumentation. The procedure(s) shall also assure that all inspection method sheets have been approved by the customer.

3.6.5 Specific Offeror audit procedures/guidelines which pertain to process and product audits performed both in-house and at sub-vendor facilities. These procedures shall, as a minimum assure:

3.6.5.1 Strict adherence to the sequence, parameters, and all other significant process variables of manufacturing operations defined on manufacturing process sheets approved by the customer is maintained both in-house and at sub-vendors' facilities. Specific procedures for auditing and/or controlling requisite significant processes must be provided.

3.6.5.2 Dedicated equipment is properly maintained and calibrated and is capable of adequately performing its intended application.

3.6.5.3 General housekeeping and manufacturing practices employed do not adversely affect the quality of the end product.

3.6.5.4 Established process controls and production acceptance plans are providing products which conform to the Purchaser requirements.

3.6.6 Specific Offeror procedures for assuring that certificates of test or conformance provided by sub-vendors of raw material and significant processes are complete and supported by process data and numerical test results from an OEM-approved laboratory for the requisite testing, are representative of material received, and the material is in conformance with Purchaser requirements.

3.6.7 Adequate records are retained for documenting sub-vendor lists, sub-vendor quality ratings, layout inspection reports, all Purchaser and OEM approvals, component traceability, and objective evidence of conformance to product, process, and quality acceptance requirements; and are available to the Purchaser upon request.

3.6.8 Evidence of a system for controlling non-conforming material to ensure:

3.6.8.1 The classification of all non-conforming characteristics in terms of critical, major, and minor is approved by the Purchaser.

3.6.8.2 Final disposition of all non-conforming critical and major characteristics including rework and repair is approved by the Purchaser prior to implementation.

3.6.8.3 Effective control of non-conforming material at sub-vendor facilities.

---------- **END OF DOCUMENT** ----------