

CONTRACT NAS1 -00106

The following information has been determined to be exempt from disclosure and has been deleted from the contract and contract modifications:

- Small Disadvantaged Business Participation - Contract Targets: Name of Concern(s)
- ' Subcontracting Plan

The deleted material is exempt from disclosure under 14 [C.F.R. 1206.300](#) (b) (4) which covers trade secrets and commercial or financial information obtained from a person and privileged or confidential. It has been held that commercial or financial matter is "confidential" for purposes of this exemption if its disclosure would be likely to have either of the following effects: (1) impair the Government's ability to obtain necessary information in the future; or (2) cause substantial harm to the competitive position of the person from whom the information was obtained, [National Parks and Conservation v Morton](#) 498 F2d 765 (D.C. Cir. 1974).

If NASA should release the negotiated financial information, which is considered to be company "confidential," the result could be that contractors would refuse to negotiate such agreements on the basis that the firm's pricing structure and sub-elements of cost would be made available to its competitors. Furthermore, disclosure would discourage other companies from participating in the negotiation of similar advance agreements regarding the limitation of certain cost items and billing rates.

Disclosure of the information in the Subcontracting Plan would discourage future submission of detailed data concerning the company's implementation of their Subcontracting Plan and impair the Government's ability to obtain necessary information in the future as well as cause substantial harm to the competitive position of the company.

TABLE OF CONTENTS

Solicitation/Contract Form

PART I - THE SCHEDULE

Section B	Supplies Or Services And Prices/Costs	2
Section C	Description s/Specs.Work Statements	3
Section D	Packaging And Marking	7
Section E	Inspection And Acceptance	8
Section F	Deliveries Or Performance	9
Section G	Contract Administration Data	10
Section H	Special Contract Requirements	18

PART II - CONTRACT CLAUSES

Section I	Contract Clauses	20
-----------	------------------	----

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

Section J	List Of Attachments	32
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PART I - THE SCHEDULE**Section B - Supplies Or Services And Prices/Costs****B.1 SUPPLIES AND/OR 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 Flight Critical System Research Integrity as specified in Task Orders issued pursuant to Clause G.3 entitled "Procedures for Issuing Task Orders." The type of work to be performed under such Task Orders is limited to the types of work incorporated by Clause C. 1 Statement of Work.

B.2 INDEFINITE DELIVERY/INDEFINITE QUANTITY CONTRACT

Pursuant to the Federal Acquisition Regulation (FAR) Parts 16.501-2 and 16.504, this contract is defined as an indefinite quantity type. The contract provides for an indefinite quantity, within stated limits, of supplies or services to be furnished during a fixed period, with deliveries or performance to be scheduled by placing orders with the Contractor. The total minimum and maximum dollar value of supplies or services to be acquired under the contract are set forth below:

Contract Minimum: The Government will issue Task Order(s) (TOs) under this contract which provide for a minimum of \$25,000 in services. (Each Awardee)

Contract Maximum: The Government issued Task Order(s) under all contracts awarded for this procurement shall not exceed a maximum of \$20,000,000 (aggregate total for all awardees) in services for the entire period of performance.

PART I - THE SCHEDULE

Section C - Description/Specifications/Work Statement

C.1 STATEMENT OF WORK-- FLIGHT CRITICAL SYSTEMS RESEARCH

1.0 Introduction

The Aerospace Technology (AST) Enterprise of the National Aeronautics and Space Administration (NASA) defines its technology innovation goals with respect to three strategic Pillars: 1) Global Civil Aviation, 2) Revolutionary Technology Leaps, and 3) Access to Space. The research and technology requirements described in this Statement of Work (SOW) support goals that lie within the scope of Pillar One, Pillar Two, and Pillar Three. The specific goals within Pillar One, Global Civil Aviation are:

Goal 1 - Reduce the aircraft accident rate by a factor of five within 10 years, and by a factor of 10 within 20 years.

Goal 4 - While maintaining safety, triple the aviation system throughput, in all weather conditions, within 10 years.

within Pillar Two, the Revolutionary Technology Leaps goals are:

Goal 7 - Invigorate the general aviation industry, delivering 10,000 aircraft annually within 10 years, and 20,000 aircraft annually within 20 years.

Goal 8 - Provide next-generation design tools and experimental aircraft to increase design confidence, and cut the development cycle time for aircraft in half.

and within Pillar Three, the Access to Space goal is:

Goal 9 - Reduce the payload cost to low-Earth orbit by an order of magnitude from \$10,000 to \$1,000 per pound within 19 years, and by an additional order of magnitude, from thousands to hundreds of dollars per pound, within 25 years.

The primary emphasis is on the safety and design integrity aspects of these goals.

To meet the goals, the AST Enterprise sponsors focused research programs in intelligent design/synthesis environments, aviation safety and air transportation system capacity; and base research and technology programs in airframe systems, aviation propulsion, advanced space transportation technology, and airspace operations. The successful accomplishment of these programs depends on technology innovation in all vehicle systems. The scope of this Contract addresses avionics systems critical to flight management. The purpose of this Contract is to support basic and applied research in Flight Critical Systems.

2.0 Scope

The scope of this SOW is constrained in general by the AST Enterprise Goals described in Section 1.0 and in particular by the objectives and scope of the Task areas described in Section 4.0. The five Task areas are:

- Guidance and Control in Adverse Conditions
- Flight Critical Systems Design and Analysis
- Flight Critical Systems Health Management
- Situation Awareness

Systems Engineering and Analysis

2.1 Guidance and Control in Adverse Conditions

The scope of this work area includes development of technologies that enhance the ability of the flight crew to respond correctly when critical system or component failures occur; that would prevent related occurrences of loss of control in flight; that enable automated responses to mitigate controlled flight into terrain; and that reduce the pilot workload associated with maintaining safe flight .

Specifically, guidance and control technologies are to be developed for operation throughout the flight envelope to (1) prevent loss of vehicle control and (2) recover vehicle control from loss-of-control (upset) conditions resulting from adverse flight conditions and vehicle/system failures which can each occur separately or in combinations. Adverse conditions to be considered include, but are not limited to external disturbances; atmospheric disturbances (e.g. wake vortices); weather (e.g. wind shear, turbulence, icing); internal errors, crew input errors (e.g. mode confusion, pilot induced oscillations); system errors/malfunctions (e.g. software/hardware, HIRF); external interference; aircraft; and terrain/fixed obstacles. Vehicle and system failures to be considered include, but are not limited to control system component failures; sensors; actuators; propulsion system; vehicle impairment and damage; control surface impairment and damage; and fuselage and lifting body impairment and damage. Vehicle upset conditions to be considered include, but are not limited to, operation beyond the normal vehicle flight envelope; unstable modes of motion; stall and/or departure from controlled flight; uncommanded motions due to asymmetric thrust or failures; and out-of-control motions (e.g., falling leaf).

2.2 Flight Critical Systems Design and Analysis

The scope of this work area includes contribution to the prevention and reduction of malfunctions and failures in aircraft systems and components by developing the design and assessment tools to produce systems that reduce the pilot workload associated with safe flight under system and component failures, and to prevent related occurrences of controlled flight into terrain (CFIT) .

Specifically, methods, techniques, and tools for the design, verification, integration, validation, and certification of complex and highly integrated mission and life critical systems are to be developed and demonstrated. Highly integrated, complex systems are composed of functionally and physically different entities that must operate in seamless and safe coordination. Such entities include mechanical, electrical, computational, and human components. The methods, techniques, and tools will ensure the safety; required performance: functional correctness; immunity to disturbances in electromagnetic environments (EME); information integrity and security in presence of malicious and environmental threats; and fault containment, recovery, and accommodation capability of systems developed in accordance with them. Additional objectives are to investigate methods for the combined and simultaneous assessment of dependability and performance that quantify the system's ability to perform to specification in the presence of faults: and to develop databases from analytical, simulation, and flight investigations of flight critical systems performance in failure/damage situations. Such databases will provide the basis for new system designs and for new assessment techniques and tools .

2.3 Flight Critical Systems Health Management

The scope of this work area includes investigation of the integration and validation of existing and future sensing/processing technologies to better aid in vehicle -wide health monitoring. Concepts, methods, and technologies for distributed, smart systems and onboard diagnostic system architectures are to be developed. New health monitoring and diagnostic system concepts in the context of catastrophic failure prevention and decreased maintenance costs are to be validated. Proposed research may encompass the major vehicle systems to :

Develop and demonstrate health monitoring and management systems for malfunctions and failures of the aircraft propulsion system, such as engine surge, asymmetric thrust, and turbomachinery crack/fatigue growth and propagation;

Develop and demonstrate health monitoring and management systems for damage of the airframe (including the wings, fuselage, and control surface attachment points), such as crack/fatigue growth and propagation :

Develop and demonstrate health monitoring and management systems for anticipated and unanticipated malfunctions and failures of the aircraft flight systems (including the electrical power generation/distribution system; digital computers for guidance, navigation, control, and flight management; crew station computers, displays, cueing, warning, and annunciation systems; the digital data bus; sensors; and control actuation components), such as functional error modes in computers, bus errors, short circuits, blocked Pitot tubes, and faulty sensors and actuators :

Develop and demonstrate health monitoring and management systems that provide crew members with the possible consequences of systems failures, the symptom and indicators of such consequences, and correct crew responses to mitigate consequences .

2.4 Situation Awareness

Historically, aviation accidents have resulted from many causal factors including onboard system failures, structural failures, and pilot errors. The latter is often due to a lack of adequate situation awareness on the part of the flight crew. This lack of situation awareness information has been a contributing factor leading to several fatal accident classes including controlled flight into terrain (CFIT), loss of control in flight, and runway incursions. The scope of this work area includes development of technologies and methods that provide real-time information, electronically, to flight crews to improve their situation awareness. Types of real-time information include, but are not limited to, current position in four dimensional space; traffic locations and identity; terrain and obstacle locations; hazardous weather location and type; flight path or surface route information; air traffic control (ATC) instructions; and alerts of impending/potential hazardous situations. If properly presented to the flight crew, this information can supplement the normal visual scans and radio communications and thus, eliminate uncertainties associated with each. By reducing these uncertainties, safety margins increase and inadvertent pilot-induced errors will be less likely to occur. In addition to information presentation technologies, the scope of this work area includes the communication, navigation, and surveillance infrastructure technologies required to acquire, process, and disseminate situation awareness information. The scope also includes development of technologies and methods aimed at increasing the situation awareness of air traffic controllers through, for example, systems to enable both strategic and tactical collaborative decision making; seamless surveillance; controller-pilot datalink communications (CPDLC); and alerting of path/route deviations by flight crews-

2.5 Systems Engineering and Analysis

The scope of this work area includes performance of systems engineering in support of novel flight critical systems analysis and development from research concept through simulation and test to flight experiment. Specific functions associated with systems engineering include requirements analysis; complex system functional decomposition; experimental system specification; experimental system design; system verification and validation; cost-benefit studies; modeling and simulation; configuration management; systems integration; and systems assurance .

3.0 Applicable Documents

Government documents required to execute any Task will be identified in the Task SOW and will be provided by the government. The acquisition of applicable non-government documents will be the responsibility of the Contractor .

For the purposes of responding to this solicitation the following documents apply :

FA Office of System Architecture and Investment Analysis, "National Airspace System Architecture, Version 4.0, January 1999.
<http://nasdocs.faa.gov/nasiHTML/nas-architecture/index.html>

Raymond, E.T. and Chenoweth, CC.: "Aircraft Flight Control Actuation System Design , Society of Automotive Engineers, Inc., 1993.

4.0 Requirements

The Contractor shall perform specific tasks as assigned by the Contracting Officer within the scope of the Task areas described in Section 2.0. The Contractor shall be responsible for defining operational and system requirements, and for delivering engineering and research results that meet the specific technical and programmatic requirements defined in the SOW of each Task assigned by the Contracting Officer. In addition, all deliverables in Task areas 2.1 through 2.4 shall 1) apply to at least one of the Vehicle Classes defined in the next paragraph; 2) be consistent with the Federal Aviation Administration National Airspace System plan (see Section 3.0 Applicable Documents); 3) be supported by a detailed performance analysis; 4) include an analysis of the certifiability and retrofitability of the delivered technology; 5) be supported by a thorough cost-benefit analysis where requested; 6) use commercial-off-the-shelf (COTS) technology where possible; 7) document the impact on the Air Traffic Management System where applicable; and 8) require minimum airport/ground-based equipage. For all deliverables in Task area 2.5, Systems Engineering and Analysis, the Contractor shall 9) perform all analyses and develop all documentation necessary to obtain cognizant safety authority (e.g. for NASA aircraft, the Field Center Aviation Safety Review Board) approval for any experimental flight system(s) required in the Task SOW .

For the purposes of this Contract, Vehicle Classes are defined to be General Aviation/Business aircraft, Subsonic Commercial aircraft (passenger and cargo), Supersonic Commercial aircraft (passenger and cargo), High Performance (military) aircraft, and Space Launch vehicles,' "

In reference to Requirement 3), detailed performance analyses may include recent test data, past performance data where applicable, and pilot acceptance ratings (e.g. Cooper -Harper) for crew systems related deliverables.

In reference to Requirement 4), a conclusion that the technology is not retrofitable or certifiable is an acceptable result of the analysis. Certifiability shall be demonstrated by a detailed description of the applicable existing certification method or by a viable approach to the development of a new method.

The Representative Task Orders (RTO) included in this solicitation do not represent actual completed, planned, or existing Tasks. Because a number of the documents referred to in the RTOs do not actually exist, the following assumptions hold for responding to the RTOs -

RTO No. 1 - A fictitious experimental plan will be provided as an attachment to the RTO. The plan will provide a sufficient basis for developing the proposal for the Task .

RTO No. 2- To simulate Documents A through E listed in the RTO, a short document referencing sections of Document 2 listed in Section 3.0, Applicable Documents, of the Contract SOW will be provided as an attachment to this RTO. Documents F and G will also be attached .

RTO No. 3 - Assume that the technology to be evaluated is a system for the detection of and recovery from a transient electromagnetic disturbance to an aircraft's primary control system. Choose from any Vehicle Class. A description of the Systems and Airframe Failure Emulation, Testing, and Integration Laboratory will be attached to the RTO.

PART I - THE SCHEDULE**Section D - Packaging And Marking****D.1 PACKAGING AND MARKING**

(a) The Contractor shall preserve, pack, and mark for shipment all items deliverable under this contract in accordance with good commercial practices and in accordance with instructions that may be specified by the Government in authorized Task Orders. Shipments shall be preserved, packed and marked to ensure both acceptance by common carrier and safe transportation at the most economical rate(s).

(b) The Contractor's markings on shipping containers shall be clearly legible from a distance of 36 inches. The Contractor may mark by stencil, rubber stamp, or lacquer over a coated gummed label. Markings for reports and other documentation shall be as set forth in Exhibit A, Contract Documentation Requirements.

(c) The Contractor shall place identical requirements in all subcontracts.

PART I - THE SCHEDULE

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 as specified in Task Orders.

PART I - THE SCHEDULE

Section F - Deliveries Or Performance

F.1 DELIVERY

A. The documentation and reports required by each Task Order produced under this contract shall be delivered f.o.b. destination in accordance with the schedule specified therein .

B. The reports and documentation required by Section J. Exhibit A, Contract Documentation Requirements, shall be delivered at the times and to the places specified therein .

F.2 PERIOD OF PERFORMANCE - TASK ORDERS (LaRC 52.211-112) (APR 1998)

A. The period for issuance of task orders is 54 months from the effective date of this contract.

B. Any task orders issued prior to the expiration of the period for issuance of task orders shall be completed, subject to the limitations specified in FAR 52.216-22, Paragraph (d).

F.3 PLACE(S) OF PERFORMANCE (LaRC 52.211 -98) (OCT 1992)

The place(s) of performance shall be :

The Contractors and/or subcontractors facility and other sites as may be designated by the task order.

F.4 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.

PART I - THE SCHEDULE

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 name and representatives are hereby designated by the Contracting Officer to administer such clause:

Title	Office Code	Address (including zip code)
New Technology Representative	212	NASA, Langley Research Center Hampton, VA 23681-2199
Patent Representative	212	NASA, Langley Research Center Hampton, VA 23681-2199

(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:

Attn: Financial Management Division, MS 175
NASA Langley Research Center
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
Boeing Resident Office
P.13. Box 6240 M/S 45-53
Kent, WA 98064-6240

(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 :

Attn: Financial Management Division, MS 175
 NASA Langley Research Center
 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 PROCEDURES FOR ISSUING TASK ORDERS

A. The Contracting Officer (00) will be responsible for award and administration of Task Orders.

B. For orders issued under multiple Task Order contracts, each awardee shall be provided a fair opportunity to be considered for each order in excess of \$2,500 with the exceptions as specified in the following Paragraph. In selecting the awardee with whom to place orders, the CO will consider past performance, quality of services and/or deliverables, cost control, and final proposed cost.

Awardees need not be given an opportunity to be considered for a particular order in excess of \$2,500 under multiple Task Order contracts if the CO determines that -

1. The agency need for such supplies or services is of such urgency that providing such opportunity would result in unacceptable delays,
2. Only one such Contractor is capable of providing such supplies or services required at the level of quality required because the supplies or services ordered are unique or highly specialized;
3. The order should be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under this or any prior contract, provided that all awardees were given a fair opportunity to be considered for the original order; or

It is necessary to place an order to satisfy a minimum guarantee .

C. The CO need not contact each of the multiple contract awardees before selecting an order awardee if the CO has information available to ensure that each multiple awardee is provided a fair opportunity to be considered for each order.

D. For those orders which are competed among the multiple contract awardees, the CO will provide a solicitation to each awardee and will request a bid or proposal by a common cut-off date. The solicitation will include a Statement of Work, specifications, or drawings; required delivery date, incentive fee metrics, any special instructions or provisions, and the selection criteria to be used to award the Task Order. Prior to awarding the Task Order, all awardees will be required to provide a task plan that may include the following: 1) technical approach, 2) implementation plan (including staffing, proposed facilities and subcontractors), and 3) estimated cost including breakouts of the estimated labor hours and all costs to perform the Task Order. The level of detail in each Task Plan will be dependent on the complexity of the requirement. Upon selection of an awardee, the CO and the Contracting Officer's Technical Representative (COTR) will review the task plan and cost estimate to complete the work. The CO will negotiate any necessary changes with the Contractor. (The final cost estimate represents the baseline to be used for reporting in Columns 7b and 7d of NASA Form 533M (See Exhibit A). In addition, the final cost estimate will serve as the target cost for calculating the appropriate incentive fee for the Task Order.)

E. In some cases, the CO may issue Task Orders for conceptual designs to be performed by more than one awardee, with the selection for any subsequent order for the detailed design to be based on the merits of the completed conceptual designs.

F. Orders may be issued by facsimile or by electronic commerce methods .

G. After contract award(s) per Solicitation **No. 1-063-DIG. 1299**, no protest under FAR 33.1 is authorized in connection with the issuance or proposed issuance of an order under this contract except for a protest on the grounds that the order increases the scope, period, or maximum value of the contract. In accordance with FAR 16.505(b)(4), the following individual is designated as the Task Order Ombudsman responsible for reviewing complaints from Contractors on Task Order contracts:

Dr. Belinda Adams (Call Sandra Ray at (757) 864-2426), Langley Research Center

H. In the case where only one award is made as a result of this solicitation or if the CO determines that the Task Order shall not be competed (based on criteria state in Article G.3. B), the following Task Order initiation procedures apply:

1. The COTR will provide a Statement of Work, specifications or drawings; required delivery date, incentive fee metrics and any special instructions or provisions to the Contractor.

2. The Contractor will be required to provide a task plan which shall include a discussion of their technical approach for performing the work and an estimated cost for the proposed Task Order within 15 working days from receipt of the requirement. The estimated cost shall include breakouts of the estimated labor hours and costs to perform the Task Order.

3. The CO and COTR will review the task plan and cost estimate to complete the work. The CO will negotiate any necessary changes with the Contractor.

4. The final negotiated cost estimate shall represent the baseline to be used for reporting in (Columns 7b and 7d of NASA Form 533M (See Exhibit A)). In addition, the final cost estimate will serve as the target cost for calculating the appropriate incentive fee for the Task Order.

G.4 TASK ORDERS (LaRC 52.216-94) (APR 1998)

A. The work to be performed within the areas outlined in Section C, Statement of Work, will be more specifically defined and controlled by means of written task orders, issued solely by the Contracting Officer. The Contractors task order shall contain the following information:

1. Task Order Number
2. Date of Order and Contract Number TBD.
3. Statement of Work, Specifications and/or Drawings
4. Deliverables
5. Completion date and delivery schedule
6. Place of delivery and delivery instructions
7. Accounting and Appropriation Data
8. Estimated Cost
9. Incremental Funding
10. Applicable special instructions or provisions
11. Government-Furnished Items
12. Incentive Metrics and Fee Arrangement (mm, target, and max incentive fee)

B. Each Task Order shall require the Contractor to acknowledge receipt within 10 calendar days after issuance. The Contractor shall sign the "Acknowledgement" enclosed and return it to the CO .

C. The Contracting Officer may modify Task Orders in the same manner they are issued. In the event that there is a conflict between the requirements of the task order and the Contractor's task plan, the task order shall prevail. A copy of each Task Order shall be furnished to the Contractor. The Contractor shall acknowledge receipt of the task by signing the "Acknowledgment" sheet enclosed and returning it to the Contracting Officer within 10 calendar days after issuance .

G.5 TASK ORDER LIMITATIONS

Each Task Order shall specify a total cost limitation. Notwithstanding the Limitation of Funds clause, the Contractor shall not exceed the authorized cost set forth in each Task Order. If it becomes necessary to increase the cost limitation, the Contractor shall notify the Government prior to incurring cost beyond the stated limitation and if authorized, the Contracting Officer shall issue in writing a task order modification. Note that such requests shall be treated as an overrun and the incentive fee will be calculated in accordance with the incentive schedule .

G.6 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 Office 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 127, who may be reached by telephone at (757) 864-2500.

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 Contractors 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 .

G.7 INCENTIVE FEE

This contract is a cost reimbursement incentive fee arrangement whereby fee will be determined based upon the Contractor's performance at the task level. The fee structure detailed in this clause provides incentives for effective Task Order management. The Contractor's ability to meet the Quality Metrics defined here as cost, technical performance, and schedule will be the basis for computing the incentive fee.

A. Incentive Fee Chart The incentive fee chart defined below contains the maximum, minimum, and target fee percentages that will be used to calculate the dollar value of incentive fee on a Task Order basis .

Incentive Fee Chart

Fee Category	Percentages
Maximum Fee	12%
Target Fee	10%
Minimum Fee	8%

B. Fee Arrangement Schedule The distribution of fee will be defined by one of the five arrangements detailed in the table below. In order to calculate the incentive fee and provide the Contractor with Task priority information, an "Incentive Fee Category" will be identified on each Task Order. The table below gives the applicable categories, the percentage distributions, and a description of each:

Fee	Fee Category				
	A	B	C	D	E
Cost (C%)	34	50	25	25	TBD
Performance (P%)	33	25	50	25	TBD
Schedule (S%)	33	25	25	50	TBD
TOTAL	100	100	100	100	100

Incentive Fee Category Description

Fee Category A All three "quality metrics" are of equal importance. It is anticipated that this category will be utilized most often.

Fee Category B: Tasks issued with this designation have Cost' as the over-riding factor. This fee structure is expected for Tasks with fixed, limited funding .

Fee Category C: Tasks issued with this designation have "Performance" as the over-riding factor.

Fee Category D: Tasks issued with this designation have "Schedule as the over-riding factor. Typically these Tasks will have short, firm delivery dates in order to meet project dead lines/milestones.

Fee Category E: While use of categories A-D will be emphasized, there may be occasions where these fee structures (and their incentives) are inappropriate. The use of this fee structure arrangement will require additional negotiations. The cost percentage under this category shall be at least 25% .

C. Task Assessment and Adjective Rating: The Contractor shall submit monthly fee vouchers for the payment of the incentive fee. The fee will be paid monthly installments that are based upon the application of the minimum fee rate to the actual costs incurred. At task completion (most tasks will be 12 months or less), the Contractor's performance will be evaluated against the Task Order and its metrics. The balance of incentive fee due is the difference between fee already billed and the total fee due. Task Orders with a Period of Performance greater than 12 months shall be submitted in accordance with the delivery and performance milestones established in the task plan. Each Quality Metric" will be assessed and an adjective rating (i.e., Fails, Meets, or Exceeds) will be provided. The Government shall review and make a determination for the incentive fee due the Contractor within 30 days after task completion, This evaluation will provide the basis for computing the amount of "incentive fee" awarded based upon the following :

Cost: The incentive fee for cost will be calculated using the following definitions and computations described below.

$$\text{Cost Deviation} = \frac{\text{Actual Cost} - \text{Negotiated Estimated Cost}}{\text{Negotiated Estimated Cost}}$$

Cost Deviation	Ad). Rating	Fee Earned
Underrun of 10% or more	Exceeds	Maximum
From Underrun of < 10% to Overrun of < 1%	Meets	Target
Overrun of > 1%	Fails	Minimum

Performance: An adjective rating will be assigned by the COTR based upon an evaluation of the Contractor's ability to complete the Task's technical objectives/metrics. The following table assigns a fee for each adjective rating, which will then be used in the final "Incentive Fee Computation".

Exceeds	Maximum
Meets	Target
Fails	Minimum

Schedule: An adjective rating will be assigned by the COTR based upon an evaluation of the Contractor's ability to meet the Task's delivery schedule/metrics. The following table assigns a fee for each adjective rating, which will then be used in the final "Incentive Fee Computation".

Exceeds	Maximum
Meets	Target
Fails	Minimum

0. Incentive Fee Computation:

Incentive Fee \$ = [(C% X Rating%) + (P% X Rating%) + (S% X Rating%)] * Budgeted Cost

Where C%, P%, and S% are the percentage values for cost, technical performance, and schedule as provided by the Fee Category; and Rating% represents the maximum, target, and minimum fee percentages based upon the adjective rating assigned for the Task's quality metric.

Example: The Task is initiated with the following fee structure :

Category A	
Minimum Fee	1%
Target Fee	3%
Maximum Fee	5%

The evaluation at Task completion produces :

Quality Metric	Adj. Rating
Cost	Meets (3%)
Performance	Exceeds (5%)
Schedule	Fails (1%)

The budget cost for the Task is \$100,000, and billed fee amount totals \$1,000 .

For this example the calculated Incentive Fee would be,

Incentive Fee Rate (34% x 3%) + (33% x 5%) + (33% * 1%) 3%

Incentive Fee \$ = Incentive Fee Rate X Budgeted Cost

Incentive Fee \$ = 3% x \$100,000

Incentive Fee \$ = \$3,000; balance due = \$2,000

Each incentive fee voucher shall utilize the format as described in Exhibit C .

G.8 INCENTIVE FEE INVOICES

All fee vouchers shall be submitted in accordance with Paragraph G.2, Submission of Vouchers for Payment; Paragraph G.7, Incentive Fee and the payment schedule established in the task plan. The CO will review and approve each fee voucher using input from the CO's Technical Representative (COTR) and data from the monthly Financial Management Report (533) to ensure that all calculations are accurate and in accordance with Paragraph G.7, Incentive Fee. If errors or inaccuracies are revealed from the COTR's review, the Contractor will be contacted for verification purposes. The CO will ultimately determine the final incentive fee.

G.9 INVOICES AND PAYMENTS (LaRC 52.232-96) (OCT 1992)

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

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

PART I - THE SCHEDULE

Section H - Special Contract Requirements

H.1 RIGHTS TO PROPOSAL DATA (**TECHNICAL**) (FAR 52.227-23 (JUN 1987

Except for data contained on pages ALL, 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 October 15, 1999, upon which this contract is based-

H.2 INCORPORATION OF SECTION K OF THE PROPOSAL BY REFERENCE (LaRC 52 215-107 (JUN 1998

Pursuant to FAR 15.204-1(b), the completed Section K of the proposal dated October 15, 1999 is hereby incorporated herein by reference -

H.3 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 Officers 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.

H.4 SUBCONTRACTING PLAN

The approved Contractor plan for subcontracting with small business and small disadvantaged business concerns is attached hereto as Exhibit D and is hereby made a part of this contract -

H.5 YEAR 2000 COMPLIANCE (MAY 1998

(a) Definition: "Year 2000 compliant," as used in this clause, means that the information technology (hardware, software and firmware, including embedded systems or any other electro-mechanical or processor-based systems used in accordance with its associated documentation) accurately processes date and date-related data (including, but not limited to, calculating, comparing, and sequencing) from , into, and between the twentieth and twenty-first centuries, and the Years 1999 and 2000 and leap year calculations, to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date and date-related data with it.

(b) Any information technology provided, operated and/or maintained under this contract is required to be Year 2000 compliant. To ensure this result, the Contractor shall provide documentation describing how the IT items or services demonstrate Year 2000 compliance consisting of: standard product literature or test reports for commercial items, test procedures, and/or certification for complex systems.

(c) The Contractor warrants that any IT items or services provided under this contract that involve the processing of date and date-related data are Year 2000 compliant. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system.

(d) The remedies available under this warranty shall include repair or replacement, at no additional cost to the Government, of any provided items or services whose non-compliance is discovered and made known to the Contractor in writing within 90 days after acceptance. In addition, all other the terms and limitations of the Contractor's standard commercial warranty or warranties shall be available to the Government for the IT items or services acquired under this contract. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.

H.6 SMALL DISADVANTAGED BUSINESS PARTICIPATION-CONTRACT TARGETS
(LaRC 52219-91 (JAN 1999) (Fill-In: By offeror)

(a) This clause does not apply to, and should not be completed by, Small Disadvantaged Business (SDB) offerors unless the SDB offeror has waived the price adjustment evaluation adjustment [see Paragraph (c) of FAR clause 52.219-23].

(b) FAR 19.1202-4(a) requires that SDB participation targets be incorporated in the contract. Targets for SDB participation as subcontractors in authorized SIC Major Groups, as determined by the Commerce Business Department, are as follows:

<u>Basic Contract Period</u>	Department of Commerce Major SIC Group	Dollar Target	<u>Percent of Contract Value</u>
1/112000 - 7/1/2004	8731	Dependent on Task Order Awarded	8%
Total			8%

(c) FAR 19.1202-4(b) requires that SDB concerns that are specifically identified by the offeror be listed in the contract when the extent of the identification of such subcontractors was part of the SDB evaluation subfactor. SDB concerns (subcontractors) specifically identified by the offeror are as follows:

Name of Concern(s):

¹ The Contractor shall notify the Contracting Officer of any substitutions affirms that are not SDB concerns.

(d) If the prime offeror is an SDB (including joint venture partners and team members) that has waived the price evaluation adjustment, the target for the work it intends to perform as a prime contractor in authorized SIC Major Groups, as determined by the Commerce Department, is as follows:

<u>Basic Contract Period</u>	<u>Dollars</u>	<u>Percent of Contract Value</u>
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PART II- CONTRACT CLAUSES

Section I - Contract Clauses

1.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

CLAUSE NUMBER	TITLE AND DATE
52202-1	Definitions (OCT 1995)
52203-3	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)
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JUN 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)
52.211-15	Defense Priority and Allocation Requirements (SEP 1990)
52.215-2	Audit and Records--Negotiation (AUG 1996)
52.215-8	Order of Precedence (OCT 1997)
52.215-11	Price Reduction for Defective Cost or Pricing Data --Modifications (OCT 1997)
52.215-13	Subcontractor Cost or Pricing Data-Modifications (OCT 1997)
52.215-14	Integrity of Unit Prices (OCT 1997)
52.215-15	Pension Adjustment and Asset Reversion (DEC 1998)
52.215-17	Waiver of Facilities Capital Cost of Money (OCT 1997)
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits Other Than Pensions (OCT 1997)
52.215-19	Notification of Ownership Changes (OCT 1997)
52.216-7	Allowable Cost and Payment (APR 1998)
52.219-8	Utilization of Small Business Concerns (JAN 1999)
52.219-9	Small Business Subcontracting Plan (JAN 1999) -- Alternate II (JAN 1999)
52.219-16	Liquidated Damages--Subcontracting Plan (JAN 1999)
52-219-25	Small Disadvantaged Business Participation Program -Disadvantaged Status and Reporting(JAN 1999)
52.222-1	Notice to the Government of Labor Disputes (FEB 1997)
52.222-3	Convict Labor (AUG 1996)
52.222-26	Equal Opportunity (FEB 1999)
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 (JAN 1999)
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)
52.232-25	Prompt Payment (JUN 1997)
52.225-11	Restrictions on Certain Foreign Purchases (AUG 1998)
52.227-1	Authorization and Consent (JUL 1995)-Alternate I (JUL 1995)

CLAUSE NUMBER	TITLE AND DATE
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)
52.227-11	Patent Rights - Retention By The Contractor (Short Form) (JUL 1997) - as Modified by NASA FAR Supplement 18-52.227-11 (Applicable to Small Business only)
52.227-16	Additional Data Requirements (JUN 1987) with the words "specifically used" omitted
52.228-7	Insurance-Liability to Third Persons (MAR 1996)
52.230-2	Cost Accounting Standards (APR 1998)
52.230-3	Disclosure and Consistency of Cost Accounting Practices (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)
52.232-25	Prompt Payment (JUN 1997)
52.232-33	Mandatory Information for Electronic Funds Transfer Payment (AUG 1996)
52.233-1	Disputes (DEC 1998)--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)
52.242-3	Penalties for Unallowable Costs (OCT 1995)
52.242-4	Certification of Final Indirect Costs (JAN 1997)
52.242-13	Bankruptcy (JUL 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)
52.244-2	Subcontracts (AUG 1998)
52.244-5	Competition in Subcontracting (AUG 1998)
52.245-5	Government Property (Cost-Reimbursement, Time-And-Material, or Labor-Hour Contracts) (JAN 1986)
52.246-9	Inspection of Research and Development (Short Form) (APR 1984)
52.246-23	Limitation of Liability (FEB 1997)
52.246-25	Limitation of Liability - Services (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

CLAUSE NUMBER	TITLE AND DATE
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 Businesses Subcontracting Reporting (JUL 1997)
1852.219-76	NASA 8 Percent Goal (JUL 1997)
1852.223-70	Safety and Health (MAR 1997)
1852.225-70	Export Licenses (FEB 2000)
1852.227-70	New Technology (JUL 1995)
1862.235-70	Center for AeroSpace Information (JUN 1998)
1852.242-73	NASA Contractor Financial Management Reporting (JUL 1997)
1852.243-71	Shared Savings (MAR 1997)
1852.244-70	Geographic Participation in the Aerospace Program (APR 1985)
1852.245-70	Contractor Requests for Government-Owned Equipment (JUL 1997)
1852.246-72	Material Inspection and Receiving Report (JUN 1995)

1852.245-70 Contractor Requests for Government-Owned Equipment (JUL 1997)
 1852.246-72 Material Inspection and Receiving Report (JUN 1995)

1.2 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

CLAUSE NUMBER	TITLE AND DATE
52.252-2	Clauses Incorporated by Reference (FEB 1998)
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications (OCT 1997)
52.216-18	Ordering (OCT 1995)
52.216-19	Order Limitations (OCT 1995)
52.216-22	Indefinite Quantity (OCT 1995)
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 1999)
52.219-23	Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 1998)
52.227-14	Rights in Data-General (JUN 1987)-Alternate I (JUN 1987) and Alternate III (JUN 1987)--as modified by NASA FAR Supplement 1852.227-14
52.244-6	Subcontracts for Commercial Items and Commercial Components (OCT 1998)
52.252-6	Authorized Deviations in Clauses (APR 1984)
1852.215-84	Ombudsman (OCT 1996)
1852.245-73	Financial Reporting of NASA Property in the Custody of Contractors (SEP 1996)

1.3 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
 ■ clause may be accessed electronically at this/these address(es):

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

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

1.4 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (FAR 52.215-21 (OCT 1997

(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403 -4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable --

Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office .

(ii) Information on modifications of contracts or subcontracts for commercial items.

(A) If--

(1) The original contract or subcontract was granted an exception

from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

1.5 ORDERING (FAR 52.216-18) (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of a delivery order or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from contract award through six months prior to the end of the contract term.

~~(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.~~

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

1.6 ORDER LIMITATIONS (FAR 52.216-19) (OCT 1995)

(a) **Minimum** order. When the Government requires supplies or services covered by this contract in an amount of less than guaranteed minimum stated in Clause 3.2 Indefinite Delivery Contract, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) **Maximum** order. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of maximum stated in Clause B.2 Indefinite Delivery Contract.

(2) Any order for a combination of items in excess of maximum stated in Clause B.2, Indefinite Delivery Contract or

- (3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above -
- (c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in Paragraph (b) above.
- (d) Notwithstanding Paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in Paragraph (b), unless that order (or orders) is returned to the ordering office within 10 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source -

1.7 INDEFINITE QUANTITY (FAR 52.216-22 (OCT 1995

- (a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.
- (b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the maximum. The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."
- (c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations -
- (d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period, provided that the Contractor shall not be required to make any deliveries under this contract after 60 months from the effective date of the contract

1.8 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (FAR 52.219-4 (JAN 1999

- (a) Definition. "HUBZone small business concern," as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.
- (b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except:
- i) Offers from HUBZone small business concerns that have not waived the evaluation preference;
 - ii) Otherwise successful offers from small business concerns;
 - iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and
 - iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.
- (2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor -
- (3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against a

offeror's base offer. These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

* Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for--

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

1.9 NOTICE OF PRICE EVALUATION ADJUSTMENT FOR SMALL DISADVANTAGED BUSINESS CONCERNS (FAR 52.219-23) (OCT 1998)

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

Small disadvantaged business concern means an offeror that represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either -

(1) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and

(i) No material change in disadvantaged ownership and control has occurred since its certification;

(ii) Where the concern is owned by one or more disadvantaged individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(iii) It is listed, on the date of its representation, on the register of small disadvantaged business concerns maintained by the Small Business Administration;

(2) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted. In this case, in order to receive the benefit of a price evaluation adjustment, an offeror must receive certification as a small disadvantaged business concern by the Small Business Administration prior to contract award; or

(3) Is a joint venture as defined in 13 CFR 124.1002(f).

Historically black college or university means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense (DOD), the National Aeronautics and Space Administration (NASA), and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1985.

Minority institution means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)) which, for purposes of this clause, includes a Hispanic-serving institution of higher education as defined in Section 316(b)(1) of the Act (20 U.S.C. 1059c(b)(1)).

United States means the United States, its territories and possessions, the Commonwealth of Puerto Rico, the U.S. Trust Territory of the Pacific Islands, and the District of Columbia .

(b) Evaluation adjustment. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except

-- Offers from small disadvantaged business concerns that have not waived the adjustment;

(ii) For DOD, NASA, and Coast Guard acquisitions, otherwise successful offers from historically black colleges or universities or minority institutions ;

(iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is equaled or exceeded (see section 25.402 of the Federal Acquisition Regulation (FAR));

(iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government; and

(v) For DOD acquisitions, otherwise successful offers of qualifying country end products (see sections 225.000-70 and 252.225-7001 of the Defense FAR Supplement).

(2) The factor shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor. The factor may not be applied if using the adjustment would cause the contract award to be made at a price that exceeds the fair market price by more than the factor in paragraph (b)(1) of this clause.

(c) Waiver of evaluation adjustment. A small disadvantaged business concern may elect to waive the adjustment, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply to offers that waive the adjustment.

Offeror elects to waive the adjustment .

(d) Agreements. (1) A small disadvantaged business concern, that did not waive the adjustment , agrees that in performance of the contract, in the case of a contract for

contract performance will be spent for employees of the concern ;

(ii) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern;

(iii) General construction, at least 15 percent of the cost of the contract, excluding the cost of materials, will be performed by employees of the concern, or

(iv) Construction by special trade contractors, at least 25 percent of the cost of the contract, excluding the cost of materials, will be performed by employees of the concern .

(2) A small disadvantaged business concern submitting an offer in its own name agrees to furnish in performing this contract only end items manufactured or produced by small disadvantaged business concerns in the United States. This paragraph does not apply in connection with construction or service contracts.

1.10 RIGHTS IN DATA- GENERAL (FAR 52.227-14) (JUN 1987) ALTERNATE IV (JUN 1987)

(a) Definitions

"Computer software," as used in this clause, means computer programs, computer data bases, and documentation thereof.

"Data," as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information .

"Form, fit, and function data," as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics.

and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software -

"Limited rights," as used in this clause, means the rights of the Government in limited rights data as set forth in the Limited Rights Notice of subparagraph (g)(2) if included in this clause -

"Limited rights data," as used in this clause, means data (other than computer software) that embody trade secrets or are commercial or financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications thereof.

"Restricted computer software," as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software; including minor modifications of such computer software -

"Restricted rights," as used in this clause, means the rights of the Government in restricted computer software, as set forth in a Restricted Rights Notice of subparagraph (g)(3) if included in this clause, or as otherwise may be provided in a collateral agreement incorporated in and made part of this contract, including minor modifications of such computer software -

"Technical data," as used in this clause, means data (other than computer software) which are of a scientific or technical nature.

"Unlimited rights," as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so -

(b) Allocation of rights

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in -

- (i) Data first produced in the performance of this contract ;
- (ii) Form, fit, and function data delivered under this contract ;
- (iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this contract; and
- (iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause -

(2) The Contractor shall have the right to -

- (i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) of this clause;
- (ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause ;
- (iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and
- (iv) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in subparagraph (c)(1) of this clause -

(c) Copyright

(1) Data First Produced in the Performance of this Contract Except as otherwise specifically provided in this contract, the Contractor may establish claim to copyright subsisting in any data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the application copyright notice of 17 U.S.C. 401 01402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software, the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Contractor grants to the Government and others acting on its behalf, a paid up, nonexclusive, irrevocable worldwide license for all such computer software to reproduce, prepare derivative works, and perform publicly and display publicly, by or on behalf of the Government.

(2) Data not first produced in the performance of this contract The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause, provided, however, that if such data are computer software the Government shall acquire a copyright license as set forth in subparagraph (g)(3) of this clause if included in this contract or as otherwise may be provided in a collateral agreement incorporated in or made part of this contract.

(3) Removal of copyright notices The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release publication and use of data

(1) The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Contractor agrees that to the extent it receives or is given access to data necessary for the performance of this contract which contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(e) Unauthorized marking of data

Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked with the notices specified in subparagraph (g)(2) or (g)(3) of this clause and use of such is not authorized by this clause, or if such data bears any other restrictive or limiting markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the Contractor affording the Contractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Contractor a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(3) This paragraph (e) does not apply if this contract is for a major system or for support of a major system by a civilian agency other than NASA and the US Coast Guard agency subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.

(4) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by this paragraph (e) from bringing a claim under the Contract Disputes Act, including pursuant to the Disputes clause of this contract, as applicable, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) Omitted or incorrect markings

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (g) of this clause, or the copyright notice required by paragraph (C) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Contractor's expense, and the Contracting Officer may agree to do so if the Contractor -

- (i) Identifies the data to which the omitted notice is to be applied;
- (ii) Demonstrates that the omission of the notice was inadvertent;
- (iii) Establishes that the use of the proposed notice is authorized; and
- (iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also (i) permit correction at the Contractor's expense of incorrect notices if the Contractor identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized, or (ii) correct any incorrect notices.

(g) Protection of limited rights data and restricted computer software

(1) When data other than that listed in subdivisions (b)(1)(i), (ii), and (iii) of this clause are specified to be delivered under this contract and qualify as either limited rights data or restricted computer software, if the Contractor desires to continue protection of such data, the Contractor shall withhold such data and not furnish them to the Government under this contract. As a condition to this withholding, the Contractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer data base for delivery to the Government are to be treated as limited rights data and not restricted computer software.

(2) Notwithstanding Subparagraph (g)(1) of this clause, the contract may identify and specify the delivery of restricted computer software, or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be withholdable. If delivery of such computer software is so required, the Contractor may affix the following "Restricted Rights Notice" to the computer software and the Government will thereafter treat the computer software, subject to Paragraphs (e) and (t) of this clause, in accordance with the Notice:

Limited Rights Notice (Jun 1987)

These data are submitted with limited rights under Government Contract No. _____ (and subcontract _____, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure: [Agencies may list additional purposes as set forth in 27.404(d) (1) or if *none*, so state.]

(3) Subparagraph (g)(3)(I) is considered included in full text.

(h) Subcontracting The Contractor has the responsibility to obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government such rights, the Contractor shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subcontract award without further authorization.

(i) Relationship to patents Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

1.11 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS
(FAR 52244-6 (OCT 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 it s
 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 fo r
 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 .

1.12 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 .

1.13 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 CO, 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 CO for resolution. If resolution cannot be made by the
 GO, 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, Thomas S. Luedtke, 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 CO or as specified elsewhere in this
 document .

1.14 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 addresses 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 statements 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.

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, **June 1998, 4 pages**
- Exhibit C** **Fee Voucher Format, 1 page**
- Exhibit D** **Subcontracting Plan, October 1, 1998 through September 30, 1999, Pages 1
through 29**

EXHIBIT A

CONTRACT DOCUMENTATION REQUIREMENTSDOCUMENTATION **PREPARATION/SUBMISSION** INSTRUCTIONS

A. Monthly Technical Letter Progress Report--The Contractor shall submit monthly technical letter reports for each task assignment describing progress of the task to date, noting all technical areas in which effort is being directed and indicating the status of work within these areas. Tasks may be summarized in one letter report unless otherwise stipulated in individual task assignments. 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
 - 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.

B. Monthly Financial Management Report--

1. The Contractor shall submit a monthly financial management report as provided by the Section I clause entitled "NASA Financial Management Reporting." This report shall be submitted utilizing NASA Form 533M, Monthly Contractor Financial Management Report, in accordance with submission instructions contained on the reverse side of the form. (Columns 8a and 8b, **533m**, shall contain estimates for the following two successive months for the reporting a. and c. of paragraph 2. below.)
2. For this task order contract a 533M shall be provided for the reporting levels identified below:
 - a. Each Authorized Cost Reimbursement Task Order
 - b. Contract Total (Includes the sum of Items a. and b.) Column 9b shall reflect total estimated cost.
 - c. Due not later than the 10th operating day following the close of the Contractor's accounting period being reported.
 - d. Each 533M shall include a narrative explanation for variances exceeding 15 percent between planned dollars and actual dollars for each reporting category (at the total contract level only).
3. In addition, cost detail associated with the following elements shall be included in each cost-reimbursable task order, if applicable
 - a. Direct Productive Labor Dollars
 - b. Other Direct Labor Dollars
 - c. Overhead
 - d. G&A
 - e. Subcontract

- f. Material
- g. Travel
- h. Computing
- i. ODC
- j. FCCOM
- k. Total Estimated Cost
- l. Target Fee (or Earned Fee if task is completed)
- m. Total IDIQ Contract

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. Final Reports--Each task order may require the Contractor to submit a final report, either formal or informal, which documents and summarizes the results. When a formal final Contractor report is required, it shall be submitted 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 specified number of approval copies shall be submitted within the time specified in the task assignments .

G. 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-1 00)** as required by this clause -

H. Year 2000 Compliance Documentation-In accordance with the clause in H.6 the Contractor shall provide for the review and approval of the Contracting Officer the documentation that demonstrates Year 2000 compliance. This documentation shall be provided with the deliverable hardware/software identified in this contract .

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: Deloris J. Hart, Mail Stop 126
 Contract NAS1-001 06
 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 152D

C--New Technology Representative, Mail Stop 212

D--Patent Counsel, Mail Stop 212

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

F--Programs and Resources Division, Mail Stop 104

G--Property Administrator, Mail Stop 377

H--According to Instructions on Form

I--Small Business Specialist, Mail Stop 144

J--According to instructions on the Form

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

DOCUMENT	LETTER CODE AND DISTRIBUTION
Monthly Progress Report	A-i, B-2
Financial Management Reports	A-i, 8-2, E-2
New Technology or Patent Rights Reports	A-i, B-2, C-i, D-1
Report of Government-Owned/Contractor-Held Property (NASA Form 1018)	G-4
Subcontracting Report for Individual Contracts (Standard Form 294)	A-i, I-i
Summary Subcontractor Report (Standard Form 295)	J-1
Federal Contractor Veterans Employment Report (VETS-100)	J-1
Year 2000 Compliance Report	A-i, B-1
Informal Final Report	A-5
Final Report (Approval Copies)	A-5
Final Report (Approved)	As specified by the Contracting Officer

EXHIBIT B

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 unscreened 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 area of 7 -1/8 by 9-3/16 inches

REPORT DOCUMENTATION PAGE

) Form Approved
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. 1-UNIONING NUMBERS CC NAS1-18676 TA 6	
b. 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	
ii 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) 12b. DISTRIBUTION CODE Unclassified-Unlimited (If contract specifies restricted distribution, state restriction instead of Unclassified-Unlimited) Subject Category 00 (See http://www.nasa.gov/dw/hq/subject.html) Distribution: Standard or Nonstandard (Tech. Monitor determines distribution) Availability					
13. ABSTRACT (Maximum 200 words) Advancing the understanding of the Earth system requires improved knowledge of the time-varying 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. (Provide an unclassified abstract not to exceed 200 words)					
14. SUBJECT TERMS Real-time data needs, Onboard data processing: Real-time Processing EQS EQS 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-

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 68).

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.

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EXHIBIT D

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