

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) ▶	RATING C9	PAGE OF PAGE(S) 1 51
2. CONTRACT NO. (Proc. Inst. Ident.) NO. NAS1-98129		3. EFFECTIVE DATE OCT 13 1998	4. REQUISITION/PURCHASE REQUEST/PROJECT NO. DSL.1380	
5. ISSUED BY: National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-2199		6. ADMINISTERED BY (If other than Item 5) Delegation Being Made Via NASA Form 1430		

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP code) Northrop-Grumman Corp. Military Aircraft Systems Division South Oyster Bay Road Bethpage, NY 11714		8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below)
		9. DISCOUNT FOR PROMPT PAYMENT NONE
CODE		10. SUBMIT INVOICES (4 copies unless other-wise specified) TO THE ADDRESS SHOWN IN: Block 12

11. SHIP TO/MARK FOR See Exhibit A.	12. PAYMENT WILL BE MADE BY: Financial Management Division, M/S 175 NASA, Langley Research Center Hampton, VA 23681-2199
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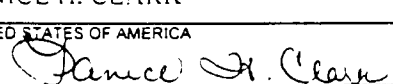
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()	14. ACCOUNTING AND APPROPRIATION DATA PR: DSL.1380; R23891; \$190,000 (Partial)
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15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QTY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
1	High Temperature Integrated Structures			Est. Cost	\$2,320,743
				Fixed Fee	\$ 151,000
15G. TOTAL AMOUNT OF CONTRACT ▶					\$2,471,743

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. <input type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return <u>3</u> copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents (s) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation _____ Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.
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19A. NAME AND TITLE OF SIGNER (Type or print) William J. Sirico Manager, Contracts & Pricing	20A. NAME OF CONTRACTING OFFICER PANICE H. CLARK
19B. NAME OF CONTRACTOR BY 	20B. UNITED STATES OF AMERICA BY 
19C. DATE SIGNED 10/13/98	20C. DATE SIGNED 10/13/98

PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SUPPLIES AN/DOR SERVICES TO BE FURNISHED (LaRC 52.211-90) (AUG 1997)

The Contractor shall provide all resources (except as may be expressly stated in this contract as furnished by the Government) necessary to furnish the Description/Specifications/Work Statement in Section C.

B.2 ESTIMATED COST AND FIXED FEE (NASA 1852.216-74) (DEC 1991)

The estimated cost of this contract is \$2,320,743 exclusive of the fixed fee of \$151,000. The total estimated cost and fixed fee is \$2,471,743.

B.3 CONTRACT FUNDING (NASA 1852.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$178,404. This allotment is for the effort set forth in C.1 and covers the following estimated period of performance: February 15, 1999.

(b) An additional amount of \$11,596 is obligated under this contract for payment of fee.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK – HIGH TEMPERATURE INTEGRATED STRUCTURES

1.0 INTRODUCTION

The project objective is demonstration of an aggressive wing structural design, coupled with advanced materials and process development that significantly reduce weight and launch cost for a Reusable Launch Vehicle (RLV). The two technology enablers to be demonstrated will be: (1) the structural integration through co-processing of a Polymer Matrix Composite (PMC) primary structure with a strain-compliant Ceramic Matrix Composite (CMC) Hot Structure (H/S); and (2) the use of 3D textiles woven preform technology coupled with affordable resin film infusion (RFI) processes to reduce acquisition costs. The project will emphasize hardware deliverables culminating in the design, fabrication and fatigue testing of a lower wing cover subcomponent. The potential benefits over state-of-the-art (SOA) systems are: 30% structural weight saving; 30% acquisition cost reduction; and greater than 50% Life Cycle Cost (LCC) savings.

The program is defined by four tasks as follows:

- Design Requirements
- Trade Studies
- Materials and Process Development
- Structural Testing

The approach is to utilize textile structural design and high temperature ceramics to solve the structural performance/thermal management problem. The NASA/LaRC will provide critical support in the form of data, thermal analysis, and testing services.

2.0 Task Description

2.1 Design Requirements

Objective: Establish a set of baseline design criteria to insure Task 2.1.2 trade studies are focused and representative.

Requirements: The Contractor shall define design requirements and criteria for trade study purposes. The NASA/LaRC will provide aerodynamic loads, thermal profiles, environmental conditions, flight conditions, and other information to support the trade study.

2.2 Trade Studies

Objective: Develop candidate wing structural concepts, select the leading candidates, and develop the technology required for component validation.

Requirements: The Contractor shall apply the requirements and criteria generated under Task 2.1.1, along with preferred hot structures (H/S) concepts produced during the screening portion of the M&P development task to a structural concepts trade study. This study shall include wing structural arrangement development, internal loads generation, and configuration definition and optimization. Efforts shall focus on providing maximum structural efficiency while reducing acquisition and life cycle costs. The NASA/LaRC will provide selection criteria to be used in selecting the final structural configuration.

2.3 Materials and Process Development (M&PD)

Objective: Develop candidate H/S material systems, select the leading system, and develop the technology required for incorporation on element and subcomponent validation test articles.

Requirements: This task shall be broken down into two subtasks, as follows:

Subtask 1: Conduct a screening program of ceramic materials and CMC foams for co-processability with PETI-5 substructure material.

Subtask 2: Design and fabricate 96 coupon specimens listed in Table 1 to evaluate the co-processing procedure and to obtain mechanical property data on the CMC foam and ceramic material selected in the screening process in Subtask 1. Perform tests on the room temperature specimens listed in Table 1 and deliver the elevated temperature specimens (marked in bold) for testing. The NASA/LaRC will perform testing and supply the data to the Contractor for use in developing the element and subcomponent validation test articles.

2.4 Structural Verification

Objective: Evaluate the structural capabilities of High Temperature Integrated Structures material systems and validate the down selected systems with element and subcomponent testing.

Requirements: Validation shall follow a building block approach investigating the H/S material system at the coupon level feeding into the H/S configuration at the element level and culminating with the structural configuration at the subcomponent level. The Contractor shall design and fabricate 165 PETI-5 coupon specimens as specified in Table II and perform all static and fatigue room temperature tests listed. All elevated temperature and thermal cycle test specimens (shown in bold in Table II) shall be delivered to NASA/Langley to provide for testing. Results will be provided to the Contractor for use in developing the element and subcomponent validation test articles listed in Table III.

The Contractor shall fabricate 18 element test specimens and perform all static and fatigue room temperature tests listed in Table III. The elevated temperature test specimens (shown in bold in Table III) shall be delivered to NASA/Langley to provide testing. Results will be provided to the Contractor for use in developing the subcomponent validation test article. The Contractor shall design, fabricate, and deliver a 3-foot by 6-foot lower wing cover subcomponent. The subcomponent will be tested by NASA/Langley and the data provided to the Contractor for use in comparison with predicted results and for inclusion in a formal final report.

3.0 Government-Furnished Property

NASA/Langley will furnish the following:

- Aerodynamic loads, thermal profiles, environmental conditions, flight conditions, and other information to support the trade study.
- Selection criteria to be used in selecting the final structural configuration.
- Elevated temperature testing and data for use in developing the element and subcomponent validation test articles and for use in comparison with predicted results and for inclusion in a formal final report.

SECTION E - INSPECTION AND ACCEPTANCE

E.1 FINAL INSPECTION AND ACCEPTANCE (LaRC 52.246-94) (OCT 1992)

Final inspection and acceptance of all items specified for delivery under this contract shall be accomplished by the Contracting Officer or his duly authorized representative at destination.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 PERIOD OF PERFORMANCE (LaRC 52.211-91) (AUG 1997)

The period of performance of this contract shall be 33 months from the effective date of the contract.

F.2 DELIVERY SCHEDULE

The Contractor shall deliver the items required to be furnished by the contract as follows:

Item No.	Description	Qty.	No. Months from Contract Effective Date
1	Hot Structure Down Selection Recommendation	1	3
2	Trade Study Report	1	12
3	Coupons	165	18
4	Test Plan	1	18
5	Elements	18	21
6	Test Plan	1	21
7	Subcomponent and Test Plan	1	26

F.3 PLACE OF DELIVERY (LaRC 52.211-92) (OCT 1992)

Delivery shall be f.o.b. destination:

National Aeronautics and Space Administration
Langley Research Center
4 South Marvin Street (Bldg. 1206)
Hampton, VA 23681-2199

F.4 PLACE(S) OF PERFORMANCE (LaRC 52.211-98) (OCT 1992)

The place(s) of performance shall be:

The Contractor's facility located in Bethpage, New York.

F.5 NOTICE OF DELAY (LaRC 52.211-105) (AUG 1997)

If, because of technical difficulties, the Contractor becomes unable to complete the contract work at the time specified, notwithstanding the exercise of good faith and diligent efforts in performing of the work called for under this contract, the Contractor shall give the Contracting Officer written notice of the anticipated delay and the reasons for it. The notice and reasons shall be delivered promptly after the condition creating the anticipated delay becomes known to the Contractor but in no event less than 45 days before the completion date specified in this contract, unless otherwise directed by the Contracting Officer. When notice is given, the Contracting Officer may extend the time specified in the Schedule for such period as is deemed advisable.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 1852.227-72) (JUL 1997)

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights - Retention by the Contractor (Short Form)", whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:

<u>Title</u>	<u>Office Code</u>	<u>Address (including zip code)</u>
New Technology Representative	212	NASA, Langley Research Center Hampton, VA 23681-0001
Patent Representative	212	NASA, Langley Research Center Hampton, VA 23681-0001

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

G.2 SUBMISSION OF VOUCHERS FOR PAYMENT (NASA 1852.216-87) (MAR 1998)

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is identified below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b)(1) If the Contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

NASA Langley Research Center
Attn: Financial Management Division, MS 175
Hampton, VA 23681-2199

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the Contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the Contractor shall prepare and submit vouchers as follows:

(1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment to:

Defense Contract Audit Agency
Northrop-Grumman Corp.
Mail Stop DO1-25
Bethpage, NY 11714

(2) Five copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:

- (i) Copy 1 NASA Contracting Officer;
- (ii) Copy 2 Auditor;
- (iii) Copy 3 Contractor;
- (iv) Copy 4 Contract administration office; and
- (v) Copy 5 Project management office.

(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers of payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and be forwarded to:

NASA Langley Research Center
Attn: Financial Management Division, MS 175
Hampton, VA 23681-2199

This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

G.3 INVOICES AND PAYMENTS (LaRC 52.232-96) (OCT 1992)

A. General--Invoices shall be addressed as shown in Block 12 on page 1 of this contract and shall be identified by the contract number. Cost and fee invoices shall be submitted separately.

B. Cost--Payments of cost shall be made in monthly installments.

C. Payments of fixed fee shall be made in monthly installments based upon the percentage of completion of work as determined by the Contracting Officer.

G.4 CONTRACT CLOSEOUT (LaRC 52.242-90) (JUN 1988)

A. Reassignment--After receipt, inspection, and acceptance by the Government of all required articles and/or services, and resolution of any pending issues raised during the Period of Performance, this contract will be reassigned to the NASA Langley Research Center Contracting Officer for Contract Closeout. All transactions subsequent to the physical completion of the contract should, therefore, be addressed to the said Contracting Officer at NASA Langley Research Center, Mail Stop 126, who may be reached by telephone at (757) 864-7765.

B. "Quick Closeout"--Paragraph (f) of the Allowable Cost and Payment clause of this contract addresses the "Quick Closeout Procedure" delineated by Subpart 42.7 of the Federal Acquisition Regulation (FAR). It should be understood that the said procedure applies to the settlement of indirect costs for a specific contract in advance of the determination of final indirect cost rates when the amount of unsettled indirect cost to be allocated to the contract is relatively insignificant. Therefore, the "Quick Closeout" procedure does not preclude the provisions of paragraph (d) of the Allowable Cost and Payment clause nor does it constitute a waiver of final audit of the Contractor's Completion Voucher.

C. Completion Voucher Submittal--Notwithstanding the provisions of the Allowable Cost and Payment clause, as soon as practicable after settlement of the Contractor's indirect cost rates applicable to performance of the contract, the Contractor shall submit a Completion Voucher as required by the aforesaid clause. The Completion Voucher shall be supported by a cumulative claim and reconciliation statement and executed NASA Forms 778, Contractor's Release, and 780, Contractor's Assignment of Refunds, Rebates, Credits, and Other Amounts. Unless directed otherwise by the Contracting Officer for Contract Closeout, the Contractor shall forward the said Completion Voucher directly to the cognizant Government Agency to which audit functions under the contract have been delegated.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 SECURITY PROGRAM/FOREIGN NATIONAL EMPLOYEE INVESTIGATIVE REQUIREMENTS (LaRC 52.204-91) (AUG 1997)

Prior to reporting to Langley Research Center (LaRC) to perform under a contract or grant, each Foreign National shall have approval for access to LaRC facilities from NASA Headquarters, Office of Space Science and Aeronautics (Code IS). A copy of the access authorization request shall be provided to the LaRC Chief of Security. Additionally, an investigation by the Government shall be completed on each Foreign National contractor prior to reporting to LaRC to perform under a contract or grant. A properly executed "Name Check Request" (NASA Form 531) and a completed "applicant" fingerprint card shall be submitted to the LaRC Security Office, Mail Stop 450, for each Foreign National contractor at least 75 days prior to the estimated entry on duty date. The NF 531 and fingerprint card may be obtained from the LaRC Security Office. If the access approval is obtained from NASA Headquarters prior to completion of the investigation, and the Contracting Officer requires a Foreign National to work on LaRC, an escort request may be considered by the LaRC Chief of Security.

H.2 INCORPORATION OF THE REPRESENTATIONS AND CERTIFICATIONS BY REFERENCE

Pursuant to FAR 15.204-1(b), the Representations and Certifications dated July 9, 1998 are hereby incorporated herein by reference.

H.3 RIGHTS TO PROPOSAL DATA (TECHNICAL) (FAR 52.227-23) (JUN 1987)

Except for data contained on pages NONE, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have

unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated June 18, 1998, upon which this contract is based.

H.4 ADVANCE APPROVAL FOR RELEASE OF TECHNICAL INFORMATION
(LaRC 52.227-92) (JUL 1998)

The Contractor shall not release technical information based on or containing data first produced in the performance of this contract and describing the work performed under this contract unless prior written approval is given by NASA. The Contractor shall submit technical information regarding the contract effort, such as journal articles, meeting papers, and technical documents to the Contracting Officer's Technical Representative (COTR) for review and concurrence with approval by the Center Export Administrator or designee prior to publication, presentation or release to others. The Contractor may proceed upon receipt of written concurrence by the COTR, unless directed otherwise in the COTR concurrence letter.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
52.202-1	Definitions (OCT 1995)
52.203-3	Gratuities (APR 1984)
52.203-5	Covenant Against Contingent Fees (APR 1984)
52.203-6	Restrictions on Contractor Sales to the Government (JUL 1995)
52.203-7	Anti-Kickback Procedures (JUL 1995)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
52.204-4	Printing/Copying Double-Sided on Recycled Paper (JUN 1996)
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JUL 1995)
52.211-5	Material Requirements (OCT 1997)
52.211-15	Defense Priority and Allocation Requirements (SEP 1990)
52.215-2	Audit and Records--Negotiation (AUG 1996)
52.215-8	Order of Precedence (OCT 1997)
52.215-14	Integrity of Unit Prices (OCT 1997)
52.215-15	Termination of Defined Benefit Pension Plans (OCT 1997)
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits Other Than Pensions (OCT 1997)
52.216-8	Fixed Fee (MAR 1997)
52.219-8	Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns (JUN 1998)
52.219-9	Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan (AUG 1998)
52.219-16	Liquidated Damages--Subcontracting Plan (AUG 1998)
52.222-1	Notice to the Government of Labor Disputes (FEB 1997)
52.222-3	Convict Labor (AUG 1996)
52.222-26	Equal Opportunity (APR 1984)
52.222-28	Equal Opportunity Preaward Clearance of Subcontracts (APR 1984) (Deviation)
52.222-35	Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (APR 1998)
52.222-36	Affirmative Action for Handicapped Workers (JUN 1998)
52.222-37	Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (APR 1998)

52.223-2	Clean Air and Water (APR 1984)
52.223-6	Drug-Free Workplace (JAN 1997)
52.223-14	Toxic Chemical Release Reporting (OCT 1996)
52.225-3	Buy American Act - Supplies (JAN 1994)
52.225-11	Restrictions on Certain Foreign Purchases (AUG 1998)
52.227-1	Authorization and Consent (JUL 1995)--Alternate I (APR 1984)
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)
52.227-14	Rights in Data--General (JUN 1987)--as modified by NASA FAR Supplement 1852.227-14
52.227-16	Additional Data Requirements (JUN 1987)
52.228-7	Insurance--Liability to Third Persons (MAR 1996)
52.230-2	Cost Accounting Standards (APR 1998)
52.230-6	Administration of Cost Accounting Standards (APR 1996)
52.232-9	Limitation on Withholding of Payments (APR 1984)
52.232-17	Interest (JUN 1996)
52.232-22	Limitation of Funds (APR 1984)
52.232-23	Assignment of Claims (JAN 1986)
52.232-33	Mandatory Information for Electronic Funds Transfer Payment (AUG 1996)
52.233-1	Disputes (OCT 1995)--Alternate I (DEC 1991)
52.233-3	Protest After Award (AUG 1996)--Alternate I (JUN 1985)
52.242-1	Notice of Intent to Disallow Costs (APR 1984)
52.242-2	Production Progress Reports (APR 1991)
52.242-3	Penalties for Unallowable Costs (OCT 1995)
52.242-15	Stop-Work Order (AUG 1989)--Alternate I (APR 1984)
52.243-2	Changes--Cost-Reimbursement(AUG 1987)--Alternate V (APR 1984)
52.244-5	Competition in Subcontracting (DEC 1996)
52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (JAN 1986) (DEVIATION) (JUL 1995)
52.246-3	Inspection of Supplies--Cost-Reimbursement(APR 1984)
52.246-8	Inspection of Research and Development--Cost-Reimbursement(APR 1984)
52.246-23	Limitation of Liability (FEB 1997)
52.249-6	Termination (Cost-Reimbursement)(SEP 1996)
52.249-14	Excusable Delays (APR 1984)
52.253-1	Computer Generated Forms (JAN 1991)

NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
1852.208-81	Restrictions on Printing and Duplicating (AUG 1993)
1852.216-75	Payment of Fixed Fee (DEC 1988)
1852.216-89	Assignment and Release Forms (JUL 1997)
1852.219-74	Use of Rural Area Small Businesses (SEP 1990)
1852.219-75	Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Reporting (JUL 1997)
1852.219-76	NASA 8 Percent Goal (JUL 1997)
1852.227-70	New Technology (JUL 1995)
1852.235-70	Center for AeroSpace Information (JUN 1998)
1852.242-73	NASA Contractor Financial Management Reporting (JUL 1997)
1852.244-70	Geographic Participation in the Aerospace Program (APR 1985)
1852.245-70	Contractor Requests for Government-Owned Equipment (JUL 1997)

I.2 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

52.252-2	Clauses Incorporated by Reference (FEB 1998)
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JUN 1997)
52.216-7	Allowable Cost and Payment (APR 1998)
52.222-2	Payment for Overtime Premiums (JUL 1990)
52.232-25	Prompt Payment (JUN 1997)
52.242-13	Bankruptcy (JUL 1995)
52.244-2	Subcontracts (AUG 1998)--Alternate I (AUG 1998)
52.244-6	Subcontracts for Commercial Items and Commercial Components (APR 1998)
52.252-6	Authorized Deviations in Clauses (APR 1984)
1852.215-84	Ombudsman (OCT 1996)
1852.223-70	Safety and Health (MAR 1997)
1852.245-73	Financial Reporting of NASA Property in the Custody of Contractors (SEP 1996)
1852.246-72	Material Inspection and Receiving Report (JUN 1995)

I.3 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far/>

<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

I.4 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (52.203-8) (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

**I.5 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
(FAR 52.203-12) (JUN 1997)**

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal

contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or

instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions. (1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure. (1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes—

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties. (1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

I.6 ALLOWABLE COST AND PAYMENT (FAR 52.216-7) (APR 1998)

(a) Invoicing. The Government shall make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks, in amounts determined to be allowable by the Contracting Officer in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract and the terms of this contract. The Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as the representative may require, an invoice or voucher supported by a statement of the claimed allowable cost for performing this contract.

(b) Reimbursing costs. (1) For the purpose of reimbursing allowable costs (except as provided in subparagraph (b)(2) of this section, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term "costs" includes only--

(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract;

(ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for--

(A) Materials issued from the Contractor's inventory and placed in the production process for use on the contract;

(B) Direct labor;

(C) Direct travel;

(D) Other direct in-house costs; and

(E) Properly allocable and allowable indirect costs, as shown in the records maintained by the Contractor for purposes of obtaining reimbursement under Government contracts; and

(iii) The amount of progress and other payments that have been paid by cash, check or other form of payment to the Contractor's subcontractors under similar cost standards.

(2) Contractor contributions to any pension or other postretirement benefit, profit-sharing or employee stock ownership plan funds that are paid quarterly or more often may be included in indirect costs for payment purposes; Provided, that the Contractor pays the contribution to the fund within 30 days after the close of the period covered. Payments made 30 days or more after the close of a period shall not be included until the Contractor actually makes the payment. Accrued costs for such contributions that are paid less often than quarterly shall be excluded from indirect costs for payment purposes until the Contractor actually makes the payment.

(3) Notwithstanding the audit and adjustment of invoices or vouchers under paragraph (g) of this clause, allowable indirect costs under this contract shall be obtained by applying indirect cost rates established in accordance with paragraph (d) of this clause.

(4) Any statements in specifications or other documents incorporated in this contract by reference designating performance of services or furnishing of materials at the Contractor's expense or at no cost to the Government shall be disregarded for purposes of cost-reimbursement under this clause.

(c) Small business concerns. A small business concern may be paid more often than every 2 weeks and may invoice and be paid for recorded costs for items or services purchased directly for the contract, even though the concern has not yet paid for those items or services.

(d) Final indirect cost rates. (1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with Subpart 42.7 of the Federal Acquisition Regulation (FAR) in effect for the period covered by the indirect cost rate proposal.

(2)(i) The Contractor shall submit an adequate final indirect cost rate proposal to the Contracting Officer (or cognizant Federal agency official) and auditor within the 6-month period following the expiration of each of its fiscal years. Reasonable extensions, for exceptional circumstances only, may be requested in writing by the Contractor and granted in writing by the Contracting Officer. The Contractor shall support its proposal with adequate supporting data.

(ii) The proposed rates shall be based on the Contractor's actual cost experience for that period. The appropriate Government representative and the Contractor shall establish the final indirect cost rates as promptly as practical after receipt of the Contractor's proposal.

(3) The Contractor and the appropriate Government representative shall execute a written understanding setting forth the final indirect cost rates. The understanding shall specify (i) the agreed-upon final annual indirect cost rates, (ii) the bases to which the rates apply, (iii) the periods for which the rates apply, (iv) any specific indirect cost items treated as direct costs in the settlement, and (v) the affected contract and/or subcontract, identifying any with advance agreements or special terms and the applicable rates. The understanding shall not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in this contract. The understanding is incorporated into this contract upon execution.

(4) Within 120 days after settlement of the final indirect cost rates covering the year in which this contract is physically complete (or longer, if approved in writing by the Contracting Officer), the Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates.

(5) Failure by the parties to agree on a final annual indirect cost rate shall be a dispute within the meaning of the Disputes clause.

(e) Billing rates. Until final annual indirect cost rates are established for any period, the Government shall reimburse the Contractor at billing rates established by the Contracting Officer or by an authorized representative (the cognizant auditor), subject to adjustment when the final rates are established. These billing rates—

(1) Shall be the anticipated final rates; and

(2) May be prospectively or retroactively revised by mutual agreement, at either party's request, to prevent substantial overpayment or underpayment.

(f) Quick-closeout procedures. Quick-closeout procedures are applicable when the conditions in FAR 42.708(a) are satisfied.

(g) Audit. At any time or times before final payment, the Contracting Officer may have the Contractor's invoices or vouchers and statements of cost audited. Any payment may be—

(1) Reduced by amounts found by the Contracting Officer not to constitute allowable costs; or

(2) Adjusted for prior overpayments or underpayments.

(h) Final payment. (1) Upon approval of a completion invoice or voucher submitted by the Contractor in accordance with paragraph (d)(4) of this clause, and upon the Contractor's compliance with all terms of this contract, the Government shall promptly pay any balance of allowable costs and that part of the fee (if any) not previously paid.

(2) The Contractor shall pay to the Government any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Contractor or any assignee under this contract, to the extent that those amounts are properly allocable to costs for which the Contractor has been reimbursed by the Government. Reasonable expenses incurred by the Contractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Contracting Officer. Before final payment under this contract, the Contractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver—

(i) An assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) A release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, except—

(A) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;

(B) Claims (including reasonable incidental expenses) based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided, that the claims are not known to the Contractor on the date of the execution of the release, and that the Contractor gives notice of the claims in writing to the Contracting Officer within 6 years following the release date or notice of final payment date, whichever is earlier; and

(C) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Contractor under the patent clauses of this contract, excluding, however, any expenses arising from the Contractor's indemnification of the Government against patent liability.

I.7 PAYMENT FOR OVERTIME PREMIUMS (FAR 52.222-2) (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed zero or the overtime premium is paid for work -

- (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
- (2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
- (3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
- (4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall -

- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
- (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
- (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
- (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

I.8 PROMPT PAYMENT (FAR 52.232-25) (JUN 1997)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Due date. (i) Except as indicated in subparagraph (a)(2) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

- (A) The 30th day after the designated billing office has received a proper invoice from the Contractor (except as provided in subdivision (a)(1)(ii) of this clause);
- (B) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice; provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Certain food products and other payments. (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are--

- (A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

(C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

(3) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(3)(i) through (a)(3)(viii) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils), with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(5) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of the mailing or transmission.)

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) Any other information or documentation required by the contract (such as evidence of shipment).

(ix) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(4) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(5) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(3) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils).

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(6) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(5) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(7) Additional interest penalty. (i) A penalty amount, calculated in accordance with subdivision (a)(7)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

- (1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;
- (2) Attach a copy of the invoice on which the unpaid late payment interest was due; and
- (3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

- (1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or
- (2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except--

- (1) The additional penalty shall not exceed \$5,000;
- (2) The additional penalty shall never be less than \$25; and
- (3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(5)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(7)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Fast payment procedure due dates. If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

1.9 BANKRUPTCY (FAR 52.242-13) (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the

proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

I.10 SUBCONTRACTS (FAR 52.244-2) (AUG 1998) ALTERNATE I (AUG 1998)

(a) Definitions. As used in this clause--

"Approved purchasing system" means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

"Consent to subcontract" means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

"Subcontract" means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

Albany International Techniweave

Daychem Labs

Allied Signal

Boeing

Polygon Association

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor, and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) If the Contractor has an approved purchasing system and consent is not required under paragraph (c), (d), or (e) of this clause, the Contractor nevertheless shall notify the Contracting Officer reasonably in advance of entering into any (i) cost-plus-fixed-fee subcontract, or (ii) fixed-price subcontract that exceeds the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of this contract. The notification shall include the information required by paragraphs (f)(1)(i) through (f)(1)(iv) of this clause.

(g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

I.11 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS
(FAR 52.244-6) (APR 1998)

(a) Definitions.

"Commercial item," as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:

- (1) 52.222-26, Equal Opportunity (E.O. 11246);
 - (2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));
 - (3) 52.222-36, Affirmative Action for Handicapped Workers (29 U.S.C. 793); and
 - (4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996).
- (d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

I.12 AUTHORIZED DEVIATIONS IN CLAUSES (FAR 52.252-6) (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any NASA/FAR Supplement (48 CFR Chapter 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

I.13 OMBUDSMAN (NASA 1852.215-84) (OCT 1996)

An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and Contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the Contracting Officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the Contracting Officer for resolution. If resolution cannot be made by the Contracting Officer, interested parties may contact the installation ombudsman, Belinda Adams, direct inquiries to Sandra S. Ray at (757) 864-2428. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Deputy Administrator for Procurement, Thomas S. Luëdtke, at 202-358-2090. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

I.14 SAFETY AND HEALTH (NASA 1852.223-70) (MAR 1997)

(a) The Contractor shall take all reasonable safety and health measures in performing under this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and health in effect on the date of this contract and with the safety and health standards, specifications, reporting requirements, and provisions set forth in the contract Schedule.

(b) The Contractor shall take or cause to be taken any other safety and health measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the changes clause of this contract; provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other provision of the contract.

(c) The Contractor shall immediately notify and promptly report to the Contracting Officer or a designee any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property beyond any stated acceptable limits set forth in the contract Schedule, or property loss of \$25,000 or more arising out of work performed under this contract.

The Contractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. Service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract Schedule. The Contractor shall investigate all work-related incidents or accidents to the extent necessary to determine their causes and furnish the Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.

(d)(1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. The Contractor shall promptly take and report any necessary corrective action.

(2) If the Contractor fails or refuses to institute prompt corrective action in accordance with subparagraph (d)(1) of this clause, the Contracting Officer may invoke the stop-work order clause in this contract or any other remedy available to the Government in the event of such failure or refusal.

(e) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (e) and any applicable Schedule provisions, with appropriate changes of designations of the parties, in subcontracts of every tier that (1) amount to \$1,000,000 or more (unless the Contracting Officer makes a written determination that this is not required), (2) require construction, repair, or alteration in excess of \$25,000, or (3) regardless of dollar amount, involve the use of hazardous materials or operations.

(f) Authorized Government representatives of the Contracting Officer shall have access to and the right to examine the sites or areas where work under this contract is being performed in order to determine the adequacy of the Contractor's safety and health measures under this clause.

(g) As a part of the Contractor's safety plan (and health plan, when applicable) and to the extent required by the Schedule, the Contractor shall furnish a list of all hazardous operations to be performed, including operations indicated in paragraphs (a) and (b) of this clause, and a list of other major or key operations required or planned in the performance of the contract, even though not deemed hazardous by the Contractor. NASA and the Contractor shall jointly decide which operations are to be considered hazardous, with NASA as the final authority. Before hazardous operations commence, the Contractor shall submit for NASA concurrence either or both of the following, as required by the contract Schedule or by the Contracting Officer:

- (1) Written hazardous operating procedures for all hazardous operations.
- (2) Qualification Standards for personnel involved in hazardous operations.

I.15 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (NASA 1852.245-73) (SEP 1996)

(a) The Contractor shall submit annually a NASA Form 1018, NASA Property in the Custody of Contractors, in accordance with 18-45.505-14, the instructions on the form, and subpart 1845-71. Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.

(b) If administration of this contract has been delegated to the Department of Defense, the original of NASA Form 1018 shall be submitted to the NASA, LaRC Financial Management Officer, Mail Stop 175 and three copies shall be sent concurrently through the DOD Property Administrator to the address below. If the contract is administered by NASA, the original of NF 1018 shall be submitted to the LaRC Financial Management Office and three copies shall be sent concurrently and directly to the following office:

ATTN: INDUSTRIAL PROPERTY OFFICE
NASA LANGLEY RESEARCH CENTER
MAIL STOP 377
HAMPTON VA 23681-0001

(c) The annual reporting period shall be from October 1 of each year to September 30 of the following year. The report shall be submitted by October 31. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement

purposes. Therefore, it is essential that required reports be received no later than October 31. The Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$25,000 or 5 percent of the amount of the contract, whichever is less, has been set-aside. If the Contractor fails to submit annual NF 1018 reports when due, such reserve shall be withheld until the Contracting Officer has determined that the required reports have been received by the Government. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(d) A final report is required within 30 days after disposition of all property subject to reporting when the contract performance period is complete.

I.16 MATERIAL INSPECTION AND RECEIVING REPORT (NASA 1852.246-72) (JUN 1995)

(a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in three copies, an original and two copies.

(b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 18-46.672-1. The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope which shall be securely attached to the exterior of the package in the most protected location.

(c) When more than one package is involved in a shipment, the Contractor shall list on the DD Form 250, as additional information, the quantity of packages and the package numbers. The Contractor shall forward the DD Form 250 with the lowest numbered package of the shipment and print the words "CONTAINS DD FORM 250" on the package.

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS**SECTION J - LIST OF ATTACHMENTS**

- | | |
|-----------|---|
| Exhibit A | Contract Documentation Requirements, 3 pages |
| Exhibit B | Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Form PROC./P-72, May 1992, 4 pages |
| Exhibit C | Subcontracting Plan, September 5, 1996, 19 pages |

EXHIBIT A - CONTRACT DOCUMENTATION REQUIREMENTS

I. DOCUMENTATION PREPARATION/SUBMISSION INSTRUCTIONS

A. Monthly Technical Letter Progress Report--The Contractor shall submit monthly technical letter reports describing progress of the program to date, noting all technical areas in which effort is being directed and indicating the status of work within these areas. Reports shall be in narrative form, brief and informal in content. These reports shall include:

1. A narrative statement of work accomplished during the report period
2. A statement of current and potential problem areas and proposed corrective action
3. A discussion of work to be performed during the next report period

The monthly progress report shall be submitted within 15 days after the end of each calendar monthly report period. A monthly progress report shall not be required for the period in which the final report is due. This submittal shall be subject to the provisions of the Section I clause entitled "Production Progress Reports."

B. Monthly Financial Management Report--The contractor shall comply with the Section I clause of this contract entitled, "NASA Contractor Financial Management Reporting" by monthly submission of NASA Form 533M, Monthly Contractor Financial Management Report. The form shall be prepared and submitted in accordance with the instructions set forth on the reverse side of the form and NASA Procedures and Guidelines, "NASA Contractor Financial Management Reporting" (NPG 9501.2C) as further definitized below:

1. Due not later than the 10th operating day following the close of the Contractor's accounting period being reported.
2. Columns 8.a and b shall be completed using estimates (forecasts) for the succeeding two months.
3. Each 533M shall include a narrative explanation for variances exceeding 5% between planned hours/dollars and actual hours/dollars for each reporting category.
4. The following categories shall be included in column 6 of this report:
 - a. Direct Labor Dollars
 - (1) Engineering
 - (2) Manufacturing
 - (3) Total
 - b. Fringe
 - c. Overhead
 - d. Total Labor Costs
 - e. Material
 - (1) Interdivisional
 - (2) Subcontract
 - (3) General Procurement
 - (4) Total
 - f. Other Direct Cost (Travel)
 - g. G&A
 - h. FCCOM
 - i. Total Estimated Cost
 - j. Fee

k. Total Estimated Cost and Fee

C. Quarterly Financial Management Report--The Contractor shall submit a financial report at the contract level detailed by categories specified in paragraph B. above on NASA Form 533Q at times and in accordance with the instructions contained on the reverse side of the form. The initial report shall be due 10 operating days after the award of the contract.

D. Property in the Custody of Contractors (NASA Form 1018)--The Contractor shall submit the NASA Form 1018 no later than October 31 of each year in accordance with the Section I clause entitled "Financial Reporting of NASA Property in the Custody of Contractors."

E. Subcontracting Reports--The Contractor shall submit Standard Form 294, Subcontracting Report for Individual Contracts and Standard Form 295, Summary Subcontractor Report, in accordance with the instructions on the reverse of the form.

In addition to the instructions on the reverse of the SF 295, the Contractor is required to comply with Clause 1852.219-75, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Reporting.

F. New Technology Report--The Contractor shall submit all disclosures of reportable items and subject inventions, interim reports, subcontract identification and other information as required by the clause at NFS 1852.227-70. Further, upon completion of the work under the contract (or subcontract, if any) a final report shall be submitted.

G. Final Report--The Contractor shall submit a final report which documents and summarizes the results of the entire contract work. The final report shall include tables, graphs, diagrams, curves, sketches, photographs and drawings in sufficient detail to explain comprehensively the results achieved under the contract. The final report shall be submitted to the Contracting Officer in accordance with the instructions contained in Exhibit B, Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Form PROC./P-72. The Contractor shall submit the required approval copies of the final report 30 months from the effective date of this contract and include a concurrent mailing to CASI in accordance with NFS 1852.235-70.

H. Federal Contractor Veterans Employment Report--In compliance with Clause 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era, the Contractor shall submit the Federal Contractor Veterans Employment Report (VETS-100) as required by this clause.

II. DOCUMENT DISTRIBUTION REQUIREMENTS

A. Unless otherwise specified elsewhere in this contract, reports and other documentation shall be submitted f.o.b. destination as specified below, addressed as follows:

National Aeronautics and Space Administration
Langley Research Center
Attn: Contracting Officer, Mail Stop 126
Contract NAS1-98129
Hampton, VA 23681-2199

B. The following letter codes designate the recipients of reports and other documentation which are required to be delivered to Langley Research Center by the Contractor:

A--Contract Administrator, Mail Stop 126

B--Contracting Officer Technical Representative, Mail Stop 396

C--New Technology Representative, Mail Stop 212

D--Patent Counsel, Mail Stop 212

E--Cost Accounting, Mail Stop 135 (via Mail Stop 175)

F--Property Administrator

G--According to Instructions on Form

H--Small Business Specialist, Mail Stop 144

C. The following are the distribution requirements for reports and other documentation required to be delivered f.o.b. destination. The numeral following the letter code specifies the number of copies to be provided:

<u>DOCUMENT</u>	<u>LETTER CODE AND DISTRIBUTION</u>
Monthly/Quarterly Progress Report	A-1, B-2
Financial Management Report	A-1, B-2, E-2
Quarterly Financial Management Report	A-1, B-1, E-2
New Technology or Patent Rights Reports	A-1, B-2, C-1, D-1
Report of Government-Owned/Contractor-Held Property (NASA Form 1018)	F-4
Test Reports	B-1
Subcontracting Report for Individual Contracts (Standard Form 294)	A-1, H-1
Summary Subcontractor Report (Standard Form 295)	G-1
Federal Contractor Veterans Employment Report (VETS-100)	G-1
Final Report (Approval Copies)	A-5
Final Report (Approved)	As specified by the Contracting Officer

D. When the Contract Administrator (A) is not designated above to receive a copy of a report or document, the Contractor shall furnish a copy of the report/document transmittal letter to the Contract Administrator.

ENCLOSURE**PROCEDURES FOR THE PREPARATION AND APPROVAL OF CONTRACTOR REPORTS FOR
LANGLEY RESEARCH CENTER**

GUIDELINES: The following documents or subsequent editions in effect on date of contract shall serve as the basis for preparation of Contractor Reports:

NPG 2200.2A NASA Procedures and Guidelines

(<http://www.sti.nasa.gov/neghome3.htm>)

DoD 5220.22-M, National Industrial Security Program Operating Manual
(NISPOM), January 1995

FORMAT AND ORGANIZATION: The format and organization of a Contractor Report should be consistent and follow the practices recommended in the NASA Procedures and Guidelines. For questions concerning format, contact Langley Research Information Management at (757) 864-2518. A Report Documentation Page (RDP) (Standard Form 298) shall be included as the last page in the report. The RDP is available electronically at (<http://www.sti.nasa.gov/neghome3.htm>). A sample of this form is attached.

TRADEMARKS: U.S. Government policy prohibits endorsing or criticizing commercial products in its publications. Use of trademarks is discouraged. If a trademark must be used, its owner must be credited and the trademark must be used as an adjective modifying the generic name.

REFERENCES: Material that is not obtainable or available must not be listed in the references. Documents of NASA contracts published as in-house documents must be referenced as NASA CR's, not as NASA Contract Numbers.

SECURITY: Security markings, when necessary, shall be consistent with DD Form 254, the directive issued by the Security Classification Officer, and shall conform to requirements established in the DoD NISPOM. For questions concerning security classification, contact LaRC Security Classification Officer at (757) 864-3420.

APPROVAL COPIES.

1. Upon completion of a report, the Contractor shall submit five (5) approval copies to the Contracting Officer's Technical Representative (COTR) for review and approval by NASA. These copies may be reproduced on both sides of sheet where feasible and assembled by an economical means by the Contractor. **Notify the Langley Contracting Officer when the approval copies are submitted.**

2. The Contractor will be notified of acceptance of the approval copy of the report by the COTR within thirty (30) days. Approval will be contingent upon changes required by NASA.

FINAL (REVISED) COPIES:

1. Upon receipt of acceptance from the Langley COTR, the Contractor shall prepare an original manuscript incorporating the changes required by NASA.
2. The Contractor shall submit the original manuscript and up to five (5) duplicate copies to the Langley COTR within thirty (30) days after receipt of acceptance. Electronic PostScript files for the cover and report (including figures and tables), and Report Documentation Page source file shall also be submitted to the Langley COTR, if available. **Notify the Langley Contracting Officer when the final revised report is submitted.**

Contact the Langley COTR for information on transmitting the electronic files by file transfer protocol (FTP). The electronic files may be saved on a 3.5-inch, high density, double-sided disk(s) and submitted with the final manuscript. The disk(s) and files should be labeled to properly identify the report.

ORIGINAL MANUSCRIPT: The original manuscript of a Contractor Report shall consist of a single-sided, unbound, laser printed copy of the text with all tables, figures, artwork, graphs, photos and captions included on the pages. Photographs shall be either scanned electronic images or unscreend glossy prints that have been cut and mounted on the pages. The manuscript shall be single spaced with consecutive page numbers on all pages, excluding the cover. The manuscript shall be printed on 8-1/2 by 11 paper with a maximum page image are of 7-1/8 by 9-3/16 inches

REPORT DOCUMENTATION PAGE			<i>Form Approved</i> OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour 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 this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 1991		3. REPORT TYPE AND DATES COVERED Contractor Report
4. TITLE AND SUBTITLE Science Needs for Real-Time Adaptable Data Products From the Earth Observing System			5. FUNDING NUMBERS CC NAS1-18676 TA 6	
6. AUTHOR(S) Paul D. Try, Paul F. Twitchell and Christopher R. Redder				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Science and Technology Corporation 101 Research Drive Hampton, VA 23666-1340			8. PERFORMING ORGANIZATION REPORT NUMBER STC-42518	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-2199			10. SPONSORING/MONITORING AGENCY REPORT NUMBER NASA/CR	
11. SUPPLEMENTARY NOTES Langley Technical Monitor: David E. Bowker Final Report				
12a. DISTRIBUTION/AVAILABILITY STATEMENT (If contract specifies restricted distribution, state restriction instead of Unclassified-Unlimited.) Unclassified-Unlimited (If contract specifies restricted dist., state restriction instead of Unc.-Unl.) Subject Category 00 (See http://larepubs.larc.nasa.gov/newhtml/subject.html) Distribution: Standard or Nonstandard (Tech. Monitor determines dist.) Avail			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Advancing the understanding of the Earth system requires improved knowledge of the time-variant governing processes, and the knowledge of these processes often comes only from real-time observations of the changing variables as seen from space. The unpredictability of what is to be measured and at what rate requires flexibility in the observational capability. The Earth Observing System (EOS) will be a major source of observational data during the next 10- to 25-year timeframe. Consequently, to ensure the needed advances in the understanding of the Earth system, real-time onboard processing is concluded to be a critical need for EOS. <i>(Provide an unclassified abstract not to exceed 200 words)</i>				
14. SUBJECT TERMS Real-time data needs; Onboard data processing; Real-time Processing EOS; EOS communication needs.			15. NUMBER OF PAGES 76	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT	

INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling each block of the form follow. It is important to *stay within the lines to meet optical scanning requirements*.

Block 1. Agency Use Only (*Leave blank*).

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g., 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g., 10 Jul 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. (*If known*)

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with . . . ; Trans. of . . . ; To be published in When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g., NOFORN, REL, ITAR).

DOD	-	See DoDD 5230, "Distribution Statements on Technical Documents"
DOE	-	See authorities.
NASA	-	See Handbook NHB 2200.2.
NTIS	-	Leave blank.

Block 12b. Distribution Code.

DOD	-	Leave blank.
DOE	-	Enter DOE distribution categories
		from the Standard Distribution for Unclassified Scientific and Technical Reports.
NASA	-	Leave blank.
NTIS	-	Leave blank.

Block 13. Abstract. Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code (*NTIS only*).

Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.


MASTER SUBCONTRACTING PLAN
FOR
SMALL, SMALL DISADVANTAGED &
WOMEN OWNED SMALL BUSINESS CONCERNS


Submitted by

NORTHROP GRUMMAN CORPORATION

Military Aircraft Systems Division (MASD)

3 July 1996


Betty B. Koller
Manager
Supplier Relations


G. A. Braga
Vice President
Materiel and Subcontract
Management

Approved by:


Division Administrative Contracting Officer

Sep 5, 1996
Date

Effective Date: 5 September 1996 through 4 September 1999

SECTION I

INTRODUCTION

This plan applies to Northrop Grumman Corporation, Military Aircraft Systems Division activities including, but not limited to, the following programs:

- B-2 and Sustained Low Rate Production Program
- F/A-18 (all versions and spares and support contracts)
- F-5/T-38 modification and support
- Research and Development Programs
- JSF (Joint Strike Fighter)
- Targets and Unmanned Vehicles
- Joint Stars
- E-2C

In order to fully comply with Public Law 95-507, 99-661, 100-180, 100-656, 102-484, and 102-355 Northrop Grumman Corporation, Military Aircraft Systems Division, herein submits this Master Subcontracting Plan required by FAR 52.219-9 and FAR Subpart 19.7 et. seq. It is the policy of the division to fully support the extent and intent of the above stated Public Laws. This Master Subcontracting Plan; when approved, shall be incorporated by reference as a part of an individual subcontracting plan submitted for Government contracts exceeding five hundred thousand dollars (\$500,000) that provide further subcontracting opportunities. For contracts containing options, the cumulative value of the basic contract and all options is considered in determining whether a subcontracting plan is necessary. If a plan is necessary, the individual subcontracting plan will contain all the elements required by 19.704(a) and will contain separate parts, one for the basic contract and one for each option.

Each major section is in response to a requirement in FAR 52.219-9. The appropriate FAR reference is footnoted at the beginning of each response.

SECTION II

ESTABLISHMENT OF GOALS¹

A detailed review of several procurement documents including the contract Bill of Material, supplier quotations, engineering estimates, the present supplier file, and/or possible new suppliers is performed to determine subcontract opportunities for Small/Small Disadvantaged Business/Women Owned Small Business (S/SDB/WOSB) concerns so that comprehensive and achievable goals may be established and incorporated into individual subcontracting plans. The S/SDB/WOSB goals are expressed as percent of the subcontract dollar value. The intent of direct dollar goal assignments is to fully support the purpose of the applicable public laws. The dollar figures and percentages proposed are approximations and are subject to change pending final negotiated values.

¹ FAR42.219.(D)

SECTION III

METHOD USED TO IDENTIFY POTENTIAL SOURCES²

Northrop Grumman Corporation and its Divisions will continue to build upon its long established tradition of working with small and minority business development associations, through its Outreach Program to develop a valid and dynamic source list. In addition to participating in procurement conferences, Small Business Program Office representatives and Procurement personnel attend trade fairs and community development programs for S/SDB/WOSBs.

Additional sources utilized to locate S/SDB/WOSB suppliers include:

- The U.S. Small Business Administration Procurement Automated Source System (P.A.S.S.).
- On-Line Supplier Directory - All currently approved Northrop Grumman Military Aircraft Systems Division (MASD) suppliers (coded by business size and continually updated) Northrop Grumman Military Aircraft Systems Division - 1996.
- Additional miscellaneous Small, Minority, and Women Owned Business Directories such as:
 - Southern California Regional Purchasing Directory
 - Try Us - National Minority Business Directory
 - National Directory of Women Owned Businesses
- New sources are also generated through Northrop Grumman MAS Division participation in the following Small Business and Disadvantaged Business Associations and Conferences:
 - Federal and Congressional Sponsored Conferences
 - Regional Purchasing Councils Conference
 - Black Business Association
 - Asian Business Association
 - Latin Business Association
 - National Indian Business Council
 - Minority/Women-owned Business Market Place

The primary source utilized to locate and qualify Historically Black Colleges and Universities and Minority Institutions include:

- An Inventory of the capabilities of the Historically Black Colleges and Universities and Minority Institutions (HBCU/MIs): A National Association for Equal Opportunity in Higher Education /Institution Roster.

² FAR42.219.(D)

SECTION IV

INDIRECT DOLLARS³

Northrop Grumman Military Systems Aircraft Systems Division does not include indirect costs establishing Subcontracting goals.

Northrop Grumman Corporation Military Aircraft Systems Division does include indirect dollars as part of its subcontracting efforts.

These indirect dollars are collected by type of business - Large, Small and Small Disadvantaged. The total cost is proportionate to the direct material dollars and a pro-rata relationship is established. Indirect dollars are not included in SF294 reports, however an allocation of indirect dollars are included in the Division SF295 as they relate to Government/DOD procurements.

Indirect percentage goals are reviewed by Supplier Relations on an annual basis and updated accordingly.

³ FAR42.219.(D)

SECTION V

ADMINISTRATION OF SUBCONTRACTING PROGRAM⁴

Ms. Lisa T. Pollack, Small Business Programs Administrator has responsibility for the Small Business Program Office and responsibility to administer this Master Subcontracting Plan, and assure that Northrop Grumman Military Aircraft Systems Division is in full compliance with Public Law 95-507, Public Law 99-661, Public Law 100-180, Public Law 100-656 Public Law 102-484, and Public Law 102-355. Ms. Pollack reports to the manager of Supplier Relations, Betty B. Koller. Ms. Koller reports to the vice president of Materiel and Subcontract Management, Mr. G. A. Braga. Mr. Braga reports to Wallace C. Solberg, corporate vice president and division general manager.

Mr. Solberg has issued a Division Policy Directive (DP A303) which states "it is the policy of the Military Aircraft Systems Division to increase procurement opportunities for capable small businesses and small disadvantaged business."

The Northrop Grumman Corporation has issued a Management Manual Policy (96-4) which directs all divisions to ensure full compliance with the Small Business Act, Public Law 95-507, United States Code, Volume 5, Section 631 et seq.

The Small Business Program Office, and Site Small Business Liaison Officers (SBLOs) as directed in Northrop Grumman Military Aircraft Systems Division Standard Practice Memorandum 6-6, shall perform the following duties on behalf of the division:

1. Meet with representatives of subject firms to counsel and discuss subcontracting opportunities.
 - a. Provide representatives with information and direction about current procurement requirements and appropriate contacts with procurement representatives.
 - b. Arrange for technical and administrative assistance to subject firms when requested or required.
2. Review and approve Subcontracting Plans or certificates from large business suppliers, maintain files of approved plans, and provide them to buyers.

⁴ FAR42.219.(D)

SECTION V CONTINUED

ADMINISTRATION OF SUBCONTRACTING PROGRAM

3. Upon request from Contracts, develop a Subcontract Plan. Submit completed plan to the cognizant contract administrator for submission to the Customer. If required, assist Contracts in the negotiation of the plan. Monitor goal achievement on all Northrop Grumman MASD approved subcontracting plans from inception through contract completion. Prepare Government required reports on a contract-by-contract basis of all Northrop Grumman approved subcontracting plans. Forward status reports to local DCMC office.
4. Act as focal points for Government agencies, small business associations, etc. and serve as Northrop Grumman's representatives on various community and industry committees. Coordinate facility review of subject concerns with appropriate Procurement and Quality Assurance personnel, and participate in audits/surveys requested by Government Agencies.
5. Prepare required statistical reports, including Summary Subcontract Report Standard Form 295, and Standard Form 294, Individual Subcontract Report, covering all purchase order and change order transactions for distribution, as required, to the customer, corporate officers and Subcontract Management and Procurement.

In addition, Small Business Program Office representatives assist S/SDB/WOSBs in resolution of payment problems, and provide consultation to suppliers who experience quality or delivery problems.

Small Business Program Office representatives also act as a liaison between procurement organizations and potential suppliers. The representatives assist buyers in finding qualified potential suppliers and assist the suppliers in their attempt to become Northrop Grumman Team Members.

SECTION V CONTINUED

TECHNICAL ASSISTANCE

Northrop Grumman Military Aircraft Systems Division will provide technical assistance as necessary to develop S/SDB/WOSBs in the following areas:

- (1) Bidders conferences to discuss and advise on specifications, statements of work, and interpretation of requirements.
- (2) Site surveys in the quality system area to evaluate systems and, where necessary, provide assistance to meet quality assurance requirements.
- (3) Post award assistance from Subcontract Management and Procurement and Quality field offices located in several geographic locations to ensure requirements are fully understood and to assist in Purchase Order performance, where required.
- (4) Financial assistance in the form of progress payments, where appropriate.
- (5) In house minority business symposiums attended by engineering, manufacturing, and facilities to discuss and advise on new programs, problem areas, and upcoming requirements.
- (6) Conduct TQ symposiums for S/SDB/WOSBs in areas such as statistical process control, just in time, and other advanced management, manufacturing, and organizational developments.

RESTRICTED COMPETITION

Northrop Grumman Military Aircraft Systems Division has exceeded the five percent SDB goal at several of its Sites. Northrop Grumman Corporate policy (as outlined in Corporate Policy Letter 123/JPC/90-58), specifically states "Company elements should consider use of restricted bidding only where the foregoing elements exist, and a requirement to facilitate SDB participation in the procurement process is evident (i.e., Where overall achievement is low and good faith progress is required)." Given our achievements and Northrop Grumman Corporate policy, several sites do not currently practice restricted competition. At Sites where restricted competition will assist toward the achievement of goals, restricted bidding maybe utilized.

SECTION VI

SUBCONTRACT OPPORTUNITIES⁵

Northrop Grumman Military Aircraft Systems Division is fully committed to providing an equitable opportunity for S/SDB/WOSBs to compete for subcontracts. The extraordinary efforts used to provide this equitable opportunity include:

- (1) Review of procurement documents to determine subcontract opportunities for S/SDB/WOSB concerns (See Section II, Establishment of Goals).
- (2) Use of directories and Data Bases to match S/SDB/WOSB capabilities with Northrop Grumman requirements. (See Section III, Method Used to Identify Potential Sources).
- (3) Counseling of S/SDB/WOSB on doing business with Northrop Grumman (See Section V, Administration of Subcontracting Program).
- (4) Providing Technical, Administrative and Financial Assistance to S/SDB/WOSBs (See Section V).
- (5) Providing S/SDB/WOSB visibility to Northrop Grumman procurement, management and user organizations through circulation of capability information, training sessions, S/SDB/WOSB procurement trade fairs (See Section V).
- (6) Encouraging use of S/SDB/WOSBs through buyer recognition programs.

The production procurement requirements for Northrop Grumman Military Aircraft Systems Division are categorized into the following commodity groups: purchased parts; standard parts; raw stock; castings and forgings; offsite machining support, major equipment items, major subsystems; and research and development.

Each individual subcontracting plan identifies the principal supply and service areas where subcontracting opportunities exist for S/SDB/WOSB concerns. Should subcontracting opportunities for S/SDB/WOSB concerns not exist or be limited on a particular program, the individual subcontracting plan will identify and explain the reason (s) for such limitations.

⁵ FAR42.219.(D)

SECTION VI CONTINUED

SUBCONTRACTING OPPORTUNITIES

In addition to production requirements, the division procures many non-production related items and services. A representative listing of these items include: office furniture; office supplies; medical supplies; graphic supplies; maintenance equipment; computer hardware, software and associated items; construction of facilities; service contracts; and maintenance and janitorial supplies.

Northrop Grumman MASD will provide assistance to S/SDB/WOSBs in resolving payment problems, provide consultation to suppliers experiencing quality or delivery problems, and expand on, as necessary - loan of tooling, test equipment, engineering assistance, etc.

HBCU/MIs

Northrop Grumman MASD will make a best effort to use, whenever applicable or feasible, Historically Black Colleges or Universities (HBCUs) or Minority Institutions (MIs). This will be accomplished by considering whether subcontractors which are contemplated will involve research or studies of the type normally performed by higher education institutions. If there is opportunity available for higher educational institutions, all or a portion of these dollars will be assigned an HBCU/MI goal.

Northrop Grumman Military Aircraft Systems Division has donated, and will continue to donate, surplus equipment and furniture to several HBCU/MIs.

Purchase Order dollars will be included in the Small Disadvantaged Business goals, where applicable. Donations, grants and scholarship and other non purchase order work with HBCU/MIs which are not included in the goals, will be included in the remarks section of the SF 295.

Mentor Protégé Program

The Military Aircraft Systems Division has three Mentor Protégé agreements.

- 1) Aero Chip, Compton, CA.: A small machine shop.
- 2) Mandaree Electronics Corporation, Mandaree, North Dakota. A small manufacturer of electrical wire harnesses.
- 3) Symvionics, Inc. Pasadena, CA.: A small developer and integrator of software systems and Integrated Logistics Support.

The division supports these agreements through subcontracts, donations of surplus equipment, training and technical assistance. NGMASD has a detailed developmental plan for each of its protégés. Additional protégés will be considered where feasible and applicable.

SECTION VI CONTINUED

SUBCONTRACTING OPPORTUNITIES**NIB/NISH**

Northrop Grumman MASD will make its best effort to use companies affiliated with the National Industries for the Blind and the National Industries for the Severely Handicapped (NIB/NISH) organizations. This will be accomplished by considering the type of activity to be subcontracted and the potential pool of suppliers which are affiliated with NIB/NISH. If there is opportunity available in their areas of expertise, these companies will be considered whenever applicable or feasible.

Purchase Order dollars will be included in the Small Business goals, where applicable. Other non purchase order work with NIB/NISH companies which are not included in the goals, will be included in the remarks section of the SF 295.

SECTION VII

FLOWDOWN REQUIREMENTS⁶

All Subcontracts exceeding \$10,000 contain Northrop Grumman Terms and Conditions which flows down the requirements for utilization of S/SDB/WOSB concerns (FAR 52.219-8).

All subcontracts awarded over \$500,000 (in the case of construction of a public facility the base amount is \$1,000,000), contain a clause requiring submission to Northrop Grumman Military Aircraft Systems Division of a Subcontracting Plan or a Certificate of Compliance or evidence of participation in the Comprehensive Subcontract Test program. For contracts containing options, the cumulative value of the basic contract and all options is considered in determining whether a subcontracting plan is necessary. If a plan is necessary the, individual subcontracting plan will contain all the elements required by 19.704(a) and will contain separate parts, one for the basic contract and one for each option. When a subcontractor submits a Subcontracting Plan, the subcontractor will be required to adopt a plan similar to the plan agreed to by the offeror in accordance with FAR 52.219-9 (D) (9). A file of Subcontract Plans or Certificates of Compliance or other documentation submitted to Northrop Grumman is maintained in the Small Business Program Office as well as with the appropriate purchase order file.

⁶ FAR42.219.(D)

SECTION VIII

SURVEYS AND REPORTS⁷

It is Northrop Grumman's policy to cooperate with the Department of Defense, the Small Business Administration and other government agencies in responding to requests for information regarding Northrop Grumman Small, Small Disadvantaged, and Women Owned Small Business Programs. Northrop Grumman Military Aircraft Systems Division has received an outstanding ratings from DCMC during compliance reviews and has an excellent rating from the Small Business Administration.

In accordance with applicable Government regulations, Northrop Grumman will continue to furnish reports and participate in surveys and audits requested by the Small Business Administration and Federal Procurement Agencies to verify Northrop Grumman's compliance with current Government regulations.

Computer programs have been developed to accommodate the reporting requirements of the Small Business Administration and Federal Procurement Agencies to verify Northrop Grumman's compliance with current Government regulations.

All procurement managers receive, on a quarterly basis, a report indicating the dollars awarded to S/SDB/WOSBs.

A quarterly report lists the names of each S/SDB/WOSB award, purchase orders, and the amount of the award. Northrop Grumman Military Aircraft Systems Division will continue to furnish Standard Forms 294 and 295 in accordance with Government requirements. A Standard Form 294 is prepared for each active contract containing an approved subcontract plan, and is submitted to the appropriate contracting agency, as well as the DCMC. Standard Form 295 is submitted to the Department of Defense, NASA and DCMC. Respective program offices also receive copies of this information.

Northrop Grumman MAS Division will ensure that subcontractors agree to submit Standard Form 294 (Subcontracting Report for Individual Contracts) and 295 (Summary Subcontracting Plan) in accordance with Federal Regulations.

⁷ FAR42.219.(D)

SECTION IX CONTINUED

RECORDS

- E. Individual subcontract plans and/or certificates are filed with the appropriate subcontract plan file, and the records for these plans are maintained on a contract by contract basis in the Small Business Program Office at the various sites.
- F. Subcontract Plans from all large businesses who are contracted by Northrop Grumman Military Aircraft Systems Division for \$500,000 or more.

NORTHROP GRUMMAN

Military Aircraft Systems Division

**Individual
Subcontracting Plan
for
Small, Small Disadvantaged
and
Women Owned Small
Business Concerns**

Public Law 95-507

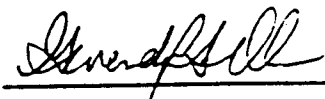
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Contract: N/A

RFP: NRA 8-21

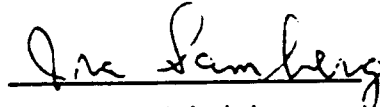
Date: 8-4-98

PREPARED BY:-



Small Business Office

CONCURRENCE:



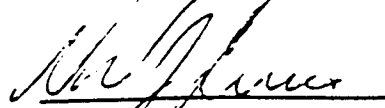
Contracts Administrator

APPROVED BY:



Manager, Small Business

APPROVED BY:



Manager, Contracts

INDIVIDUAL SUBCONTRACTING PLAN

This is the Supplemental Sheet for Northrop Grumman Military Aircraft Systems Division to the approved Master Subcontracting Plan effective 5 September 1996 through 4 September 1999 with the Goals and Product/Service as follows:

RFP:	<u>NRA 8-21</u>	BOA:	
CONTRACT #:		ORDER:	
P.O. NO.			
DESCRIPTION OF EFFORT:		<u>HIGH TEMPERATURE INTEGRATED</u>	
		<u>STRUCTURES</u>	
DATE:	<u>08/04/98</u>		

GOALS

Separate percentage goals (expressed in terms of percentage of planned subcontracting dollars) for the utilization of small and small disadvantaged business concerns as subcontractors are as follows:

	<u>DOLLARS</u>	<u>PERCENT</u>
Total Contract Value	<u>\$2,494,623</u>	
Total Direct Dollars Planned to be Subcontracted	<u>\$604,033</u>	<u>100.0%</u>
 <u>DIRECT</u>		
a. To Large Business Concerns	<u>\$473,953</u>	<u>78.5%</u>
b. To Small Business Concerns	<u>\$130,080</u>	<u>21.5%</u>
(1) To Disadvantaged Business Concerns	<u>\$51,380</u>	<u>8.5%</u>
(i) To HBCUs/MIs (subset of (1))*	<u>\$0</u>	<u>0.0%</u>
(2) To Non-Disadvantaged Bus. Concerns	<u>\$78,700</u>	<u>13.0%</u>
Women Owned Small Business (includes both Small and Small Disadvantaged Business)	<u>\$15,700</u>	<u>2.6%</u>

NAS1-98129

GOAL DEVELOPMENT

	TOTAL		GOAL SB		TARGET SB		GOAL SDB		TARGET SDB		GOAL WOSB		TARGET WOSB		GOAL
	SB	%	SB	%	SB	%	SDB	%	SDB	%	WOSB	%	WOSB	%	SDB&WOSB
TOOLING MATERIAL	140,000		45.00%		63,000		1.00%		1,400		0.5%		700		
ALLOCATED MATERIAL			40.00%		0		1.50%		0		0.5%		0		
RAW MATERIAL			31.00%		0		1.50%		0		1.0%		0		
CASTINGS & FORGINGS			85.00%		0		35.00%		0		1.0%		0		
PLANNED MFG. SUBCONTRACT			75.00%		0		15.00%		0		3.0%		0		
MAJOR SUBCONTRACTS			20.00%		0		5.00%		0		2.0%		0		
DIRECTED SOURCE (LB)	399,053		0.00%		0		0.00%		0		0.0%		0		
DIRECTED SOURCE (SDB)	49,980		0.00%		0		100.00%		49,980				0		
DIRECTED SOURCE (SB)	15,000		100.00%		0		0.00%		0		0.0%		0		
DIRECTED SOURCE (WOSB)			0.00%		0		0.00%				100.0%		15,000		
DIRECTED SOURCE (SDB & WOSB)			0.00%				0.00%				0.0%		0		
PURCHASED PARTS			43.00%		0		5.00%		0		2.0%		0		
SUPPLIER SERVICES			46.00%		0		5.00%		0		10.0%		0		
	\$604,033				\$63,000				\$51,380				\$15,700		

100.00%

TOOLING MATERIAL & RAW MATERIAL USE RAW MATERIAL. ALLOCATED MATERIAL USES PURCHASED PARTS AND ENGINEERING MATERIAL IS GENERALLY RAW MATERIAL.

THIS SPREADSHEET SHOW FIGURES AS THEY FALL OUT

	DOLLARS	GOALS
TOTAL MATERIAL	604,033	78.5%
LARGE BUSINESS	473,953	21.5%
SMALL BUSINESS TOTAL	130,080	10.4%
SMALL BUSINESS (OTHER)	63,000	8.5%
SMALL DISADVANTAGED BUSINESS	51,380	0.0%
SMALL WOMAN-OWNED MINORITY BUSINESS	0	2.6%
SMALL WOMAN-OWNED BUSINESS	15,700	

ORIGINAL MODIFICATION TOTAL

SF 1411 VALUE \$2,494,623 \$0 \$2,494,623