

CONTRACT NAS1-00135

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

- Section G.13: Schedule of Rates for Task Orders, pg. 20-24

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).

Disclosure of the financial information could cause substantial competitive harm to the contractor by providing its competitors insight into the company's costing practices and management approaches. Furthermore, disclosure would discourage other companies from participating in future competitive procurements, thereby impairing the Government's ability to obtain complete and accurate cost data, and in turn, frustrating the mandate to obtain maximum competition in negotiated procurements.

AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)

RATING

C9

PAGE OF PAGE(S)

1

71

2. CONTRACT NO. (Proc. Inst. Ident.) NO.

NAS1-00135

3. EFFECTIVE DATE

01/01/2001

4. REQUISITION/PURCHASE REQUEST/PROJECT NO.

RB.0002

5. ISSUED BY:

CODE

National Aeronautics and Space Administration
Langley Research Center
Hampton, VA 23681-2199

6. ADMINISTERED BY (If other than Item 5)

CODE

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP code)

Swales and Associates, Inc
5050 Powder Mill Road
Beltsville, MD 20705

8. DELIVERY

FOB ORIGIN

OTHER (See below)

9. DISCOUNT FOR PROMPT PAYMENT

None

10. SUBMIT INVOICES (4 copies unless other-wise specified) TO THE ADDRESS SHOWN IN:

ITEM

G.2

CODE

FACILITY CODE

11. SHIP TO/MARK FOR

See F.2

CODE

12. PAYMENT WILL BE MADE BY:

CODE

Financial Management Division, M/S 175
NASA, Langley Research Center
Hampton, VA 23681-2199

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION

10 U.S.C. 2304(b)(2)

41 U.S.C. 253(c)()

14. ACCOUNTING AND APPROPRIATION DATA

See Attached Page 1a

15A. ITEM NO.

15B. SUPPLIES/SERVICES

15C. QTY

15D. UNIT

15E. UNIT PRICE

15F. AMOUNT

Langley Research Center and Other NASA Centers - Systems Analysis and Mission Support (SAMS)

Minimum

\$1,000,000

Maximum

\$240,000,000

15G. TOTAL AMOUNT OF CONTRACT

\$240,000,000

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents (s) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)
Swales & Associates, Inc

18. AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER (Type or print)

THOMAS L. WILSON SR. VICE PRES.

20A. NAME OF CONTRACTING OFFICER

ROSEMARY C. FROEHLICH

19B. NAME OF CONTRACTOR

BY *[Signature]*
(Signature of person authorized to sign)

19C. DATE SIGNED

11-01-00

20B. UNITED STATES OF AMERICA

BY *[Signature]*
(Signature of Contracting Officer)

20C. DATE SIGNED

11-3-00

ACCOUNTING AND APPROPRIATION DATA

| PR Number | PY | Job Order | Program No. | Amount | Task Order | Partial/ Complete |
|-----------|----|-----------|-------------|-----------|------------|----------------------|
| OBAB.1027 | 00 | R22475 | 22612131000 | \$10,000 | 05RFM | Complete |
| OBAB.1028 | 00 | R22475 | 22612131000 | \$30,000 | 06RFM | Complete |
| AH.1078 | 00 | R24461 | 29790000100 | \$10,000 | 01AH | Complete |
| RBF.1095 | 00 | M4189 | 99220087100 | \$10,000 | 01RFB | Complete |
| OCB.1050 | 00 | R24585 | 52251211000 | \$10,000 | 02OCB | Complete |
| OCB.1051 | 00 | R24585 | 52251211000 | \$10,000 | 01OCB | Complete |
| OCB.1052 | 00 | R24585 | 52251211000 | \$10,000 | 03OCB | Complete |
| RBA.1049 | 00 | R0004 | 50559870400 | \$20,000 | 12RBA | Complete |
| RBD.1082 | 00 | R27064 | 70631110200 | \$33,200 | 15RBD | Complete |
| RD.1100 | 00 | M4282 | 99262100600 | \$10,000 | 08RFL | Complete |
| RD.1101 | 00 | M4282 | 99262100600 | \$10,000 | 09RFL | Complete |
| RBJ.1162 | 00 | M4189 | 99220087100 | \$12,500 | 11RBJ | Complete |
| RBJ.1161 | 00 | M4189 | 99220087100 | \$12,500 | 03RBJ | Complete |
| RBJ.1160 | 00 | M4189 | 99220087100 | \$12,500 | 17RBJ | Complete |
| RBJ.1159 | 00 | M4189 | 99220087100 | \$12,500 | 16RBJ | Complete |
| RBF.1096 | 00 | R27114 | 70681129200 | \$10,000 | 02RBF | Complete |
| OBAB.1026 | 00 | R22475 | 22612131000 | \$15,000 | 07RFM | Complete |
| RD.1105 | 00 | M4283 | 99262100600 | \$11,500 | 01OJ | Complete |
| RDH.1082 | 00 | R27169 | 70617210600 | \$10,000 | 03RDH | Complete |
| RDH.1081 | 00 | R27169 | 70617210600 | \$10,000 | 11RDH | Complete |
| OBAA.1024 | 00 | R24234 | 25940044100 | \$10,000 | 01RFH | Complete |
| RBB.1037 | 00 | R26557 | 52225316500 | \$10,000 | 04RBB | Complete |
| RFF.1065 | 00 | R26751 | 70617110400 | \$52,000 | 01OJ | Complete |
| RA.1427 | 00 | R26700 | 70624110600 | \$42,000 | O2RAD | Complete |
| RBG.1087 | 00 | R26747 | 70632410100 | \$10,000 | 14RBG | Complete |
| | | | Total: | \$393,700 | | |

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SUPPLIES AND/OR SERVICES TO BE FURNISHED (LaRC 52.211-90) (MAY 1999)

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

| <u>Item No.</u> | <u>Description</u> | <u>Quantity</u> | <u>Unit</u> |
|-----------------|----------------------------------------------------------------------|-----------------|-------------|
| 1 | Langley Research Center - System Analysis and Mission Support (SAMS) | 1 | Lot |
| 2 | Other NASA Centers - SAMS | 1 | Lot |

B.2 MINIMUM AND MAXIMUM INDEFINITE DELIVERY, INDEFINITE QUANTITY (IDIQ) CONTRACT VALUE

The guaranteed minimum quantity of work which will be required under this contract, and which will be initiated through the issuance of task orders, shall be \$1 million. There will be no further obligation on the part of the Government to issue additional task orders thereafter. The total maximum value is \$240 million for the 5 year potential period of performance.

B.3 AWARD FEE

The Award Fee Evaluation Plan is contained as Exhibit E to this contract. The maximum award fee available to the Contractor on each task order will be established by applying a fixed rate of 6.5% to the total estimated (not actual) cost of each task order agreed upon by both parties at the time of issuance.

The award fee available for each evaluation period will be determined based on the task orders projected to be performed during that period. If a task order is projected to be started and completed during a particular evaluation period, then the award fee for that particular task order will be included in the award fee available for that period only. If a task order is started in a particular evaluation period and projected to extend beyond that period, then the award fee for that particular task will be distributed across the appropriate evaluation periods consistent with projected completion milestones (see G.12(C)(2)(i)). At the end of each evaluation period, the actual earned award fee will be added to the contract by modification.

B.4 CONTRACT FUNDING (NASA 1852.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$369,700. This allotment is for the performance of work in accordance with the limitations and completion dates as set forth in task orders authorized by the Contracting Officer.

(b) An additional amount of \$24,000 is obligated under this contract for payment of fee.

B.5 ESTIMATED COST

The estimated cost of the contract is the sum of the estimated costs set forth for individual Task Orders issued by the Government pursuant to G.12, Task Orders.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK -- SYSTEMS ANALYSIS AND MISSION SUPPORT CONTRACT (SAMS)

1.0 Purpose

This statement of work defines the requirement for research, engineering and technical support necessary to assist the NASA Langley Research Center and other NASA Centers in fulfilling its mission. These requirements include, but are not limited to, technical support in the functional areas of Aerodynamics, Aerothermodynamics, and Acoustics; Structures and Materials; Aerospace Systems and Concepts; Airborne Systems; and Systems Engineering.

2.0 Scope

The Contractor shall provide support to the Langley Research Center aeronautic and aerospace research programs, earth and space science programs, and engineering activities. The work to be performed will be defined in performance based Task Orders issued by the Contracting Officer. Some of these tasks will be classified (up to and including Top Secret). The scope and diversity of these Task Orders will encompass the broad scope of the mission and responsibilities of the Langley Research Center's research and technology programs. The general categories of work to be performed under the task orders are outlined below.

3.0 Systems Analysis and Technology Integration Studies

3.1 Aeronautics Systems Analysis - The Contractor shall conduct systems analysis and technology integration and conceptual design studies for advanced civil and advanced military aircraft. Both advanced conventional aircraft configurations and unconventional aircraft concepts will be studied. The Contractor shall conduct conceptual design studies to identify potential benefits of advanced aircraft technologies, components and subsystems, and the Contractor shall evaluate the impact and interaction of key technologies on the survivability of advanced military aircraft. The Contractor shall also conduct system studies to evaluate the potential impact of technology on the safety and capacity of the national air transportation system. The output of these various studies will help NASA evaluate the technical content of current and proposed research programs towards meeting agency and national goals.

3.1.1 Subsonic and Supersonic Civil Aircraft - The Contractor shall conduct systems analysis and technology integration and conceptual design studies pertaining to large subsonic and supersonic passenger and cargo transports and for general aviation and personal aircraft concepts. Both conventional aircraft configurations and advanced aircraft concepts will be evaluated. The Contractor shall conduct aircraft mission and economic analyses using state-of-the-art aircraft sizing codes and economic analysis tools. Supersonic transport studies, including supersonic business jets, will also involve the conceptual design and analysis of configurations with a low sonic-boom level. The Contractor shall also employ current state-of-the-art analysis codes to evaluate the potential impact of advanced technologies on the safety and capacity of the national airspace system. Of particular interest are the technologies being developed in both the NASA Safety and Capacity programs. The Contractor shall identify the high-payoff and critical technologies that will need to be developed for the various aircraft and transportation system concepts. The Contractor shall also maintain, upgrade and provide user support for the Flight Optimization System which is a state-of-the-art aircraft sizing, analysis and optimization code that is applicable to a wide range of aircraft.

3.1.2 Subsonic and Supersonic Military Aircraft - The Contractor shall conduct systems analyses and technology integration and conceptual design studies for advanced military aircraft. The aircraft types include subsonic airlift transports, fighter/attack aircraft, supersonic air-superiority fighters and long-range bombers and hypersonic vehicles. The contractor shall conduct multi-disciplinary system studies that develop conceptual designs for advanced military aircraft, evaluate the application of advanced technologies to military aircraft and develop and modify the analysis and design codes that are required to conduct the studies. The Contractor shall be responsible for generating or analyzing the configuration layout, aerodynamics, weights, propulsion, performance, and survivability characteristics of the advanced military aircraft concepts.

3.2 Advanced Space Transportation and Planetary Exploration Systems Analysis – The Contractor shall conduct systems analysis, technology assessments, and conceptual design studies for space transportation and planetary exploration vehicle systems. The Contractor shall conduct conceptual design studies to identify lower cost, safer and more reliable systems that fulfill Agency mission goals. The Contractor shall also evaluate the impact of varying technologies on such systems and provide information that can help define and prioritize Agency technology programs. This shall include system trade studies for representative vehicle systems in space transportation, hypersonic, and planetary exploration mission areas. The output of these analyses will help NASA define, evaluate and select the technical content of current and proposed technology and vehicle programs that meet Agency and National goals.

3.2.1 Advanced Space Transportation Systems – The Contractor shall conduct systems analysis, technology assessments, and conceptual design studies related to rocket and airbreathing crew and cargo space launch systems; on-orbit crew and cargo transfer systems; and airbreathing hypersonic cruise vehicle systems. The Contractor shall provide and employ state-of-the-art analysis codes to perform performance studies including: six-degree-of-freedom trajectory analysis; aerodynamic and aerothermal (including Computational Fluid Dynamics (CFD)) analysis of vehicles under launch, cruise, orbit, entry, variable weight and geometry conditions; and structural and subsystem analysis and design of such vehicles with advanced propulsion systems. The Contractor shall also employ state-of-the-art analysis codes to evaluate the design sensitivities, cost, reliability and safety of such vehicle systems. Of particular interest is the identification of technologies by the Contractor relative to such systems that have significant payoffs in vehicle concept performance, associated cost, safety and reliability. The Contractor shall also maintain, upgrade and provide user support for state-of-the-art design tools that support such studies.

3.2.2 Planetary Exploration Systems – The Contractor shall conduct systems analysis, technology assessments, and conceptual design studies related to planetary exploration systems including: planetary entry systems, systems that utilize planetary aero-assist, and humans-to-Mars vehicle systems. The Contractor shall provide and employ state-of-the-art analysis codes to perform six-degree-of-freedom performance studies including: Monte Carlo trajectory analysis; aerodynamic and aerothermal (including CFD) analysis of vehicles during planetary entry as well as associated weights and geometry; structural and subsystem analysis and design of such vehicles. The Contractor shall also employ state-of-the-art analysis codes to evaluate the detailed performance, design sensitivities, cost, reliability and safety of such vehicle systems. Of particular interest is the identification by the Contractor of technologies and techniques relative to such systems that have significant payoffs in vehicle concept performance, associated cost, safety and reliability. The Contractor shall also maintain, upgrade and provide user-support for state-of-the-art design tools that support such studies.

3.3 Spacecraft Mission and System Performance Analysis - The Contractor shall develop, maintain and apply state-of-the-art space mission analysis techniques and tools to be used for both mathematically and visually simulating Earth-orbiting and exploration spacecraft. These techniques and tools should be compatible with NASA collaborative engineering environments and be able to facilitate the optimization of a full mission lifecycle design. In addition to the design, modeling and simulation of a space system's physical and functional characteristics, the techniques and tools employed shall also factor in cost, risk, architecture and programmatic variables in the analysis process. The tools and techniques shall be flexible enough to perform full mission simulations across a broad spectrum of NASA missions including Earth remote sensing, planetary exploration and Human exploration and development of space.

The Contractor shall apply state-of-the-art analysis tools and techniques towards the simulation and visualization of six-degree-of-freedom dynamics and controls analysis, proximity operations and automated spacecraft servicing for the International Space Station, future spacecraft, and in-space experiments in order to derive and/or verify mission operations requirements and procedures. The Contractor shall assess the impacts of incorporating advanced guidance, navigation, and control technologies and/or operations on spacecraft mission requirements and performance and overall spacecraft systems design.

3.4 Multidisciplinary Design Optimization (MDO) - The contractor shall implement and evaluate new MDO methods on a variety of test problems ranging from simplified mathematical models to complex engineering models of conceptual or preliminary design processes for aerospace vehicles and spacecraft. The basic

analytical codes shall be supplied by NASA; they would be comparable to the analysis codes utilized by the Contractor in performing the work outlined in Sections 4.0, 5.0, 6.0 and elsewhere in Section 3.0 of this document. The particular vehicle or spacecraft application and the design processes would be comparable to the studies described in Sections 3.1 - 3.3. The applications would cover traditional engineering design issues as well as full life-cycle considerations, which include requirements, manufacturing, operations, safety, cost and disposal as well as engineering design. The MDO methods to be implemented and evaluated include, but are not limited to sensitivity analysis techniques; rapid reanalysis methods; approximation methods; decomposition and re-composition techniques, MDO formulations, gradient-based optimization methods; discrete optimization methods; and methods for optimization under uncertainties. The applications shall be implemented under NASA-approved configuration control, using modern object-oriented programming techniques and, generally, in a distributed computing environment.

The Contractor shall provide realistic non-parametric and parametric disciplinary analysis models of vehicles and spacecraft, including, but not limited to, parametric CAD models, finite-element computational structural mechanics models, structured and unstructured computational fluid dynamics grids, computational electromagnetic grids and computational aeroacoustic grids.

The Contractor shall re-engineer analysis codes supplied by NASA. The re-engineering may include converting legacy code into modern structured code, converting Fortran code into ASCII-standard Fortran 77 or Fortran 90 code, and converting a code from an interactive mode into an automated, batch mode.

The Contractor shall serve as a disciplinary analyst on MDO applications teams. The disciplinary analyst would be responsible for preparing the relevant discipline analysis code for integration into an MDO application, validating a stand-alone version of the discipline analysis code, supporting the validation of the analysis code as integrated into the full MDO application, and providing the relevant disciplinary interpretation of the results from the MDO application. The disciplines and analysis tools would be comparable to those described in Sections 4.0, 5.0, 6.0 and elsewhere in Section 3.0 of this document.

4.0 Engineering and Operations Support

4.1 Flight Project Design, Engineering, and Development - The Contractor shall provide the design, development, testing, integration, operation, and data retrieval for aeronautics and space flight programs, including the support of mechanical and electronic design of systems for both ground-based and flight (balloon, rotorcraft, aircraft, and spacecraft) use. The Contractor shall develop state-of-the-art measurement techniques, data retrieval and data processing systems required in current and future Langley projects. The Contractor shall complete technical design and analysis tasks such as mechanical design/engineering, electronic design/engineering, controls, thermal and structural analysis and design, electro-optics sensor and detector design/engineering for systems that may form a part of larger systems. The Contractor shall use electronic design and analysis tools that are consistent with those used by the government so that output can be consolidated with that of higher level processes.

4.2 Project Planning - The Contractor shall complete tasks involving focused technology projects, basic research projects, facilities test planning, flight operations and space projects, and construction of facility projects. The scheduling system provided by the Contractor shall be a component of the project performance measurement plans. The Contractor shall prepare standard analytical reports, which include critical path analysis, contingency evaluation schedules, status impact assessments, problem analysis, and recommended solutions. The Contractor shall develop planning/scheduling software applications, which include menus for user friendly access and data entry, standard tabular reports and graphics for data output. The Contractor shall develop routines for the exchange of data between different software packages. The Contractor shall prepare parametric cost estimates for comparison with internally-generated estimates for various Langley technical projects.

4.3 Aircraft and Aircraft Systems - The Contractor shall perform tasks supporting the operation of aircraft, as well as their associated experimental systems.

The Contractor shall perform tasks involving the operation of the experimental systems of the Transport Research Facility (TRF) and the Flight System Integration Laboratory (FSIL). Specific tasks will address navigation engineering, flight management systems, guidance systems, flight controls, digital avionics systems

interface, installation of flight qualified hardware in the FSIL, and experimental systems documentation. The Contractor shall maintain configuration control and documentation for designated experimental systems.

Other task areas of aircraft operations include the operation, maintenance, and repair of the Langley Flight Operations Support Center and Metro (Meteorology and Dispatch), and operations engineering functions.

The Contractor shall provide pilots for the Langley general aviation aircraft (currently BE-200 (King Air)) and co-pilots for the Langley B-757 aircraft. The B-757 co-pilots shall be provided on an "on-call" basis when required to meet project commitments. The pilots must be qualified and have current certification for the operation of the aircraft.

5.0 Aeronautics, Aerothermodynamics, and Acoustics Research

5.1 Hypersonic Research and Development - The Contractor shall provide support in the general areas of experimental and computational aerothermodynamics, hypersonic airbreathing propulsion systems, wind tunnel studies, and system evaluations. The Contractor shall interpret and analyze experimental data and apply and upgrade computational methods and phenomenological models. This support includes timely generation of both surface and volume grids for CFD and Direct Simulation Monte Carlo (DSMC) codes as well as routine maintenance and implementation of upgrades of the actual software as required to ensure state-of-the-art computing capability. Analyses shall determine the flowfield physics about a variety of configurations required to quantify the performance of fully integrated (tip-to-tail) airbreathing propulsion vehicles and aerospace vehicles.

The Contractor shall perform aerothermodynamic assessment and optimization of advanced aerospace vehicle concepts via the application of unstructured, inviscid solvers, such as the FELISA code. The Contractor shall perform maintenance and upgrades to the codes such as the incorporation of real gas effects.

5.2 Aerodynamics Research and Development - The Contractor shall provide support in the areas of: wind tunnel testing of advanced aircraft concepts and components, including rotorcraft; development of advanced wind tunnel testing technology; and applied computational fluid dynamics. Included in the field of wind tunnel testing and testing technology development are: test participation, instrumentation selection, development and use of advanced measurement techniques, development of advanced wind tunnel testing techniques, and the implementation of uncertainty analysis as a standard practice in wind tunnel research. The wind tunnels cover the speed range from low subsonic to hypersonic and include conventional as well as cryogenic facilities.

In the area of computational dynamics, the Contractor shall develop and apply computational codes to study aircraft designs, airframe/propulsion integration, and aircraft performance throughout the speed regime from low subsonic to hypersonic. Also included will be the development and application of advanced grid generation concepts.

The Contractor shall be responsible for maintaining, upgrading, certification, and version control of unstructured grid, Navier-Stokes flow solver codes and related codes. The Contractor shall provide user support for the codes including training new users and troubleshooting problems.

5.3 Acoustics and Flow Physics Research and Development - The Contractor shall provide analytical, computational, and experimental support for flow physics and acoustics research and technology programs. The Contractor shall support both focused and basic research and technology development in the areas of aeroacoustics, including instrumentation, data acquisition and analysis, acoustic testing of rotors, jets, ducted fans in wind tunnels, anechoic chambers, or outdoors. The Contractor shall perform tasks in structural acoustics, including prediction and control of noise transmission and structural response, experimental and analytical methods for acoustic liner technology, digital control systems and their implementation to noise and vibration control problems. The Contractor shall provide coding, upgrading, and maintenance of large multipurpose computer programs, test subjects for psychoacoustic testing, operation of psychoacoustic test facilities, support for wind-tunnel experiments, support for flight experiments, and modifications to analysis codes for effective performance on distributed workstations and massively parallel computers. The Contractor shall provide support for structural-acoustic finite element/boundary element model development using codes such as MSC/NASTRAN and COMET/Acoustics. The

contractor shall perform experimental validation and correction of these models using correlation analysis techniques. The Contractor shall provide laboratory support for design, development, calibration, and upgrades to acoustic facilities, test techniques, support equipment, and computer interfaces.

The Contractor shall perform tasks in laminar flow control, including advanced transition prediction and control methods and the effects of surface roughness/steps/gaps and inhomogeneities and attachment line contamination. The Contractor shall perform tasks utilizing aerodynamic and acoustic methods, including aerodynamic analyses of complex-geometry configurations using structured and unstructured-grid Euler and Reynolds-averaged Navier-Stokes methodologies.

The Contractor shall perform tasks in flow modeling and control, including large-eddy simulations of turbulent boundary layers and computations to study the effect of roughness, suction, and admittance on receptivity of three-dimensional boundary layers on swept wings.

The Contractor shall develop measurement science and technology, including image transmission and receiving optics, data acquisition systems, data analysis systems, ground based applications, systems to eliminate directional ambiguity, real-time analysis systems, applications to high-speed flow, digital electronics, software algorithms, computer interfacing, computer animation, Monte Carlo simulation, and particle scattering studies.

6.0 Structures and Materials Research

6.1 Structures Research and Technology Programs - The Contractor shall provide analytical and experimental support for structures research and technology programs. The Contractor shall support focused and basic research and technology development in the areas of structural mechanics, structural dynamics, aeroelasticity, thermal structures, and computational structures. The Contractor shall support investigations that quantify the response, failure, and structural integrity of composite and metallic aircraft, space transportation, and spacecraft structures. The Contractor shall develop innovative modeling methods for predicting composite and metallic component response, failure, and structural integrity of composite and metallic structures subjected to complex combined mechanical and thermal loading. The Contractor shall develop impact damage failure and damage tolerance criteria for through-the-thickness graded and multi-functional structures for aerospace applications. The Contractor shall develop and integrate test methods and advanced structural response measurement techniques and support experimental research. The Contractor shall develop new equation solvers, eigenvalue extraction algorithms, and stiffness and mass matrix assembly techniques that enable efficient and rapid solutions on evolving computer systems. The Contractor shall develop efficient structural concepts for future space transportation systems, including durable thermal protection systems, reusable cryogenic tanks, and cooled-structure concepts by developing and using appropriate optimization methods. The Contractor shall support analyses and tests of aeroelastically scaled models of fixed-wing and rotary-wing vehicles, including performance, the control of aeroelastic instabilities, loads, vibration, flutter, buffet, buzz, gust response, limit cycle oscillations, and adverse structural response. The Contractor shall develop simulations, ground tests, wind-tunnel tests, and flight experiments. The Contractor shall develop analytical methods to perform vibration, aeroelastic, and aeroservoelastic studies; analytical and experimental studies to predict, verify, and control the dynamic response of spacecraft structures; and studies to advance the safety and ground handling performance of aircraft during all-weather takeoff and landing operations.

6.2 Materials Research and Technology Programs - The Contractor shall support research to develop advanced light metallic alloys, polymers and polymeric matrix composites, carbon-carbon composites, and ceramic-based materials. This research includes the development of metal forming and joining technology, polymer matrix composite processing and fabrication technology, adhesive bonding and sealant technology, and carbon-carbon and ceramics processing and coating technology. Materials characterization testing shall be conducted to measure chemical, physical, electrical, optical, and mechanical properties of metals and composites. Experimental studies shall be conducted to characterize the effects of the environment on the long-term durability of materials for aircraft and spacecraft. Mechanics models shall be developed to predict the stiffness, strength, durability, and damage tolerance of composite materials. Fracture mechanics methodologies shall be developed to predict the strength and fatigue life of metallic materials. Advanced sensors, electronics, and signal processing

technology shall be developed for nondestructive examination systems, including integrated vehicle health management. Advanced sensor technologies shall be developed for smart materials and structures, and for in-situ process monitoring and quality control. R&D support tasks shall include operation of a wide variety of equipment used for materials processing, mechanical testing, and materials analysis. The following are examples of typical materials support tasks:

6.2.1 Operation of metals processing laboratory equipment for deposition, consolidation, heat treatment, forming, and joining of metallic materials, including plasma spray deposition system, chemical and physical vapor deposition systems, laser deposition system, hot isostatic press, vacuum hot press, biaxial superplastic forming system, friction stir weld system, resistance spot weld system, heat treatment furnaces, salt baths, cold-rolling mill; operation of surface preparation facilities for chemical cleaning, chemical milling, and anodizing; operation of mechanical property characterization equipment and data acquisition systems for measurement of tensile, compressive, toughness, fatigue, and creep behavior of specimens and structural subelements at temperatures ranging from -450°F (liquid helium temperature) to 2500°F; metallurgical specimen preparation; identification and quantification of metallurgical phases, morphologies, and chemistries through application of advanced metallurgical analysis techniques including optical microscopy, scanning and transmission electron microscopy, texture and microtexture analysis, energy and wavelength dispersive spectroscopy, x-ray and electron diffraction, differential scanning calorimetry, differential thermal analysis, hardness and microhardness, inductively-coupled plasma, atomic absorption; support of failure analyses of structural components; support in the development and application of lightweight coatings and surface modification techniques for environmental resistance and thermal control.

6.2.2 Operation of laboratory equipment required for chemical characterization of high performance polymers, adhesives and polymer matrix composites. Typical measurement methods shall include: Fourier Transform Infrared Spectroscopy, High Pressure Liquid Chromatography, Gel Permeation Chromatography, Low Angle Laser Light Scattering Photometry, Differential Viscometry and Osmometry.

6.2.3 Performance of laboratory tests in support of the fabrication of advanced composite subcomponents. Supporting tasks shall include: tests to establish processing methods, development of improved methods for subelement fabrication, design of test fixtures and associated apparatus, and operation of test machines to measure mechanical and physical properties.

6.2.4 Performance of laboratory tests in support of the materials durability, pressurized liquid permeation, and fatigue and fracture research.

7.0 Airborne Systems Research and Development

Flight Dynamics, Guidance and Control Research and Technology - The Contractor shall develop analytical, mathematical models of aircraft and spacecraft; synthesize and analyze navigation, guidance, and control systems for aircraft and spacecraft; develop efficient and reliable numerical methods and optimization algorithms for use in guidance and control law synthesis; provide data acquisition and reduction support, and analyze data from dynamics, control and/or crew systems experiments, including simulation and flight tests, some involving extensive meteorological data; coordinate the design and construction of models, conduct static and dynamic (free spin, tumble, forced oscillation) wind tunnel model tests, and analyze the results; use engineering codes and CFD methodologies to predict aircraft flight dynamics and correlate these results with experimental data; develop and maintain computer-based, high-fidelity aircraft and spacecraft batch simulation software; develop and apply software tools for simulation data analysis, including studies with simulated air traffic environments; conduct piloted aircraft simulation studies; develop software modifications for an existing atmospheric modeling CFD code; develop and operate the hardware and software components of electro-optical sensing and processing systems; develop and operate drop model and free-flight model test integrated hardware and software systems, including control law software appropriate displays, and necessary network communications; configure and operate physiological signal and behavioral data acquisition systems, develop appropriate software tools for analysis of data from such systems, and perform the analysis; synthesize and analyze transport flight deck systems, including displays and underlying algorithms; provide operational airline, corporate, and private pilot and air traffic controller expertise to support the planning, development, conduct and flight validation of aircraft simulation studies in simulated air traffic environments.

8.0 General Mission Support

8.1 Information and Electromagnetic Systems Technology - The Contractor shall provide support for research and technology development in selected technical areas in the information systems and electromagnetic systems disciplines. The areas include: the design and development of electronic hardware for information and electromagnetic systems; the design and development of computer codes for the analysis of complex sensor, antenna and digital computer systems; the development of design and assessment methods for life-critical systems; and maintenance and operation of research laboratories. Additional information regarding support for these areas is as follows:

8.1.1 Design and Development of Electronic Hardware - The Contractor shall provide support for sensor technology development and testing, digital circuit and microprocessor designs, mechanical and structural designs, computational models for predicting fluid flow in reduced gravity environments and optical/fiber-optic system fabrication and evaluation.

8.1.2 Design and Development of Computer Codes - The Contractor shall provide support for design, development, modeling, simulation, and implementation of computer codes for the design and assessment of antenna systems, airport systems, flight crucial digital systems and electromagnetic fields.

8.1.3 Development of Design and Assessment Methods - The Contractor shall develop techniques for the design and assessment of fault-tolerant, life-critical systems for aerospace applications. These techniques may use formal specifications, automatic theorem proving, hierarchical design methodologies, fault-tolerant systems theory, and reliability theory as well as other available capabilities.

8.1.4 Maintenance and Operation of Research Laboratories - The Contractor shall be responsible for the maintenance and operation of Information and Electromagnetic Technology research facilities including but not limited to: compact range, experimental test range, low frequency antenna chamber, High Intensity Radiation Laboratory test chambers, microgravity crystal growth facility, the crystal vapor deposition facility and the vehicle emulator system.

8.2 Ground Test Systems and Test Technique Development - The Contractor shall design and implement data acquisition and reduction systems, instrumentation systems and test processes for research testing in wind tunnel and laboratory environments. The Contractor shall use knowledge of the state-of-the-art in instrumentation and measurement systems such as laser velocimetry, data acquisition and reduction methodology, data quality assurance, and processing systems to support new and on-going programs in acoustical, structural, and aerospace research programs.

The Contractor shall use the latest technology to develop innovative test techniques, test hardware, and systems to support the ground facility testing at Langley, and general reductions in test cycle times. Test techniques/systems will be used in laboratory as well as wind tunnel test environments. The Contractor shall complete technical design, analysis, and fabrication tasks in mechanical, electrical and or electronic, thermal, chemical and optical measurement systems to support aerodynamic, structural and acoustical testing.

8.3 Independent Assessment - The contractor shall provide assessments and evaluations of concepts, problems and proposals for general mission support, aeronautic and aerospace research programs, earth and space science programs, and engineering activities.

9.0 Electronic Task Order System

The Contractor shall establish, implement, and maintain management control systems required to plan, organize, direct, and control contract activities. The Contractor shall automate the task flow process as defined in the Task Order clauses of this contract in a manner that is consistent with Center information technology standards. The automated system shall allow for the electronic routing, review, approval, issuance, and modification of Task Orders with the use of password security for the individuals identified in the Task Order clauses of this

contract, with initiation, editing, and re-routing by each approver as needed, and with automatic notification to the approvers of the need for approval. In addition, the Contractor's automated management system shall track the status of Task Orders from planning to completion and record projected and actual resources data for each Task Order with graphic, tabular, and narrative descriptions. These Task Order data shall be the same information as that in the monthly progress and financial reports required in Exhibit B. At the discretion of the Contract Administrator and/or the COTR, these electronic versions may be used in lieu of their respective paper copies.

SECTION E - INSPECTION AND ACCEPTANCE**E.1 INSPECTION OF SERVICES - COST-REIMBURSEMENT (FAR 52.246-5) (APR 1984)**

- (a) Definition. "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If any of the services performed do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, for no additional fee. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce any fee payable under the contract to reflect the reduced value of the services performed.
- (e) If the Contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and reduce any fee payable by an amount that is equitable under the circumstances or (2) terminate the contract for default.

E.2 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 as specified in task orders.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 STOP-WORK ORDER (FAR 52.242-15) (AUG 1989) ALTERNATE I (APR 1984)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work order is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall

either -

- (1) Cancel the stop-work order; or
- (2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if -

- (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
- (2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

F.2 PLACE OF DELIVERY (LaRC 52.211-92) (OCT 1992)

Delivery shall be f.o.b. destination:

As specified in task orders.

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

The place(s) of performance shall be NASA, Langley Research Center, Hampton, Virginia; other NASA Centers and other sites as may be designated by task orders.

F.4 PERIOD OF PERFORMANCE - TASK ORDERS (LaRC 52.216-112) (APR 1998)

A. The period for issuance of task orders is 60 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).

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 AWARD FEE FOR SERVICE CONTRACTS (FAR 1852.216-76) (MAR 1998)

- (a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in Section B, B.3, Award Fee.
- (b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the Contractor's performance every 6 months to determine the amount of award fee earned by the contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with the Award Fee Plan contained as Exhibit E to this contract. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.
- (c) The Government will advise the Contractor in writing of the evaluation results. The LaRC Financial Management Division will make payment based on issuance of unilateral modification by Contracting Officer.
- (d) After 85 percent of the potential award fee has been paid, the Contracting Officer may direct the withholding of further payment of award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total potential award fee.
- (e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth through the issuance of task orders in accordance with Section G, G.12 and the distribution of fee on those task orders in accordance with Section B, B.3. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.
- (f) (1) Provisional award fee payments will not be made under this contract.
 (2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the Contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.
- (3) If the Contracting Officer determines that the Contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the Contractor in writing if it is determined that such discontinuance or reduction is appropriate. This determination is not subject to the Disputes clause.
- (4) Provisional award fee payments will not be made prior to the first award fee determination by the Government.
- (g) Award fee determinations made by the Government under this contract are not subject to the Disputes clause.

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:

DCAA.
 One Mall North, Suite 200
 10025 Governor Warfield Parkway
 Columbia, MD 21044

- (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: C. Tom Weih, MS 126
 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 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 1852.227-72) (JUL 1997)

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

| <u>Title</u> | <u>Office Code</u> | <u>Address (including zip code)</u> |
|-------------------------------|--------------------|---------------------------------------------------------|
| New Technology Representative | 212 | NASA, Langley Research Center Hampton, VA 23681-2199 |
| 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.4 TECHNICAL DIRECTION (NASA 1852.242-70) (SEP 1993)

- (a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in

writing in accordance with NASA FAR Supplement 18-42.270. "Technical direction" means a directive to the Contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Section C of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instructions purporting to be technical direction that -

- (1) Constitutes an assignment of additional work outside the statement of work;
- (2) Constitutes a change as defined in the changes clause;
- (3) In any manner causes an increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;
- (4) Changes any of the expressed terms, conditions, or specifications of the contract; or
- (5) Interferes with the Contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The Contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the Contractor's opinion, any instructions or direction by the COTR falls within any of the categories defined in paragraph (b) above, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 days that the instruction or direction is -

- (1) Rescinded in its entirety; or
- (2) Within the requirements of the contract and does not constitute a change under the changes clause of the contract and that the Contractor should proceed promptly its performance.

(e) A failure of the Contractor and Contracting Officer to agree that the instruction or direction is both within the requirements of the contract and does not constitute a change under the changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the Contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the Contractor's risk.

G.5 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (NASA 1852.242-73) (JUL 1997)

(a) The Contractor shall submit NASA Contractor Financial Management Reports on NASA Forms 533 in accordance with the instructions in NASA Policy Guidance (NPG) 9501.2, NASA Contractor Financial Management Reporting, and on the reverse side of the forms, as supplemented in the Schedule of this contract. The detailed reporting categories to be used, which shall correlate with technical and schedule reporting, shall be set forth in the Schedule. Contractor implementation of reporting requirements under this clause shall include NASA approval of the definitions of the content of each reporting category and give due regard to the Contractor's established financial management information system.

(b) Lower level detail used by the Contractor for its own management purposes to validate information provided to NASA shall be compatible with NASA requirements.

(c) Reports shall be submitted in the number of copies, at the time, and in the manner set forth in the Schedule or as designated in writing by the Contracting Officer. Upon completion and acceptance by NASA of all contract line items, the Contracting Officer may direct the Contractor to submit Form 533 reports on a quarterly basis only, report only when changes in actual cost incur, or suspend reporting altogether.

(d) The Contractor shall ensure that its Form 533 reports include accurate subcontractor cost data, in the proper reporting categories, for the reporting period.

(e) If during the performance of this contract NASA requires a change in the information or reporting requirements specified in the Schedule, or as provided for in Paragraph (a) or (c) of this clause, the Contracting Officer shall effect that change in accordance with the Changes clause of this contract.

G.6 CONTRACTOR REQUESTS FOR GOVERNMENT-OWNED EQUIPMENT(NASA 1852.245-70) (JUL 1997)

(a) "Equipment," as used in this clause, means commercially available items capable of stand-alone use, including those to be acquired for incorporation into special test equipment or special tooling.

(b)(1) Upon determination of need for any Government-owned equipment item for performance of this contract, the contractor shall provide to the Contracting Officer a written request justifying the need for the equipment and the reasons why contractor-owned property cannot be used, citing the applicable FAR or contract authority for use of Government-owned equipment. Equipment being acquired as a deliverable end item listed in the contract or as a component for incorporation into a deliverable end item listed in the contract is exempt from this requirement.

(2) The contractor's request shall include a description of the item in sufficient detail to enable the Government to screen its inventories for available equipment or to purchase equipment. For this purpose, the contractor shall (i) prepare a separate DD Form 1419, DOD Industrial Plant Equipment Requisition, or equivalent format, for each item requested and (ii) forward it through the contracting officer to the Industrial Property Officer at the cognizant NASA installation at least 30 days in advance of the date the contractor intends to acquire the item. Multiple units of identical items may be requested on a single form. Instructions for preparing the DD Form 1419 are contained in NASA FAR Supplement 1845.7102. If a certificate of nonavailability is not received within that period, the contractor may proceed to acquire the item, subject to having obtained contracting officer consent, if required, and having complied with any other applicable provisions of this contract.

(c) Contractors who are authorized to conduct their own screening using the NASA Equipment Management System (NEMS) and other Government sources of excess property shall provide the evidence of screening results with their request for contracting officer consent. Requests to purchase based on unsuitability of items found shall include rationale for the determined unsuitability

G.7 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY(NASA 1852.245-71) (JUL 1997)

(a) The Government property described in the clause at 1852.245-77, List of Installation-Provided Property and Services, shall be made available to the contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property. Under this clause, the Government retains accountability for, and title to, the property, and the contractor assumes the following user responsibilities:

(1) The user shall sign NASA Form 1602 for each individual piece of equipment assigned for his/her use.

(2) The user shall inform the NASA Property Custodian of any changes in location or user name and shall report immediately any property noted as missing.

(3) The user shall prepare Langley Form 52 or Langley Form 141 and obtain the required signatures before removing any Government property from Langley Research Center.

The Contractor shall establish and adhere to a system of written procedures for compliance with these user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.

(b) (1) The official accountable recordkeeping, physical inventory, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

(i) The contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area;

(ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area;

(iii) The contractor shall establish a record of the property as required by FAR 45.5 and 1845.5 and furnish to the Industrial Property Officer a DD Form 1149 Requisition and Invoice/Shipping Document (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.

(iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the contracting officer and notification of the SEMO. The contractor shall assume accountability and financial reporting responsibility for such property. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR Part 45.5 until its return to the installation.

(b) (2) After transfer of accountability to the Government, the contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the contracting officer.

G.8 LIST OF INSTALLATION-ACCOUNTABLE PROPERTY AND SERVICES (NASA 18-52.245-77)
(JUL 1997)

In accordance with the clause at 1852.245-71, Installation-Accountable Government Property, the Contractor is authorized use of the types of property and services listed below, to the extent they are available, in the performance of this contract within the physical borders of the installation which may include buildings and space owned or directly leased by NASA in close proximity to the installation, if so designated by the Contracting Officer.

The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

(a) Office space, work area space, office furniture, and utilities. No copiers, copying service, or office supplies will be provided. Government telephones are available for official purposes only; pay telephones are available for contractor employees for unofficial calls.

(b) Publications and blank forms stocked by the installation.

(c) Safety and fire protection for Contractor personnel and facilities.

(d) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

(e) Cafeteria privileges for Contractor employees during normal operating hours.

(f) Building maintenance for facilities occupied by Contractor personnel.

(g) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.

(h) The user responsibilities of the Contractor are defined in paragraph (a) of the clause at 1852.245-71, Installation-Accountable Government Property.

G.9 AWARD FEE EVALUATIONS (LaRC 52.216-92) (JUN 1990)

A. The Contractor's performance hereunder shall be evaluated each period by an Evaluation Board in accordance with an established evaluation plan. A copy of this plan shall be furnished to the Contractor on the effective date of this contract. This plan may be modified by the Government and a copy of any modification will be provided to the Contractor. The Board shall review the Contractor's performance for each period in the following areas:

Technical Performance
Management and Safety
Cost

B. The findings of the Board shall be reported to the Fee Determination Official (a cognizant individual at the program director level or higher of LaRC management) who will determine to what extent the Contractor's performance for the preceding award fee evaluation period warrants payment of some portion of the available award fee specified in Section G. In no event will any unawarded portion of fee for any evaluation period become available for award in subsequent periods.

C. The Contractor will be notified of the Fee Determination Official's determination of award fee by the Contracting Officer in a Notice of Award Fee, and such decision shall be binding on both parties and not subject to the Section I clause entitled "Disputes - Alternate I."

D. In the event this contract is terminated prior to a regularly scheduled award fee determination, the fee to be paid to the Contractor shall be an appropriate portion of any available award fee, as may be determined by the Fee Determination Official.

E. The Contractor may submit evaluation plan recommendations pertinent to evaluation criteria, methods of measurement, definitions, ground rules, relative importance, etc., to the Contracting Officer. Such recommendations may be for the initial evaluation period or for subsequent periods. Recommendations for the initial period should be received by the Contracting Officer no later than the effective date of the contract and for subsequent periods no later than thirty (30) days prior to the beginning of the period.

G.10 CONTRACT CLOSEOUT (LaRC 52.242-90) (MAY 1999)

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

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

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

G.11 PROVIDING FACILITIES TO CONTRACTORS (LaRC 52.245-90) (AUG 1997)

A. In accordance with FAR 45.302-1, it is policy of the Government that Contractors shall furnish all facilities required for performing Government contracts. "Facilities" include general purpose, off-the-shelf equipment, machine tools, test equipment, and vehicles. "Facilities" do not include material, special test equipment, special tooling or agency-peculiar property. In keeping with the policy set forth in FAR 45.302-1, the Government will not provide facilities.

B. Notwithstanding the "Allowable Cost and Payment" clause of this contract, cost of facilities are not an allowable cost except when charged to this contract in accordance with your approved accounting system.

C. The Contractor shall supply and maintain automatic data processing (ADP) equipment for their use on this contract. The Contractor shall also supply and maintain software loaded on this ADP equipment. The equipment and software shall be compatible with the Langley Organization being supported

D. NASA will furnish specialized software (e.g. graphics) including the upgrades as required for contract performance. This specialized software will be delineated on a task order basis. In addition, NASA will provide access to workstations on an as-needed basis per task order.

G.12 TASK ORDERS

A. The Contracting Officer or his/her authorized representative will issue task orders to the Contractor, providing specific authorization or direction to perform work within the scope of the Statement of Work specified in Section C. The Contractor may incur costs under the contract in performance of task orders and task order modifications issued in accordance with this clause. No other costs are authorized unless otherwise specified in the contract or expressly authorized by the Contracting Officer.

B. Prior to issuing a task order, the Contracting Officer shall provide the Contractor with the following data:

1. A description of the work identifying the objectives or results desired from the contemplated task order.

2. Proposed performance standards to be used as criteria for determining whether the work requirements have been met.

C. Within 15 calendar days, or another time if mutually agreed to by the parties, after receipt of the Contracting Officer's request, the Contractor shall submit a task plan which includes the information below:

1. Discussion of the technical approach for performing the work.
2. The total estimated cost and fee for completion of the task order in accordance with G.13,

Schedule of Rates for Task Orders, to include the following:

- a. Direct Labor estimate by category including hours.
- b. The travel and material estimates.
- c. An estimate for subcontractors and consultants.
- d. Estimated computer use time required, if applicable.
- e. Indirect costs.
- f. Other pertinent information
- g. Monthly spending profile
- h. The Government may require the Contractor to provide the cost information as defined in

Paragraphs (a) through (g) above for subtasks within an overall task order.

- i. Proposed fee to be assigned to the task order, including proposed distribution of fee for achievement of specific milestones will become part of the award fee pool in the period in which the milestone is projected to be achieved. All other fee associated with a task order will go into the award fee pool for the period in which the task is required to be completed.

3. The task plan, once negotiated/accepted by the Government, represents the baseline to be used for reporting in columns 7b and 7d of NASA Form 533M (See Exhibit B, Paragraph I.B)

D. After the Contracting Officer's Technical Representative (CO-TR), Technical Monitor and the Contractor have signed the task plan, the Contracting Officer or his authorized representative may issue a task order to the Contractor containing, as a minimum, the following:

1. Task Order number and date.
2. Description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.
3. Performance standards/metrics
4. Total estimated cost and award fee
5. Any other resources (travel, materials, equipment, facilities, etc.) authorized.
6. Delivery/performance schedule.

E. The Contractor shall provide acknowledgment of receipt to the Contracting Officer within 3 working days after receipt of the task order.

F. The Contracting Officer may amend tasks in the same manner in which they were issued.

G. In the event of a conflict between the requirements of the task order and the Contractor's approved task plan, the task order shall prevail.

H. If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in Paragraphs (A) through (D), a task order which includes a ceiling price may be issued as determined by the Contracting Officer.

G.13 SCHEDULE OF RATES FOR TASK ORDERS (LANGLEY)

The Contractor shall only use the fully burdened composite rates set forth below in establishing the estimated cost of each Task Order. Labor Categories may be added upon bilateral agreement provided the technical requirements warrant additions.

| LABOR CLASSIFICATION | | | | | |
|--------------------------------|----|----|----------|----|----|
| Technical Professional: | | | | | |
| Computer Scientist | \$ | \$ | \$ 42.67 | \$ | \$ |
| Programmer | \$ | \$ | \$ | \$ | \$ |
| System Analyst | \$ | \$ | \$ | \$ | \$ |
| Engineer | \$ | \$ | \$ | \$ | \$ |
| Project Manager | \$ | \$ | \$ | \$ | \$ |
| Engineer Supervisor | \$ | \$ | \$ | \$ | \$ |
| Research Scientist | \$ | \$ | \$ | \$ | \$ |
| Senior Scientist | \$ | \$ | \$ | \$ | \$ |
| Operational Aircraft Pilot | \$ | \$ | \$ | \$ | \$ |
| Support Personnel: | | | | | |
| Admin Associate | \$ | \$ | \$ | \$ | \$ |
| Project Planner | \$ | \$ | \$ | \$ | \$ |
| Programmer | \$ | \$ | \$ | \$ | \$ |
| Documentarian | \$ | \$ | \$ | \$ | \$ |
| Scheduler/Cost Analyst | \$ | \$ | \$ | \$ | \$ |
| Air Traffic Controller | \$ | \$ | \$ | \$ | \$ |
| Technicians: | | | | | |
| Electronic Technician | \$ | \$ | \$ | \$ | \$ |
| Test Assistant | \$ | \$ | \$ | \$ | \$ |
| Designer | \$ | \$ | \$ | \$ | \$ |
| Mechanical Technician | \$ | \$ | \$ | \$ | \$ |
| Test Conductor | \$ | \$ | \$ | \$ | \$ |
| Engineering Associate | \$ | \$ | \$ | \$ | \$ |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| LABOR CLASSIFICATION | | | | | |
|--------------------------------|----|----|----|----|----|
| Technical Professional: | | | | | |
| Computer Scientist | \$ | \$ | \$ | \$ | \$ |
| Programmer | \$ | \$ | \$ | \$ | \$ |
| System Analyst | \$ | \$ | \$ | \$ | \$ |
| Engineer | \$ | \$ | \$ | \$ | \$ |
| Project Manager | \$ | \$ | \$ | \$ | \$ |
| Engineer Supervisor | \$ | \$ | \$ | \$ | \$ |
| Research Scientist | \$ | \$ | \$ | \$ | \$ |
| Senior Scientist | | | \$ | \$ | \$ |
| Operational Aircraft Pilot | | \$ | \$ | \$ | \$ |
| Support Personnel: | | | | | |
| Admin Associate | | \$ | \$ | \$ | \$ |
| Project Planner | | \$ | \$ | \$ | \$ |
| Programmer | | \$ | \$ | \$ | \$ |
| Documentarian | \$ | \$ | \$ | \$ | \$ |
| Scheduler/Cost Analyst | | \$ | \$ | \$ | \$ |
| Air Traffic Controller | | \$ | \$ | \$ | \$ |
| Technicians: | | | | | |
| Electronic Technician | | \$ | \$ | \$ | \$ |
| Test Assistant | | \$ | \$ | \$ | \$ |
| Designer | | \$ | \$ | \$ | \$ |
| Mechanical Technician | | \$ | \$ | \$ | \$ |
| Test Conductor | | \$ | \$ | \$ | \$ |
| Engineering Associate | | \$ | \$ | \$ | \$ |

| LABOR CLASSIFICATION | | | | | |
|--------------------------------|----|----|----|----|----|
| Technical Professional: | | | | | |
| Computer Scientist | \$ | \$ | \$ | \$ | \$ |
| Programmer | \$ | \$ | \$ | \$ | \$ |
| System Analyst | \$ | \$ | \$ | \$ | \$ |
| Engineer | \$ | \$ | \$ | \$ | \$ |
| Project Manager | \$ | \$ | \$ | \$ | \$ |
| Engineer Supervisor | \$ | \$ | \$ | \$ | \$ |
| Research Scientist | \$ | \$ | \$ | \$ | \$ |
| Senior Scientist | \$ | \$ | \$ | \$ | \$ |
| Operational Aircraft Pilot | \$ | \$ | \$ | \$ | \$ |
| Support Personnel: | | | | | |
| Admin Associate | \$ | \$ | \$ | \$ | \$ |
| Project Planner | \$ | \$ | \$ | \$ | \$ |
| Programmer | \$ | \$ | \$ | \$ | \$ |
| Documentarian | \$ | \$ | \$ | \$ | \$ |
| Scheduler/Cost Analyst | \$ | \$ | \$ | \$ | \$ |
| Air Traffic Controller | \$ | \$ | \$ | \$ | \$ |
| Technicians: | | | | | |
| Electronic Technician | \$ | \$ | \$ | \$ | \$ |
| Test Assistant | \$ | \$ | \$ | \$ | \$ |
| Designer | \$ | \$ | \$ | \$ | \$ |
| Mechanical Technician | \$ | \$ | \$ | \$ | \$ |
| Test Conductor | \$ | \$ | \$ | \$ | \$ |
| Engineering Associate | \$ | \$ | \$ | \$ | \$ |

| LABOR CLASSIFICATION | | | | | |
|--------------------------------|----|----|----|----|----|
| Technical Professional: | | | | | |
| Computer Scientist | \$ | | \$ | | \$ |
| Programmer | \$ | | \$ | | \$ |
| System Analyst | \$ | | \$ | | \$ |
| Engineer | \$ | | \$ | | \$ |
| Project Manager | | | \$ | | \$ |
| Engineer Supervisor | | | \$ | | \$ |
| Research Scientist | | \$ | | \$ | |
| Senior Scientist | \$ | | \$ | | \$ |
| Operational Aircraft Pilot | \$ | | \$ | | \$ |
| Support Personnel: | | | | | |
| Admin Associate | \$ | | \$ | | \$ |
| Project Planner | \$ | | \$ | | \$ |
| Programmer | \$ | | \$ | | \$ |
| Documentarian | \$ | | \$ | | \$ |
| Scheduler/Cost Analyst | | \$ | | \$ | |
| Air Traffic Controller | | \$ | | \$ | |
| Technicians: | | | | | |
| Electronic Technician | \$ | | \$ | | \$ |
| Test Assistant | \$ | | \$ | | \$ |
| Designer | \$ | | \$ | | \$ |
| Mechanical Technician | \$ | | \$ | | \$ |
| Test Conductor | \$ | | \$ | | \$ |
| Engineering Associate | \$ | | \$ | | \$ |

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 LIMITATION OF FUTURE CONTRACTING (NASA 1852.209-71) (DEC 1988)

- (a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of all prospective offerors is invited to FAR Subpart 9.5-- Organizational Conflicts of Interest.
- (b) The nature of this conflict is: The management of the evaluation of Announcements of Opportunity (AO) process; the management of External Readiness Reviews and assessment processes, the evaluation of the Contractor's own products; access to other companies proprietary data; and participation by the Contractor in the development of requirements and specifications for both software and hardware systems.
- (c) The restrictions upon future contracting are as follows:
- (1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.
 - (2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect this data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

H.2 SECURITY PROGRAM/FOREIGN NATIONAL EMPLOYEE ACCESS REQUIREMENTS (LaRC 52.204-91) (FEB 2000)

Foreign nationals must meet the eligibility requirements outlined in NPG 1371.2 prior to performing any work under a contract. Eligibility determinations will be based solely on the scientific and technical contributions of the contractor, as outlined in the statement of work. Foreign nationals who meet the eligibility requirements will undergo a rigorous approval and investigative process prior to physical access to the Center and/or to NASA information. Foreign nationals must be sponsored by a NASA Civil Service employee. The sponsor must submit a formal request to the Security Office for access to the Center and/or NASA information, to include electronic information. The request will be processed through the Center's Export Administrator and subject to approval by the International Visits Coordinator. Normal processing time for a request is between 60 and 90 days depending on the nationality of the foreign national. All approvals will be for a maximum of one year, and must be resubmitted annually. Following approval, the foreign national will undergo a National Agency Check Investigation (NACI). As part of the NACI, the foreign national will submit a "Name Check Request" (NASA Form 531) and a completed "applicant" fingerprint card, to the LaRC Security Office, Mail Stop 450. Normal processing time for a NACI is between 90 to 120 days. Until the NACI is completed and favorably adjudicated, the foreign national will require complete escort from entry onto and exit off of the Center, and will not be allowed access to electronic information unless approved by the Center Information Technology Security Manager. Upon completion of the NACI, the foreign national will only be granted unescorted access to an approved workplace and to designated open areas during normal weekday work hours between 6:00 a.m. and 6:00 p.m. The foreign national will not be granted access during non-work hours, weekends, and holidays. Derogatory information developed concerning the foreign national may be grounds for visit termination.

H.3 WORK SCHEDULE--ON-SITE ONLY (LaRC 52.211-103) (JUL 1991)

In order that the necessary and proper inspection of the Contractor's work may be effectively accomplished, and to assure the availability of required Government interface, the Contractor shall schedule work performance hereunder so as to be compatible with the established workweek and hours of work observed by the Government organization having cognizance over the work being performed.

H.4 OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LaRC 52.211-104) (MAY 1999)

A. Observation of Regulations--In performance of that part of the contract work which may be performed at Langley Research Center or other Government installation, the Contractor shall require its employees to observe the rules and regulations as prescribed by the authorities at Langley Research Center or other installation including all applicable Federal, NASA and Langley or other local installation safety, health, environmental and security regulations.

B. Identification Badges--At all times while on LaRC property, the Contractor shall require its employees, subcontractors and agents to wear badges which will be issued by the NASA Contract Badge and Pass Office, located at 1 Langley Boulevard (Building No. 1228). Badges shall be issued only between the hours of 6:30 a.m. and 3:30 p.m., Monday through Friday. Contractors will be held accountable for these badges, and may be required to validate outstanding badges on an annual basis with the NASA LaRC Security Office. Immediately after employee termination or contract completion, badges shall be returned to the NASA Contract Badge and Pass Office.

H.5 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 June 26, 2000 is hereby incorporated herein by reference.

H.6 ADVANCE APPROVAL FOR RELEASE OF TECHNICAL INFORMATION (LaRC 52.227-92) (JUL 1998)

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

H.7 EVIDENCE OF INSURANCE (LaRC 52.228-94)(AUG 1993)

Prior to performing under this contract, the Contractor shall submit to the Contracting Officer evidence of the insurance coverage required by the Section I NASA Clause 1852.228-75 entitled "Minimum Insurance Coverage" (such as a Certificate of Insurance or other confirmation). If the Government extends the term of the contract, the Contractor shall present such evidence to the Contracting Officer prior to performing under the extension.

H.8 VIRGINIA AND LOCAL SALES TAXES (LaRC 52.229-92) (APR 1992)

To perform this contract, the Contractor must be knowledgeable of relevant state and local taxes when making purchases of tangible personal property. The Contractor shall refrain from paying nonapplicable taxes or taxes where an exemption exists, but shall pay applicable taxes that are reimbursable pursuant to FAR 31.205-41, Taxes. Even though title to property purchased under this contract may pass to the Government and the price is reimbursable under contract cost principles, such transactions do not in themselves provide tax immunity to the Contractor. Therefore, within 30 days after the effective date of this contract, the Contractor shall request from the Virginia State Tax Commission a ruling on any tax exemptions that may be applicable to purchases made under this contract. The Contractor shall provide all facts relevant to the situation and shall pursue an interpretation of the law that is most favorable to both the Contractor and the Government.

H.9 QUALITY SYSTEM REQUIREMENTS (ISO 9001) (LaRC 52.246-95) (FEB 2000)

The Contractor's quality system shall be compliant with the requirements of ANSI/ISO/ASQC Q9001-1994, Quality Systems-Model for Quality Assurance in Design, Development, Production, Installation, and Servicing. If the Contractor's quality system is not already compliant with the requirements of ANSI/ISO/ASQC Q9001-1994, the Contractor shall develop quality system procedures and associated documentation to become compliant within **nine months** after the contract effective date. The Contractor's quality system shall remain in compliance with ANSI/ISO/ASQC Q9001-1994 during the term of the contract. The Government reserves the right to audit the Contractor's quality system at any time. The requirements of this clause do not flow down to subcontractors.

"Compliant" as used in this clause means that the contractor has defined, documented, and will continually implement during the term of the contract management-approved methods of operation that conform to the requirements given in the above-cited International Standard.

H.10 UNESCORTED ACCESS BY CONTRACTOR EMPLOYEES

Background investigations are required for Contractor employees to have unescorted access to the Langley Research Center. All Contractor employees must as a minimum have a favorably adjudicated National Agency Check (NAC). The NAC is not required if the Contractor can certify that an employee has a Confidential or higher security clearance or a favorably adjudicated current investigation. When it is necessary for an employee to perform work prior to completion of the NAC, the employee may be escorted while at the site by an individual who has a favorable NAC or a higher level of investigation favorably adjudicated, or a Confidential or higher level security clearance or as otherwise approved by the LaRC Security Officer.

H.11 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.
- (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.

SECTION I - CONTRACT CLAUSES**I.1 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (FEB 1998)**

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

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

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

A. Listing of Federal Acquisition Regulation (48 CFR Chapter 1) Clauses Incorporated by Reference

| <u>Clause Number</u> | <u>Clause Title</u> |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 52.202-1 | Definitions (OCT 1995) |
| 52.203-3 | Gratuities (APR 1984) |
| 52.203-5 | Covenant Against Contingent Fees (APR 1984) |
| 52.203-6 | Restrictions on Contractor Sales to the Government (JUL 1995) |
| 52.203-7 | Anti-Kickback Procedures (JUL 1995) |
| 52.203-8 | 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) |
| 52.204-2 | Security Requirements (AUG 1996) |
| 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--Uniform Contract Format (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) |
| 52.215-15 | Pension Adjustments and Asset Reversions (DEC 1998) |
| 52.215-18 | Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions (OCT 1997) |
| 52.215-19 | Notification of Ownership Changes (OCT 1997) |
| 52.216-7 | Allowable Cost and Payment (MAR 2000) |
| 52.217-8 | Option to Extend Services (NOV 1999) |
| 52.219-6 | Notice of Total Small Business Set-Aside (JUL 1996) |
| 52.219-8 | Utilization of Small Business Concerns (JAN 1999) |
| 52.219-14 | Limitations on Subcontracting (DEC 1996) |
| 52.222-1 | Notice to the Government of Labor Disputes (FEB 1997) |
| 52.222-3 | Convict Labor (AUG 1996) |
| 52.222-4 | Contract Work Hours and Safety Standards Act--Overtime Compensation (JUL 1995) |
| 52.222-21 | Prohibition of Segregated Facilities (FEB 1999) |
| 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 Workers with Disabilities (JUN 1998) |
| 52.222-37 | Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (JAN 1999) |
| 52.222-41 | Service Contract Act of 1965, as amended (MAY 1989) |

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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 52.223-3 | Hazardous Material Identification and Material Safety Data (JAN 1997)--Alternate I (JAN 1997) |
| 52.223-5 | Pollution Prevention and Right-To-Know Information (APR 1998) |
| 52.223-6 | Drug-Free Workplace (JAN 1997) |
| 52.223-14 | Toxic Chemical Release Reporting (OCT 1996) |
| 52.225-13 | Restrictions on Certain Foreign Purchases (FEB 2000) |
| 52.227-1 | Authorization and Consent (JUL 1995)--Alternate I (APR 1984) |
| 52.227-2 | Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996) |
| 52.227-11 | Patent Rights - Retention by the Contractor (FAR 52.227-11) (Short Form) (JUN 1989) - as modified by NASA FAR Supplement 18-52.227-11 |
| 52.227-14 | Rights In Data--General (JUN 1987) (Alternate II) (JUN 1987) and Alternate IV (JUN 1987) - as modified by NASA FAR Supplement 1852.227-14 |
| 52.227-16 | Additional Data Requirements (JUN 1987) |
| 52.228-7 | Insurance--Liability to Third Persons (MAR 1996) |
| 52.232-9 | 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) |
| 52.232-34 | Payment by Electronic Funds Transfer--Other Than Central Contractor Registration (MAY 1999) |
| 52.233-1 | Disputes (DEC 1998)--Alternate I (DEC 1991) |
| 52.233-3 | Protest After Award (AUG 1996)--Alternate I (JUN 1985) |
| 52.237-2 | Protection of Government Buildings, Equipment, and Vegetation (APR 1984) |
| 52.237-3 | Continuity of Services (JAN 1991) |
| 52.239-1 | Privacy or Security Safeguards (AUG 1996) |
| 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) |
| 52.243-2 | Changes--Cost-Reimbursement (AUG 1987)--Alternate V (APR 1984) |
| 52.244-5 | Competition in Subcontracting (DEC 1996) |
| 52.245-5 | Government Property (Cost-Reimbursement, Time-and- Material, or Labor-Hour Contracts) (JAN 1986) (Deviation) (JUL 1995) |
| 52.246-5 | Inspection of Services--Cost-Reimbursement (APR 1984) |
| 52.246-25 | Limitation of Liability - Services (FEB 1997) |
| 52.248-1 | Value Engineering (FEB 2000) |
| 52.249-6 | Termination (Cost-Reimbursement) (SEP 1996) |
| 52.249-14 | Excusable Delays (APR 1984) |
| 52.253-1 | Computer Generated Forms (JAN 1991) |

B. Listing of NASA FAR Supplement (48 CFR CHAPTER 18) Clauses Incorporated by Reference

| | |
|-------------|-----------------------------------------------------|
| 1852.208-81 | Restrictions on Printing and Duplicating (AUG 1993) |
| 1852.216-89 | Assignment and Release Forms (JUL 1997) |
| 1852.219-74 | Use of Rural Area Small Businesses (SEP 1990) |
| 1852.219-76 | NASA 8 Percent Goal (JUL 1997) |
| 1852.223-74 | Drug and Alcohol-Free Workforce (MAR 1996) |
| 1852.225-70 | Export Licenses (FEB 2000) |
| 1852.228-71 | Aircraft Flight Risks (DEC 1988) |
| 1852.228-75 | Minimum Insurance Coverage (OCT 1988) |
| 1852.235-70 | Center for AeroSpace Information (JUN 1998) |
| 1852.237-70 | Emergency Evacuation Procedures (DEC 1988) |
| 1852.242-71 | Travel Outside of the United States (DEC 1988) |

| | |
|-------------|---------------------------------------------------------------------------------------------|
| 1852.242-72 | Observance of Legal Holidays (AUG 1992)--Alternate I (SEP 1989) and Alternate II (SEP 1989) |
| 1852.243-71 | Shared Savings (MAR 1997) |
| 1852.244-70 | Geographic Participation in the Aerospace Program (APR 1985) |
| 1852.245-71 | Installation-Accountable Government Property (JUN 1998) |

c. Listing of Clauses in Full Text

The clauses listed below follow in full text:

| | |
|-------------|------------------------------------------------------------------------------------------------------------------|
| 52.252-2 | Clauses Incorporated by Reference (FEB 1998) |
| 52.215-21 | Requirements for Cost and 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) |
| 52.222-2 | Payment for Overtime Premiums (JUL 1990) |
| 52.222-21 | Prohibition of Segregated Facilities (FEB 1999) |
| 52.222-42 | Statement of Equivalent Rates for Federal Hires (MAY 1989) |
| 52.227-23 | Rights to Proposal Data (Technical) (JUN 1987) |
| 52.244-2 | Subcontracts (AUG 1998)--Alternate I (AUG 1998) |
| 52.244-6 | Subcontracts for Commercial Items and Commercial Components (OCT 1998) |
| 52.252-6 | Authorized Deviations in Clauses (APR 1984) |
| 1852.204-75 | Security Classification Requirements (SEP 1989) |
| 1852.204-76 | Security Requirements for Unclassified Information Technology Resources (JULY 2000) |
| 1852.215-84 | Ombudsman (OCT 1996) |
| 1852.223-70 | Safety and Health (MAR 1997) |
| 1852.246-72 | Material Inspection and Receiving Report (JUN 1995) |

I.2 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--

(i) 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.

I.3 ORDERING (FAR 52.216-18) (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from the effective date of the contract through 60 months from the effective date if the contract.

(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.

I.4 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 **\$1,000**, 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 **\$100,000,000**;

(2) Any order for a combination of items in excess of **\$100,000,000**; or

(3) A series of orders from the same ordering office within **10 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.

I.5 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 12 months from the end of the contract effective period.

I.6 PAYMENT FOR OVERTIME PREMIUMS (FAR 52.222-2) (JUL 1990)

- (a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0 or the overtime premium is paid for work -
- (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
 - (2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
 - (3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
 - (4) That will result in lower overall costs to the Government.
- (b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall -
- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
 - (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
 - (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
 - (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

I.7 PROHIBITION OF SEGREGATED FACILITIES (FAR 52.222-21) (FEB 1999)

- (a) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.
- (b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.
- (c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

I.8 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42) (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION

| <u>Employee Class</u> | <u>Monetary Wage</u> |
|-------------------------------|----------------------|
| Electronics Tech-Maintenance | \$15.02 |
| Instrument Mechanic | \$15.02 |
| Technical Support Engineering | \$18.27 |
| Computer Operations | \$16.59 |
| Mechanical Technicians | \$15.02 |
| Electronics Technicians | \$15.02 |

FRINGE BENEFITS

- Annual Leave - Receives 13 days paid leave for service up to 3 years; 20 days for 3 to 15 years service; and 26 days for 15 years service or over.
- Sick Leave - Receives 13 days paid leave per year.
- Holidays - Receives 10 paid holidays per year.
- Health Insurance - Government pays up to 60% of health insurance.
- Group Life Insurance - Government pays two-thirds of life insurance rate premiums.
- Retirement - The Government provides three retirement plans identified as the Civil Service Retirement System (CSRS), the Federal Employees Retirement System (FERS), and the CSRS Offset. Under the CSRS, the Government contributes 7% of the employees' base pay towards the retirement benefit and 1.45% towards Medicare. Under the FERS, the Government contributes 11.4% of the employees' base pay towards a basic benefit plan, 6.2% to Social Security, 1.45% towards Medicare, and 1% (plus matching contributions of up to 4% of basic pay, depending on employees' contributions) to a thrift savings plan. Under the CSRS Offset, the Government contributes 0.8% of the employees' base pay towards the retirement benefit, 6.2% to Social Security, and 1.45% towards Medicare.

Part-time Federal employees receive pro rata annual leave, sick leave, holiday leave, health insurance, and group life insurance benefits based on the number of hours worked.

I.9 RIGHTS TO PROPOSAL DATA (TECHNICAL) (FAR 52.227-23) (JUN 1987)

Except for data contained on pages 1-54 and 68-74 of Volume I, all pages of Volume II, pages I.II.III and 1-35 of Section I/Volume III, and pages 1-38 of Section II/Volume III, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated June 26, 2000, upon which this contract is based.

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

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

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

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

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

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

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

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

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

(2) Is fixed-price and exceeds--

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

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

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

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

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

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

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

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

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

(vii) A negotiation memorandum reflecting--

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

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

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

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

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

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

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

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

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

- (1) Of the acceptability of any subcontract terms or conditions;
- (2) Of the allowability of any cost under this contract; or
- (3) To relieve the Contractor of any responsibility for performing this contract.

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

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

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

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

Subcontract: 2111-LMTS with Lockheed Martin Technical Services, Subcontract: 2111-VI with Vigyan, Inc., and Subcontract 2111-AMA with Analytical Mechanics and Associates, Inc.

I.11 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (FAR 52.244-6) (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 its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

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

- (1) 52.222-26, Equal Opportunity (E.O. 11246);
- (2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));
- (3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793); and
- (4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241)

(flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this Paragraph (d), in subcontracts awarded under this contract.

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

- (a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.
- (b) The use in this solicitation or contract of any NASA/FAR Supplement (48 CFR Chapter 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

I.13 SECURITY CLASSIFICATION REQUIREMENTS (NASA 1852.204-75) (SEP 1989)

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of **TOP SECRET**. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Exhibit A.

I.14 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (NASA 1852.204-76) (JULY 2000)

(a) The Contractor shall comply with the security requirements outlined in NASA Policy Directive (NPD) 2810.1, Security of Information Technology, and NASA Procedures and Guidelines (NPG) 2810.1, Security of Information Technology. These policies apply to all IT systems and networks under NASA's purview operated by or on behalf of the Federal Government, regardless of location.

(b)(1) The Contractor shall ensure compliance by its employees with Federal directives and guidelines that deal with IT Security including, but not limited to, OMB Circular A-130, Management of Federal Information Resources, OMB Circular A-130 Appendix III, Security of Federal Automated Information Resources, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.), and all applicable Federal Information Processing Standards (FIPS).

(2) All Federally owned information is considered sensitive to some degree and must be appropriately protected by the Contractor as specified in applicable IT Security Plans. Types of sensitive information that may be found on NASA systems that the Contractor may have access to include, but are not limited to --

(i) Privacy Act information (5 U.S.C. 552a et seq.);

(ii) Export Controlled Data, (e.g. Resources protected by the International Traffic in Arms Regulations (22 CFR Parts 120-130)).

(3) The Contractor shall ensure that all systems connected to a NASA network or operated by the Contractor for NASA conform with NASA and Center security policies and procedures.

(c)(1) The Contractor's screening of Contractor personnel will be conducted in accordance with NPG 2810.1, Section 4.5 for personnel requiring unescorted or unsupervised physical or electronic access to NASA systems, programs, and data.

(2) The Contractor shall ensure that all such employees have at least a National Agency Check investigation. The Contractor shall submit a personnel security questionnaire (NASA Form 531), Name Check Request for National Agency Check (NAC) investigation, and Standard Form 85P, Questionnaire for Public Trust Positions (for specified sensitive positions), and a Fingerprint Card (FD-258 with NASA overprint in Origin Block) to the Center Chief of Security for each Contractor employee requiring screening. The required forms may be obtained from the Center Chief of Security. In the event that the NAC is not satisfactory, access shall not be granted. At the option of the Government, background screenings may not be required for employees with recent or current Federal Government investigative clearances.

(3) The Contractor shall have an employee checkout process that ensures --

(i) Return of badges, keys, electronic access devices and NASA equipment;

(ii) Notification to NASA of planned employee terminations at least three days in advance of the employee's departure. In the case of termination for cause, NASA shall be notified immediately. All NASA accounts and/or network access granted terminated employees shall be disabled immediately upon the employee's separation from the Contractor; and

(iii) That the terminated employee has no continuing access to systems under the operation of the Contractor for NASA. Any access must be disabled the day the employee separates from the Contractor.

(4) Granting a non-permanent resident alien (foreign national) access to NASA IT resources requires special authorization. The Contractor shall obtain authorization from the Center Chief of Security prior to granting a non-permanent resident alien access to NASA IT systems and networks.

(d)(1) The Contractor shall ensure that its employees with access to NASA information resources receive annual IT security awareness and training in NASA IT Security policies, procedures, computer ethics, and best practices.

(2) The Contractor shall employ an effective method for communicating to all its employees and assessing that they understand any Information Technology Security policies and guidance provided by the Center Information Technology Security Manager (CITSM) and/or Center CIO Representative as part of the new employee briefing process. The Contractor shall ensure that all employees represent that they have read and understand any new Information Technology Security policy and guidance provided by the CITSM and Center CIO Representative over the duration of the contract.

(3) The Contractor shall ensure that its employees performing duties as system and network administrators in addition to performing routine maintenance possess specific IT security skills. These skills include the following:

- (i) Utilizing software security tools.
- (ii) Analyzing logging and audit data.
- (iii) Responding and reporting to computer or network incidents as per NPG 2810.1.
- (iv) Preserving electronic evidence as per NPG 2810.1.
- (v) Recovering to a safe state of operation.

(4) The Contractor shall provide training to employees to whom they plan to assign system administrator roles. That training shall provide the employees with a full level of proficiency to meet all NASA system administrators' functional requirements. The Contractor shall have methods or processes to document that employees have mastered the training material, or have the required knowledge and skills. This applies to all system administrator requirements.

(e) The Contractor shall promptly report to the Center IT Security Manager any suspected computer or network security incidents occurring on any system operated by the Contractor for NASA or connected to a NASA network. If it is validated that there is an incident, the Contractor shall provide access to the affected system(s) and system records to NASA and any NASA designated third party so that a detailed investigation can be conducted.

(f) The Contractor shall develop procedures and implementation plans that ensure that IT resources leaving the control of an assigned user (such as being reassigned, repaired, replaced, or excessed) have all NASA data and sensitive application software permanently removed by a NASA- approved technique. NASA-owned applications acquired via a "site license" or "server license" shall be removed prior to the resources leaving NASA's use. Damaged IT storage media for which data recovery is not possible shall be degaussed or destroyed. If the assigned task is to be assumed by another duly authorized person, at the Government's option, the IT resources may remain intact for assignment and use of the new user.

(g) The Contractor shall afford NASA, including the Office of Inspector General, access to the Contractor's and subcontractor's facilities, installations, operations, documentation, databases and personnel. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data, and to preserve evidence of computer crime.

(h)(1) The Contractor shall document all vulnerability testing and risk assessments conducted in accordance with NPG 2810.1 and any other IT security requirements specified in the contract or as directed by the Contracting Officer.

(2) The results of these tests shall be provided to the Center IT Security Manager. Any Contractor system(s) connected to a NASA network or operated by the Contractor for NASA may be subject to vulnerability assessment, or penetration testing as part of the Center's IT security compliance assessment and the Contractor shall be required to assist in the completion of these activities.

(3) A decision to accept any residual risk shall be the responsibility of NASA. The Contractor shall notify the NASA system owner and the NASA data owner within 5 working days if new or unanticipated threats or hazards are discovered by the Contractor, made known to the Contractor, or if existing safeguards fail to function effectively. The Contractor shall make appropriate risk reduction recommendations to the NASA system owner and/or the NASA data owner and document the risk or modifications in the IT Security Plan.

(i) The Contractor shall develop a procedure to accomplish the recording and tracking of IT System Security Plans, including updates, and IT system penetration and vulnerability tests for all NASA systems under its control or for systems outsourced to them to be managed on behalf of NASA. The Contractor must report the results of these actions directly to the Center IT Security Manager.

(j) When directed by the Contracting Officer, the Contractor shall submit for NASA approval a post-award security implementation plan outlining how the Contractor intends to meet the requirements of NPG 2810.1. The plan shall subsequently be incorporated into the contract as a compliance document after receiving Government approval. The plan shall demonstrate thorough understanding of NPG 2810.1 and shall include as a minimum, the security measures and program safeguards to ensure that IT resources acquired and used by Contractor and subcontractor personnel --

(1) Are protected from unauthorized access, alteration, disclosure, or misuse of information processed, stored, or transmitted;

(2) Can maintain the continuity of automated information support for NASA missions, programs, and functions;

(3) Incorporate management, general, and application controls sufficient to provide cost-effective assurance of the systems' integrity and accuracy;

(4) Have appropriate technical, personnel, administrative, environmental, and access safeguards;

(5) Document and follow a virus protection program for all IT resources under its control; and

(6) Document and follow a network intrusion prevention program for all IT resources under its control.

(k) Prior to selecting any IT security solution, the Contractor shall consult with their Center IT Security Manager to ensure interoperability and compatibility with other systems with which there is a data or system interface requirement.

(l) The Contractor shall comply with all Federal and NASA encryption requirements for NASA flight programs (e.g., secure flight termination systems, encryption for satellite uplinks, encryption for flight and satellite command and control for both up and down link) and involve the Center Communications Security (COMSEC) Manager when selecting encryption solutions.

(m) The Contractor shall incorporate this clause in all subcontracts where the requirements identified in this clause are applicable to the performance of the subcontract.

I.15 OMBUDSMAN (NASA 1852.215-84) (OCT 1996)

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

I.16 SAFETY AND HEALTH (NASA 1852.223-70) (MAR 1997)

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

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

(c) The Contractor shall immediately notify and promptly report to the Contracting Officer or a designee any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property beyond any stated acceptable limits set forth in the contract Schedule, or property loss of \$25,000 or more arising out of work performed under this contract. The Contractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. Service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract Schedule. The Contractor shall investigate all work-related incidents or accidents to the extent necessary to determine their causes and furnish the

Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.

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

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

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

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

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

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

I.17 MATERIAL INSPECTION AND RECEIVING REPORT (NASA 1852.246-72) (JUN 1995)

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

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

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

SECTION J - LIST OF ATTACHMENTS

- Exhibit A Contract Security Classification Specification, DD Form 254, 2 pages
- Exhibit B Contract Documentation Requirements, 4 pages
- Exhibit C Register of Wage Determination and Fringe Benefits, 1999, 9 pages
- Exhibit D Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Form PROC/P-72, June 1998, 2 pages
- Exhibit E Draft Award Fee Evaluation Plan
- Exhibit F Safety and Health Plan
- Exhibit G Direct Labor Classification Descriptions

EXHIBIT A

| | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|-------------------------------------|
| <p>DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i></p> | | | | <p>1. CLEARANCE AND SAFEGUARDING</p> <p>A. FACILITY CLEARANCE REQUIRED Secret</p> <p>B. LEVEL OF SAFEGUARDING REQUIRED NONE</p> | | | |
| <p>2. THIS SPECIFICATION IS FOR: (X AND COMPLETE AS APPLICABLE)</p> <p>A. PRIME CONTRACT NUMBER NAS1-00135</p> <p>B. SUBCONTRACT NUMBER</p> <p>C. SOLICITATION OR OTHER NUMBER 1-132-RB.1002</p> | | | <p>3. THIS SPECIFICATION IS: (X AND COMPLETE AS APPLICABLE)</p> <p>A. ORIGINAL (COMPLETE DATE IN ALL CASES) X DATE (YYMMDD) 00/10/16</p> <p>B. REVISED (SUPERSEDES ALL PREVIOUS SPECS) REVISION NO. DATE (YYMMDD)</p> <p>C. FINAL (COMPLETE ITEM 5 IN ALL CASES) DATE (YYMMDD)</p> | | | | |
| <p>4. IS THIS A FOLLOW-ON CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. IF YES, COMPLETE THE FOLLOWING: CLASSIFIED MATERIAL RECEIVED OR GENERATED UNDER _____ (PRECEDING CONTRACT NUMBER) IS TRANSFERRED TO THIS FOLLOW-ON CONTRACT.</p> | | | | | | | |
| <p>5. IS THIS A FINAL DD FORM 254? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. IF YES, COMPLETE THE FOLLOWING: IN RESPONSE TO THE CONTRACTOR'S REQUEST DATED _____ RETENTION OF THE CLASSIFIED MATERIAL IS AUTHORIZED FOR THE PERIOD _____</p> | | | | | | | |
| <p>6. CONTRACTOR (INCLUDE COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE)</p> <p>A. NAME, ADDRESS, AND ZIP CODE SWALES AND ASSOCIATES 5050 POWDER MILL ROAD BELTSVILLE, MD 20705</p> <p>B. CAGE CODE 8V543</p> <p>C. COGNIZANT SECURITY OFFICE (NAME, ADDRESS, AND ZIP CODE) DEFENSE INVESTIGATIVE SERVICES 1235 JEFFERSON DAVIS HIGHWAY ARLINGTON, VA 22202 (202) 768-4440</p> | | | | | | | |
| <p>7. SUBCONTRACTOR</p> <p>A. NAME, ADDRESS, AND ZIP CODE LOCKHEED ENGINEERING & SCIENCES CO. 144 RESEARCH DRIVE HAMPTON, VA 23666</p> <p>B. CAGE CODE OJA89</p> <p>C. COGNIZANT SECURITY OFFICE (NAME, ADDRESS, AND ZIP CODE) DEFENSE SECURITY SERVICES PEMBROKE 5, SUITE 5250 VIRGINIA BEACH, VA 23462-5460</p> | | | | | | | |
| <p>8. ACTUAL PERFORMANCE</p> <p>A. Location NASA LANGLEY RESEARCH CENTER</p> <p>B. Cage Code</p> <p>C. Cognizant Security Office (Name, Address, And Zip Code)</p> | | | | | | | |
| <p>9. GENERAL IDENTIFICATION OF THIS PROCUREMENT SYSTEM ANALYSIS AND MISSION SUPPORT (SAMS)</p> | | | | | | | |
| <p>10. CONTRACTOR WILL REQUIRE ACCESS TO:</p> | | <p>YES</p> | <p>NO</p> | <p>11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:</p> | | <p>YES</p> | <p>NO</p> |
| A. COMMUNICATIONS SECURITY (COMSEC) INFORMATION | | | <input checked="" type="checkbox"/> | A. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY | | <input checked="" type="checkbox"/> | |
| B. RESTRICTED DATA | | | <input checked="" type="checkbox"/> | B. RECEIVE CLASSIFIED DOCUMENTS ONLY | | | <input checked="" type="checkbox"/> |
| C. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION | | | <input checked="" type="checkbox"/> | C. RECEIVE AND GENERATE CLASSIFIED MATERIAL | | | <input checked="" type="checkbox"/> |
| D. FORMERLY RESTRICTED DATA | | | <input checked="" type="checkbox"/> | D. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE | | | <input checked="" type="checkbox"/> |
| E. INTELLIGENCE INFORMATION | | | <input checked="" type="checkbox"/> | E. PERFORM SERVICES ONLY | | <input checked="" type="checkbox"/> | |
| (1) SENSITIVE COMPARTMENTED INFORMATION (SCI) | | | <input checked="" type="checkbox"/> | F. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES | | | <input checked="" type="checkbox"/> |
| (2) NON-SCI | | | <input checked="" type="checkbox"/> | G. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER | | | <input checked="" type="checkbox"/> |
| F. SPECIAL ACCESS INFORMATION | | | <input checked="" type="checkbox"/> | H. REQUIRE A COMSEC ACCOUNT | | | <input checked="" type="checkbox"/> |
| G. NATO INFORMATION | | | <input checked="" type="checkbox"/> | I. HAVE TEMPEST REQUIREMENTS | | | <input checked="" type="checkbox"/> |
| H. FOREIGN GOVERNMENT INFORMATION | | | <input checked="" type="checkbox"/> | J. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS | | | <input checked="" type="checkbox"/> |
| I. LIMITED DISSEMINATION INFORMATION | | | <input checked="" type="checkbox"/> | K. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE | | | <input checked="" type="checkbox"/> |
| J. FOR OFFICIAL USE ONLY INFORMATION | | | <input checked="" type="checkbox"/> | L. OTHER (SPECIFY) | | | |
| K. OTHER (SPECIFY) N/A | | | | | | | |

12. PUBLIC RELEASE. Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release

Direct Through (Specify)

**NASA LANGLEY RESEARCH CENTER
ATTN: C. TOM WEIH, M/S 126
HAMPTON, VA 23681-2199**

To the Office of Public Affairs, National Aeronautics and Space Administration, Washington, DC 20546, for review.
*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)

WORK ON THIS CONTRACT WILL BE PERFORMED AT GOVERNMENT FACILITIES WHERE CLASSIFICATION GUIDANCE WILL BE PROVIDED AS NECESSARY.

THE CONTRACTOR MAY BE PROVIDING SUPPORT PERSONNEL FOR ONGOING RESEARCH AND DEVELOPMENT PROGRAMS THAT WILL REQUIRE INDIVIDUALS, DESIGNATED BY GOVERNMENT, TO HAVE A TOP SECRET SECURITY CLEARANCE.

THE CONTRACTOR WILL PROVIDE COPIES OF ANY DD254s ISSUED TO SUBCONTRACTORS WORKING UNDER THIS CONTRACT TO THE ADDRESS SHOWN BELOW IN BOX 16, NO LATER THAN 30 DAYS FROM ISSUANCE.

14. ADDITIONAL SECURITY REQUIREMENTS. Requirements, in addition to ISM requirements, are established for this contract. (If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.)

YES NO

HOWEVER, SPECIAL ACCESS PROJECTS (SAP) TASK MAY BE ISSUED THAT REQUIRE ADDITIONAL SECURITY PROTECTION.

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. (If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.)

Yes No

HOWEVER, ALL SPECIAL ACCESS PROJECTS, ELEMENTS AND AREAS ACCREDITED UNDER THIS CONTRACT WILL BE UNDER THE SECURITY COGNIZANCE OF THE ACTIVITY LISTED:

**ATTN: SAM A. HARVEY, MAIL STOP 450
NASA LANGLEY RESEARCH CENTER
HAMPTON, VA 23681-2199**

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

| | | |
|--------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------|
| a. TYPED NAME OF CERTIFYING OFFICIAL SAM A. HARVEY | b. TITLE PROGRAM SECURITY TEAM LEADER | c. TELEPHONE (Include Area Code) (757) 864-6507 |
|--------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------|

d. ADDRESS (Include Zip Code)
**ATTN: SAM A. HARVEY, MAIL STOP 450
NASA LANGLEY RESEARCH CENTER
HAMPTON, VA 23681-2199**

e. SIGNATURE

17. REQUIRED DISTRIBUTION

| | |
|-------------------------------------|-------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | A. CONTRACTOR |
| <input type="checkbox"/> | B. SUBCONTRACTOR |
| <input checked="" type="checkbox"/> | C. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR |
| <input type="checkbox"/> | D. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION |
| <input checked="" type="checkbox"/> | E. ADMINISTRATIVE CONTRACTING OFFICER |
| <input checked="" type="checkbox"/> | F. OTHERS AS NECESSARY PSM |

EXHIBIT B

CONTRACT DOCUMENTATION REQUIREMENTS

I. DOCUMENTATION PREPARATION/SUBMISSION INSTRUCTIONS

A. Monthly Technical Letter Progress Report--The Contractor shall submit monthly technical letter reports for each task order 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 orders. Reports shall be in narrative form, brief and informal in content. These reports shall include:

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

The monthly progress report shall be submitted within **15 days** after the end of each calendar monthly report period.

B. Monthly Financial Management Report

1. The Contractor shall submit a monthly financial management report as provided by the Section G, Clause 1852.242-73, entitled "NASA Contractor 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 of Paragraphs 2a and 2c below.)

2. For this task order contract a 533M shall be provided for the reporting levels identified below:

- a. For each authorized Task Order.
- b. Summary Report for the total contract.
- 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 **10 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 of the above, 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. Fee
- m. Total Estimated Cost and Fee

C. Quality System Documents (ISO 9001) - The Contractor shall submit the following ISO-compliant documents in accordance with H.9 not later than nine months from the effective date of the contract:

Quality System Manual

Quality System Procedures - these procedures shall address:

(1) contract and subcontract management, (2) customer requirement review and execution, (3) task management, including work order generation and processing, (4) document control, (5) handling of customer supplied product, (6) corrective and preventive action, (7) training of employees, and (8) design control including design of software and hardware.

D. 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 D, 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 orders.

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

F. Evidence of Insurance--The Contractor shall submit evidence of the insurance coverage, required by the NASA Clause 1852.228-75 entitled "Minimum Insurance Coverage" (i.e., a Certificate of Insurance or other confirmation), to the Contracting Officer prior to performing under this contract. In the event the Government exercises its options to extend the term of the contract, the Contractor shall also present such evidence to the Contracting Officer prior to commencement of performance under the extension.

G. Quarterly Accident/Injury Report--The Contractor shall submit a Quarterly Accident/Injury Report within 10 operating days after the end of each quarter.

H. Security Plan for Unclassified Information Technology Resources -- The Contractor shall submit the Security Plan for Unclassified Information Technology Resources in accordance with NASA FAR Supplement Clause 1852.204-76 30 days after contract award.

I. Self Assessment Report -- The Contractor shall submit a Self Assessment Report in accordance with the instructions contained in the Award Fee Evaluation Plan (Exhibit E), including the cost analysis as defined in Part III.C of the plan. The self assessment shall not exceed five pages and shall be delivered to the Government within 25 calendar days from the end of each award fee evaluation period.

J. Safety and Health Plan -- The Contractor shall submit a Safety and Health Plan in accordance with NASA FAR Supplement Clause 1852.223-73, 30 days after contract award.

K. Electronic Task Order Spreadsheet -- The Contractor shall prepare an electronic task order spreadsheet by contract award and maintain it through contract completion. The spreadsheet shall include but not be limited to: (1) task order number, (2) task monitor, organization code, and mail stop, (3) task order cost estimate, (4) task order fee, (5) cumulative actual cost per task order, (6) balance of cost and fee per task order, (7) the number of revisions/modifications per task order, (8) the total estimated cost and fee for issued task orders and (9) the total actual cumulative cost and fee. The spreadsheet shall be made available to the Contracting Officer and the Contracting Officer's Technical Representative upon request.

L. Virginia and Local Sales Taxes--In accordance with Section H.11, you are required to submit a copy of the letter sent to the Virginia Tax Commission and a copy of the subsequent response.

M. Year 2000 Compliance Documentation—In accordance with the clause in H.9 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.

II. DOCUMENT DISTRIBUTION REQUIREMENTS

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

National Aeronautics and Space Administration
Langley Research Center
Attn: Tom Weih, Mail Stop 126
Contract NAS1- 00135
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, unless otherwise specified, by the Contractor:

A--Contract Administrator, Mail Stop 126

B--Contracting Officer Technical Representative, Mail Stop 162

C--New Technology Representative, Mail Stop 212

D--Patent Counsel, Mail Stop 212

E--Cost Accounting, Mail Stop 147

F--LMS Project Officer, Mail Stop 438

G--Task Monitor

H--Security and Public Safety Office, Mail Stop 450

I--NASA Center for Aerospace Information (CASI)
Attn: Accessioning Department
Parkway Center
7121 Standard Drive
Hanover, MD 21076

J--Geoff Tennille, Communications and Computer Systems Branch, Mail Stop 124

For CASI, one copy must be reproducible; plus one 3.5 inch diskette. The diskette text should be MS-DOS or DOS TEXT files and labeled with contract number, content description, date prepared, and type of software used. Encapsulated Post Script level 1.2 is preferred, but WordPerfect 6.x or Microsoft Word 6.x or Adobe portable document format (PDF) or Standard Generalized Markup Language (SGML) or ASCII full-text are acceptable. All graphics must be included. Standard Form 298, Report Documentation Page, shall comply with ANSI Standard Z39-18, OMB Approval 0704-0188. Only Unclassified reports shall be submitted to the NASA Center for AeroSpace Information.

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

DOCUMENTLETTER CODE AND
DISTRIBUTION

| | |
|----------------------------------------------------------|--------------------|
| Monthly Technical Letter Progress Report | A-1, B-1 |
| Monthly Financial Management Report | A-1, B-1, E-2 |
| Safety and Health Plan | A-1, B-1, H-1 |
| Federal Contractor Veterans Employment Report (VETS-100) | A-1 |
| Quality System Documents | A-1, B-1, F-1 |
| Final Reports | A-1, B-1, G-1, I-1 |
| <u>Evidence of Insurance</u> | A-1 |
| Quarterly Accident/Injury Report | A-1, B-1, H-1 |
| Self Assessment Report | A-1, B-1 |
| Security Plan for Unclassified Federal Computer Systems | A-1, J-1 |
| Electronic Task Order Spreadsheet | A-1, B-1 |
| Virginia and Local Sales Taxes Letter | A-1 |
| Year 2000 Compliance Documentation | A-1, B-1 |
| Patent Rights Report | C-1, D-1 |

D. When the Contract Administrator (A) is not designated above to receive a copy of a report or document, the Contractor shall furnish a copy of the report/document transmittal letter to the Contract Administrator. The Contractor shall also furnish a copy of the transmittal letter and a copy of each Financial Management Report to the delegated Administrative Contracting Officer of the cognizant DoD (or other agency) contract administrative services component.

EXHIBIT C

94-2544 VA, NORFOLK

06/08/99

FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU WITH DOL

REGISTER OF WAGE DETERMINATION UNDER

U.S. DEPARTMENT OF LABOR

THE SERVICE CONTRACT ACT

EMPLOYMENT STANDARDS

ADMINISTRATION

By direction of the Secretary of Labor

WAGE AND HOUR DIVISION

Washington, D.C. 20210

Wage Determination No.: 94-2544

Revision No.: 18

Date of Last Revision: 06/03/1999

Division of Wage Determinations

State: North Carolina, Virginia

Areas: North Carolina COUNTIES OF Camden, Chowan, Currituck, Gates, Pasquotank, Perquimans

Virginia COUNTIES OF Gloucester, Isle of Wight, James City, Mathews,

Southampton, Surry, York, Chesapeake, Hampton, Newport News, Norfolk

Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg

** Fringe Benefits Required For All Occupations Included In
This Wage Determination Follow The Occupational Listing **

OCCUPATION CODE AND TITLE

MINIMUM HOURLY WAGE

Administrative Support and Clerical Occupations:

| | |
|--------------------------------------------|----------|
| 01011 Accounting Clerk I | \$ 7.76 |
| 01012 Accounting Clerk II | \$ 9.80 |
| 01013 Accounting Clerk III | \$ 12.19 |
| 01014 Accounting Clerk IV | \$ 13.23 |
| 01030 Court Reporter | \$ 12.43 |
| 01050 Dispatcher, Motor Vehicle | \$ 10.61 |
| 01060 Document Preparation Clerk | \$ 9.38 |
| 01070 Messenger (Courier) | \$ 7.62 |
| 01090 Duplicating Machine Operator | \$ 9.38 |
| 01110 Film/Tape Librarian | \$ 9.28 |
| 01115 General Clerk I | \$ 7.51 |
| 01116 General Clerk II | \$ 9.24 |
| 01117 General Clerk III | \$ 11.49 |
| 01118 General Clerk IV | \$ 12.84 |
| 01120 Housing Referral Assistant | \$ 13.25 |
| 01131 Key Entry Operator I | \$ 8.82 |
| 01132 Key Entry Operator II | \$ 11.10 |
| 01191 Order Clerk I | \$ 8.50 |
| 01192 Order Clerk II | \$ 11.12 |
| 01261 Personnel Assistant (Employment) I | \$ 9.49 |
| 01262 Personnel Assistant (Employment) II | \$ 10.97 |
| 01263 Personnel Assistant (Employment) III | \$ 11.58 |
| 01264 Personnel Assistant (Employment) IV | \$ 13.27 |
| 01270 Production Control Clerk | \$ 13.78 |
| 01290 Rental Clerk | \$ 9.97 |
| 01300 Scheduler, Maintenance | \$ 9.97 |
| 01311 Secretary I | \$ 9.97 |

| | |
|-----------------------------------------|----------|
| 01312 Secretary II | \$ 11.60 |
| 01313 Secretary III | \$ 13.25 |
| 01314 Secretary IV | \$ 15.53 |
| 01315 Secretary V | \$ 16.30 |
| 01320 Service Order Dispatcher | \$ 10.67 |
| 01341 Stenographer I | \$ 10.10 |
| 01342 Stenographer II | \$ 11.34 |
| 01400 Supply Technician | \$ 13.23 |
| 01420 Survey Worker (Interviewer) | \$ 10.80 |
| 01460 Switchboard Operator-Receptionist | \$ 8.08 |

| | |
|--------------------------|----------|
| 01510 Test Examiner | \$ 11.60 |
| 01520 Test Proctor | \$ 11.60 |
| 01531 Travel Clerk I | \$ 7.57 |
| 01532 Travel Clerk II | \$ 8.08 |
| 01533 Travel Clerk III | \$ 8.62 |
| 01611 Word Processor I | \$ 10.00 |
| 01612 Word Processor II | \$ 11.27 |
| 01613 Word Processor III | \$ 12.62 |

Automatic Data Processing Occupations:

| | |
|---------------------------------------|----------|
| 03010 Computer Data Librarian | \$ 8.26 |
| 03041 Computer Operator I | \$ 9.25 |
| 03042 Computer Operator II | \$ 10.70 |
| 03043 Computer Operator III | \$ 13.25 |
| 03044 Computer Operator IV | \$ 15.34 |
| 03045 Computer Operator V | \$ 16.31 |
| 03071 Computer Programmer I 1/ | \$ 15.39 |
| 03072 Computer Programmer II 1/ | \$ 17.42 |
| 03073 Computer Programmer III 1/ | \$ 20.76 |
| 03074 Computer Programmer IV 1/ | \$ 24.75 |
| 03101 Computer Systems Analyst I 1/ | \$ 19.38 |
| 03102 Computer Systems Analyst II 1/ | \$ 22.32 |
| 03103 Computer Systems Analyst III 1/ | \$ 27.48 |
| 03160 Peripheral Equipment Operator | \$ 9.50 |

Automotive Service Occupations:

| | |
|--------------------------------------------|----------|
| 05005 Automobile Body Repairer, Fiberglass | \$ 16.22 |
| 05010 Automotive Glass Installer | \$ 14.79 |
| 05040 Automotive Worker | \$ 14.79 |
| 05070 Electrician, Automotive | \$ 15.49 |
| 05100 Mobile Equipment Servicer | \$ 13.37 |
| 05130 Motor Equipment Metal Mechanic | \$ 16.22 |
| 05160 Motor Equipment Metal Worker | \$ 14.79 |
| 05190 Motor Vehicle Mechanic | \$ 16.22 |
| 05220 Motor Vehicle Mechanic Helper | \$ 12.61 |
| 05250 Motor Vehicle Upholstery Worker | \$ 14.07 |
| 05280 Motor Vehicle Wrecker | \$ 14.79 |
| 05310 Painter, Automotive | \$ 15.49 |
| 05340 Radiator Repair Specialist | \$ 14.07 |
| 05370 Tire Repairer | \$ 13.37 |
| 05400 Transmission Repair Specialist | \$ 16.22 |

Food Preparation and Service Occupations:

| | |
|----------------------------------------------|---------|
| 07010 Baker | \$ 8.68 |
| 07041 Cook I | \$ 7.85 |
| 07042 Cook II | \$ 8.68 |
| 07070 Dishwasher | \$ 6.96 |
| 07100 Food Service Worker (Cafeteria Worker) | \$ 6.30 |
| 07130 Meat Cutter | \$ 9.85 |
| 07250 Waiter/Waitress | \$ 6.58 |

Furniture Maintenance and Repair Occupations:

| | |
|-----------------------------------|----------|
| 09010 Electrostatic Spray Painter | \$ 17.81 |
| 09040 Furniture Handler | \$ 12.89 |
| 09070 Furniture Refinisher | \$ 15.49 |
| 09100 Furniture Refinisher Helper | \$ 12.61 |
| 09110 Furniture Repairer, Minor | \$ 14.07 |
| 09130 Upholsterer | \$ 15.49 |

General Service and Support Occupations:

| | |
|------------------------------------|---------|
| 11030 Cleaner, Vehicles | \$ 6.96 |
| 11060 Elevator Operator | \$ 6.05 |
| 11090 Gardener | \$ 8.91 |
| 11121 Housekeeping Aide I | \$ 6.70 |
| 11122 Housekeeping Aide II | \$ 7.46 |
| 11150 Janitor | \$ 6.96 |
| 11210 Laborer, Grounds Maintenance | \$ 7.57 |
| 11240 Maid or Houseman | \$ 6.24 |
| 11270 Pest Controller | \$ 8.25 |
| 11300 Refuse Collector | \$ 6.96 |
| 11330 Tractor Operator | \$ 8.49 |
| 11360 Window Cleaner | \$ 7.57 |

Health Occupations:

| | |
|---------------------------------------------------------------|----------|
| 12020 Dental Assistant | \$ 10.26 |
| 12040 Emergency Medical Technician/Paramedic Ambulance Driver | \$ 10.26 |
| 12071 Licensed Practical Nurse I | \$ 9.40 |
| 12072 Licensed Practical Nurse II | \$ 10.55 |
| 12073 Licensed Practical Nurse III | \$ 11.80 |
| 12100 Medical Assistant | \$ 9.46 |
| 12130 Medical Laboratory Technician | \$ 10.11 |
| 12160 Medical Record Clerk | \$ 10.13 |
| 12190 Medical Record Technician | \$ 12.71 |
| 12221 Nursing Assistant I | \$ 6.66 |
| 12222 Nursing Assistant II | \$ 7.49 |
| 12223 Nursing Assistant III | \$ 8.17 |
| 12224 Nursing Assistant IV | \$ 9.17 |
| 12250 Pharmacy Technician | \$ 11.44 |
| 12280 Phlebotomist | \$ 10.55 |
| 12311 Registered Nurse I | \$ 14.62 |
| 12312 Registered Nurse II | \$ 17.88 |
| 12313 Registered Nurse II, Specialist | \$ 17.88 |
| 12314 Registered Nurse III | \$ 21.64 |
| 12315 Registered Nurse III, Anesthetist | \$ 21.64 |

12316 Registered Nurse IV \$ 25.93

Information and Arts Occupations:

13002 Audiovisual Librarian \$ 13.75
 13011 Exhibits Specialist I \$ 15.02
 13012 Exhibits Specialist II \$ 18.25
 13013 Exhibits Specialist III \$ 20.27
 13041 Illustrator I \$ 15.02
 13042 Illustrator II \$ 18.25
 13043 Illustrator III \$ 20.27
 13047 Librarian \$ 15.81
 13050 Library Technician \$ 11.02
 13071 Photographer I \$ 11.33
 13072 Photographer II \$ 15.02
 13073 Photographer III \$ 18.25
 13074 Photographer IV \$ 20.27
 13075 Photographer V \$ 24.53

Laundry, Drycleaning, Pressing and Related Occups:

15010 Assembler \$ 5.83
 15030 Counter Attendant \$ 5.83
 15040 Dry Cleaner \$ 7.18
 15070 Finisher, Flatwork, Machine \$ 5.83
 15090 Presser, Hand \$ 5.83

 15100 Presser, Machine, Drycleaning \$ 5.83
 15130 Presser, Machine, Shirts \$ 5.83
 15160 Presser, Machine, Wearing Apparel, Laundry \$ 5.83
 15190 Sewing Machine Operator \$ 7.66
 15220 Tailor \$ 8.13
 15250 Washer, Machine \$ 6.28

Machine Tool Operation and Repair Occupations:

19010 Machine-Tool Operator (Toolroom) \$ 15.49
 19040 Tool and Die Maker \$ 17.84

Materials Handling and Packing Occupations:

21010 Fuel Distribution System Operator \$ 13.37
 21020 Material Coordinator \$ 14.02
 21030 Material Expediter \$ 14.02
 21040 Material Handling Laborer \$ 8.56
 21050 Order Filler \$ 8.46
 21071 Forklift Operator \$ 10.36
 21080 Production Line Worker (Food Processing) \$ 10.54
 21100 Shipping/Receiving Clerk \$ 10.18
 21130 Shipping Packer \$ 10.18
 21140 Store Worker I \$ 8.40
 21150 Stock Clerk (Shelf Stocker; Store Worker II) \$ 10.51
 21210 Tools and Parts Attendant \$ 12.54
 21400 Warehouse Specialist \$ 12.07

Mechanics and Maintenance and Repair Occupations:

| | |
|------------------------------------------------------------|----------|
| 23010 Aircraft Mechanic | \$ 17.75 |
| 23040 Aircraft Mechanic Helper | \$ 13.80 |
| 23050 Aircraft Quality Control Inspector | \$ 18.53 |
| 23060 Aircraft Servicer | \$ 15.39 |
| 23070 Aircraft Worker | \$ 16.18 |
| 23100 Appliance Mechanic | \$ 15.49 |
| 23120 Bicycle Repairer | \$ 13.37 |
| 23125 Cable Splicer | \$ 16.22 |
| 23130 Carpenter, Maintenance | \$ 15.49 |
| 23140 Carpet Layer | \$ 17.01 |
| 23160 Electrician, Maintenance | \$ 16.22 |
| 23181 Electronics Technician, Maintenance I | \$ 14.09 |
| 23182 Electronics Technician, Maintenance II | \$ 14.41 |
| 23183 Electronics Technician, Maintenance III | \$ 15.44 |
| 23260 Fabric Worker | \$ 14.07 |
| 23290 Fire Alarm System Mechanic | \$ 16.22 |
| 23310 Fire Extinguisher Repairer | \$ 13.37 |
| 23340 Fuel Distribution System Mechanic | \$ 16.22 |
| 23370 General Maintenance Worker | \$ 14.79 |
| 23400 Heating, Refrigeration and Air-Conditioning Mechanic | \$ 16.22 |
| 23430 Heavy Equipment Mechanic | \$ 16.22 |
| 23440 Heavy Equipment Operator | \$ 16.22 |
| 23460 Instrument Mechanic | \$ 16.22 |
| 23470 Laborer | \$ 9.68 |
| 23500 Locksmith | \$ 15.49 |
| 23530 Machinery Maintenance Mechanic | \$ 16.18 |
| 23550 Machinist, Maintenance | \$ 16.22 |
| 23580 Maintenance Trades Helper | \$ 12.61 |
| 23640 Millwright | \$ 18.65 |
| 23700 Office Appliance Repairer | \$ 15.49 |
| 23740 Painter, Aircraft | \$ 15.49 |
| 23760 Painter, Maintenance | \$ 15.49 |
| 23790 Pipefitter, Maintenance | \$ 16.22 |
| 23800 Plumber, Maintenance | \$ 15.49 |
| 23820 Pneudraulic Systems Mechanic | \$ 16.22 |
| 23850 Rigger | \$ 16.22 |
| 23870 Scale Mechanic | \$ 14.79 |
| 23890 Sheet-Metal Worker, Maintenance | \$ 16.22 |
| 23910 Small Engine Mechanic | \$ 14.79 |
| 23930 Telecommunications Mechanic I | \$ 16.22 |
| 23931 Telecommunications Mechanic II | \$ 19.48 |
| 23950 Telephone Lineman | \$ 16.22 |
| 23960 Welder, Combination, Maintenance | \$ 16.22 |
| 23965 Well Driller | \$ 16.22 |
| 23970 Woodcraft Worker | \$ 16.22 |
| 23980 Woodworker | \$ 13.37 |

Personal Needs Occupations:

| | |
|-------------------------------|---------|
| 24570 Child Care Attendant | \$ 6.34 |
| 24580 Child Care Center Clerk | \$ 9.10 |
| 24600 Chore Aide | \$ 5.92 |
| 24630 Homemaker | \$ 9.58 |

Plant and System Operation Occupations:

| | |
|--------------------------------------|----------|
| 25010 Boiler Tender | \$ 16.22 |
| 25040 Sewage Plant Operator | \$ 17.21 |
| 25070 Stationary Engineer | \$ 16.22 |
| 25190 Ventilation Equipment Tender | \$ 12.61 |
| 25210 Water Treatment Plant Operator | \$ 17.21 |

Protective Service Occupations:

| | |
|------------------------------|----------|
| 27004 Alarm Monitor | \$ 8.29 |
| 27006 Corrections Officer | \$ 11.91 |
| 27010 Court Security Officer | \$ 11.91 |
| 27040 Detention Officer | \$ 11.91 |
| 27070 Firefighter | \$ 13.19 |
| 27101 Guard I | \$ 6.93 |
| 27102 Guard II | \$ 8.29 |
| 27130 Police Officer | \$ 14.25 |

Stevedoring/Longshoremen Occupational Services:

| | |
|--------------------------|----------|
| 28010 Blocker and Bracer | \$ 14.18 |
| 28020 Hatch Tender | \$ 12.33 |
| 28030 Line Handler | \$ 12.33 |
| 28040 Stevedore I | \$ 13.57 |
| 28050 Stevedore II | \$ 14.90 |

Technical Occupations:

| | |
|-----------------------------------------------------------|----------|
| 29010 Air Traffic Control Specialist, Center 2/ | \$ 24.90 |
| 29011 Air Traffic Control Specialist, Station 2/ | \$ 17.17 |
| 29012 Air Traffic Control Specialist, Terminal 2/ | \$ 18.91 |
| 29023 Archeological Technician I | \$ 11.43 |
| 29024 Archeological Technician II | \$ 12.85 |
| 29025 Archeological Technician III | \$ 15.87 |
| 29030 Cartographic Technician | \$ 15.87 |
| 29035 Computer Based Training (CBT) Specialist/Instructor | \$ 20.26 |
| 29040 Civil Engineering Technician | \$ 18.25 |
| 29061 Drafter I | \$ 10.07 |
| 29062 Drafter II | \$ 11.33 |
| 29063 Drafter III | \$ 14.24 |
| 29064 Drafter IV | \$ 17.30 |
| 29081 Engineering Technician I | \$ 12.06 |
| 29082 Engineering Technician II | \$ 12.90 |
| 29083 Engineering Technician III | \$ 15.89 |
| 29084 Engineering Technician IV | \$ 19.25 |
| 29085 Engineering Technician V | \$ 22.48 |
| 29086 Engineering Technician VI | \$ 27.78 |
| 29090 Environmental Technician | \$ 15.87 |
| 29100 Flight Simulator/Instructor (Pilot) | \$ 23.32 |
| 29150 Graphic Artist | \$ 17.62 |
| 29160 Instructor | \$ 17.51 |
| 29210 Laboratory Technician | \$ 11.86 |
| 29240 Mathematical Technician | \$ 15.87 |

| | |
|------------------------------------------------------------------|----------|
| 29361 Paralegal/Legal Assistant I | \$ 10.80 |
| 29362 Paralegal/Legal Assistant II | \$ 13.12 |
| 29363 Paralegal/Legal Assistant III | \$ 16.05 |
| 29364 Paralegal/Legal Assistant IV | \$ 19.42 |
| 29390 Photooptics Technician | \$ 18.25 |
| 29480 Technical Writer | \$ 15.02 |
| 29491 Unexploded Ordnance Technician I | \$ 15.82 |
| 29492 Unexploded Ordnance Technician II | \$ 19.15 |
| 29493 Unexploded Ordnance Technician III | \$ 22.95 |
| 29494 Unexploded Safety Escort | \$ 15.82 |
| 29495 Unexploded Sweep Personnel | \$ 15.82 |
| 29620 Weather Observer, Senior 3/ | \$ 14.72 |
| 29621 Weather Observer, Combined Upper Air & Surface Programs 3/ | \$ 13.60 |
| 29622 Weather Observer, Upper Air 3/ | \$ 13.60 |

Transportation/Mobile Equipment Operation Occups:

| | |
|------------------------------------|----------|
| 31030 Bus Driver | \$ 9.42 |
| 31260 Parking and Lot Attendant | \$ 6.98 |
| 31290 Shuttle Bus Driver | \$ 9.01 |
| 31300 Taxi Driver | \$ 8.50 |
| 31361 Truckdriver, Light Truck | \$ 9.01 |
| 31362 Truckdriver, Medium Truck | \$ 9.42 |
| 31363 Truckdriver, Heavy Truck | \$ 11.18 |
| 31364 Truckdriver, Tractor-Trailer | \$ 11.18 |

Miscellaneous Occupations:

| | |
|------------------------------------------------------------------|----------|
| 99020 Animal Caretaker | \$ 7.00 |
| 99030 Cashier | \$ 6.23 |
| 99041 Carnival Equipment Operator | \$ 8.49 |
| 99042 Carnival Equipment Repairer | \$ 8.91 |
| 99043 Carnival Worker | \$ 6.05 |
| 99050 Desk Clerk | \$ 7.00 |
| 99095 Embalmer | \$ 17.63 |
| 99300 Lifeguard | \$ 6.16 |
| 99310 Mortician | \$ 17.63 |
| 99350 Park Attendant (Aide) | \$ 7.74 |
| 99400 Photofinishing Worker (Photo Lab Tech., Darkroom Tech) | \$ 6.91 |
| 99500 Recreation Specialist | \$ 13.04 |
| 99510 Recycling Worker | \$ 8.52 |
| 99610 Sales Clerk | \$ 6.16 |
| 99620 School Crossing Guard (Crosswalk Attendant) | \$ 6.96 |
| 99630 Sports Official | \$ 6.16 |
| 99658 Survey Party Chief (Chief of Party) | \$ 9.49 |
| 99659 Surveying Technician (Instr. Person/Surveyor Asst./Instr.) | \$ 8.63 |
| 99660 Surveying Aide | \$ 5.92 |
| 99690 Swimming Pool Operator | \$ 8.68 |
| 99720 Vending Machine Attendant | \$ 8.52 |
| 99730 Vending Machine Repairer | \$ 9.98 |
| 99740 Vending Machine Repairer Helper | \$ 8.52 |

** Fringe Benefits Required For All Occupations Included In
This Wage Determination **

HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of \$2.56 per hour computed on the basis of all hours worked by service employees employed on the contract.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years; 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with predecessor contractors in the performance of similar work at the same Federal facility. (See 29 CFR 4.173)

HOLIDAYS: Minimum of ten paid holidays per year: New Year's Day, Martin Luther King JR's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

1/ Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See 29 CFR 4.156)

2/ **APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL:** An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3/ **WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY:** If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employee (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$4.25 per week (or \$.85 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Titles and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Second Supplement, dated August 1995, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or

by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE
 {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

EXHIBIT D**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 are of 7-1/8 by 9-3/16 inches

EXHIBIT E

AWARD FEE EVALUATION PLAN

NASA CONTRACT NAS1-00135

SYSTEMS ANALYSIS AND MISSION SUPPORT (SAMS) CONTRACT

CONTENTS

| | |
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| PART I | AWARD FEE EVALUATION BOARD CHARTER AND MEMBERS |
| PART II | EVALUATION PROCESS |
| PART III | EVALUATION FACTORS AND CONSIDERATIONS |
| PART IV | CHANGES TO EVALUATION PLAN |
| EXHIBIT A | EVALUATION PROCESS FLOW CHART |
| EXHIBIT B | SCORING GUIDELINES |

PART I - AWARD FEE EVALUATION BOARD CHARTER AND MEMBERS

A. General

The Award Fee Evaluation Board (AFEB) derives its authority from Langley Research Center memorandum signed by the Center Director dated _____.

The Charter of the AFEB is to maintain an organization and establish a method of operation which will ensure acquisition of data necessary to permit a valid semi-annual assessment of the Contractor's performance in the following three (3) areas: Technical Performance, Management and Safety, and Cost. The AFEB is to develop an evaluation plan, evaluate the Contractor's overall performance concerning the contract work, discuss such evaluations with the Contractor, and submit to the Fee Determination Official (FDO) a fee recommendation for each evaluation period with applicable results and findings.

B. Award Fee Evaluation Board

The AFEB Membership consists of those individuals appointed in the memorandum dated _____ signed by the Center Director. Changes in the AFEB Chairman, other Voting members, secretary, and coordinators will be approved by the FDO. Changes in monitors will be approved by the AFEB Chairperson. Any changes in the FDO will be made by the Center Director. The Contractor will be provided with copies of any such changes.

PART II - EVALUATION PROCESS

The participants in the award fee process and the process itself are described below:

- A. AFEB Meeting - The meetings will be scheduled so that the evaluation process can be completed and the Determination and Findings presented to the FDO for action within 45 days following completion of the evaluation period. At least four voting AFEB members shall be present in order to conduct the meeting.
- B. AFEB Chairperson - A NASA Langley employee designated to lead the award fee evaluation process. The Chair is responsible for leading the preparation of the award fee plan and for all meetings of the Board. The Chair shall schedule all meetings so that the evaluation process can be completed within the time allotted. If the AFEB Chair is unavailable to schedule and conduct the meeting, the FDO shall appoint one of the other voting members to serve as Chairperson for the award fee evaluation period.
- C. AFEB Secretary - A NASA Langley employee responsible for the documentation of the activities of the Board. The Secretary is responsible for the minutes of meetings or other documentation that summarizes the information reviewed, including any additional information provided by the contractor, and the consideration given to all such information. Announcements, documentation and files are important to support the meetings and recommendations of the Board.
- D. Monitor - A NASA Langley employee designated to observe, assess, and report the performance by the Contractor on a specified Task Order. Monitors are identified on the Task Orders. The monitor will complete a semi-annual Task Order performance report using the standards/metrics specified in the Task Orders as the basis for evaluation. The monitor will assign an overall adjective and numerical rating to Task Orders, with consideration given to quality and timeliness, using the definitions set forth in Exhibit B. In addition, the technical monitor shall indicate any major strengths or weaknesses that need to be brought to the AFEB's attention.
- E. Contractor - The Contractor shall submit a 5-page (or less) self-assessment report including the 2 cost analysis reports (not included in the 5-page limitation) to the technical and business coordinators within 25 days from the end of each 6-month evaluation period. The report shall contain any pertinent information that is considered critical to the evaluation process. This report will be used by the technical and business coordinators in assessing the Contractor's performance for the period. Furthermore, the Contractor will have

the opportunity to provide a 30 minute presentation to the AFEB on the day of the meeting following each evaluation period.

- F. Coordinators - NASA Langley employees designated to receive, validate, and assess the monitors' reports and present performance information to the AFEB. Coordinators have been appointed as set forth in Part I above by the Center Director.

There are two coordinators for this contract. The technical coordinator is responsible for documenting and presenting the evaluation of the Contractor's Technical Performance, and Management and Safety. The business coordinator will address Cost and support the technical coordinator in addressing Management and Safety.

The technical coordinator will review and consolidate the monitors' semi-annual evaluation reports and input their adjective and numerical ratings into a database, which will average the total numerical score. The technical coordinator will make an independent assessment of the performance rendered by the Contractor and may modify monitor input if circumstances warrant doing so. The technical coordinator will present the final score along with any significant strengths/weaknesses and input from the Contractor to the AFEB. The technical coordinator will then perform and document strengths and weaknesses of the Contractor's performance under Management and Safety (with input from the business coordinator), and assign an adjective rating.

The business coordinator will evaluate Cost and assign an adjective rating as described in Exhibit B. The business coordinator will also review the cost analysis as defined below and present the findings to the AFEB. Under Management and Safety, the business coordinator will take into account the effectiveness of the Contractor in recognizing and resolving business problems. The business coordinator will document strong and weak points in reference to business management along with the results of the Cost analysis and report the findings to the AFEB.

The coordinators' reports will be forwarded to the AFEB at least 2 days prior to the scheduled AFEB meeting. The coordinators will present an oral briefing of their evaluation results to the AFEB at the evaluation meetings.

- G. AFEB - A team of NASA Langley employees who perform a review of all aspects of Contractor performance and recommend an appropriate performance rating and fee amount to the FDO. All changes to the voting member appointments will be approved by the FDO.

The AFEB will develop an evaluation plan for evaluating the Contractor's performance and will periodically review the plan to determine if it is still current and whether any changes are necessary. The AFEB will convene on a schedule that ensures completion of the total award fee process within 60 days according to Exhibit A.

The AFEB will receive written and oral evaluation reports from the coordinators. Using the approved evaluation plan and giving due consideration to all known performance data, the Board will assess the Contractor's overall performance. The Board will develop an adjective rating as set forth in Exhibit B for each of the evaluation factors: Technical Performance, Management and Safety and Cost. The adjective ratings will then be converted to a numerical rating.

The Board will then weigh each of the factor numerical ratings by the Factor weights as follows:

| | |
|-----------------------|-----|
| Technical Performance | 50% |
| Management and Safety | 25% |
| Cost | 25% |

The Board will then sum the weighted scores to derive a recommended award fee rating. The Board will review the rating to ensure that it reflects the consensus regarding the Contractor's total overall performance for the period. The Board will then derive a recommended fee amount.

The AFEB will provide the Contractor with a briefing of the evaluation findings. The Board will consider any further performance data offered by the Contractor, and if necessary, will revise evaluation findings, adjective ratings, and recommend a fee rating to reflect this additional information. The Board will document its evaluation results and recommend a fee amount for transmittal to the FDO. If the FDO's final determination of award fee is different from that recommended by the Board, the FDO will document the rationale for the Board's file. The business coordinator will prepare a "Notice of Award Fee" for transmittal by the Contracting Officer to the Contractor.

The Office of Procurement will maintain the official award fee evaluation files containing: the AFEB Establishment Memorandum and revisions, evaluation plan and revisions, minutes of meetings, coordinators' and monitors' reports, contractor submittals, general correspondence, memoranda to the FDO, determinations of award fee, notices of award fee, and other documents of significance.

- H. Fee Determination Official - A member of Langley Research Center's management designated to review the semi-annual recommendation of the AFEB in order to make a final determination of award fee.

PART III - EVALUATION FACTORS AND CONSIDERATIONS

The following is a description of evaluation factors to be considered. The Contractor's performance levels will be assessed for each factor using the adjective ratings described in Exhibit B. The evaluation process will encompass actual performance and the conditions under which it was achieved. For example, performance will be considered in light of the priorities and workload existing during the evaluation period, taking into consideration factors beyond the Contractor's control, which either enhanced or detracted from performance.

A. Technical Performance - The effectiveness of the Contractor's overall technical performance will be evaluated. Consideration will be given to quality and timeliness. The primary basis of the evaluation will be the specific standards/metrics listed in individual Task Orders.

B. Management and Safety - This factor is evaluated at the contract level, and carries a weight of 25% of the total available fee for each Award Fee Period. The effectiveness of the Contractor's overall technical and business management will be evaluated. Consideration will be given to:

- Management effectiveness
- Response to emergency and other urgent tasks
- Recognition, resolution and prevention of problems
- Quality and timeliness of required documentation
- Communications/cooperation/working relationships with Government
- Effective staffing of the contract (including training)
- Soundness of management systems (e.g., purchasing and subcontracting, time and attendance, control of Government property, work scheduling and control)
- Adequacy of equipment and other tools to perform the contract
- Trends or recurring problems

The Contractor's safety and health program and record will also be evaluated as part of this Factor. Areas to be considered are the company's emphasis on safety, the effectiveness of the safety organization, safety training, actions taken to prevent accidents or safety violations, recognition of safety hazards/violations and remedial actions, and the timeliness and adequacy of required safety documentation. An analysis will be made of lost-time and other accidents, the number, types, duration of lost time, and reasons for the accidents. An assessment will be made as to whether accidents represent isolated instances or are symptomatic of a contractor safety program deficiency.

The technical and business coordinators will consider any other actions that significantly contribute to or detract from effective management.

C. **Cost** - The effectiveness of the Contractor's management of cost will be evaluated. The cost evaluation will be based on the Task Orders performed during the 6-month evaluation period and an overall assessment of the Contractor's indirect rates. The Contractor will be required to submit a task plan that basically describes the technical approach and a proposed cost for performing the work prior to issuing each Task Order. The proposed cost of each Task Order will be based on a schedule of rates (both direct and indirect) that will be contained in the Contract Schedule, Section G, G.13, Schedule of Rates for Task Orders. There will be two Task Order cost analyses applicable to the award fee process

Definitions:

- A. **Task Order Planned Cost** = The final negotiated cost of the individual Task Order applicable to the 6-month evaluation period
- B. **Task Order Actual Cost** = The final cumulative cost incurred in performing the Task Order for the 6-month evaluation period taken directly from the NASA Financial Management Report (533)
- C. **Total Planned Cost** = The sum of the planned cost for all Task Orders performed during the 6-month evaluation period
- D. **Total Actual Cost** = The sum of the actual cost for all Task Orders performed during the 6-month evaluation period

Cost Analysis No.1:

The **Task Order Actual Cost** will be compared to the **Task Order Planned Cost** for each Task Order performed during the 6-month evaluation period. The numerical score under Cost Analysis 1 will be based on the percentage of tasks that fall at or below 105% of the **Task Order Planned Cost**.

Cost Analysis No. 2:

The **Total Planned Cost** for all Task Orders performed during the 6-month evaluation period will be compared to the **Total Actual Costs** for the same Task Orders.

Cost Analysis Report – Appendix 1

The Contractor shall prepare and submit both Cost Analysis calculations using the definitions above and include them as Appendix 1 to the self-assessment report. The analysis shall include:

1. A listing of all Task Orders performed during the 6-month evaluation period.
2. The **Task Order Planned Cost** of all Task Orders performed during the 6-month evaluation period.
3. The **Task Order Actual Cost** of all Task Orders performed during the 6-month evaluation period.
4. The percentage of Task Orders where the **Task Order Actual Cost** falls at or below 105% of the **Task Order Planned Cost**.
5. The **Total Planned Cost** of all Task Orders performed during the 6-month evaluation period.
6. The **Total Actual Cost** of all Task Orders performed during the 6-month evaluation period.

The Government reserves the right to adjust both analysis listed above to correct errors in the Contractors calculations or to factor in other circumstances that occurred during the six-month evaluation period.

PART IV - CHANGES TO EVALUATION PLAN

Throughout the period of performance, both parties to the contract are encouraged to submit suggestions for improving management emphasis, motivating higher performance levels, or simplifying the evaluation process. Both the Government and the contractor should work to eliminate any unnecessary contractual, organizational, or conceptual barriers that impede a partnering relationship.

Any changes to this award fee evaluation plan will be made by the AFEB and will be approved by the AFEB Chairman. Changes will be made available to the Contractor, through the Contracting Officer, prior to the first evaluation period in which the change will be effective.

EXHIBIT A

ACTIONS AND SCHEDULES FOR AWARD FEE DETERMINATIONS

The following is a summary of the principal actions involved in determining the award fee for the evaluation periods.

| <u>Action</u> | <u>Schedule (Calendar Days)</u> |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 1. AFEB Chair and members appointed | Prior to contract award. |
| 2. AFEB considers reports and other requested performance information. | On-going |
| 3. Technical Monitors submit evaluation reports | NLT 14 days after end of each award fee period. |
| 4. Contractor submits self assessment report. | NLT 25 days after end of each award fee period. |
| 5. AFEB meets and summarizes preliminary findings. | NLT 39 days after end of each award fee period. |
| 6. AFEB meets with the Contractor to discuss preliminary findings. | NLT 39 days after end of each award fee period. |
| 7. AFEB establishes findings and recommendations for the Award Fee Evaluation Report (AFER). | NLT 39 days after end of each award fee period. |
| 8. AFEB chair submits AFER to the FDO. | NLT 40 days after end of each award fee period. |
| 9. FDO considers the AFER and discusses it with AFEB, as appropriate. | NLT 44 days after end of each award fee period. |
| 10. FDO signs award fee determination letter. Office of Procurement sends notification of Award Fee to the Contractor. | NLT 45 days after end of each award fee period. |
| 11. Payment made to Contractor. | NLT 60 days after end of period. |

EXHIBIT B- AWARD FEE PLAN

SCORING GUIDELINES

Each evaluation factor is scored based on these guidelines. The determining percentage for each factor is weighted to derive a recommended award fee rating.

| <u>Adjective</u> | <u>Description</u> | <u>Percentage of Award Fee</u> |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Excellent | Of exceptional merit; exemplary performance in a timely, efficient, and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance. | 91-100 |
| Very Good | Very effective performance, fully responsive to contract requirements accomplished in a timely, efficient, and economical manner for the most part. Only minor deficiencies. | 81-90 |
| Good | Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance. | 71-80 |
| Satisfactory | Meets or slightly exceeds minimum acceptable standards; adequate results. Reportable deficiencies with identifiable, but not substantial, effects on overall performance. | 61-70 |
| Poor/ Unsatisfactory | Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas which adversely affect overall performance | 60 and Below* |

Any factor receiving a grade of "Poor/Unsatisfactory" (less than 61) will be assigned zero performance points for purposes of calculating the award fee amount. The Contractor will not be paid any award fee when the total award fee score is "Poor/Unsatisfactory" (less than 61).

EXHIBIT F
Safety and Health Plan

EXHIBIT G**Direct Labor Classification Descriptions****Technical Professional**

| Exp. Levels | Recommended Education and Years of Work Experience |
|--------------------|-----------------------------------------------------------------------------------------------------|
| Category I | Entry Level Eng., BS Degree in Eng. |
| Category II | Masters Degree with <3 yrs. Exp., Bachelors Degree with <5 yrs. Exp. |
| Category III | Ph.D. with <3 yrs., Masters Degree with 3-6 yrs. Exp., Bachelors Degree with 5-10 yrs. Exp. |
| Category IV | Ph.D. with ≥ 3 years exp., Masters Degree with >6 yrs. Exp., Bachelors Deg. with >10 yrs. Exp. |
| Category V | Ph.D. with ≥ 10 years exp., Masters Degree with >15 yrs. |

Support Personnel

| Exp. Levels | Recommended Education and Years of Work Experience |
|--------------------|-----------------------------------------------------------|
| Category I | High School |
| Category II | BA Degree or 10 Yrs. Minimum Exp. |
| Category III | MA, or BA with 5+ Yrs., or 15+ Yrs. Exp. |
| Category IV | MA with 5+ Years Exp., BA with 10+ Yrs., or 20+ Yrs. Exp. |

Technicians

| Exp. Levels | Recommended Education and Years of Work Experience |
|--------------------|-----------------------------------------------------------|
| Category I | High School |
| Category II | AA Degree, or Minimum 5 Yrs. Exp. |
| Category III | AA Degree with 5+ Yrs. Exp., or Minimum 10 Yrs. Exp. |
| Category IV | AA Degree with 10+ Yrs. Exp., or Minimum 20 Yrs. Exp. |

Technical Professional:

Computer Scientist - Resolves a variety of difficult operation problems (e.g., making unusual equipment connections and rarely used equipment and channel configurations to direct processing through or around problems in equipment, circuits, or channels or reviewing test run requirements and developing unusual system configurations that will allow test programs to process without interfering with ongoing job requirements). May spend considerable time providing technical assistance to lower level operators and assisting programmers, systems analysts, and subject matter specialists in resolving problems.

Programmer - Develops and implements computer codes to accomplish research objectives. Modifies existing codes to meet new requirements. Troubleshoots problems as needed.

Systems Analyst - Monitors and maintains computer system resources. Troubleshoots and corrects hardware problems.

— **Operation Aircraft Pilot** - Provides pilot capabilities for aircraft or simulated aircraft. Assists with project activities that benefit from pilot expertise.

Engineer - Develops engineering specifications based on research requirements; develops designs, performs supporting analyses, documents findings.

Project Manager - Responsible for overall project implementation. Tracks progress and resources (cost & manpower). Documents and reports progress and deficiencies. Recommends and implements strategies for solving problems.

Engineer Supervisor - Provides line management for engineering and technical personnel. Ensures appropriate utilization of resources and reports individual performance.

Research Scientist - Senior-level engineering or research personnel providing direct research support. Duties include basic research, design and development of tests, supervision and performance of tests as well as professional level documentation such as journal articles.

Senior Scientist - Nationally or worldwide recognized scientific expert in a specific discipline. Performs highly specialized, one-of-a-kind research tasks in direct support of mission requirements. Capable of extending state-of-the-art to a significant degree.

Support Personnel:

Administrative Associate - Performs specialized administrative support tasks of non-routine and non-repetitive nature to assist technical, and/or administrative personnel. Performs professional level tasks requiring independent judgment, initiative and tact.

Project Planner - Coordinates and organizes projects, develops Work Breakdown Structures and logic diagrams. Supports Project Manager in information management for the project.

Programmer - Performs administrative data entry tasks such as schedule and resource database updates. Collates and collects data for Projects

Documentarian - Serves as focal point for development of Project Libraries; including information management and tracking. Develops document trees and procedures governing project activities.

Scheduler/Cost Analyst - Develops and maintains project level budgets and schedules. Tracks and updates project progress through use of computer-based COTS software.

Air Traffic Controller – Supports research by providing air traffic control expertise based on experience with air traffic flow and management requirements, and relevant National Aerospace System Components.

Technician:

Electronic Technician - Applies technical knowledge of electronics principles in determining equipment malfunctions, and applies skill in restoring equipment operations.

Test Assistant - conducts routine tests or experiments; records and evaluates data and reports findings. At higher levels, may plan approach and conduct various experiments; may arrange for fabrication of support equipment; may determine test procedures and design of special test equipment.

Designer – Performs layouts, drafting and “light” independent design in support of engineering personnel. At higher levels, may specify equipment and perform supporting calculations.

Mechanical Technician - Applies methods outlined by others to limited segments of research and development projects; assembles experimental or prototype models and hardware to meet engineering requirements.

Test Conductor - Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; sets up and may operate equipment; records data, measures and records problems that require resolution. Analyzes data and prepares test reports. At higher levels, may advise equipment users on redesign or solve unique operational deficiencies.

Engineering Associate - Applies conventional engineering practices to develop, prepare, or recommend schematics, designs, specifications, electrical drawings and parts lists. Examples of designs include: detailed circuit diagrams; hardware fittings or test equipment involving a variety of mechanisms; conventional piping systems; and building site layouts.