SOLICITATION, OFFER AND AWARD

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) → RATING: DO-C9

PAGE ___ OF PAGES ___

CONTRACT NUMBER	3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NUMBER
NNJ09JE44C	NNJ08247027R	☐ SEALED BID (IFB) X NEGOTIATED (RFP)	04/22/2009	4200308528

APPROVED
JSC PROCUREMENT OFFICER
3-25-09
DATE

7. ISSUED BY — CODE
NASA Lyndon B. Johnson Space Center
Institutional Procurement Office, Attn: Nancy Robb/BJ4
2101 NASA Parkway
Houston, TX 77058-3696

8. ADDRESS OFFER TO (If other than Item 7)
NASA Lyndon B. Johnson Space Center
Institutional Procurement Office
Attn: Nancy Robb
Houston, TX 77058-3696

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder"

SOLICITATION

9. Sealed offers in original and 5 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the depository located in room 502, 1100 Space Park Dr., Houston, TX 77058, until **4:30 PM** local time on May 21, 2009.

CAUTION — LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: →	A. NAME	B. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS
		AREA CODE	NUMBER	EXT.	
	Nancy Robb	281	483-9044		nancy.s.robb@ nasa.gov

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OFFER *(Must be fully completed by offeror)*

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days *(210 calendar days unless a different period is inserted by the offeror)* from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8) →	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %
Current Value of Funds Rate				

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
	1	4-28-09	4	6-04-09
	2	5-18-09	5	6-08-09
	3	5-28-09		

15A. NAME AND ADDRESS OF OFFEROR — CODE 1JGQ2 FACILITY 1JGQ2
CSC Applied Technologies, LLC
6500 West Freeway Suite 600
Fort Worth, TX 76116

16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*
Jeff Beauford
Director of Contracts and Procurement

15B. TELEPHONE NUMBER			☒ 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. **See Addendum 1**	17. SIGNATURE	18. OFFER DATE
AREA CODE	NUMBER	EXT.			
817	570	2877			**August 10, 2009**

AWARD *(To be completed by Government)*

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION
B.3	$45,209,809.00	PR 4200308528

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
☒ 10 U.S.C. 2304(c) (1) ☐ 41 U.S.C. 253(c)( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)* → ITEM G.4

24. ADMINISTERED BY *(If other than Item 7)* CODE

25. PAYMENT WILL BE MADE BY — CODE
NASA Shared Services Center
Financial Management Division-Accounts Payable, B. 1111,
C. Road, Stennis Space Center, MS 39529

NAME OF CONTRACTING OFFICER *(Type or print)*
Alice Jean Pursell

27. UNITED STATES OF AMERICA
Alice Jean Pursell
(Signature of Contracting Officer)

28. AWARD DATE
8/25/2009

IMPORTANT -- Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

Addendum 1, SF 33 Continuation Page

Block 15C Remittance Address (continued)

For remittance by check:

CSC Applied Technologies, LLC
PO Box 951427
Dallas, TX 75395-1427

For overnight remittance only:

Wachovia Bank
CSC Applied Technologies, LLC
Lockbox #951427
7101 Envoy Court
Dallas, TX 75247

EFT or ACH wires:

Account #20000032590612
Lock Box #951427
Routing #031000503

If and address is needed with the wire transfer use:

Wachovia Bank
401 S. Tryon Street
3 Wachovia Center
Charlotte, NC 28288

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NNJ09JE44C

SECTION B

SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -

No FAR By-reference clauses in Section B.

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -

No NASA By-reference clauses in Section B.

B.2 SCOPE OF WORK

The Contractor shall provide all personnel, materials, and facilities (except as otherwise provided in the contract) necessary to perform those functions set forth in section C, Statement of Work (SOW), at the Johnson Space Center (JSC) and other locations as specified in the SOW.

(End of clause)

B.3 ESTIMATED COST AND AWARD FEE (NASA 1852.216-85) (SEP 1993)

The estimated cost of this contract is b4 The maximum available award fee, excluding base fee, if any, is $ b4 . The base fee is $ b4 . Total estimated cost, base fee, and maximum award fee are :

B.3.1 The estimated cost and maximum available award fee for Johnson Space Center, Dryden Flight Research Center, and Langley Research Center are:

B.3.1.1 The estimated cost of this contract at the Johnson Space Center is $ b4 . The maximum available award fee, excluding base fee, if any, is $ b4 The base fee is $ b4 b4 Total estimated cost, base fee, and maximum award fee are

B.3.1.2 The estimated cost of this contract at Dryden Flight Research Center is b4 The maximum available award fee, excluding base fee, if any, is b4 The base fee is $ b4 b4 Total estimated cost, base fee, and maximum award fee are

B.3.1.3 The estimated cost of this contract at Langley Research Center is b4 The maximum available award fee, excluding base fee, if any, is b4 . The base fee is $ b4 . Total estimated cost, base fee, and maximum award fee are : b4

(End of clause)

B.4 FUNDING

Funds shall be provided for JSC in B.5 below. For DFRC and LaRC, Delivery Orders with funding shall be issued by the Administrative Contracting Officer for that Center. Funds shall be allotted by the Delivery Order and subsequent modifications, if required. The "Limitation of Funds" clause applies individually to each Center.

SECTION B

SUPPLIES OR SERVICES AND PRICES/COSTS

B.5 CONTRACT FUNDING (NASA 1852.232-81) (JUN 1990)

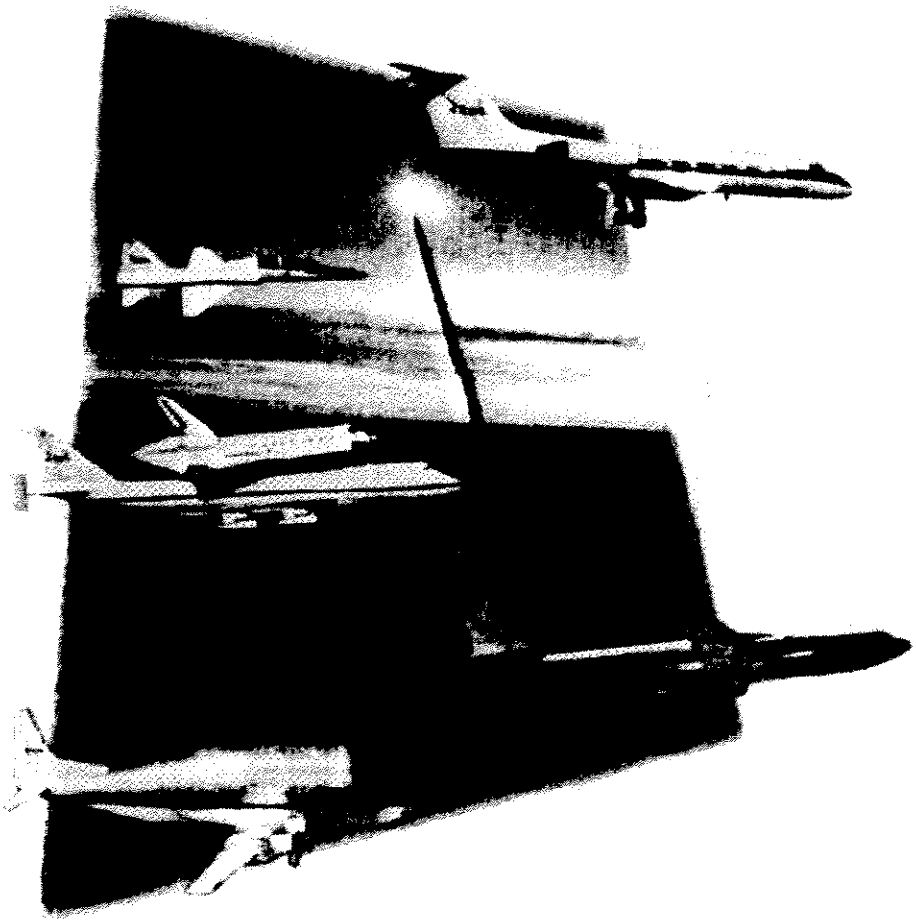
(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is $2,833,000. This allotment is for the Aircraft Maintenance and Modification Program Contract for work performed at JSC and covers the following estimated period of performance: September 1, 2009 through September 15, 2009.

(b) An additional amount of $167,000 is obligated under this contract for payment of fee.

(End of clause)

(END OF SECTION)

STATEMENT OF WORK (SOW) FOR AIRCRAFT MAINTENANCE AND MODIFICATION PROGRAM (AMMP)



May 2008

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1 INTRODUCTION

This Statement of Work (SOW) describes the work to be performed and the deliverables to be provided by the Contractor under this Aircraft Maintenance and Modification Program (AMMP) contract. The purpose of this contract is to support the maintenance and modification of all aircraft operated at:

(1) Johnson Space Center (JSC), at Ellington Field (EFD), Texas.
  (a) JSC, at El Paso (ELP), Texas.
  (b) JSC, at Edwards Air Force Base (EDW), California.
(2) Dryden Flight Research Center (DFRC), at Edwards Air Force Base (EDW) California.
  (a) Dryden Aircraft Operations Facility (DAOF), at Palmdale California.
(3) Langley Research Center (LaRC), Virginia.

1.1 JSC Aircraft

The aircraft are operated in support of various NASA programs. During deployments, JSC aircraft may conduct aircraft operations from other facilities including Outside the Continental United States (OCONUS). The Contractor shall perform flightline, depot level, intermediate maintenance, repairs, modification(s), and engineering support on JSC aircraft and aircraft operated by the following NASA Centers on an as needed basis:

(1) Kennedy Space Center, Patrick Air Force Base, Florida
(2) Marshall Space Flight Center, Huntsville, Alabama
(3) Dryden Flight Research Center, Edwards AFB, California

1.2 DFRC Aircraft

DFRC aircraft are operated to meet both Center and Agency flight research requirements at Edwards AFB and Palmdale, California. During deployments, DFRC aircraft may conduct aircraft operations from other facilities. The Contractor shall support all aircraft services, including aircraft maintenance, aircraft modification, aircrew, and flight-line operations. Services may also include designated support shop repair and modification for Support aircraft and designated Research aircraft.

1.3 LaRC Aircraft

LaRC aircraft are operated to meet both the Center and Agency flight research requirements at Langley, Virginia. During deployments, LaRC aircraft may conduct aircraft operations from other facilities. The Contractor shall support all services, including aircraft maintenance, aircraft modification, aircrew, and flight-line operations. Services may also include designated support shop repair and modification for Support aircraft and designated Research aircraft.

The Contractor shall follow the SOW unless otherwise specified in the exceptions.

2 SCOPE

2.1 JSC Aircraft

The Contractor shall maintain, repair, modify, and provide engineering services all assigned equipment, as described herein on: airframes, engines, appliances, and support equipment. Majority of the maintenance is performed at EFD. In addition, a work force is required at the Forward Operating Locations (FOL) at ELP and EDW. The Contractor must be able to expand into additional FOL's as required by NASA. Aircraft currently assigned to JSC include the following:

Quantity	Type Aircraft	Mission	Location
1	377 SGT Super Guppy	Program Support Aircraft- Life Sciences	JSC, El Paso, TX
2 0(FY11)	Boeing 747	Program Support Aircraft- Shuttle Carrier Aircraft (SCA)**	DFRC, Edwards Air Force Base (EDW), California
1	C-9	Program Support Aircraft- Zero Gravity	JSC, Houston, TX
7 3(FY11)	Gulfstream II (G-1159)	Program Support Aircraft- 4** configured as Shuttle Training Aircraft (STA); 3 are used as Mission Management Aircraft	STA- JSC, Houston, TX. Mission Management Aircraft- JSC, Houston, TX (1 flyable) (1 permanent storage PIMA), (1 bailed to DoD to return to ELP).
2	General Dynamics WB-57F	Program Support Aircraft- Life Sciences	JSC, Houston, TX
26 20(FY11)	Northrop, T-38N	Program Support Aircraft- Space Flight Readiness Training, NASA avionics upgrade derivative	JSC, Houston, TX

The aircraft are powered by the following types of engines:
Allison 501-D22C (377SGT Super Guppy).
Pratt and Whitney JT9D-7J (SCA).
Rolls Royce Spey MK511-8 (G-1159A & STA).
Pratt and Whitney JT-8D-9 (C-9).
General Electric J-85-5 (T-38N).
Pratt and Whitney TF-33-P11 (WB-57F).

2.2 DFRC Aircraft

The Contractor shall maintain all assigned equipment, as described herein on: airframes, engines, and appliances assigned to DFRC. The majority of the work requirement will be at DFRC. Aircraft currently assigned to DFRC include the following:

Quantity	Type Aircraft	Mission	Location
2	Beechcraft King Air B200	Mission Management & Program Support Aircraft	Dryden Flight Research Center, CA
1	Gulfstream, G-III	Program Support Aircraft	DAOF, Palmdale, CA
1	C20/Gulfstream III	Research Aircraft	DAOF, Palmdale, CA
4	McDonnell-Douglas F-18A/B	Program Support Aircraft, Chase	Dryden Flight Research Center, CA
2	Northrop T-38A	Program Support Aircraft	Dryden Flight Research Center, CA
2	Lockheed ER-2	Research Aircraft	Dryden Flight Research Center, CA
1	Boeing 747 SP Sofia	Program Support	DAOF, Palmdale, CA
1	DC 8	Research Aircraft	DAOF, Palmdale, CA

1	Raytheon T-34	Program Support	Dryden Flight Research Center, CA
1	Predator B	Program Support	Dryden Flight Research Center, CA
2	Global Hawk	Research Aircraft	Dryden Flight Research Center, CA
2	F-15	Research Aircraft	Dryden Flight Research Center, CA
1	F-18B McDonnell-Douglas	Research Aircraft	Dryden Flight Research Center, CA
1	YO-3, Lockheed	Program Support Aircraft	Dryden Flight Research Center, CA
1	F-16 General Electric	Research Aircraft	Dryden Flight Research Center, CA

The aircraft are powered by the following types of engines:

- Pratt & Whitney PT6A-42, (Beach King Air 200).
- Rolls Royce Spey MK511-8, (C-20/G-III).
- General Electric 404-400, (F-18A/B).
- General Electric J-85-5 (T-38A).
- General Electric 404 (ER-2).
- Pratt and Whitney JT9D-7J (Sofia).
- CFM56-2-C1 High Bypass Turbofan Jet (DC-8).
- Pratt and Whitney PT-6A25 (T-34).
- Garrett/Honeywell TPE-331 (Predator B).
- Rolls Royce AE3007H (Global Hawk).
- Pratt & Whitney F-100 (F-15)
- General Electric F-10/129 (F-16)
- Continental I-0360 (YO-3)
- General Electric 404-200 (F-18B)

2.3 LaRC Aircraft

The Contractor shall maintain all assigned equipment, as described herein on: airframes, engines, appliances, and support equipment. Majority of the maintenance is performed at LaRC. Aircraft currently assigned to LaRC include the following:

Quantity	Type Aircraft	Mission	Location
1	Beechcraft King Air B200	Program Support Aircraft	Langley Research Center, Virginia
1	C-12 King Air	Research Aircraft	Langley Research Center, Virginia
1	Bell UH-1H	Program Support Aircraft	Langley Research Center, Virginia
1	Cessna 206	Research and Development Aircraft	Langley Research Center, Virginia
1	Cirrus SR-22	Research and Development Aircraft	Langley Research Center, Virginia
1	Lancair Columbia 300	Program Support Aircraft	Langley Research Center, Virginia
1	North American Rockwell OV-10A	Research and Development Aircraft	Langley Research Center, Virginia

The aircraft are powered by the following types of engines:
Pratt & Whitney PT6A-42, (Beech King Air B200).
Lycoming T-53-L-13B (UH-1H).
Lycoming IO-540-AC1A (Cessna 206).
Continental IO-550 (Cirrus SR-22).
Continental IO-550 (Lancair Columbia 300).
Garrett-AiResearch T-76 (OV-10A).

3 GENERAL REQUIREMENTS

The Contractor shall meet the requirements for maintenance and operations as directed in *NPR 7900.3B, Aircraft Operations Management,* NPR 7120.5, *NASA Program and Project Management Processes and Requirements*, and the Federal Aviation Administration (FAA) Federal Aviation Regulations 14 CFR Part 43. 14 CFR Part 43 shall be the default document for minimum standards for acceptable maintenance practices. The Contractor's responsibilities include but are not limited to:

(1) Exercise management and operational control and retain full responsibility for performance requirements set forth in this SOW.

(2) Meet or exceed the metrics outlined in Appendix C, *Performance Goals.*

3.1 Management

The Contractor shall establish management procedures to fulfill the requirements of this SOW. The Contractor also shall be required to interface, as required, with various NASA organizations, other NASA Contractors, and appropriate regulatory bodies.

3.2 Quality Management System

The Contractor shall establish and maintain a Quality Management System (QMS) encompassing all services and requirements of this SOW. The Contractor's QMS shall meet or exceed the elements contained in the SAE AS9100, Aerospace Quality Management System. Third party certification of the Contractor QMS is not required. The Contractor's QMS shall be compatible with each NASA Center's unique QMS.

3.2.1 Center Unique Differences

The format of the AMMP SOW reflects JSC as the primary customer and each section and subsection describes work that shall be accomplished under this contract.

DFRC center unique requirements are designated by an "A" and LaRC center unique requirement are designated by a "B" prior to the applicable AMMP SOW paragraph number at the end of each section.

Any differences between the AMMP SOW requirements and those at DFRC and LaRC will be specified at the end of each section and the SOW center unique differences will take precedence when identified.

If an AMMP SOW section or subsection is not referenced for DFRC or LaRC, that AMMP SOW section shall apply in its entirety to DFRC or LaRC.

3.3 Maintenance Services

Contractor operations shall include preventive and routine maintenance on JSC, DFRC, LaRC, and other NASA aircraft and their respective systems. The Contractor's responsibilities include but are not limited to:

(1) Remove, disassemble, inspect, repair, overhaul, adjust, test, assemble and re-install components when required by the aircraft inspection program.

(2) Perform maintenance to comply with FAA regulations as defined in NPR 7900.3B, *Aircraft Operations Management* and applicable aircraft technical data.

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3.2 Quality Management System

The Contractor shall establish and maintain a Quality Management System (QMS) encompassing all services and requirements of this SOW. The Contractor's QMS shall meet or exceed the elements contained in the International Organization for Standardization document AS9110, Quality Management System for Aerospace, Requirements for Aircraft Maintenance. Third party certification of the Contractor QMS is not required. The Contractor's QMS shall be compatible with each NASA Center's unique QMS.

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(2) Perform maintenance to comply with FAA regulations as defined in NPR 7900.3B, *Aircraft Operations Management* and applicable aircraft technical data.

(3) Support NASA directed maintenance on Government transient aircraft.

3.4 Engineering Services

The Contractor shall provide engineering and drafting support services for aircraft alterations, modifications, software/hardware engineering, and repairs for public and FAA type-certificated aircraft. DFRC requires engineering library services only. No engineering services are required for LaRC.

3.5 Flight Operations

The Contractor shall provide flight operations support for aircraft operations identified in this SOW. NPR 7900.3B, *Aircraft Operations Management* defines the procedures and guidelines for management, utilization, operation, and control of NASA aircraft.

3.6 Logistic Services

The Contractor shall perform provisioning, property control, receipt and inspection, packing, shipping, delivery, redistribution, and disposal functions that meet the requirements of this contract. The Contractor shall use the Government furnished automated logistics support system. Logistic services are required for DFRC.

4 QUALITY MANAGEMENT SYSTEM

4.1 Management Responsibility

The Contractor shall define and document its policy for quality, including objectives for quality, and its commitment to quality in accordance with DRL item 4. The quality policy shall be relevant to the organizational goals and the expectations. The Contractor shall ensure that this policy is understood, implemented, and maintained at all levels of the organization.

4.2 Quality Management System

The Contractor shall establish, document, implement and maintain a Quality Management System (QMS) encompassing all services and requirements to cover the scope of this contract and continually improve its effectiveness. The Contractor's QMS shall be in compliance of the SAE AS9100, Quality System-Aerospace Model for Quality Assurance in Design, Development, Production, Installation, and Servicing. The Contractor shall ensure that personnel have access to QMS documentation and are aware of relevant procedures. Customer and regulatory Authority representatives shall have access to QMS documentation.

The Contractor's QMS shall be compatible with each NASA Center's unique QMS.

4.2.1 Quality Management System Planning

The Contractor shall ensure the integrity of the QMS is maintained and conforms to JSC standards and regulatory requirements when changes are implemented. If NASA actions significantly impair the Contractor's ability to meet established criteria, the Contractor may provide written justification for noncompliance to the CO/COTR. The CO/COTR will coordinate a waiver, if required.

4.3 Customer Focus

The Contractor shall assist in the development of requirements for controlling the quality and environmental impacts of JSC products and services by identifying, controlling, measuring and improving the processes used to perform assigned work in accordance with JPR 1281.9, Process Control.

4.4 Design Control

The Contractor shall be responsible for design control to include cost estimates, implementation plans, and schedules for all modifications and associated tests in accordance with JPR 1281.4, Design and Development. See Section 7, Engineering Activities.

4.5 Document and Data Control

4.5.1 Document Control

4.5.1.1 Process Control Work Instructions

The Contractor shall follow the QMS Work Instructions (WI) provided by NASA located on the QMS Aircraft Operations Master List. The Contractor may request

SECTION 4 - QUALITY MANAGEMENT SYSTEM

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4.5 Document and Data Control

4.5.1 Document Control

4.5.1.1 Process Control Work Instructions

The Contractor shall follow the QMS Work Instructions (WI) provided by NASA located on the QMS Aircraft Operations Master List. The Contractor may request

changes to these WI's in accordance with AOD 33803, Document and Data Management.

4.5.1.2 Technical Data

The Contractor shall coordinate document changes with NASA and regulatory Authorities. New maintenance processes shall be documented, qualified, and approved by NASA and, on type certificate aircraft, the FAA. The Contractor shall:

(1) Provide technical data after incorporation of new equipment to the NASA Quality Assurance (QA) Document Management Office (DMO).
(2) Ensure FAA approved technical data is available for equipment installed on FAA type-certificated aircraft prior to aircraft being released for flight.
(3) Provide the document custodian with technical data for flight manual changes.
(4) Prepare one time inspection requirements and identify needed changes to aircraft, engines, aircraft systems, and support equipment technical data. These changes shall be forwarded to the DMO for development and incorporation into formal technical documents.
(5) Provide technical data process improvements to the DMO in accordance with AOD 33803, Document and Data Management. Local changes to technical data will be reviewed for DoD applicability. If applicable to DoD, the Contractor will prepare an AFTO Form 22, Technical Manual Change Recommendation and Reply, change request and route to the Assistant Branch Chief, NASA QA Section for review and approval. Upon approval, the form will be forwarded to the responsible ALC for appropriate action.

4.5.1.3 Technical Libraries

(1) The Contractor shall maintain a library in each area that affects quality. The Contractor shall maintain technical libraries at EFD, ELP, and KSC to include QC and Shop libraries. The NASA QA DMO will determine additional areas.
(2) The Contractor QC Office shall maintain a current document master list for AOD and each technical library.
(3) The Contractor shall provide NASA a weekly report of document updates.
(4) The Contractor shall maintain a log of documents archived from the QC Library. The log shall be accessible to NASA QA and the Contractor shall provide reports as requested by NASA.

4.5.1.3.1 Technical Library Clerks

The Contractor shall provide technical library clerks who shall perform duties including but not limited to:

(1) Maintain an up-to-date technical library and document master list of all technical manuals, microfiche, and publications.
(2) Order all required technical publications.
(3) Distribute new technical publications and/or data changes when received from NASA QA to issue to sub-account custodian support personnel within two working days of receipt. The Contractor shall ensure the library documents are update within 5 working days of receipt.

(4) Conduct internal audits of AMMP sub-accounts throughout Aircraft Operations Division (AOD) to include FOL's.
(5) Provide training to sub-account custodians.
(6) Maintain technical orders in accordance with T.O. 00-5-1, Air Force Technical Order System.

4.5.1.3.2 Sub-Account Custodians

The Contractor shall provide sub-account custodians to the various work centers within AOD and its supporting FOL's to maintain sub-account shop libraries. Duties include but are not limited to:

(1) Ensure currency of publications assigned to the work center sub-accounts.
(2) Check the Technical Order Distribution File in QC on a weekly basis to ensure timely receipt of changes.
(3) Incorporate new technical publications and/or changes in sub-account files within 5 work days from the date posted on the AOD Form 124, Electronics Technical Distribution Form.
(4) Assist shop personnel in preparing process improvements in accordance with AOD 33803, Document and Data Management.
(5) Conduct page-by-page inventory on all assigned documents on an annual basis. Document the inventory with the date and time and initial on cover page of publication.
(6) Maintain technical orders in accordance with T.O. 00-5-1, Air Force Technical Order System.

4.5.2 Data Control

4.5.2.1 Maintenance Data Collection System

The Contractor shall maintain the NASA aircraft maintenance management system collection system. The data shall include but not be limited to the minimum requirements to comply with 14 CFR Parts 43 and 91, Maintenance Records.

4.5.2.2 Maintenance Database Administrator

The Contractor shall provide a Maintenance Database Administrator who shall maintain the NASA aircraft maintenance management system. The Contractor shall utilize the NASA provided computer information system to produce reports as requested by NASA.

4.6 Procurement

The Contractor shall establish and maintain procurement procedures in accordance with JPR 1281.6, Procurement. See Section 9, Logistics Activities.

4.7 Control of Customer Supplied Product

The Contractor shall control customer supplied products in accordance with JPR 1281.7, Control of Customer-Supplied Product and 14 CFR Part 45.

4.7.1 Control of Production and Service Provision

NASA reserves the right to inspect any system or procedure with NASA personnel that affects quality or safety.

The Contractor shall establish and maintain procedures for inspection and testing aircraft and related equipment in accordance with JPR 1281.10, Inspection and Testing. The Contractor shall:

(1) Establish process controls and develop control plans where key characteristics have been identified.

(2) Identify in-process verification points that require Quality Control intervention, or verification of conformance, for critical inspections. These tasks shall be incorporated into the Aircraft Inspection Program.

(3 Design, manufacture, and use tooling so that variable measurements can be taken, particularly for key characteristics.

(4) Plan special processes.

(5) Plan and carry out production and service provisions under controlled conditions. Controlled conditions shall include

(a) The availability of information that describes the characteristics of the product or task.

(b) The availability of work instructions.

(c) The use of suitable equipment.

(d) The availability and use of monitoring and measuring devices.

(e) The implementation of monitoring and measurement.

(f) The implementation of release, delivery and post-delivery activities.

(g) Accountability for all products during manufacture.

(h) Evidence that all manufacturing and inspection operations have been completed or otherwise documented and authorized.

(i) Provisions for the prevention, detection and removal of foreign objects.

(j) Monitoring and control of utilities and supplies to the extent they affect product quality.

(k) Criteria for Workmanship

The Contractor shall use the most current authorized version of the process control work instruction or technical data as indicated on the master document list. This includes all SOW requirements and options. The Contractor's responsibilities include but are not limited to:

1. Perform workmanship in accordance with the approved technical data and 14 CFR Section 43.13, Performance Rules, and the workmanship criteria shall apply to all aircraft, engines, and appliances for both public and FAA type-certificated aircraft.

2. Perform maintenance and inspections in accordance with (not inclusive) Military Technical Orders (T. O.), Manufacturers Specification, maintenance manuals, locally generated one-time inspections and one-time replacements, service changes, customer bulletins, service bulletins, engine bulletins, airframe bulletins and changes that are received from aircraft or component manufacturers, the Federal Aviation Administration (FAA), and the DoD.

3. When technical data is not available or is inadequate, the process will be stopped and NASA maintenance will be contacted. No work will be accomplished under these circumstances; verbal direction to deviate from technical manual is not authorized.
4. Develop operation and maintenance instructions that include criteria for workmanship and use of technical data requirements at the work site.

4.8 Product Identification and Traceability

4.8.1 Disposition of Aircraft Parts

The Contractor shall establish and maintain procedures to control product identification and traceability of Aircraft Life-Limited Parts modeled to JPR 1281.8, Product Identification and Traceability. Control procedures shall include the requirements of 14 CFR Section 43.10, Disposition of Life-Limited Aircraft Parts, and 14 CFR Section 45.16, Marking of Life Limited Parts. The Contractor's responsibility includes but is not limited to:

(1) Tag Parts
A tag or other record shall be attached to the parts. The tag or record must include the part number, serial number, and current life status of the part. Each time the part is removed from a type-certificated product, either a new tag or record must be created, or the existing tag or record must be updated with the current life status.

(2) Control Parts
The part shall be controlled using the maintenance data collection system that substantiates the part number, serial number, and current life status of the part. Each time the part is removed, the record must be updated with the current life status. Additional methods for Product Identification and Traceability are listed below. Methods shall prevent the installation of the part on an aircraft after it has reached its life limit. Acceptable methods include:

(a) Non-Permanent Marking
The part shall be legibly marked using a non-permanent method showing its current life status. The life status must be updated each time the part is removed from a product. If the identification mark is removed, another method of tracking shall be used. On certificated aircraft, the mark must be accomplished in accordance with 14 CFR Section 45.16, Marking of Life Limited Parts, in order to maintain the integrity of the part.

(b) Permanent Marking
Parts shall be legibly marked in accordance with 14 CFR Section 45.16, Marking of Life Limited Parts, in order to maintain the integrity of the part.

(c) Segregation
The part shall be segregated using methods that prevent its installation on a product. These methods must include, at least:

1. Maintaining a record of the part number, serial number, and current life status.
2. Ensuring the part is physically stored separately from parts that are currently eligible for installation.

4.8.2 Temporary Removal of Life-Limited Parts

The Contractor shall document when maintenance is performed on Life-Limited Parts and the status of Life-Limited Parts. This includes the documentation of a part that is removed and subsequently reinstalled to facilitate other maintenance.

4.8.3 Marking of Life-Limited Parts

The Contractor shall ensure all Aircraft Life-Limited Parts are properly marked, tagged, or positively identified, and maintain the historical records of serviceability and are available if sold or transferred in accordance with 14 CFR Section 45.16, Marking of Life Limited Parts.

4.9 Process Control

The Contractor shall follow the QMS Work Instructions (WI) provided by NASA. The Contractor may request changes to these WI's in accordance with AOD 33803, Document and Data Management. The Contractor shall:

(1) Establish processes, documents, or resources required to NASA management,
(2) Perform verification, validations, monitoring, inspection and test activities when required by this SOW and the criteria for product acceptance, and
(3) Provide records that provide evidence the verification, validations, monitoring, inspection and test activities are accomplished.

4.9.1 Determination of Requirements

Prior to accomplishing any work, the Contractor shall determine

(1) The requirements for delivery and post-delivery,
(2) Requirements not stated by this SOW or other directives but necessary for specified or intended use, where known, and
(3) Statutory and regulatory requirements related to any process.

4.9.1.1 Review of Requirements

Prior to accomplishing any work, the Contractor shall review the requirements and ensure that:

(a) Requirements are clearly defined,
(b) Contract or order requirements differing from those previously expressed are resolved,
(c) The Contractor has the ability to meet the defined requirements, and
(d) Risks (e.g., new technology, delivery time) have been evaluated.
(e) Records of the results of the review and actions arising from the review shall be maintained.

4.9.2 Aircraft Mishap Plan

The Contractor shall perform procedures identified in JSC 05900, Emergency Preparedness Plan, Appendix 5, Aircraft Mishap Plan, to respond to mishaps involving NASA aircraft. This plan includes:

(1) Providing personnel properly trained and responsible for the safe and efficient handling of each aircraft in a mishap situation.

(2) Providing the NASA Duty Office with a list of personnel trained in, and responsible for, the safe and efficient handling of each type aircraft in a mishap situation.

(3) Maintaining NASA's aircraft emergency response trailer and the equipment therein at EFD. Inspections shall ensure equipment is in good working order and verify inspection inventory list is complete. Inspections shall be accomplished every 180-days +/- 20 working days. These inspections will be tracked and documented in the NASA aircraft maintenance management system.

(4) Responsibilities for impounding aircraft or components after a mishap and prevent tampering of evidence in accordance with AOD 33808, Impounding Aircraft, Components, and Documentation Management.

4.9.3 Aircraft Recovery Plan

The Contractor will provide Aircraft Recovery efforts as required.

4.9.4 Aircraft Static Display

The Contractor shall provide aircraft static display services in accordance with AOD 33823, Aircraft Static Display. Notification of static display requirements will normally be provided by the NASA Operations Duty Officer.

4.9.5 Aircraft Inspection Program

The Contractor shall perform the requirements of each type of aircraft in accordance with the Aircraft Inspection Program.

4.9.6 Corrosion Control Prevention and Treatment Program

The Contractor shall perform the procedures for the Corrosion Control Prevention and Treatment Program in accordance with AOD 33827, Aircraft Corrosion Control Program.

4.9.7 Foreign Object Damage/Debris (FOD) Control Program

The Contractor shall establish and maintain a Foreign Object Damage/Debris (FOD) Control Program in accordance with AOD 33935.

4.9.8 Reserved

4.9.9 Hydraulic Contamination Prevention Program

The Contractor shall establish and maintain a Hydraulic Contamination Prevention Program that include the requirements of NAVAIR 01-1A-17, Air Force T O 42B2-1-1,2 Aviation Hydraulics Manual, T. O. 42B2-1-3, Fluids for Hydraulic Equipment, and NSTS 08131, Contamination Control Plan.

The Contractor shall notify NASA QA and Maintenance anytime hydraulic samples exceed established limits for the item being checked, to include aircraft and support equipment sampling.

4.9.10 Joint Oil Analysis Program (JOAP)

The Contractor shall maintain an Oil Analysis Program in accordance with the type aircraft technical requirements contained in AOD 33871, Joint Oil Analysis Program.

4.9.11 Tool Control Program

The Contractor shall establish and maintain a Tool Control Program. Personal common hand/power tools shall not be provided by the Government on a routine basis. Power tools may be purchased by the Government under special circumstances for technicians with prior approval by NASA's COTR or assigned authorizing official. The Contractor's duties include but are not limited to:

(1) Ensure individual tools are positively accounted for. Ensure that each technician receives training on the safety and use of tools.

(2) Be responsible for NASA provided special tools and test equipment so the tools are not damaged or destroyed through neglect or abuse.

(3) Ensure positive inventory control to account for tools, equipment and those checked-out to other shops or personnel.

  (a) All toolboxes, personal and shop, shall be shadowed and contain a master inventory list.

  (b) All tool boards shall be shadowed.

  (c) All tools shall be marked or identified.

  (d) A work center supervisor, or a production inspector, shall perform tool inventories at the end of each work task and at a frequency that includes but is not limited to the end of each day. The work center supervisor shall retain these inventory records for 6 months.

(4) Establish the policy and procedures to be followed in all instances involving lost or missing tools. This policy includes but is not limited to:

  (a) Immediately notifying maintenance control and the technician's supervisor.

  (b) Generating a down discrepancy in the NASA aircraft maintenance management system against stating what type tool was lost for all affected aircraft.

  (c) Notifying the NASA Assistant Branch Chief, Aircraft Systems Section and the NASA Assistant Branch Chief, Quality Assurance Section or their designated representative.

  (d) Ensuring the supervisor completes AOD Form 1748, Lost Tool Report and forwards the completed copy to the NASA Assistant Branch Chief, Quality Assurance Section prior to aircraft flight.

4.9.12 Weight and Balance Program

The Contractor shall establish and maintain a Weight and Balance Program in accordance with the Automated Weight and Balance System (AWBS) program.

4.9.13 Weather Protection/Lightning Detection Program

The Contractor shall comply with the requirements for the Weather Detection/Lightning Detection Program in accordance with AOD 33821, Weather Protection/Lightning Detection. All aircraft at EFD shall be positioned in a hangar as facilities or weather permits, or made ready to be flown to another field prior to severe weather as directed by NASA.

4.9.14 Fuel Cell Maintenance

The Contractor shall ensure all fuel cell maintenance is accomplished in accordance with all applicable general and aircraft specific technical manuals.

4.9.15 Slings and Lifting Devices

The Contractor shall establish a sling and lifting device program to comply with the requirements of NASA-STD 8719.9, Standard for Lifting Devices and Equipment and USAF technical data contained in T. O. 35D6-1-106, Periodic and Maintenance Instructions--Acft and Engine Slings and Restraining Devices.

4.10 Inspection and Testing

The Contractor shall establish and maintain procedures for inspection and testing aircraft and related equipment in accordance with JPR 1281.10, Inspection and Testing.

4.10.1 General

NASA reserves the right to inspect any system or procedure with NASA personnel that affects quality or safety.

The Contractor's responsibilities include but are not limited to:

(1) Ensure all work which requires an inspection by a PI or QAR inspector are performed and subsequently captured in the NASA aircraft maintenance management system, on the appropriate quality record (if applicable), or other approved documentation format.
(2) Each inspection or repair action shall be entered in the NASA aircraft maintenance management system showing completion of the task.
(3) Ensure specified type aircraft technical data or FAA AC 43.13-1B, Acceptable, Methods, Techniques and Practices--Aircraft Inspection and Repair, are followed.

4.10.2 Acceptance Inspections

The Contractor shall perform acceptance inspections on NASA aircraft and engines. The Contractor shall conduct these inspections and provide NASA with a written report of the results. These inspections shall include but are not limited to:

(1) FOD checks on all newly acquired aircraft.
(2) Inspecting the aircraft and engines after major maintenance is conducted at a third party facility prior to departure.
(3) Verification of correct quality record entries to include aircraft, engine, propeller and thrust reverser logbooks.
(4) Verifying continued airworthiness requirements in accordance with 14 CFR Section 21.50, Instructions for Continued Airworthiness and Manufacturer's Maintenance Manuals having Airworthiness Limitations Sections, have been implemented for new system installations. These requirements shall include Flight Supplements, Flight Manuals, Flight Checklists, Maintenance Manuals, work unit codes, and other approved aircraft technical data. The Contractor shall ensure continued airworthiness manuals are logged into the QC library database.
(5) Verifying engineering drawings are forwarded to engineering in accordance with quality control procedures.

(6) Perform service changes unless otherwise waived by NASA Engineering, Maintenance, and QA. These service changes shall be approved in accordance with AOD 33846, Aircraft Service Changes.

(7) Maintain a complete copy of the third party work order as active quality record in accordance with 14 CFR Section 91.417, Maintenance Records, NPR 1441.1, Records Retention Schedules, and JPR 1440.3, JSC Files and Records Management Procedures.

4.10.3 Engineering Inspections/Analysis

The Contractor shall be responsible for engineering Inspections/Analysis in accordance with Section 7, Engineering Activities.

4.10.4 Production Inspections

The Contractor shall perform production inspections on all aircraft work indicated below and when required by the applicable WI. The Contractor shall identify and perform mandatory production inspections on all critical tasks identified in the Aircraft Maintenance Program. Records of these inspections shall be maintained in accordance with NPR 1441.1, Records Retention Schedules, JPR 1440.3, JSC Files and Records Management Procedures, and Section 4.16. See PI's and QAR's for the production inspection requirements per Section 4.10.4.1 and 4.10.4.2. The Contractor shall ensure all Production Inspections are accomplished prior to the aircraft, engine, or appliance being returned to service. Inspections may be performed on any system or procedure to ensure quality of the product.

4.10.4.1 Production Inspectors

The Contractor shall designate technicians with the collateral duty of Production Inspectors (PI). PI's shall be responsible to the quality control manager when serving in the capacity of an inspector. The PI's are actively involved in the decision making process on how the troubleshooting and repairs will be made. These duties shall include but are not limited to:

(1) Performing aircraft inspections of quality procedures, processes, and change requests. NASA deems those Configuration Directives with a Technical Directive code of 11, 12, 13, 14, 16 or 17 as critical processes and therefore will require a second level inspector's signature in the DSI/QAR block on the appropriate NASA provided automated form utilized in the automated database indicating the work has been completed as depicted on the Configuration Directive in accordance with AOD WI 33851. In these cases, the PI can stamp and/or sign for all Mandatory Inspection Points (MIP's) associated with the PI's stamp authority. The second level inspector (QAR) is responsible for ensuring these MIP's and the intent of the directive has been satisfied before signing off the directive.

(2) Performing toolbox inventory inspections.

(3) Performing inspection of quality records. Conduct research, to include trend analysis to determine extent of deficiencies and make recommendations as appropriate to correct negative trends.

(4) Monitoring currency and filing of technical publications.

(5) Performing operational tests/checks on equipment in accordance with approved technical data.

(6) Recommend changes in methods, procedures, processes and other techniques employed to improve the productivity without compromising safety or quality of assigned tasks. Changes to existing requirements will be accomplished in accordance with AOD 33803, Documentation and Data Management.

(7) Preparing aircraft for in-flight operational checks in accordance with AOD 33824, Functional Check Flights and Operational Checks.
(8) Performing mandatory production inspections in accordance with AOD 33817, Mandatory Inspection Points, and all critical tasks identified by the NASA and the Contractor in the Aircraft Maintenance Program.
(9) Performing production inspections to validate troubleshooting procedures when system discrepancies cannot be duplicated (CND) in accordance with AOD 33832, Downgrading and Symbol Changes.
(10) Performing inspections of all major changes to the aircraft systems.
(11) Ensuring the requirements for Continued Airworthiness identified in Section 4.5.1.2 are available prior to the aircraft being returned to service.
(12) Contacting the QAR and NASA QA for mandatory inspections when identified in the NASA aircraft maintenance management system or other approved technical data. This includes, but is not limited to: Work cards, WIs, CMPs, EWOs and TP-FRP's.

4.10.4.2 Quality Assurance Representative

The Contractor shall provide QAR personnel who shall support the Contractor's quality control system. QAR's shall be responsible to the quality control manager and a lead QAR. The QAR duties shall include those identified in Section 4.10.4.1, and include but are not limited to:

(1) Inspecting any system or procedure that affects quality or safety.
(2) Monitoring quality related actions and inspections.
(3) Performing internal audits of the Contractor's quality management system.
(4) Performing no-notice audits of aircraft maintenance inspections, toolbox inventories, inspection and documentation processes, technical proficiency, safety inspections of shops, hangars, and other work areas and facilities. QAR's shall not routinely be responsible for production inspection requirements.
(5) Performing inspections of technicians and production inspectors' technical proficiency.
(6) Managing change request forms to report deficient technical manuals. Change requests shall be forwarded in accordance with AOD 33803, Documentation and Data Management.
(7) Performing safety inspections of shops, hangars, and other work areas and facilities.
(8) Performing inspections at the JSC site in accordance with the JSC QMS standards.
(9) Performing Weight and Balance Officer Duties as identified in Section 4.9.12.
(10) Performing documentation and records reviews prior to the aircraft being scheduled for a FCF or Operational Check in accordance with AOD 33824, FCF and Ops Checks.
(11) Briefing NASA personnel when aircraft systems changes have occurred.
(12) Performing a Quality Inspection on major inspection packages required by the Aircraft Maintenance Program.
(13) Notifying NASA QA when any element of the Aircraft Maintenance Program is deleted or not complied with.

(14) Ensuring Continued Airworthiness requirements are available for technicians per Section 4.5.1.2.
(15) Performing inspections on major repairs and alterations and completing the required FAA Forms prior to the aircraft being returned to service on type-certificated aircraft.
(16) Performing mandatory inspections on Configuration Directives with a Technical Directive code of 11, 12, 13, 14, 16, or 17; refer to AOD 33851, Maintenance Action Form Work Instruction NASA Form 1671.
(17) Assist in the certification of assigned personnel.
(18) Investigate safety incidents and as required provide assistance to NASA or other personnel assigned to investigate anomalies.
(19) Assist in the development of pertinent technical manuals and preparation of technical manual changes required as a direct result of NASA modifications approved by the NASA Configuration Control Board, process improvements or other actions directing the process/procedure changes to existing technical data.

4.10.5 Reserved

4.10.6 Scheduled Inspections

The Contractor shall perform scheduled inspections in accordance with Section 6, Maintenance Activities.

4.10.7 Special Inspections

The Contractor shall perform special inspections when required by the Aircraft Maintenance Program, or applicable NASA WI.

4.11 Control of Monitoring and Measuring Devices

The Contractor shall establish and maintain control procedures for inspection, measuring, and test equipment in accordance with JPR 1281.11, Control of Monitoring and Measuring Devices.

4.12 Inspection and Test Status

The Contractor shall establish and maintain control procedures for the inspection and test status of equipment to include the items indicated below in accordance with JPR 1281.10, Inspection and Testing. The Contractor's responsibility includes but is not limited to:

(1) Track the reliability of aircraft systems and components in accordance with AOD 33816, Trend Analysis, by using the NASA provided aircraft maintenance data collection system. The Contractor shall provide notification to NASA QA any component or system that exhibits abnormal failure rates or malfunctions, and recommend corrective actions. The Contractor shall take corrective action as approved by the NASA Maintenance and NASA QA offices.
(2) Record all maintenance work performed in the NASA provided aircraft maintenance data collection system in accordance with AOD 33851, Maintenance Action Form Work Instruction NASA Form 1671, and the appropriate quality record in accordance with the applicable technical data or WI.

(3) Maintain the inspection status of life limited components and inspections by using NASA aircraft maintenance data collection system or as defined by the aircraft inspection program.
(4) Record all PI and QAR inspection coverage on the applicable quality records.
(5) Identify the control procedures for maintenance and inspection acceptance.
(6) Support Flight and Test Readiness Reviews in accordance with AOD 33840 Flight Readiness Review and Test Readiness Review.
(7) Measurement requirements for acceptance shall be documented. This documentation may be part of the production documentation, but shall include:
  (a) Criteria for acceptance and rejection,
  (b) Where in the sequence measurement and testing operations are performed, including required NASA and Authority inspections,
  (c) A record of the measurement results (the record shall show the actual test results data),
  (d) Type of measurement instruments required and any specific instruction associated with their use, and
  (e) Identification of which inspection and testing operations are to be verified and witnessed. Records shall provide evidence the product meets the defined requirements.
(8) Conduct functional component inspections in accordance with CC-WD-F1, Functional Check Work Deck, and document these inspections in the NASA aircraft maintenance management system.

4.12.1 Inspection/Stamp Control Procedures

The Contractor, QC Manager, shall establish Inspection/Stamp Control Procedures for the issue, control and use of inspection stamps. The Contractor stamps shall not resemble the NASA QA quality stamps. The inspection stamp shall not be duplicated, loaned or used by any employee except to whom it is assigned. The Contractor's responsibility includes but is not limited to:
(1) Identify control procedures to include issue, control, use and reporting lost stamps.
(2) Identify (mark or stamp) the Mandatory Inspection Point(s) (MIP) on work cards or other maintenance technical data as required to ensure the maintenance organization knows in advance where the "value" added requirements for Quality exist.
(3) Identify the control procedures for electronic signature authority.

4.12.2 Non-Destructive Inspection Testing

The Contractor shall perform non-destructive inspection testing in accordance with Section 6.5.9.

4.13 Control of Nonconforming Product

The Contractor shall establish and maintain procedures to control nonconforming products in accordance with JPR 1281.13, Control of Nonconforming Product. Also, see Section 4.8.

4.14 Corrective and Preventive Action

4.14.1 Corrective Action

The Contractor shall take action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective or preventative actions shall be appropriate to the effects of the nonconformities encountered or the effects of the potential occurrence. The Contractor shall:

(1) Establish and maintain a documented procedure for identifying and preventing deficiencies in the QMS that include:
   (a) Procedures for reviewing nonconformities (including customer complaints),
   (b) Determining the causes of nonconformities,
   (c) Evaluate, determine and implement corrective actions to ensure that nonconformities are prevented and/or do not recur,
   (d) Records of the results of action taken,
   (e) Reviewing corrective and/or preventative action taken,
   (f) Flow down of the corrective action requirement to a supplier, when it is determined that the supplier is responsible for the root cause, and
   (g) Specific actions where timely and effective corrective actions are not achieved.

   Guidelines for these procedures are identified in JPR 1281.14, Corrective and Preventive Actions, and Continual Improvement, and AOD 33882, Quality Audit Program.

(2) The Contractor shall perform root cause analysis, corrective and preventive actions for all observations and nonconformance's discovered by NASA QA in accordance with AOD 33882, Quality Audit Program.

(3) The Contractor shall implement and record any changes to documented procedures resulting from corrective action.

(4) Utilize the DoD and FAA systems identified in FAA AC 21-29C, Detecting and Reporting Suspected Unapproved Parts, and FAA AC 20-109A, Service Difficulty Program, to alert other agencies of suspect components. Problems shall also be reported to the Assistant Brach Chief, Quality Assurance Section.

(5) Determining potential nonconformities and their causes (includes proactive processes for analyzing data for failure trends).

(6) Perform trend analysis procedures in accordance with AOD 33816, Trend Analysis.

4.15 Identification, Handling, Storage, Packaging, Preservation, and Delivery

The Contractor shall handle, store, package, preserve, and deliver materials in accordance with JPR 1281.15, Identification, Handling, Storage, Packaging, Preservation, and Delivery, and NPR 6000.1G, Requirements for Packaging, Handling, and Transportation.

4.15.1 Shipment of Cargo on NASA Aircraft

The Contractor's responsibility includes but is not limited to:

(1) A review of all safety regulations shall be conducted prior to acceptance of the cargo.

(2) Weigh and label cargo in accordance with 49 CFR 173, Shippers--General Requirements for Shipments and Packaging.
(3) Calculate the aircraft's weight and balance in accordance with the requirements of Section 4.9.12.
(4) Ensure Dangerous Cargo is not shipped on NASA aircraft unless it is properly marked, identified, and stored in packing containers in accordance with International Air Transport Association, Carriage of Dangerous Goods, Classification, Packaging, and Labeling.
(5) Ensure Hazardous material, as defined in 49 CFR 171.8, General Information, Regulations, and Definitions, is not transported in NASA Mission Management Aircraft in accordance with NPR 7900.3B, Aircraft Operations Management, Chapter 3, Mission Management Aircraft Operations. Hazardous Materials are listed in 49 CFR 172.101, Appendix A--List of Hazardous Substances and Reportable Quantities, and 49 CFR 173, Shippers--General Requirements for Shipments and Packaging.

4.15.2 Disposal Requirements

The Contractor shall ensure the safe use, handling, storage, and disposition of all materials, including hazardous materials, used in support of all maintenance activities. Containers shall be labeled, sealed, and checked for damage. When containers are full, they shall be staged for transportation and disposal in accordance with the following:
(1) 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response.
(2) 29 CFR 1910.1200, Hazard Communication Program.
(3) JPR 8550.1, Environmental Compliance Procedural Requirements.
(4) 14 CFR Section 43.10, Disposition of Life-Limited Aircraft Parts.

4.16 Control of Quality Records

The Contractor shall control all quality records required by NASA in accordance with NPD 1440.6, NASA Records Management, NPR 1441.1, NASA Records Retention Schedules, and JPR 1440.3, JSC Files and Records Management.

4.16.1 Quality Management System Records

The Contractor's responsibility includes but is not limited to:
(1) Make available quality records to any auditor identified in Section 4.17. See Appendix A, Definitions--Records. All QMS records generated for NASA in the performance of this contract shall become and remain Government property.
(2) Establish and maintain methods for identifying, collecting, accessing, filing, storing, maintaining, and dispositioning Quality Management System records in accordance with JPR 1440.3, JSC Files and Records Management.
(3) Records required to be maintained by the QMS shall be readily available for review by NASA, internal auditors, and regulatory authorities.

4.16.2 Aircraft Maintenance Records

All Aircraft Maintenance Records are Government property.

SECTION 4—QUALITY MANAGEMENT SYSTEM

The Contractor shall establish and maintain control methods for identifying, collecting, accessing, filing, storing, maintaining, and dispositioning all forms of Aircraft Maintenance Records in accordance with JPR 1440.3, JSC Files and Records Management, NPR 1441.1, NASA Records Retention Schedules, Schedule 7, AFS # 7900. In addition, on type-certificated aircraft, the Contractor shall establish and maintain control methods of aircraft records in accordance with 14 CFR Section 91.417, Maintenance Records. The record control methods shall include:

(1) Identification of Aircraft Maintenance Records:

(a) General Maintenance:

1. All maintenance work performed on aircraft, engines, or appliances shall be entered in the NASA aircraft maintenance management system in accordance with:
   - i. AOD 33851, Maintenance Action Work Instruction NASA Form 1671, or equivalent.
   - ii. AOD 33852, NASA Form 1672, Aircrew Flight Form, or equivalent.
   - iii. AOD 33853, NASA Form 1673, Flight Preparedness Summary Form, or equivalent, and the appropriate aircraft quality record indicated by the technical data.
2. Hard copy aircraft maintenance records shall be identified and controlled in accordance with the Aircraft Maintenance Program.

(b) Inspection Status:
The maintenance records shall indicate the current inspection status of the aircraft, including the time since the last inspection was performed.

(c) Aircraft Life-Limited Parts:
The Contractor shall control Aircraft Life-Limited Parts using the NASA aircraft maintenance management system. Refer to Section 4.8.

(d) Time Change/Life-Limited Components:
The Contractor shall establish and maintain quality records indicating the current status of Time Change/Life-Limited Components on aircraft or related equipment.

(e) Aircraft Change Directives (ACD):
All ACD's which include locally-generated one-time inspections and one-time replacements, service changes, customer bulletins, service bulletins, engine bulletins, airframe bulletins and airframe changes that are received from aircraft or component manufacturers, the FAA, and the DoD will be managed in accordance with AOD 33846, Aircraft Change Directives Management. This includes, but is not limited to:

1. Maintaining up-to-date records in the NASA aircraft maintenance management system to reflect the current status of all applicable ACD's.
2. For those ACDs complied with, the Maintenance Action Form (MAF) will contain the method of compliance in the corrective action field and if after compliance a recurring inspection will be required, the date of original ACD compliance, time on aircraft/engine (as applicable), the number of cycles (if applicable) and the date, time or cycles when the next maintenance action is required.
3. Logs and records will ensure:

i. The configuration module contained in the NASA aircraft maintenance management system is maintained in an up-to-date status at all times.

ii. All ACD recurring inspections are baselined in the NASA aircraft maintenance management system using the information captured from paragraph 4.16.2.(e)2. above.

(f) On type-certificated Aircraft:
Copies of the forms prescribed by 14 CFR Section 43.9(a), Maintenance Record Entries, shall be recorded for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

(g) The Contractor shall ensure work performed at other facilities is recorded in all aircraft records in accordance with 14 CFR Section 43.17, Maintenance, Preventive Maintenance, Rebuilding, and Alteration.

(2) Contents of Aircraft Maintenance Records:

(a) Scheduled and Unscheduled Maintenance:
All aircraft, engine, and appliance maintenance records shall contain the requirements of 14 CFR Section 43.17, Maintenance, Preventive Maintenance, Rebuilding, and Alteration, and current NASA WI. The Contractor shall comply with the requirements of AOD 33851, Maintenance Action Work Instruction NASA Form 1671, or equivalent. Aircraft Maintenance records shall contain the items:

1. For public aircraft:
   i. The date of completion of the work performed.
   ii. A description (or reference to data acceptable to NASA) of the work performed.
   iii. The aircraft total time in service.
   iv. The total time in service of the engine, propeller, or rotor, as applicable.
   v. The name of the person performing the work.
   vi. The signature (or electronic signature) and employee number of the person approving the work.

2. For type-certificated aircraft:
   i. The date of completion of the work performed.
   ii. A description (or reference to data acceptable to the FAA Administrator) of the work performed.
   iii. The aircraft total time in service.
   iv. The total time in service of engine, propeller, or rotor, as applicable.
   v. The name of the person performing the work.
   vi. The signature and certificate number of the person approving the aircraft for return to service.

(b) Inspection Status:
Maintenance records shall include the person approving or disapproving return to service of an aircraft, airframe, aircraft engine, propeller, appliance, or component part and shall make an entry in the maintenance record containing the following information:

1. For public aircraft:
   i. The date of the inspection.
   ii. The type of inspection, methodology used to accomplish the inspection, the results of the inspection and traceability to associated discrepancies.
   iii. The aircraft total time in service, landings, parabolas, cycles, L/D's, as applicable.
   iv. The signature of the person approving or disapproving for return to service.
   v. The employee number of the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof.
2. For type-certificated aircraft:
   The certificate number and type of certificate of the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof.

   In addition to the requirements for public aircraft, the following statement: "I certify that in accordance with a progressive inspection program, a routine inspection of (identify whether aircraft or components) and a detailed inspection of (identify components) were performed and the (aircraft or components) are (approved or disapproved) for return to service."

   If disapproved, the entry will further state "and a list of discrepancies and items deemed not airworthy (date) has been provided to the aircraft owner or operator."

   The entry must identify the inspection program, the part of the inspection program accomplished, and contain a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(c) Aircraft Life-Limited and Time Change Parts:
Records for Aircraft Life-Limited parts shall include:
1. The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.
2. The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(3) Collecting Aircraft Maintenance Records:
The Contractor shall provide a central point or office to collect Aircraft Maintenance Quality Records to include electronic and hard copy media. Archive quality records in accordance with JPR 1440.3, JSC Files and Records Management Procedures.

(4) Accessing Aircraft Maintenance Records:

a. Active aircraft maintenance records, in electronic media, shall be entered in the NASA aircraft maintenance management system on a "real-time" basis. Contingency Plans shall be maintained for all electronic data.

b. Active aircraft maintenance records in hard copy media shall be readily available to any maintenance technician, quality representative, or auditor identified in Section 4.17, within 4 hours.

(5) Filing Aircraft Maintenance Records:
Records shall be grouped into record series, properly indexed for convenient storage, and identified for retrieval using the AFS. The AFS is the NASA mandatory index for filing. It is found in Appendix A of the NPR 1441.1, NASA Records Retention Schedules. Aircraft Maintenance records shall be filed by tail number, or serial number, and not intermixed with other aircraft tail numbers, or serial numbers, or other records.

(6) Storing Aircraft Maintenance Records:

a. Active Records:
Active records shall be retained on site until the work is superseded and then may be classified as an inactive record.

b. Inactive Records:
Inactive records shall be retired to on-site storage for 1 year after close of file as long as the aircraft is in the agency inventory. After files have been grouped into record series, they must be properly indexed for convenient storage and retrieval using the AFS. Aircraft Maintenance records shall be filed by tail number, or serial number, and not intermixed with other aircraft tail numbers, or serial numbers, or other records.

(7) Maintaining Aircraft Maintenance Records:
The Contractor shall identify procedures to maintain aircraft maintenance quality records to include audits to determine the status of aircraft maintenance records to minimize deterioration, damage, or loss.

(8) Disposition Aircraft Maintenance Records:

a. Active aircraft maintenance records in an electronic medium shall be readily available real-time. Contingency Plans shall be established for all electronic data.

b. Active aircraft maintenance records in hard copy medium shall be readily available to any auditor identified in Section 4.17 within 4 hours.

(9) Retention of Aircraft Maintenance Records:
Aircraft maintenance records shall be retained by the Contractor in accordance NPR 1441.1, NASA Records Retention Schedules, Schedule 7, AFS #7900. In addition, on type-certificated aircraft, in accordance with 14 CFR Section 91.417, Maintenance Records. These control methods shall include but are not limited to:

a. General maintenance records are retained as active records until the work is repeated superseded by other work, or for 1 year after the work is performed.

b. All Aircraft Change Directive records refer to AOD 33846, Aircraft Change Directives Management, shall be retained and transferred with the aircraft at the time the aircraft is sold or transferred.

c. On Type-certificated aircraft, a list of defects shall be furnished to a registered owner or operator under 14 CFR Section 43.11, Maintenance,

Preventive Maintenance, Rebuilding, and Alteration. This list shall be retained until the defects are repaired and the aircraft is approved for return to service.

d. When transferring the aircraft to another agency, the aircraft maintenance records shall be transferred with the aircraft. If aircraft is otherwise disposed of or destroyed, the records will either be destroyed, when no longer needed, or when 1 year old, whichever is sooner.

4.17 Internal Quality Audits

The Contractor shall establish and maintain self-audit procedures. The Contractor's responsibilities include but are not limited to:

(1) Perform self-audits at planned intervals to ensure the QMS
   (a) Conforms to the processes required by this SOW and
   (b) Is effectively implemented and maintained.

(2) Provide an audit program that takes into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. This program shall include:
   (a) The audit criteria, scope, frequency and methods of accomplishment.
   (b) The responsibilities of personnel. Note: Auditors shall not audit their own work.
   (c) Requirements for planning and conducting audits.
   (d) Procedures for reporting results.
   (e) The detailed tools and techniques such as checklists, process flowcharts, or any similar method to support audit or the QMS requirements. The acceptability of the selected tools will be measured against the effectiveness of the internal audit process and overall organization performance.
   (f) Procedures for maintaining audit records. The Contractor shall provide records of all inspections or audits conducted by the Contractor and any corrective action taken. All nonconformances discovered during the audit process must receive corrective action. Reports of Contractor internal audits shall be subject to NASA review to ensure the self-audit procedures are accomplished. These records shall be made available to the NASA Assistant Branch Chief, QA Section, within 30 calendar days of the audit being performed.
   (g) Follow-up activities that include verification of the actions taken and the reporting of verification results.

(3) Meet or exceed the AMMP contract and AOD QMS standards. AOD 33882, Annual Process Audit Program, defines the audit and management review process. NASA reserves the right to conduct audits at any time during the contract period. These audits shall include the inspection of facilities, equipment, and conformance to required AOD directives and Contractors Operations Manual and are normally performed in accordance with AOD 33882, Quality Audit Program, AOD 33879, Contract Surveillance Plan, NASA Headquarters Intercenter Aircraft Operations Panel (IAOP) Procedures identified in NPD 7900.4, Aircraft Operations Management, and AG-UWI-003, Conducting and Participating in Internal Audits.

4.18 Resource Management

4.18.1 Human Resources and Training

The Contractor shall provide a training program for the technical education of its employees. It is the Contractor management's responsibility to ensure personnel are trained, qualified, and certified to accomplish the duties specified in this SOW.

4.18.1.1 Training, Qualification, and Certification Program

The Contractor shall establish and maintain a Training, Qualification, and Certification Program for all employees and submit it to the CO/COTR for written approval 90 days after contract award in accordance with DRL item 20. No employee will be authorized to perform specialized tasks where special certification requirements must be maintained if the individual's certifications expire. The Training Officer must maintain records of personnel certifications for all specialized certification requirements and immediately notify the QC Manager when employee certifications expire.

4.18.1.2 Training Officer

The Contractor shall provide a Training Officer who shall perform duties including but not limited to:

(1) Maintain the Contractor's Training, Qualification, and Certification Program.
(2) Comply with management policy to ensure personnel are trained, qualified, and certified.
(3) Perform Course Instructor duties.
(4) Maintain Personnel Training Folders on each Contractor employee (refer to paragraph 4.18.1.4). These folders will be subject to NASA Quality Assurance reviews during audits and at other times deemed appropriate.
(5) Maintain up-to-date training syllabus, to include OJT for all assigned personnel.

4.18.1.3 Personnel Training

The Contractor shall provide qualified and certified personnel who shall perform the duties identified in this SOW.

4.18.1.3.1 Course Instructors

The Contractor shall provide a Course Instructor who shall perform duties including but not limited to:

(1) Conduct training in accordance with the Training, Qualification, and Certification Program.
(2) Provide course/training syllabus for recurrent training requirements.
(3) Record training accomplished.
(4) Recommend changes to the Training, Qualification, and Certification Program.

4.18.1.3.2 On-the-Job (OJT) Training

OJT Trainers shall be personnel selected from the existing workforce by the Contractor. The Contractor shall provide OJT Trainers who shall perform duties including but not limited to:

(1) Conduct OJT training.

(2) Use the OJT training checklists.
(3) Record training accomplished.
(4) Recommend changes to the Training, Qualification, and Certification Program.

4.18.1.4 Personnel Training Folder

The Contractor shall identify and record in a Personnel Training Folder the training requirements, qualifications, and certifications of all employees. These records shall be available to QMS auditors and include but are not limited to:

(1) Safety Related Records:
Safety related requirements shall be maintained by the training officer in the QC office.
   (a) Name of employee.
   (b) Employment start date.
   (c) Primary duty position to include assigned aircraft and shop.
   (d) Evidence of all safety training required in accordance with JPR 1700.1, JSC Safety and Health Handbook.

(2) Work Center Training Records:
Training records for personnel shall be maintained by the work center supervisor/foreman. These records shall be available electronically to other work center supervisors/foremen when personnel are dispatched for temporary duty (TDY). These folders shall contain but are not limited to:
   (a) Name of employee.
   (b) Primary duty position to include assigned aircraft and shop.
   (c) Additional duties which require training, qualification or certification requirements.
   (d) Evidence of all certification, when required by the duty position(s), to include recurrent certification frequencies.
   (e) Evidence of all qualifications, when required by the duty position(s), to include recurrent frequencies.
   (f) Evidence of all training, when required by the duty position(s), to include recurrent training frequencies.
   (g) Evidence of certification waiver authority when applicable.

4.18.1.5 Training Report Requirements

The Contractor shall provide a monthly training report in accordance with DRL item 8.

4.18.2 Facilities

The following facilities/shops are available for Contractor use:

Shop/Facility	Location/Building	Remarks
EFD		
Administration Office	EFD, Building 273	NASA Maintenance, IT, Contractor Administration
Battery Shop	EFD, Building 135	
Corrosion/Paint Shop	EFD, Building 136	
Egress Shop	EFD, Building 271	
Electric Shop	EFD, Building 135	

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Shop/Facility	Location/Building	Remarks
Electronics Lab	EFD, Building 135	
Engine Shop	EFD, Building 135	
Flight Line/Ramp	EFD, EDW, ELP, TTS	
Fuel Cell Maintenance	EFD, Building 150	
Ground Support Equipment Shop	EFD, Building 278	
Hangar 135	EFD, Building 135	G-II, G-III, STA Maintenance; QC/QA, Engineering
Hangar/Docks 276	EFD, Building 276	T-38 Maintenance
Hangar 990	EFD, Building 990	DC-9, WB-57F Maintenance; and WB-57 Program Office
Hydraulic Shop	EFD, Building 276	
Jet Engine Test Facility	EFD, Building 140	
Mechanical Accessories Shop	EFD, Building 272	
Nondestructive Inspection (NDI) Testing Lab	EFD, Building 150	
Personal Equipment Shop	EFD, Building 276	
Pressure Suit Shop	EFD, Building 990	
Production Control	EFD, Building 276	
Quality Control Office	EFD, Building 267	QA, QC
Sound Suppression Facility	EFD, Building 151	
Sheet Metal Shop	EFD, Building 135	
Supply Building 333	JSC Site, Building 333—Partial Use/Shared with other NASA Contractors	
Supply Building 338	JSC Site, Building 338—Partial Use/Shared with other NASA Contractors	
Supply Building 993	EFD, Building 993 (Reduced Gravity Facility)	
Supply Building 994	EFD, Building 994 (WB-57 Special Projects)	
Supply- Class B And C Explosives	This area is located in Air National Guard facilities at Ellington	
Tire and Wheel Shop	EFD, Building 137	
Tire and Wheel Storage	EFD, Building 137B	
Warehouse, Building 265	EFD, Building 265	
Warehouse, Building 266	EFD, Building 266	
Warehouse, Building 270	EFD, Building 270	
Warehouse, Building 380	EFD, Building 380	
Welding Shop	EFD, Building 279	
Aircraft Storage Facility	- - - - - - - - - - - - - - -	Wash Rack
ELP FOL		
Hangar 8101	ELP, Building 8101	T-38, G-II, G-III, STA and 377 Super Guppy Maintenance
Hangar 8102	ELP, Building 8102	T-38 Maintenance (depot)
EDW FOL		
Building 4859	EDW/DFRC	Administration

Shop/Facility	Location/Building	Remarks
Shuttle Handling Area "Area-A"	EDW/DFRC	Shuttle Support (747 aircraft)

4.18.2.1 Facility Services

The Contractor is responsible for a safe and secure work environment in accordance with JPR 1700.1, JSC Safety and Health Handbook. The Contractor's responsibilities include but are not limited to:

(1) Cleaning hangar floors and areas within all buildings occupied by the Contractor that are not carpeted or covered with floor tiles.

(2) Cleaning hangar floors to ensure free from dirt, grease, and oil. Spills shall be cleaned up immediately. All shop areas will be swept, work areas cleaned, and materials properly stored at the end of each shift or work day.

(3) Cleaning hangar wall areas (within reach) to include power cable racks, fire hose assemblies, fire cabinets, fire extinguishers, and portable eye wash stations. Fire hoses, extinguishers, and eye wash stations shall be clean and serviceable at all times.

(4) Cleaning hangar doors and drain grates to ensure free of debris.

(5) Stowing cables in "walk-overs" when in use. Cables and "walk-overs" shall be stowed when not in use to avoid trip hazards.

(6) Ensuring personnel in aircraft maintenance docks and workstations within the hangars use drip pans, aircraft hardware bags, and panel holders.

(7) Ensuring shops, warehouses, and other industrial work areas within and adjacent to the hangars are free of debris.

(8) Ensuring good housekeeping practices are implemented and followed.

(9) Ensuring cabinets are kept level, clean, and in good repair. Stacking of materials in offices and hangar spaces shall not create a hazardous condition.

(10) Ensuring the safe use, handling, storage, and disposition of all materials, including hazardous materials, used in support of aircraft maintenance. Products and materials such as flammables and combustibles shall be stored in flammable materials storage cabinets that are suitable and approved for the intended use. Products that are not compatible must be stored separately. Small quantities of flammable and combustible materials may be kept in shop, hangars, and other such work areas where it is safe to do so. See Section 4.18.3.2, Safety and Health Plan.

(11) Ensuring fire suppression/fire detection systems remain unobstructed.

4.18.2.1.1 Facility Manager Alternates

The Contractor shall assign a facility manager alternate to each hangar, building, warehouse, or facility used or occupied by the Contractor to assist the NASA facility managers. One facility manager alternate may be responsible for multiple locations. Their primary duties shall consist of:

(1) Performing facility inspections in accordance with AOD 33877, Monthly/Quarterly Safety and Health Inspection.

(2) Taking measures to correct discrepancies (particularly those with safety or health implications).

(3) Acting as a point of contact in the NASA facility manager's absence.

(4) Assisting the Primary Facility Manager in maintaining an up-to-date Emergency Action Plan for the facility assigned.
(5) Participating and educating occupants of assigned building on emergency evacuation plan.

4.18.2.2 Conservation of Utilities

The Contractor shall instruct employees in utilities conservation practices. Utilities shall be used only in areas where and when work is actually being performed. The Contractor shall not waste utilities.

4.18.2.3 Facility Inspections

The Contractor shall perform facility inspections in accordance with AOD 33877, Monthly/Quarterly Safety and Health Inspection.

4.18.3 Work Environment

The Contractor shall provide training programs about Occupational and Institutional Safety, Environmental Protections, Fire Safety and Medical Services for all personnel. The Contractor shall resolve safety and health issues as they arise.

The Contractor is expected to assist NASA as required to maintain the elements of the OSHA Voluntary Protection Program (VPP).

Participate in the Quarterly Safety and Health Inspections in accordance with AOD 33877, Monthly/Quarterly Safety and Health Inspection. Environmental management is included as required by law. See DRL item 5.

All personnel shall conduct aviation-related activities in a safe and responsible manner and in compliance with NASA aviation guidelines and safety programs in accordance with NPR 7900.3, Aircraft Operations Management Manual, Chapter 6, Aviation Safety. Aviation safety is the personal responsibility of every person involved in aviation-related activities.

4.18.3.1 Fire Safety Program

The Contractor shall establish a Fire Safety Program that shall be incorporated into the Contractor's Operating Manual. This program shall include but is not limited to:
(1) An assistant fire marshal with the duties identified below.
(2) A fire warden for each building identified in Section 4.18.3.1.2 to oversee fire safety. Fire warden duties are shared with NASA and other Contractor personnel as approved by the NASA fire marshal.
    (a) Individuals shall work in the buildings in which they are assigned fire warden duties.
    (b) Fire Wardens shall be assigned to every floor in multiple story buildings.
(3) Personnel training requirements in accordance with JPR 1700.1, JSC Safety and Health Handbook.

4.18.3.1.1 Assistant Fire Marshal

The Contractor shall designate a person to assist the NASA fire marshal. The duties shall include but are not limited to:

(1) Assisting the NASA fire marshal in the performance of fire drills.
(2) Monitoring fire equipment for serviceability.
(3) Inspecting all work areas and other facilities to identify possible fire risks.

4.18.3.1.2 Fire Wardens--Alternates and Assistants

The Contractor shall designate a Primary and Secondary Fire Warden with assistant Fire Wardens as required, with the duties identified in JPR 1700.1, JSC Safety and Health Handbook. The duties shall include but are not limited to:

(1) Assisting the NASA fire marshal in the performance of fire drills.
(2) Monitoring fire equipment for serviceability.
(3) Inspecting assigned work area to identify possible fire risks.

4.18.3.2 Safety and Health Plan

The Contractor shall establish, implement, and maintain a Safety and Health Plan in accordance with DRL item 13.

4.18.3.2.1 Safety and Health Officer

The Contractor shall designate a Safety and Health Officer to manage the Contractors Safety and Health Office. All Safety Office personnel shall provide hands on safety involvement and training (or training oversight) at all levels of the work performed. The Safety and Health Officer's duties include but are not limited to:

(1) Implement and maintain the Safety and Heath Plan and all formal contacts with regulatory agencies and with NASA.
(2) Teach basic first aid and Cardio Pulmonary Resuscitation (CPR) training to Contractor and NASA employees.
(3) Work on a daily basis with the NASA Ground Safety, Industrial Safety and Maintenance Safety Officers at EFD.
(4) Inspect shops, hangars, and other work areas and facilities regarding safety issues.
(5) Sample breathing air in accordance with 29 CFR 1910.146, General Environmental Controls--Permit-Required Confined Spaces.
(6) Test and service eye wash stations in accordance with the manufacturer's technical data.
(7) Maintain Material Safety Data Sheet (MSDS) files.
(8) Maintain spill kits.
(9) Calibrate and maintain safety and environmental test equipment.
(10) Shall be responsive to center-wide safety, health, environmental, and fire protection concerns and goals, and will participate in meetings, training, and other activities related to the JSC Safety and Health Plan.

(11) Shall co-chair the monthly safety meeting with NASA management, Contractor management, JSC Safety Officials, other Contractor management, and work center representatives.
(12) Shall perform safety and health inspections in accordance with AOD 33877, Monthly/Quarterly Safety and Health Inspections.
(13) Shall support the Voluntary Protection Program (VPP).

4.18.3.2.2 Assistant Safety and Health Officer

The Contractor shall designate an Assistant Safety and Health Officer to assist the Safety and Health Officer carry out the duties of the Contractor Safety office with duties identified in Section 4.18.3.2.1 above.

4.18.3.2.3 Safety and Health Plan Report Requirements

The Contractor shall provide safety and health reports to NASA in accordance with DRD item 11.

4.18.3.3 Environmental Health Program

The Contractor shall develop and implement an Environmental Health and Safety (EHS) Program in accordance with DRL item 5. The Contractor's responsibilities include but are limited to:
(1) Notify NASA prior to initiating any project, process, or purchase of equipment or material that change the quantity or toxicity of any pollutant emitted or generated. The COTR will provide authorization prior to the Contractor initiating the project, process, or purchase.
(2) Perform corrective action immediately upon identifying an EHS problem. All inspections and corrective actions shall be documented in accordance with DRL item 5.

4.18.3.3.1 Environmental Health Program Representative/Liaison

The Contractor shall designate an environmental health program representative/liaison to NASA. This person shall be the primary point of contact for the Contractor on environmental issues. The Environmental Health Program Representative/Liaison shall perform duties including but not limited to:
(1) Monitor the Contractor's Pollution Prevention and Waste Minimization Program.
(2) Develop baseline "benchmarking" and initiating actions to reduce waste generation.
(3) Attend pollution prevention/waste reduction workshops and seminars sponsored by NASA, DoD, and industry.
(4) Support the Voluntary Protection Program (VPP).

4.18.4 Information Systems

The Contractor shall adhere to the policies for information systems resources applicable to technologies, systems, equipment, software, associated with the creation, acquisition, transfer, and archiving of institutional data in all forms in accordance with:
(1) NPD 2800.1, Managing Information Technology.
(2) JSC SLP 4.18, Resource Management, Appendix D, Information Systems.

The information system includes the institutions workstations, software applications, data, web sites, video, telecommunications networks, documentation and publishing, records and directives administration, and information systems security. The Contractor shall provide an Information Technology Plan and associated reports in accordance with DRL item 6.

4.18.4.1 RESERVED

4.18.4.2 Computer Security

The Contractor shall establish effective and comprehensive industrial, physical, administrative, information, communications, and Information Technology (IT) security programs in accordance with the National Industrial Security Program Operating Manual, NASA site-specific regulations, and DD Form 254, Contract Security Classification Specification. The Contractor shall adhere to NASA security procedures for the unauthorized use of Government computer systems.

(1) Computers shall only be used for work-related functions.
(2) Personnel shall log off computers when not in use.
(3) Personnel shall receive security training on the computer information system within 3 months of employment and annually thereafter (See Section 10, Personnel Requirements).

A4 DFRC—QUALITY MANAGEMENT SYSTEM, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

A4.2 Quality Management System

The Contractor's QMS shall meet or exceed the elements contained in the ANSI/ASQC Q9001-2000, Quality Systems--Model for Quality Assurance in Design, Development, Production, Installation, and Servicing standard. The Contractor's QMS shall be compatible with each NASA Center's unique QMS.

A4.4 Design Control

Not applicable to DFRC.

A4.5 Documentation Control

A4.5.1.1 Process Control Work Instructions

All Contractor-developed and existing processes and procedures utilized by the Contractor to fulfill SOW requirements shall be documented and controlled in accordance with the Contractors Quality Manual.

A4.5.1.2 Technical Librarian *(Reserved.)*

A4.6 Procurement

Procurement will be made through the logistic department and approved through DFRC.

A4.9 Process Control

A4.9.1 Performance Rules

All maintenance and inspections shall be performed in accordance with the applicable Military T.O.'s, manufacturers' specification handbook of operations, maintenance manuals, Operational Maintenance Instructions (OMIs), and Operational Maintenance

Requirements System (OMRS). When approved technical data is not available or inadequate, the Contractor shall develop operation and maintenance (O&M) instructions, which will be titled Maintenance Directives (MD's). The Contractor shall establish and maintain current operation, maintenance, and repair procedures. The procedures utilized by the Contractor shall be in accordance with current laws, regulations, directives, and instructions applicable to these functions.

A4.9.2 Aircraft Mishap Plan

The Contractor shall provide support for off-site recovery or repair of disabled aircraft. Technical personnel shall participate in off-site recovery operations as required in support of DFRC flight operation missions. These deployments may include overseas travel. The Contractor shall also be required to participate in emergency recovery operations for any incidents/accidents associated with DFRC programs. Participation may require the repair of disabled aircraft, recovery of aircraft, or aircraft related hardware from crash sites. The Contractor shall be authorized to travel on Government aircraft to facilitate recovery of a disabled aircraft. The Contractor shall be expected to initiate all travel arrangements and/or procurement of services and equipment to facilitate the recovery of an aircraft.

A4.9.4 Aircraft Static Display

The Contractor shall provide aircraft static display services in accordance with DCP-O-001, Dryden Aircraft Maintenance and Safety Manual.

A4.9.5 Aircraft Maintenance Program

A4.9.5.2 Aircraft Maintenance Program Monitor

Not Applicable.

A4.9.7 Foreign Object Damage/Debris (FOD) Control Program

The Contractor shall be in compliance with the FOD policy called out in DCP-O-001, Dryden Aircraft Maintenance and Safety Manual, Chapter 9.

A4.9.10 Joint Oil Analysis Program (JOAP)

The Contractor shall maintain an Oil Analysis Program in accordance with the requirements of the type aircraft technical data.

A4.9.11 Tool Control Program

The Contractor shall be in compliance with the tool control policy called out in DCP-O-001, Dryden Aircraft Maintenance and Safety Manual, Chapter 9. The Contractor is encouraged to suggest better methods of tool control for incorporation into the Dryden policy. The Government may elect to provide tools as required to the Contractor when available as determined by COTR.

A4.9.12 Weight and Balance Program

Not applicable.

A4.9.13 Weather Protection/Lightning Detection Program

Not applicable.

A4.10 Inspection and Testing

The Contractor shall provide reliability, quality control and assurance, and aircraft hardware inspection services for aircraft and related equipment. Inspections shall be in conformance with the current edition of DCP-O-001, Dryden Aircraft Maintenance and Safety Manual. The Contractor shall implement and maintain a quality control, QA, and aircraft inspection system as approved by the CO/COTR. This system will be subject to Government audit as required to assess Contractor compliance.

A4.10.3 Engineering Inspections/Analysis

Not Applicable.

A4.10.4 Production Inspections

A4.10.4.2 Quality Assurance Representative

Not Applicable.

A4.17 Internal Quality Audits

The Contractor shall perform audits of personnel, procedures, services, and operations for tasks assigned under this SOW to verify compliance with accepted standards. This shall include audits of vendors, suppliers, and sub-Contractors providing services to the Contractor. Audits are generally not required for those vendors, suppliers, and sub-contractors who provide DoD or FAA certified parts or services. In such cases, a copy of the valid certification must be provided to the Contractor and be available for Government audit. The Contractor shall be responsible for QA within its own organization and shall make recommendations to the responsible NASA DFRC project management where audits of vendors, suppliers, and sub-contractors are necessary or desirable to ensure quality, safety, and or Airworthiness.

The Contractor shall support the Government audit of its plans, procedures and processes when deemed necessary by the Government by providing supporting documents. Government audits will include but are not limited to all disciplines and tasks associated with aircraft operations, maintenance, safety quality, logistics, engineering, fabrication, modification, technical drawing, configuration control, and financial operations.

A4.18 Resource Management

A4.18.1 Human Resources and Training

A4.18.1.1 Training, Qualification, and Certification Program

The Contractor shall establish and execute a training program to ensure their staff is adequately trained and qualified to perform all tasks identified in this SOW in accordance with DRL item 20. The training program shall be submitted to the

CO/COTR. All training shall be consistent with the provisions of the DCP-O-001, Dryden Aircraft Maintenance and Safety Manual, and with DOP-O-018, Certification Training, for mission management aircraft.

A4.18.1.3 Personnel Training

A4.18.1.3.1 Course Instructors

Not Applicable

A4.18.2 Facilities

The following facilities/shops are available for Contractor use:

Shop/Facility	Location/Building	Remarks
Maintenance Control	DFRC Trailer, T-20	
Engine Shop	DFRC Building 3800	
Electric Shop	DFRC Building 4802	
Administration Office	DFRC Building 4800/T-20	
Engineering, QC, Aircraft Operations, & Warehouse	DFRC Building 4800	
Hangar; Global Hawk	DFRC Building 4801	
Engine Shop, Hangar; F18, T34, T38, King Air	DFRC Building 4802	
Machine Shop, NDI Laboratory, Sheet metal Shop, Tool Crib, Hydraulic Shop, Fabrication Shop	DFRC Building 4823	
Hangar; F15, F16,	DFRC Building 4826	
Pilot Operations	DFRC Building 4800/DAOF	
Hangar: CEV	DFRC Building 4833	
Hangar; ER2, Predator	DFRC Building 4840	
Flight line & Ramp Areas	DFRC	
Office Areas, Support Shops, Hangar; 747, DC8, Associated Flight Line & Ramp Areas	DAOF Site 9, Building 703	

A4.18.2.1 Facility Services

A4.18.2.1.1 Facility Manager Alternates

Not Applicable

A4.18.3 Work Environment

A4.18.3.2 Safety and Health Plan

The Contractor shall establish, implement and maintain a Safety and Health Plan in accordance with DRL item 14.

A4.18.3.2.2 Assistant Safety and Health Officer

Not Applicable.

A4.18.3.3 Environmental Health Program

The Contractor shall develop and implement an Environmental Health and Safety (EHS) Program in accordance with DRL item 5.

B4 LaRC—QUALITY MANAGEMENT SYSTEM, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

B4.2 Quality Management System

The Contractor shall be responsible for a QMS that assures quality of maintenance, products produced, and services provided. The Contractor shall complete all work in accordance with applicable NASA, FAA, DoD, and LMS-TD-0940, General Aircraft Maintenance Manual for Airborne Systems Competency (AirSC), directives. The QA function shall be separate and distinct from the maintenance function and shall satisfy the requirements of NPR 7900.3B, Aircraft Operations Management. The Contractor's QMS shall be compatible with each NASA Center's unique QMS

B4.4 Design Control

Not Applicable.

B4.5 Document and Data Control

B4.5.1 Document Control

The Contractor shall maintain documentation in accordance with NPR 7900.3B, Aircraft Operations Management Manual.

B4.5.1.3 Technical Libraries

The Contractor shall be responsible for maintaining the QA library. This library includes the NASA LaRC aircraft historical records, log sheets, status boards, technical files, and Information Handling Services (CD ROM) for aircraft/standards. The Contractor shall review aircraft records daily, checking for accuracy, and proper documentation. Changes and revisions to military and commercial aircraft publications will be posted as follows:

CD-ROM Library – as received
FAA – ATP - biweekly
Commercial Aircraft (CD/hard copy)
Military (hard copy) – monthly

The Quality Assurance Office (QAO) Technical Library shall be maintained and updated. All publications must be ordered within 10 days after the receipt of request.

B4.9.5 Aircraft Maintenance Program

B4.9.5.2 Aircraft Maintenance Program Monitor

Not Applicable.

B4.9.10 Joint Oil Analysis Program (JOAP)

The Contractor shall maintain an Oil Analysis Program in accordance with the requirements of the type aircraft technical data.

B4.9.12 Weight and Balance Program

Not applicable.

B4.9.13 Weather Protection/Lightning Detection Program

Not applicable.

B4.10 Inspection and Testing

The Contractor shall advise the Lead, NASA Quality Assurance, or his designee, each morning on the status of the aircraft for which they are responsible.

B4.10.3 Engineering Inspections/Analysis

Not Applicable.

B4.10.4 Production Inspections

B4.10.4.2 Quality Assurance Representative

Not Applicable.

B4.11 Control of Monitoring and Measuring Devices

All aircraft test equipment records will be monitored for calibration due dates and repair notices. Equipment will be submitted for recalibration/repair as required. The Contractor will be responsible for tracking approximately 220 pieces of equipment.

B4.12 Inspection and Test Status

B4.12.2 Non-Destructive Inspection Testing

Not Applicable.

B4.16 Control of Quality Records

B4.16.2 Aircraft Maintenance Records

The Contractor shall maintain aircraft maintenance records in the QAO records library. Hard copy aircraft maintenance records shall be controlled in accordance with the Aircraft Maintenance Program. Section 4.16.2(1)(a)1.i., ii., and iii are not applicable to LaRC. All other requirements apply.

B4.18 Resource Management

B4.18.2 Facilities

The following facilities/shops are available for Contractor use:

Shop/Facility	Location/Building	Remarks
Administration Office	LaRC Building 1244	NASA Maintenance, Contractor Administration
Battery Shop	LaRC Building 1244	
Electric Shop	LaRC Building 1244	
Fabrication Shop	LaRC Building 1244	
Flight Line/Ramp	LaRC	
Ground Support Equipment Shop	LaRC Building 1244	

Shop/Facility	Location/Building	Remarks
Personal Equipment Shop	LaRC Building 1244	
Quality Assurance Office	LaRC Building 1244	QA, QC
Supply	LaRC Building 1244	

B4.18.2.1 Facility Services

B4.18.2.1.1 Facility Manager Alternates

Not Applicable

B4.18.3 Work Environment

B4.18.3.1 Fire Safety Program

B4.18.3.1.1 Assistant Fire Marshal

Not applicable.

B4.18.3.1.2 Fire Wardens-Alternates and Assistants

Not applicable.

B4.18.3.2 Safety and Health Plan

B4.18.3.2.2 Assistant Safety and Health Officer

B4.18.4.2 Computer Security

The Contractor shall adhere to NASA security procedures for the unauthorized use of Government computer systems. Access to LaRCNET will require an IT Security Implementation Plan.

SECTION 5- MANAGEMENT ACTIVITIES

5 MANAGEMENT ACTIVITIES

(1) The Contractor shall exercise management, operational control, and retain full responsibility for performance requirements set forth in this SOW to include the goals listed in Appendix C, *Performance Goals*.

(2) The Contractor's General Manager shall be responsible for the implementation of the safety, health, and environmental program requirements and be responsive to center-wide safety, health, environmental, and fire protection concerns and goals.

(3) The Contractor's General Manager shall participate in meetings and other activities related to the Safety and Health Plan.

(4) The Contractor shall furnish, in writing, to the CO/COTR the names and phone numbers of the contract manager, all Contractor management, and supervisory personnel no later than contract start date. The CO/COTR shall be notified immediately whenever changes are proposed. Replacement of key management personnel shall be subject to approval of the CO/COTR.

(5) The Contractor shall provide sufficient mission capable aircraft per scheduled flying day, configured in accordance with the daily/weekly/monthly flying schedule, to ensure accomplishment of the mission.

(6) If NASA actions significantly impair the Contractor's ability to meet established criteria, the Contractor may provide written justification for noncompliance to the CO/COTR. The CO/COTR will coordinate a waiver, as required.

(7) Contractor management may be required to meet at least weekly with the CO/COTR during the first month of the contract, and thereafter as determined by the CO/COTR.

(8) The Contractor shall be responsible for complying with the Contractor's QMS encompassing all services and requirements to cover the scope of this contract.

5.1 Contractor Information Program

The Contractor shall establish and maintain a program to disseminate information to all personnel concerning issues of health, environmental, safety practices, and aircraft safety of flight items. This program shall include but not be limited to:

(1) An information file of all items disseminated to Contractor personnel.

(2) Records showing all personnel are aware of the file contents.

5.2 Documents

(1) The Contractor shall establish, maintain, and implement the requirements of the following documents:

(a) Aircraft Maintenance Program Work Instructions in accordance with DRL item 3.

(b) Aircraft Recovery Plan WI in accordance with DRL item 1.

(c) Contractor's Operations Manual (COM) in accordance with DRL item 3.

(d) Environmental Health Program Plan in accordance with DRL item 4.

(e) Information Technology (IT) Capital Investment Planning (CIP) DRL item 5.

(f) Lessons Learned in accordance with DRL item 6.

(g) Notification of Potential Labor Dispute and Contingency Strike Plan in accordance with DRL item 9.

(h) Safety and Health Plan in accordance with DRL item 12.

(i) Safety and Health Program Self Evaluation in accordance with DRL item 14.

(j) Safety and Health- Monthly Metrics in accordance with DRL item 15.

(k) Systems Safety Program Plan in accordance with DRL item 16.

(l) Training, Qualification, and Certification Program WI in accordance with DRL item 18.

(2) Management shall provide personnel to perform process owner duties for the documents required by this SOW in accordance with AOD 33803, *Documentation and Data Management.*

5.3 Report Requirements

The Contractor's management shall provide the reports indicated below and they shall be maintained by the contractor in accordance with *NPR 1441.1, NASA Records Retention Schedules.* DRD report requirements may be made available electronically in lieu of hard copy distribution.

(1) Commercial Monthly Purchase Expenditures in accordance with DRL item 2.

(2) Environmental Health Program Reports in accordance with DRL item 4.

(3) Monthly Progress Reports in accordance with DRL item 7.

(4) NASA Contractor Financial Management Data.

The Contractor shall submit reports evaluating cost and expenditures in support of this contract. Reports shall include a Monthly Contractor Financial Management Report and a Quarterly Contractor Financial Management Report in accordance with DRL item 8.

(5) Reports Required for Logistics in accordance with DRL item 10.

(6) Roster of Contract Personnel in accordance with DRL item 11.

(7) Safety and Health Program Reports in accordance with DRL item 12.

The Contractor shall provide separate tracking for incident, accident, close call, preventive, or other safety related reports for JSC or other NASA aircraft.

(8) Small Business Subcontracting Reports in accordance with DRL item 17.

(9) Wage/Salary and Fringe Benefit Data in accordance with DRL item 19.

(10) Environmental and Energy Consuming Product Compliance Reports in accordance with DRL item 21.

(11) Other reports as required by the contract.

5.4 Computer Systems- General

NASA utilizes Microsoft Windows Office software with an emphasis on eliminating hard copy interoffice memos and reports. Electronic mail is used on a daily basis to distribute information and the local center internet is used extensively to provide current technical

data information. Contractor personnel shall effectively utilize the computer information systems supplied by the Government to accomplish the requirements of this SOW.

5.4.1 Aircraft Maintenance and Logistics Management Information System(s)- General

The Contractor shall effectively utilize the Government furnished aircraft maintenance, logistics, and inventory management information systems. The Contractor shall input all data to ensure aircraft maintenance and logistics functions are accomplished.

5.5 JSC Environmental and Energy Conservation Requirements

The Contractor shall ensure that all work performed and equipment used on-site at JSC, EF, SCTF and EPFOL to fulfill the requirements of this contract are in compliance with all Federal, state, and local regulations and public laws, and the following NASA JSC directives: JPD 8500.1, JSC Environmental Excellence Policy; JPR 8550.1, JSC Environmental Compliance Procedural Requirements; JPR 8553.1, JSC Environmental Management System Manual; CWI JE9W-06, EMS Aspect/Impact Assessment and EMP Process; NPR 8570.1, Energy Efficiency and Water Conservation; JSC's Energy and Water Conservation 5-Year Plan; and CWI J69W-03, Energy Conservation. The Contractor shall provide data on affirmative procurement, waste reduction activity, energy efficient product procurement, and ozone depleting substances in accordance with DRD XX-X-X, Environmental and Energy Consuming Product Compliance Reports.

The Government remains the owner and operator of record for all environmental activities conducted at NASA owned properties unless otherwise documented in a signed agreement between NASA and the Contractor. The Contractor is advised that activities performed at JSC and associated facilities are subject to Federal, state and local regulatory agency inspections to review compliance with environmental laws and regulations. For on-site issues, JSC's Environmental Office will be the single point of contact with Federal and state regulatory agencies and their representatives unless otherwise directed by the Contracting Officer or the Environmental Office. The Contractor shall immediately notify the JSC Environmental Office when contacted by external regulatory agency representatives and shall cooperate fully. The Contractor shall complete, maintain, and make available to the Contracting Officer, JSC Environmental Office, JSC Energy Manager, or regulatory agency personnel all documentation relating to environmental compliance matters under applicable laws. The Contractor shall immediately notify the JSC Environmental Office upon issuance of a Notice of Violation or noncompliance to the Contractor.

Should a Notice of Violation, Notice of Noncompliance, Notice of Deficiency, or similar regulatory agency notice be issued to the Government as a facility owner/operator on account of the actions or inactions of the Contractor or one of its subcontractors in the performance of work under this contract, the Contractor shall fully cooperate with the Government in correcting any problems and defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

SECTION 5- MANAGEMENT ACTIVITIES

A5 DFRC- MANAGEMENT ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

(1) The Contractor shall provide a Site Manager. The Site Manager shall make day-to-day decisions related to all work performed under this SOW and is responsible for the Contractor's and sub-contractor's overall performance at that location. This person shall be the Contractor's prime point of contact (POC) with the CO/COTR for technical issues.
(2) The Contractor's Site Manager shall be responsible for the implementation of the safety, health, and environmental program requirements and be responsive to center-wide safety, health, environmental, and fire protection concerns and goals, and will participate in meetings and other activities related to the Safety and Health Plan.
(3) The Contractor shall provide all management, supervision, and labor to perform the requirements of this contract. All Contractor personnel duties shall be in compliance with DCP-O-001 and DCP-0-006 as it pertains to Flight Operations requirements.
(4) The Site Manager shall plan, organize, schedule, staff, direct, control, budget, forecast, perform contract administration, procure, price, and estimate.
(5) The Site Manager shall be the POC for resolving conflicts involving daily activities, planning future operations, and overseeing direction and administration of Contractor personnel assigned to this contract.
(6) The Site Manager is responsible for timely and effective communications with NASA managers and technical personnel.

A5.1 Documents

The Contractor shall establish, maintain, and implement the requirements of the documents indicated below.

(1) The Contractor shall develop, implement, and maintain a *Contractor's Operations Manual.* The Contractor shall submit for Government approval a COM not later than 90 days after contract startup in accordance with DRL item 3.
(2) Safety and Health Plan in accordance with DRL item 13.

A5.2 Report Requirements

The Contractor's management shall provide the reports indicated below and they shall be maintained in accordance with NPR 1441.1, *NASA Records Retention Schedules.*

(1) Safety and Health Program Reports in accordance with DRL item 13.

A5.3 Aircraft Maintenance and Logistics Management Information System(s)- General

The Contractor shall effectively utilize the Government furnished aircraft maintenance, logistics, and inventory management information systems. The Contractor shall input all data to ensure aircraft maintenance and logistics functions are accomplished.

SECTION 5- MANAGEMENT ACTIVITIES

B5 LaRC- MANAGEMENT ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW as specified in this section and identified in Section 3.2.1.

B5.1 Documents

The Contractor shall establish, maintain and implement the requirements of the documents indicated below in accordance with JSC AOD 33803, *Document and Data Management.*

(1) The Contractor shall develop, implement, and maintain a *Contractor's Operations Manual* in accordance with DRL item 3.
(2) Environmental Health Program in accordance with DRL item 21.
(3) Information Technology Plan DRL item 5.
(4) Safety and Health Plan in accordance with DRL item 12.

B5.2 Report Requirements

The Contractor's site management shall provide the reports indicated below and they shall be maintained in accordance with NPR 1441.1, *NASA Records Retention Schedules.*

Safety and Health Program Reports in accordance with DRL item 12.

B5.3 Computer Systems- General

B5.3.1 Aircraft Maintenance and Logistics Management Information System(s)- General

The Contractor shall effectively utilize the Government furnished aircraft maintenance, logistics, and inventory management information systems. The Contractor shall input all data to ensure aircraft maintenance and logistics functions are accomplished.

6 MAINTENANCE ACTIVITIES

All maintenance activities shall be performed in accordance with the approved aircraft technical data and the QMS procedures identified in Section 4. The applicable technical data is available in the QC library. The CO/COTR shall concur with the final determination regardin who shall perform maintenance on aircraft, engines, appliances, and ground support equipment. Government personnel have the right to perform aircraft maintenance or inspections on Government owned aircraft, engines, accessories, and equipment.

Note: The Government will not provide common hand tools for the performance of aircraft maintenance. The Contractor or technician shall provide the common tools.

6.1 Performance Rules - General

See Section 4, Quality Management System for performance rules.

6.2 Maintenance Control

The Contractor shall establish a maintenance control work center that will be the *focal point* for all aircraft maintenance operations. Maintenance Control shall as a minimum:

(1) Coordinate all phases of aircraft maintenance.
(2) Maintenance Control will be manned when maintenance, servicing, or flight operati are being conducted.
(3) Brief NASA Maintenance on aircraft status and maintenance actions each workday a 0730. The Contractor shall keep the duty office informed when the maintenance or flight status of any aircraft changes from the morning briefing. Once a week, the Contractor shall review the status of all aircraft in major modification or scheduled maintenance, including the status of support shop backlog and logistics critical items.
(4) Designate a qualified supervisor and work force personnel to respond to incidents and emergencies when directed by NASA management.
(5) Support Operational Readiness Reviews on aircraft prior to deployment in accordance with AOD 33872, *Operation Readiness Reviews*.
(6) Perform documentation and system reviews prior to aircraft scheduled for a Functional Check Flight or Operational Check in accordance with AOD 33824, *FCF and Ops Checks*.

6.2.1 Maintenance Controllers

The Contractor shall provide Maintenance Controllers who perform the following duties:

(1) Perform maintenance scheduling, tracking, resource allocation, and accomplishment of all maintenance activities to include meeting the daily flight schedule.
(2) Utilize the NASA provided computer information system to produce reports as requested by NASA.
(3) Utilize the maintenance data collection system to:
   (a) Review and approve NASA Form 1671, *Maintenance Action Form* (MAF) and NASA Form 1673, *Flight Preparedness Summary Form* in accordance with 33851, *Maintenance Action Form Work Instruction NASA Form 1671*.

(b) Generate NASA Form 1673, *Flight Preparedness Summary Form* in accordance with AOD 33853, *NASA Form 1673, Flight Preparedness Summary Form* to certify aircraft "safe for flight".

(c) Perform trend analysis in accordance with AOD 33816, *Trend Analysis* for repeat discrepancies prior to dispatching personnel to a work task. In addition, trend analysis information is required any time there is an Air or Ground Abort in accordance with AOD 33822, *Abort Reports/Abort Notification*.

(4) Interface daily with the Operations Duty Officer (ODO) to meet flying requirements and requests. The Contractor shall maintain the ability to add aircraft to the schedule on a day-to-day basis to meet changing operations and maintenance requirements.

(5) Report aircraft air aborts, ground aborts, and maintenance delays in accordance with AOD 33822, *Abort Report/Abort Notification*.

(6) Receive discrepancies from aircrew and ensure they are entered into the NASA provided automated database in accordance with AOD 33851, *Maintenance Action Form Work Instruction NASA Form 1671* and AOD 33833, *One-Time Flight/Off-Station Maintenance*.

(7) Ensure aircraft are not released for flight with safety of flight discrepancies, inspections or Life-Limited Components due scheduled maintenance, or any discrepancy that can impact the mission, and coordinate all efforts through the NASA maintenance officer.

(8) Recommend changes to the process control quality procedures that effect maintenance operations.

6.2.2 Weekend Duty- Maintenance Control Supervisors

The Contractor shall provide Weekend Duty- Maintenance Control Supervisors who shall perform the following duties:

(1) Perform maintenance scheduling, tracking, resource allocation, and accomplishment of all weekend maintenance activities.

(2) Coordinate maintenance, approve NASA Form 1671, *Maintenance Action Form (MAF)* and issue NASA Form 1673, Flight Preparedness Summary Form, to certify aircraft "safe for flight".

(3) Utilize the maintenance data collection system to review and approve NASA Form 1671, *Maintenance Action Form* (MAF) and issue NASA Form 1673, *Flight Preparedness Summary Form* in accordance with AOD 33851, *Maintenance Action Form Work Instruction NASA Form 1671*.

(4) Report aircraft air aborts, ground aborts, and maintenance delays in accordance with AOD 33822, *Abort Report/Abort Notification*.

(5) Ensure the aircrew generates discrepancies into the NALCOMIS database in accordance with AOD 33851, *Maintenance Action Form Work Instruction NASA Form 1671* and AOD 33833, *One-Time Flight/Off-Station Maintenance*.

6.3 Maintenance

The Contractor shall be responsible for aircraft maintenance, repairs, and modifications requiring the installation of special equipment or instrumentation packages. The Contractor shall:

6.3.1 Scheduled Maintenance

The Contractor shall perform scheduled maintenance (calendar, events, cycle or hourly intervals) for each aircraft, engine, appliance and associated support equipment in accordance with AOD 33828, *Scheduled Inspections* and the applicable NASA or FAA Approved Inspection Program. This maintenance includes operational, intermediate, and depot level maintenance. The Contractor shall:

(1) Manage the Aircraft Inspection Program identified in Section 4.9.5.
(2) Construct a work flow chart by task completion for all modifications, repairs, and paint tasks which are greater than 10 work days in length. Work flow charts shall be utilized to brief NASA once a week at the 0730 maintenance meetings.
(3) Forecast and schedule each inspection. The Contractor shall provide monthly Maintenance Projection Reports to the appropriate NASA maintenance officer to assist in projecting aircraft schedules and budgets. This report shall include:
   (a) Time Change Components due:
      1. 14 working days prior to the established window of opportunity or as indicated in the Inspection Program.
      2. Within 6 months for major components exceeding $10,000 replacement cost.
   (b) Identify components that affect the aircraft maintenance budget or mission availability.
(4) Ensure aircraft are not released for flight when inspections or Life-Limited Components are due scheduled maintenance. A waiver to overfly inspection requirements shall be obtained by NASA maintenance. Waiver authority shall be documented on the aircraft Flight Summary Form for quality and flight crew personnel review.

6.3.1.1 Inspection Docks

The Contractor shall provide inspection docks to perform scheduled maintenance for aircraft. The Contractor shall:

(1) Provide a work instruction on the quality processes associated with inspection docks.
(2) Provide weekly status reports of inspection progress.
(3) Track labor-hours expended and sub-task completion to accurately predict the completion of the aircraft inspection.

6.3.1.2 Reserved.

6.3.1.3 Pre-dock Meeting

Pre-dock meetings shall be conducted in accordance with AOD 33835, *Aircraft Maintenance Coordination*.

6.3.1.4 Dedock Meeting

Dedock meetings shall be conducted in accordance with AOD 33835, *Aircraft Maintenance Coordination*.

6.3.2 Unscheduled Maintenance

6.3.2.1 General

The Contractor shall:

(1) Perform unscheduled maintenance for each aircraft type.
(2) Ensure aircraft with safety of flight discrepancies are not released for flight with inoperative instruments or equipment installed unless an approved Minimum Equipment List exists and approved by the FAA or NASA.
(3) Ensure flyable discrepancies are repaired as soon as practical.
(4) Ensure maintenance is accomplished in accordance with technical data.

6.3.2.2 Off Station Maintenance

Repairs required on aircraft off station shall be performed by the Contractor when required and authorized by NASA. The Contractor shall comply with the procedures AOD 33833, *One-Time Flight/Off-Station Maintenance*.

6.4 Flight Line Services

6.4.1 Aircraft Handling

The Contractor shall ensure aircraft are serviced, handled, parked, and moored in accordance with the applicable aircraft technical data approved by NASA. The Contractor shall:

(1) Protect aircraft during periods of inclement weather in accordance with AOD 33821, *Weather Protection/Lightning Detection*.
(2) Ensure aircraft are not left unattended when electrical power is applied.

6.4.2 Aircraft Servicing

The Contractor shall provide flight line servicing personnel for fueling, liquid and gaseous oxygen, nitrogen, oils, hydraulics, pneumatics, de-mineralized water, and water methanol requirements.

6.4.3 Flight Publications

The Contractor shall maintain a current set of flight publications aboard all assigned aircraft in accordance with each type aircraft Flight Publication requirement provided by NASA.

6.4.4 Launch and Recovery

The Contractor shall:

(1) Perform launch and landing support during normal duty hours and when TDY to other NASA locations. Three (3) personnel shall be available during normal workshift hours to launch and recover aircraft at EFD.
(2) Meet and park all incoming NASA aircraft, aircraft on NASA business, Government aircraft, to include DoD, and NASA transient aircraft during normal maintenance work shift hours.

Note: Limited launch and landing support for T-38 operations may be provided by the EFD fixed-based operator (FBO) on weekends, holidays, or after hours as directed by the flight schedule.

6.4.5 Preflight, Thruflight, and Postflight Inspections

The Contractor shall perform preflight, thru-flight, post-flight, and combined basic post flight inspections and ensure all aircraft are ready for flight in the timelines specified in AOD 33826, *Aircraft Ready Times*.

6.4.5.1 Checklists

The Contractor shall perform annual audits on safety checklists for each aircraft.

6.4.6 Aircraft Ready Times

The Contractor shall ensure all aircraft are ready for flight in the timelines specified in AOD 33826, *Aircraft Ready Times* or local mission requirements.

6.5 Support Shops

The Contractor shall perform support shop maintenance with emphasis on repairing items in house when it is efficient and cost effective. The Contractor shall use the aircraft maintenance information system to track input and output of the support shop work effort.

(1) The support shop manager shall maintain direct liaison with the Contractor Logistics' Manager to ensure stock levels do not fall below approved levels for items repairable at AOD.

(2) The support shop manger shall be responsible for maintaining an up-to-date Individual Component Repair Listing (ICRL) to readily identify those repairable components that are repairable at AOD. Those items identified as "not repairable on station (AOD)" will not be inducted into the support shops for repair. They will be immediately turned into logistics to expedite off-station repair.

(3) Qualified support shop personnel shall be available to immediately dispatch to other work areas in order to meet maintenance surge requirements.

(4) Repairable components which are deemed beyond the Contractor's capability to repair shall be returned to logistics.

(5) Supervision shall be available to effectively manage support shop personnel on a daily basis. Overtime shall not normally be utilized to reduce support shop backlog. The support shop manager shall brief NASA personnel on all support shop backlog. The support shop manager shall provide recommendations to NASA personnel real-time on means to reduce backlog.

6.5.1 Aerospace Ground Equipment (AGE)- Shop

The Contractor shall maintain an Aerospace Ground Equipment (AGE) shop in accorda with AFOSHSTD91-20, *Vehicle Maintenance Shops*. The Contractor shall service, maintain and conduct scheduled and unscheduled maintenance on ground power

equipment in accordance with manufactures' technical data, NASA CC-WD-N6, *Aircraft Non-Powered Ground Support Equipment Work Deck* and CC-WD-G5, *Aircraft Powered Ground Support Equipment Work Deck* and the technical data reference in this SOW. All support equipment inspections shall be tracked using the NASA provided maintenance database. The Contractor shall coordinate maintenance and repairs of the AGE facility in accordance with JPR 1700.1, JSC Safety and Health Handbook. The Contractor shall maintain all AGE and vehicles in accordance with the manufactures manuals, USAF technical orders, NASA drawings, and NASA technical data.

6.5.2 Battery/Generator Shop

The Contractor shall service, maintain, and conduct scheduled and unscheduled maintenance on aircraft and GSE batteries. The Contractor shall repair and overhaul aircraft generators. The Contractor shall coordinate maintenance and repairs of the Battery Shop in accordance with JPR 1700.1, JSC Safety and Health Handbook. The Contractor shall perform:

(1) Battery Functional Testing.
All batteries turned in to the battery shop will be logged in and initially tested to determine condition using the appropriate T.O. or original equipment manufacturer (OEM) technical manual instructions. Defective batteries under warranty will be tagged and sent to logistics. In-shop repair will be completed.

(2) Battery Maintenance.
Batteries will be maintained in a serviceable condition suitable for issue.

(3) Battery Disposal.
Batteries Not Repairable at This Station (NRTS) shall be tagged as required by Section 4.8 and returned to logistics for disposal.

(4) Generator Repair and Overhaul.
T-38 aircraft generators turned in for repair will be examined in accordance with USAF T.O. 8A6-4-5-2, *AC Generator FMI* and repaired or overhauled as necessary. Generators will be overhauled, tagged as required by Section 4.8. If generators are NRTS, they shall be tagged as required by Section 4.8 and returned to logistics.

6.5.3 Communication/Navigation Shop

The Contractor shall perform maintenance on communication and navigation (Comm/Nav) equipment used on NASA aircraft. This includes receipt of units from maintenance, engineering and logistics for functional testing, repair of failed units, and turn in of units to logistics as either serviceable or for repair beyond the capability of the Comm/Nav shop. The Contractor shall:

(1) Perform unit repair.
(2) Return unserviceable units that are NRTS to logistics.
(3) Coordinate maintenance and repairs of the Comm/Nav Shop in accordance with JPR 1700.1, JSC Safety and Health Handbook
(4) Provide system checkout for operation and accuracy.
(5) Maintain electronic calibrated equipment.

6.5.3.1 Doppler Radar

The Contractor shall maintain the Doppler Weather Radar Unit. The Contractor shall schedule a loaner unit when repair down time is projected in excess of 24 hours. The system shall be repaired or parts ordered within 1 working day.

6.5.4 Egress Shop

The Contractor shall perform maintenance, preventative maintenance, repairs, and alterations on the egress systems for T-38N and WB-57F aircraft in accordance with applicable aircraft technical data. The T-38N aircraft is equipped with the Martin-Baker MK US16LA and MK US16LN ejection seats and front canopy fracturing system with associated NASA support modifications. Unique equipment used in this facility are: hydraulic/pneumatic swager machines, wire and cable stripper, and swaged terminal pull tester. The WB-57F aircraft is equipped with Douglas IC6 ejection seats. The Contractor shall:

(1) Manufacture aircraft cables in accordance with the approved aircraft technical data, FAA AC 43-13-1B, *Acceptable, Methods, Techniques and Practices- Aircraft Inspection and Repair* or USAF TO 1-8A-8, *Structural Hardware.*

(2) Perform periodic seat and canopy inspections on the T-38 in accordance with egress inspection work cards to include time change components and *Martin-Baker T-38 Flight Line Maintenance Manual- Ejection Seat Mk US16LN-1 & 2.*

(3) Perform seat and canopy periodic inspections on the WB-57 in accordance with USAF T.O. 1B-57(W)-06, *Rescinded Aircraft Maintenance Work Unit Code Manual RB-57F Aircraft* to include time change components.

6.5.5 Electrical Shop

The Contractor shall conduct maintenance on electrical components used on NASA aircraft. These components include units from maintenance, engineering, and logistics. Work includes functional testing, repair of failed units, and turn-in of units to logistics. The Contractor shall:

(1) Perform functional testing.
   (a) The Contractor shall operationally test discrepant components if testing capability exists. Serviceable components shall be returned to logistics.
   (b) Incoming components shall be tested within 3 working days. Components that are NRTS will be sent to logistics for vendor repair.
   (c) Components under warranty shall be operationally tested; if found unserviceable, send to logistics.

(2) Perform component repair.
   (a) Unserviceable components that are found NRTS will be sent to logistics.
   (b) The Contractor shall repair all rotable units in the most economically feasible manner; in the shop or vendor repair.

(3) Fabricate wire harnesses.

(4) Modify Line Replaceable Unit (LRU) when directed by engineering.

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6.5.5.1 Lightning Detection System

The Contractor shall maintain the Lightning Detection System. The Contractor shall:

(1) Perform management oversight of the Lightning Detection System.
(2) Provide minor maintenance when necessary.
(3) Maintain the technical data to perform maintenance on the Lightning Detection System.
(4) Follow the preventive maintenance plan to include the procedures for inspecting and testing.
(5) Establish and maintain control procedures for the inspection and test status of equipment.
(6) Provide spares and test equipment.
(7) Repair failed Lightning Detection System within 3 working days. Coordinate with NASA operations while the system is down to determine lightning in the area.

6.5.5.2 T-38 Simulation

The Contractor shall provide maintenance support for a T-38N ground based simulator. The single T-38N ground based simulator is located on JSC.

6.5.6 Engine Shop

The Contractor shall perform maintenance on aircraft engines used on NASA aircraft. The Contractor shall:

(1) Perform aircraft engine, component and sub-assembly depot level maintenance and modifications on J-85 engines in accordance with AFR 66-1, 2J-J85-111, 2J-J85-116 series T.O.'s, and AOD 33839, *Configuration Control*.
(2) Perform engine preservation and de-preservation in accordance with manufacturer manuals, DoD, FAA, and NASA directives, as applicable.
(3) Operate engines in accordance with applicable aircraft maintenance instructions.
(4) Perform intermediate maintenance on Auxiliary Power Units (APU) in accordance with the applicable aircraft technical data.
(5) Perform user inspections of all shop support equipment. This includes user inspections on the J-85 engine test cell.
(6) Overhaul STA thrust reversers in accordance with STA(N)-2-6, *STA Thrust Reverser Overhaul Manual*.

6.5.7 Hydraulic Shop

The Contractor shall perform maintenance on hydraulic systems and component's associated with NASA aircraft and ground equipment. The Contractor shall:

(1) Perform maintenance and servicing of aircraft hydraulic systems in accordance with DoD, Manufactures Maintenance Manuals, FAA and NASA directives.
(2) Perform the requirements of the Hydraulic Contamination Prevention Program in accordance with Section 4.9.9.
(3) Provide intermediate maintenance and overhaul of hydraulic components.

(4) Manufacture, pressure test and replace tubing and hoses for all NASA aircraft as required in accordance with applicable manuals. As a minimum, identification, inspection, installation, and replacement of flexible lines, hoses, tubing, fittings and hose clamps conform to:
   (a) FAA AC 43-13-1B, *Acceptable Methods, Techniques, and Practices- Aircraft Inspection and Repair,*
   (b) USAF T.O. 1-1A-1, *General Manual for Structural Repairs,*
   (c) USAF T.O. 1-1A-8, *Structural Hardware*, or
   (d) USAF T.O. 42E1-1-1, *Aerospace Hose Assemblies.*
(5) Repair or overhaul ground power equipment hydraulic systems as necessary.
(6) Coordinate maintenance and repairs of the hydraulic shop in accordance with JPR 1700.1, JSC Safety and Health Handbook.

6.5.8 Mechanical Accessories Shop

The Contractor shall perform mechanical accessory shop maintenance. The Contractor shall:

(1) Perform maintenance and servicing of mechanical accessories in accordance with DoD, Manufactures Maintenance Manuals, FAA, and NASA directives.
(2) Perform maintenance on T-38 mechanical accessories to include intermediate and depot maintenance for T-38 aircraft gearboxes, diverter valves, ram/dump valves, Comm/Nav blower motor actuators, water separators, air conditioning units, side braces, and throttle quadrants to conform to:
   (a) FAA AC 43-13-1B, *Acceptable Methods, Techniques, and Practices- Aircraft Inspection and Repair,*
   (b) USAF T.O. 1-1A-1, *General Manual for Structural Repairs, or*
   (c) USAF T.O. 1-1A-8, *Structural Hardware.*

6.5.9 Non-Destructive Inspection (NDI) Shop

The Contractor shall provide a minimum of one full time NDI technician qualified/certified in Liquid Penetrant Inspection, Magnetic Particle Inspection, Eddy Current, Ultrasonic Inspection, and Radiographic Inspection to NDI/NDT Level III in accordance with NAS 410, *NAS Certification and Qualification of Non-destructive Test Personnel.* The Contractor shall:

(1) Perform Non-Destructive Inspection (NDI) testing in accordance with the standards identified in USAF T.O. 33B-1-1, *NDI Methods* and the aircraft specific technical manuals. On items not covered by the above referenced technical data the Contractor shall perform NDI activities in accordance with:
   1. Penetrant Inspection (PT) in accordance with ASTM E 1417, *Standard Practice for Liquid Penetrant Inspection.*
   2. Magnetic Particle (MT) in accordance with ASTM E 1444, *Standard Practice for Magnetic Particle Inspection.*
   3. Ultrasonic Inspection (UT) in accordance with ASTM E 164, *Standard Practice Ultrasonic Inspection of Aluminum-Alloy Wrought Products for Aerospace Applications.*

4. Radiographic Inspection (RT) in accordance with ASTM E 1742, *Standard Practice for Radiographic Examination* and ASTN E 2104, *Standard Practice for Radiographic Examination of Advanced Aero and turbine Materials and Components.*
5. Eddy Current (ET) in accordance with MIL-STD-1537, *Test Method Standard for Electrical Conductivity Test for Verification of Heat Treatment of Aluminum Alloys Eddy Current Method*, SAE ARP891, *Determination of Aluminum Tempers Through Electrical Conductivity Measurement (Eddy Current)*, and ASTM E 376, *Standard Practice for Measuring Thickness by Magnetic Field or Eddy-Current (Electromagnetic) Test Methods.*
6. Perform weld inspections in accordance with AWS D17.1, *Specification for Fusion Welding for Aerospace Applications.*

(2) Ensure all NDI equipment is operational and all unserviceable equipment has a repair order issued. General servicing shall be performed by the Contractor.

(3) Perform Non-Destructive Inspection (NDI) testing and overhaul procedures for T-38 air canopy seal regulators in accordance with USAF T.O. 9P10-4-10-3, *Air Canopy Seal Regulator P/N 11982/3 Overhaul.*

(4) Perform Joint Oil Analysis Program (JOAP) samples in accordance with Section 4.9.10.

(5) Perform calibration of pressure relief valves in accordance with JHB 1710.13, *Design, Inspection, and Certification of Ground-Based Pressure Vessels and Pressurized Systems.*

(6) Perform hydrostatic testing of valves, lines, ducts and pressure vessels in accordance with JHB 1710.13, *Design, Inspection, and Certification of Ground-Based Pressure Vessels and Pressurized Systems.*

6.5.10 Personal Equipment Shop

The Contractor shall be responsible for acquiring, storing, issuing, and maintaining flight crew personal equipment, aircraft emergency equipment, and Shuttle crew escape equipment. Work includes support of aircraft and aircraft related life support equipment, fabrication of textiles/fabric items to support aircraft maintenance, inspecting, testing, packing of life support equipment, sewing repairs, and local manufacture of fabric components. The contractor shall provide water survival training support. The Contractor shall track the input/output of equipment in the aircraft maintenance information system. The Contractor shall:

(1) Fabricate Equipment.
Fabricate and repair flight equipment, both aircraft related and non-aircraft related items. Pattern making skills will be required to manufacture items, such as seat cushion covers, flight clothing bags, aircraft intake covers, equipment covers, aircraft forms bags, aircraft interior panel/seat covers, any items per engineering or end user drawings, and applicable technical data.

(2) Maintain First Aid Kits.
Inspecting and replenishing first aid kits.

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(3) Maintain Flight Helmets.

(4) Maintain Flight Crew Oxygen Masks. Eros Crew Oxygen/Smoke Mask Assemblies (G-1159, G-1159A & STA). Maintain the Eros Crew Oxygen/Smoke Mask assemblies, part number MF10-03-04, in accordance with the *Eros Crew Oxygen/Smoke Mask Assembly Maintenance Manual*. The Contractor shall return the mask assembly to a certified repair station authorized to perform inspections and repairs on these masks.

(5) Maintain Flight Equipment.
Issuing, maintaining, and fitting of all personal flight equipment.

(6) Maintain Life Preserver/Vests.

(7) Maintain Life Rafts.

(8) Maintain Parachutes.

(a) Provide immediate service for aircrews in the chute room.

(b) Personal Parachute Assemblies (including Class III and Surveillance Chute).

1. Inspecting, testing, buildup, repairing, and packing parachutes in accordance with JSC 24127, *Shuttle Crew Escape Parachute Assembly* and JSC 33140, *SARSAT Beacon Preinstallation Acceptance Test Procedures*. Local manufacture of extraction bridles and risers are required for new PPAs.
2. Contractor personnel shall attend one annual surveillance test jump per year. This Temporary Duty (TDY) requires approximately 3 days per year.
3. The PPA program is accomplished in accordance with JSC 37743, *Understanding for Crew Escape Parachute Provisioning*.

(c) A/P28S21 Parachutes.
Inspecting, testing, buildup, repairing, and packing A/P28S21 parachutes in accordance with USAF T.O. 14D3-11-1, *Emergency Personnel Recovery Parachute*.

(d) Drogue Parachute.
Inspecting, testing, buildup, repairing, and packing parachutes in accordance with USAF T.O. 14D1-2-436, *Ejection Seat Drogue Chute*.

(e) PCU15P Harnesses.
Inspecting, testing, buildup, and repairing the PCU15P harnesses in accordance with USAF T.O. 14D3-11-1, *Emergency Personnel Recovery Parachute*.

(f) PCU16P Harnesses.
Inspecting, testing, buildup, and repairing the PCU16P harnesses in accordance with the Martin-Baker maintenance manuals.

(g) Radios/Beacons.
Inspecting, testing, and changing limited life items for radios and beacons in accordance with the manufactures instructions.

(9) Maintain Pressure Suits and Equipment
The Contractor shall support pressure suit operations.

(a) David Clark 1024B.

1. Maintain the David Clark 1024B pressure suits, gloves, helmets and all related hardware in a flyable condition in accordance with CC-PSE-001, *Full Pressure Suit packing and Transporting Checklist* and USAF TO 14P3-6-131, *Pressure Suits and Equipment*.

2. Perform pre-flight and post-flight inspections on pressure suits in accordance with AOD Form 304, WB-57 Preflight and Eminent Pre-Entry, Hook Up Crewman in Pressure Suit Checklist and USAF T.O. 14P3-6-131, Pressure Suits and Equipment.

(10) Maintain Night Vision Goggles.
Inspecting and the setting up of night vision goggles in accordance with manufacturers instructions.

(11) Maintain Smoke Masks.
Inspect, test, buildup, repair, and assembly of the smoke masks in accordance with USAF T.O.'s 15X5-5-3-1, *Fire Fighters and Oxygen Smoke Mask Assemblies,* and 15X5-4-5-3, *Mask Assembly Oxygen Breathing.* See Section 6.6.10 for the G-1159, G-1159A and STA smoke mask assemblies.

(12) Maintain Storage Areas.
(a) Bonded Storage Area.
Maintain bonded storage areas for Personal Parachute Assemblies (PPA's) and their components in accordance with JSC 26549, *JSC Manual for the Control of Program Stock.*
(b) Pyrotechnic Storage Locker.
Maintain a pyrotechnic storage locker for PPA bonded pyrotechnic devices and a locker for flares and pyrotechnics for automatic release devices in accordance with USAF T.O.'s 11A10-26-7, *Pyrotechnic Signals*, 11A10-30-7, *Pyrotechnic Fuses and Fire Starters*, and 11P-1-7, *Cartridges for Aircrew Escape Systems.*

(13) Maintain Survival Kits.
(a) MBEU 20027 Survival Kit (T-38N).
Inspecting and testing the MBEU 20027 Survival Kit in accordance with the Martin-Baker maintenance manuals.
(b) RSSK-8E Survival Kit (B-57).
Inspecting and testing the RSSK-8E Survival Kit in accordance with NavAir 13-1-6.3, *Seat Survival Kits- Aviation Crew Systems.*

6.5.11 Paint/Corrosion Shop

The Contractor shall perform paint and corrosion control procedures on aircraft, aircraft components and sub assemblies, aircraft ground support equipment, and locally manufactured items to support AOD projects in accordance with AOD 33827, *Aircraft Corrosion Control Program*. The Contractor shall perform painting and corrosion control on all assigned aircraft and support equipment. Ensure the paint area and equipment remains serviceable in accordance with the following:

(a) 29 CFR 1910.107, *Spray Finishing Using Flammable and Combustible Materials*.
(b) 29 CFR 1910.165, *Fire Protection- Employee Alarm Systems*.
(c) 40 CFR Part 75, *Continuous Emissions Monitoring*.
(d) JPR 1700.1, JSC Safety and Health Handbook.
(e) NSS 1740.15, *NASA Safety Standards for Oxygen and Oxygen Systems*.

Coordinate repairs and upkeep of the paint facility in accordance with JPR 1700.1, JSC Safety and Health Handbook

6.5.12 Sheetmetal Shop

The Contractor shall perform sheetmetal repairs on aircraft, aircraft components and sub assemblies, aircraft ground support equipment, and locally manufactured items. The general operations performed in the shop are: fiberglass repair, sheet metal forming, honeycomb repairs, manufacture of small tools and fixtures, corrosion treatment and repairs, and fabrication of engineering projects.

The Contractor shall:

(1) Perform sheetmetal repairs in accordance with USAF T.O.s, NASA Engineering Work Orders (EWO), and FAA approved technical data.

(2) Comply with routine maintenance of tools and equipment for the sheetmetal shop.

(3) Perform Inspection and Repair.
Upon receipt of aircraft components, the Contractor shall inspect, repair, and return to service using the appropriate technical manual or engineering instruction. Each inspection or repair shall be entered in the NASA aircraft maintenance database showing completion of the task. The Contractor shall be responsible for certifying that the inspection or repair work conforms to all elements of the technical requirements.

(4) Perform Fabrication of Projects.
Upon receipt of fabrication projects, the Contractor shall complete the project in accordance with the engineering instructions or technical requirements. The Contractor shall be responsible for certifying that the fabrication work conforms to all elements of the technical requirements.

(5) Maintain and inspect the T-38N aircraft support cargo pods and rear seat cargo container in accordance with T.O. 1T-38A-2-2CL-6, WSSP Removal/Installation and Inspection Procedures Checklist. Inspection program is a 180-day requirement.

6.5.13 Welding Shop

The Contractor shall perform welding on aircraft, engines, appliances, and support equipment. The general operations performed in the shop are: welding jet engine components (predominately hot section components), aircraft support equipment repairs and fabrication of engineering projects for use on aircraft. The tools and equipment/machines that are used in this facility are: drilling, Tungsten Inert Gas (TIG), Arc, spot, Metal Inert Welding (MIG), and ox-acetylene welders, saws, floor mounted grinders, plasma-arc-cutter, disc sander, and bead blaster. In general, the types of materials used in this shop are, stainless steel, 4130 steel, aluminum, magnesium, and galvanized steel. Materials vary by size, shapes, and weights depending on the project.

The Contractor shall:

(1) Perform welding on aircraft, engines, appliances, and aircraft ground support equipment to support NASA aircraft operations projects in accordance with USAF TO 00-25-252, *Welding Procedures* or AWS D17.1, *Specification for Fusion Welding for Aerospace Applications*, as applicable.

(2) Perform welding on type-certificated aircraft in accordance with approved technical data acceptable to the FAA Administrator and have work certified by a NDI technician who holds a FAA airframe "A" certificate or a powerplant "P" certificate.

(3) Perform Fabrication of Projects.
Upon receipt of fabrication projects, the Contractor shall complete the project in accordance with the engineering instructions or technical requirements as outlined. The Contractor shall be responsible for certifying that the fabrication work conforms to all elements of the technical requirements.

6.5.14 Wheel and Tire Shop

The Contractor shall perform maintenance on wheels and tires on all aircraft types. The tools and equipment that are used in this facility are: three sizes of bead breakers, tire cages, degreasing machine, hot stripper tank, rinse tank, and nitrogen carts. The Contractor shall:

(1) Perform teardown, inspection, and buildup of aircraft wheels, tires and bearings.
(2) Comply with routine maintenance of tools and equipment for the tire shop.
Perform maintenance on aircraft wheel and tire assemblies in accordance with the general and aircraft specific wheel and tire technical data, manuals, and approved technical data acceptable to the FAA Administrator.

6.5.15 Model Design and Fabrication

Not applicable.

SECTION 6- MAINTENANCE ACTIVITIES

A6 DFRC- MAINTENANCE ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

A6.1 Reserved.

A6.2 Maintenance Control

The Contractor shall:

(1) Maintain currency of permanent record/historical databases for Support and Research aircraft assigned to DFRC in accordance with applicable NASA, Navy, and Air Force requirements.

(2) Operate and maintain the F-18 Optimize Organization Maintenance Activities (OOMA). This includes:
   (a) Downloading data from the Maintenance Data Recording System package.
   (b) Reviewing and entering additional data required for update of the strain gage and engine databases in accordance with Command Navy Air Pacific Instruction 4790.33.
   (c) Providing data to the Navy authority for each F/A-18 aircraft under DFRC control and retain backup archive tapes for 1 year.

(3) Schedule aircraft for unscheduled and scheduled maintenance or related activities to include:
   (a) Inspection.
   (b) Calibration.
   (c) Weight & balance.
   (d) In-flight operational checks.

(4) Coordinate with Flight Operations Scheduling Office to determine mission support requirements.

(5) Process all electronic or manual documentation required for aircraft flight release.

(6) Request fuel support with Air Force Maintenance Control or appropriate activity as required.

(7) Process pilot flight data and aircraft discrepancies into the DFRC automated database after each flight.

(8) Provide updated aircraft maintenance status daily to include the estimated time to complete the maintenance in work.

(9) Brief aircraft status at the daily 0700 aircraft maintenance meeting.

(10) Perform debriefs with the flight crew at the conclusion of each flight.

A6.3 Maintenance

The Contractor shall perform maintenance, modification and repair at the Operational Level and Intermediate Level for all support aircraft under this contract. The Contractor is responsible for Depot Level maintenance, modification and repair of Airframe Change (AFC), Time Compliance Technical Order (TCTO), Service Bulletin (SB), Airworthiness Directive (AD) or other authorized repairs.

SECTION 6- MAINTENANCE ACTIVITIES

The Contractor shall maintain all aircraft systems in accordance with the applicable T.O. or Manufacturers Specifications and associated work cards for that aircraft unless directed by NASA.

The Contractor shall be responsible for modifications requiring the installation of special equipment or instrumentation packages. All documentation and authorization for modifications shall be in compliance with existing procedures and specifications and approved by the cognizant Configuration Control Board (CCB).

The Contractor shall be required to work on NASA transient aircraft specifically authorized by the CO/COTR.

A6.3.1 Scheduled Maintenance

The Contractor shall provide support on the following aircraft and any aircraft added to the fleet:

(1) F-18 Aircraft (Support and Designated Research).
Perform maintenance, modification and repair at the organizational, intermediate, and depot level as directed by the Operations Engineering Group for all F-18 support aircraft systems and subsystems.

(2) B 200 Mission Management and Program Aircraft.
Ensure maintenance standards meet FAA FAR Part 91, subparts A and B except when requirements of NASA Procedural Requirement (NPR) 7900.3 *Aircraft Operations Management* are more restrictive. NASA mission management aircraft are public aircraft.
The Contractor shall be responsible for maintenance, modification, and repair at the Operational Level and Intermediate Level for all B200 systems and subsystems in accordance with the manufacturer's technical data.

(3) Gulfstream III Aircraft.
Perform maintenance, modification, and repair at the operational and intermediate level for Gulfstream III systems and subsystems in accordance with the manufacturer's technical data.

(4) T-38
Perform maintenance, modification, and repair at the operational and intermediate level for systems and subsystems in accordance with the manufacturer's technical data.

(5) T-34
Perform maintenance, modification, and repair at the operational and intermediate level for systems and subsystems in accordance with the manufacturer's technical data.

(6) YO-3
Perform maintenance, modification, and repair at the operational and intermediate level for systems and subsystems in accordance with the manufacturer's technical data.

A6.3.1.2 Modification Docks

Not applicable.

A6.4 Flight Line Services

DFRC requirements for these operations are specifically listed in the DCP-O-001, *Aircraft Maintenance and Safety Manual* in Chapters 3 and 4.

A6.4.1 Aircraft Handling

The Contractor shall ensure aircraft are serviced, handled, parked, and moored in accordance with the applicable aircraft technical data approved by NASA. The Contractor shall as a minimum:

(1) Protect aircraft during periods of inclement weather in accordance with local procedures.
(2) Ensure aircraft are not left unattended when electrical power is applied.

A6.4.6 Aircraft Ready Times

The Contractor shall:
(1) Service and preflight the aircraft.
(2) Make appropriate entries in the aircraft automated database.
(3) Sign the exceptional release 30 minutes prior to scheduled launch time.

A6.5 Support Shops

A6.5.1 Aerospace Ground Equipment (AGE)- Shop

Not Applicable.

A6.5.2 Battery/Generator Shop

Not applicable.

A6.5.3 Communication/Navigation Shop

See Section 6.5.5.

A6.5.3.1 Doppler Radar

Not applicable.

A6.5.4 Egress Shop

Not applicable.

A6.5.5 Electronics and Avionics Shop

The Contractor shall:
(1) Install, modify, maintain, repair, test, calibrate, and troubleshoot airborne avionics.
(2) Install, modify, maintain, repair, test, calibrate, and troubleshoot airborne research instrumentation systems.
(3) Install, modify, maintain, repair, test, calibrate, and troubleshoot research instrumentation and avionics sensors and components.
(4) Devise layouts or fabricate, install modify, repair, and troubleshoot airborne flight controls, data acquisition, and integrated avionics systems.

A6.5.5.1 Lightning Detection System

Not applicable.

A6.5.5.2 T-38 Simulation

Not applicable.

SECTION 6- MAINTENANCE ACTIVITIES

A6.5.6 Engine Shop

The Contractor shall perform maintenance on aircraft engines used on NASA aircraft. The Contractor shall:

(1) Perform aircraft engine disassembly, assembly, and engine test as well any related off aircraft engine support.

(2) Perform engine preservation and de-preservation in accordance with manufacturer manuals, DoD, FAA and NASA directives, as applicable.

A6.5.7 Hydraulic Shop

The Contractor shall perform hydraulic shop fabrication support for facilities and related ground support equipment.

A6.5.8 Mechanical Accessories Shop

Not applicable.

A6.5.9 Non-Destructive Inspection (NDI) Shop

The Contractor shall provide a NDI technician certified in Liquid Penetrant Inspection, Magnetic Particle Inspection, Eddy Current, Ultrasonic Inspection, and Radiographic Inspection to NDI/NDT Level II in accordance with NAS 410, NAS Certification and Qualification of Non-destructive Test Personnel. All chemicals and inspection equipment necessary to perform all inspections shall be Government provided.

It is anticipated that this function will not be full time, therefore the technicians shall be dual qualified as an aircraft technician.

A6.5.10 Personnel Equipment Shop

Not applicable.

A6.5.11 Paint/Corrosion Shop

Not applicable.

A6.5.12 Sheetmetal Shop

Not applicable.

A6.5.13 Welding Shop

Not applicable.

A6.5.14 Wheel and Tire Shop

Not applicable.

A6.5.15 Model Design and Fabrication

The Contractor shall:

(1) Perform mechanical fabrications including planning, layout, and fabrication of mechanical models, instruments, and other specialized prototype experimental hardware.

(2) Provide advice and assistance to mechanical engineers in evaluating and developing unique experimental model designs.

SECTION 6- MAINTENANCE ACTIVITIES

B6 LaRC- MAINTENANCE ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

B6.1 Reserved.

B6.2 Maintenance Control

The Contractor shall:

(1) Post aircraft status boards (2) for each aircraft. At the conclusion of each flight day, the status boards shall be updated to display current aircraft time, engine time, time remaining until next inspection, and type of inspection due.
(2) Update the QAO computer database daily with current aircraft status information and inspection requirements.
(3) Incorporate records and inspection requirements for newly acquired aircraft, providing accurate, updated aircraft records with computer access to status information. The computer database shall be expanded/developed as necessary.
(4) Ensure equipment records are reviewed and updated every 7 days.

B6.2.1 Maintenance Controllers

Not applicable.

B6.2.2 Weekend Duty- Maintenance Control Supervisors

Not applicable.

B6.3 Maintenance

B6.3.1 Scheduled Maintenance

The Contractor shall provide maintenance support that covers all activities associated with routine and scheduled/unscheduled maintenance and servicing of assigned aircraft. The Contractor shall perform organizational and intermediate with occasional depot level maintenance. Duties involve all associated maintenance and repair of fixed and rotary-wing aircraft systems. The Contractor shall:

(1) Conduct daily maintenance meetings with NASA maintenance personnel to report aircraft status and Contractor maintenance actions.
(2) Provide aircraft status at 0900 and 1400 daily to NASA maintenance contact. Flight schedules will be generated by NASA following the status reports.
(3) Submit specific maintenance reports as required by the contracting officer or his authorized representative.
(4) Provide aircraft rental components when required and directed by NASA.

B6.3.1.1 Inspection Docks

The Contractor shall perform LaRC phase inspections in accordance with the applicable Aircraft Maintenance Program.

B6.3.1.2 Modification Docks

Not applicable.

B6.4 Flight Line Services

The Contractor shall provide airworthy aircraft to meet flight schedule requirements of the LaRC.

B6.4.1 Aircraft Handling

The Contractor shall ensure aircraft are serviced, handled, parked, and moored in accordance with the applicable aircraft technical data approved by NASA. The Contractor shall:

(1) Protect aircraft during periods of inclement weather in accordance with local procedures.

(2) Ensure aircraft are not left unattended when electrical power is applied.

B6.4.5 Preflight, Thruflight, and Postflight Inspections

The contractor shall perform prescribed LaRC inspections including preflight, thruflight, ana post-flight inspections. The Contractor shall provide personnel to serve as aircraft crew chief.

B6.5 Support Shops

B6.5.1 Aerospace Ground Equipment (AGE)- Shop

The Contractor shall provide maintenance/management for all aircraft Ground Support Equipment (GSE) used for flight operations by the Aircraft Systems Branch (ASB). The Contractor shall:

(1) Transfer aviation fuel from transport trucks to refueling trucks in accordance with USAF T.O. 42B-1-1, *Quality Control of Fuels and Lubricants.*

(2) Transport the LOX tank to the Air Force filling station and assure that the LOX tank is serviced and tested prior to use in accordance with USAF T.O. 15X-1-1, *Oxygen Equipment.*

B6.5.2 Battery/Generator Shop

See Section B6.5.3 for battery services required at LaRC. Maintaining generators is not required.

B6.5.3 Communication/Navigation Shop

The Contractor shall provide Comm/Nav avionics maintenance on aircraft equipment required on Program Support and Research aircraft. Types of systems maintained include: video, communication, and fly-by wire systems. The Contractor shall:

(1) Resolve in-flight avionics problems.
(2) Provide video equipment support.
(3) Develop and generate drawings and schematics for new and modified equipment installations.
(4) Perform preflight, post-flight, and periodic checks.
(5) Study and recommend avionics updates.
(6) Maintain avionics spare parts inventory.
(7) Maintain meteorology and Flight Operations and Support Center (FOSC) radios.

B6.5.3.1 Doppler Radar

Not applicable.

B6.5.4 Egress Shop

See Section 6.5.10.

B6.5.5 Electrical Shop

The Contractor shall provide maintenance on aircraft electrical equipment required on Program Support and Research aircraft. The Contractor shall conduct scheduled and unscheduled maintenance on aircraft electrical systems including component calibrations, repair, modifications, and installation. The Contractor shall:

(1) Wire and rewire aircraft electrical systems.
(2) Perform scheduled maintenance, repair, recharge, and inspections on nickel-cadmium and lead-acid batteries. Maintain and track files and documentation for aircraft and GSE batteries.

B6.5.5.1 Lightning Detection System

Not applicable.

B6.5.5.2 T-38 Simulation

Not applicable.

B6.5.6 Engine Shop

Not applicable.

B6.5.7 Hydraulic Shop

Not applicable.

B6.5.8 Mechanical Accessories Shop

Not applicable.

B6.5.9 Non-Destructive Inspection (NDI) Shop

Not applicable.

B6.5.10 Personal Equipment Shop

The Contractor shall provide maintenance on flight survival equipment. The Contractor is required to maintain flight crew personnel equipment. The Contractor shall:

(1) Support water survival training.
(2) Support egress training.
(3) Pack non-personnel aircraft parachutes.
(4) Maintain the stock of flight safety equipment.
(5) Compile computerized inventories to include maintenance due status, time change items, and other essential data.
(6) Maintain flight helmets, oxygen masks, and flight equipment: parachutes, life vests, life rafts, and smoke hoods.

B6.5.11 Paint/Corrosion Shop

Not applicable.

B6.5.13 Welding Shop

Not applicable.

B6.5.14 Wheel and Tire Shop

Not applicable.

B6.5.15 Model Design and Fabrication

Not applicable.

7 ENGINEERING ACTIVITIES

7.1 General

The Contractor shall provide engineering services required for JSC aircraft, aircraft programs, and associated projects and activities. The process by which engineering activities are delegated to the Contractor is defined by AOD 33841, *Task Transmittal – Engineering*. Engineering services, functions performed, and technical expertise required shall include but are not limited to:

(1) Aircraft maintenance engineering for aeronautics, avionics, electrical, mechanical, structural systems and components.
(2) Aircraft design and analysis engineering for aeronautics, avionics, electrical, mechanical, structural systems, and components.
(3) Design, analysis, and maintenance engineering for ground support equipment.
(4) Engineering support for aircraft weight and balance determination.
(5) Aircraft and aircraft systems ground testing.
(6) Data collection, reduction, analysis, and reporting.
(7) Report preparation.
(8) Preparation of engineering drawings.
(9) Documentation and configuration control.
(10) Engineering support for flight readiness, operational readiness, and test readiness reviews.
(11) Engineering liaison services with NASA/Government/Commercial engineering and technical personnel.
(12) FAA Designated Engineering Representative (DER) services.
(13) Design, analysis, and maintenance engineering for instrumentation.
(14) Aircraft and aircraft systems flight testing and support.

7.2 Design Control

The Contractor shall conduct design activities in accordance with JPR 1281.4, Design and Development.

7.2.1 Aircraft/Maintenance Engineering

Engineering functions are performed with the primary purpose of supporting aircraft maintenance and flight operations.

The Contractor shall provide engineering services that comply with AOD 12454, *Maintenance, Engineering, and Quality Procedures*.

The Contractor shall provide engineering services in the appropriate engineering disciplines to effect repairs to aircraft or equipment that are beyond the scope of DoD Technical Orders, manufacturer's repair manuals, or routine aircraft maintenance. Such support shall be provided in a timely manner to maximize aircraft or equipment availability. The Contractor shall develop and document all such repairs using the appropriate documentation as defined in AOD 33842, *Preparation of Engineering Work Orders*.

7.2.2 Aircraft Design and Modification

The Contractor shall be responsible for design, documentation, fabrication, integration, installation, testing, and updating engineering documentation for modifications to all aircraft and aircraft systems.

7.2.2.1 Schedule of Activities

The Contractor shall prepare and provide a schedule for design and modification activities. The initial schedule and any adjustments to the schedule, for each project, shall be coordinated with and approved by the Chief, Engineering Branch, Aircraft Operations Division, or assigned designee.

7.2.2.2 Test and Support Equipment Modification

The Contractor shall be responsible for the design, documentation, fabrication, integration, installation, and testing of modifications to ground support equipment, specialized test equipment, and other support equipment required to operate and maintain aircraft.

7.2.2.3 System and System Interface Modification

The Contractor shall be responsible for the design, documentation, fabrication, installation, and testing of modifications, including the interfaces with other systems, and shall recommend changes to improve operational efficiency, reliability, and safety.

7.2.3 Engineering Analyses/Inspections

The Contractor shall perform engineering analyses and inspections/tests required to verify operation and safety of modifications and repairs. The Contractor's responsibility includes but is not limited to:

(1) Perform operational analyses of in-flight data to evaluate aircraft and systems performance and to identify flight anomalies.
(2) Perform stress analyses, instrumentation, and monitoring.
(3) Perform Finite Element Analysis (FEA). FEA services may be provided by the Contractor's engineering staff or through subcontracting arrangements.
(4) Perform troubleshooting with schematics and diagnostic aids as required to support maintenance personnel.
(5) Perform analysis to develop aircraft weight and balance requirements.
(6) Perform propulsion system performance assessments.
(7) Perform failure modes and effects analysis (FMEA).
(8) Perform hazard analysis.
(9) Perform analysis of aircraft performance and flying qualities in accordance with the applicable aircraft performance manual.
(10) Perform assessment of the aeronautical impact of aircraft modifications on aircraft stability, control, and performance.
(11) Perform assessment of aeronautical loading on aircraft structures and flight controls.

7.2.3.1 Engineering Analyses Reports

The Contractor shall prepare and provide written reports of analyses and tests performed. Analysis reports shall be in a NASA approved format. Reports for Flight Tests shall be prepared in accordance with:

(1) AOD 33813, *STA Flight Tests* for STA.

(2) AOD 33843, *Flight Tests* for all other aircraft.

7.2.4 Engineering Liaison

Contractor engineering activities shall include serving as a technical interface with other Contractors, airframe manufacturers, NASA, FAA, other Government agencies, vendors, and other agencies or activities.

7.2.5 FAA Designated Engineering Representative (DER)

The Contractor shall provide for FAA DER engineering services in the appropriate engineering discipline when required for repairs on FAA type-certificated aircraft.

7.2.6 Aircraft Service Changes and Customer Bulletins

The Contractor shall provide engineering services to evaluate Aircraft Service Changes and Customer Bulletins in accordance with AOD 33846, *Aircraft Service Changes*

7.2.7 Technical Manual Revisions (TMR)

The Contractor shall provide engineering services to recommend and evaluate aircraft technical data revisions in accordance with AOD 33803, Document and Data Management.

7.2.8 Configuration Control

The Contractor shall accomplish configuration control procedures in accordance with AOD 33849, *Engineering Drawing Format, Requirements, and Procedures* to provide a systematic approach for the control of all documents, drawings, reports, and quality records associated with engineering activities and modifications involving all JSC assigned aircraft.

7.2.8.1 Aircraft Configuration Control

The Contractor shall perform the cconfiguration control procedures in accordance with *AOD 33839, Aircraft Configuration Control*. The Contractor's responsibility includes but is not limited to:

(1) Coordinate a monthly configuration control panel directive meeting to discuss and approve configuration changes for all JSC aircraft.

(2) Prepare comprehensive minutes of the Configuration Control Panel meetings and maintain in an electronic format.

(3) Post minutes to an NASA approved database for retrieval by AOD personnel.

7.2.8.2 Drafting

The Contractor shall provide design and drafting services. The Contractor shall prepare electrical schematics, wire lists, and mechanical drawings in direct support of

engineering design activities associated with the contract. The Contractor shall prepare and provide a release schedule for drafting activities. The initial release schedule, and any adjustments to the schedule, for each project shall be coordinated with, and approved by NASA.

Design/drafting activities shall be accomplished in accordance with AOD 33849, *Engineering Drawing Format, Requirements, and Procedures* using Computer-Aided Design (CAD) techniques. The Contractor's CAD systems shall be Auto-Cad and Pro-ENGINEER and compatible with current AOD engineering versions. Any changes to the CAD system, or any changes to the processes and procedures used with the CAD system shall be approved by the Chief, Engineering Branch or designee, prior to change.

7.2.8.2.1 Designers

The Contractor shall provide design and drafting requirements to support engineering design.

7.2.8.3 Engineering Projects

The Contractor shall support special projects when requested in accordance with AOD 33820, *Engineering Projects*.

7.3 Document and Data Control

7.3.1 Engineering Library

AOD has accumulated a large amount of archival documentation, including unique engineering drawings, flight and ground test results, equipment specifications and various procedures for equipment evaluation and assessment. This collection is comprised of paper and electronic formatted data. The Contractor's responsibility includes but is not limited to:

(1) Maintain the current and archive documentation. The complete engineering drawing files include:
   (a) Aircraft Engineering Aperture Cards, including past revisions for reference.
   (b) Computer-Aided Design Drawing Files on diskettes, compact discs, computer network, and other means.
   (c) Drawing Change Notices.
   (d) Paper (velum) engineering drawings.
   (e) Engineering reference material.

(2) Create and maintain a database to manage the existing collection, and any additions to that collection. The system shall include drawings and traceability of drawings for all modifications associated with the aircraft, including those drawings and documents provided by external organizations. Any changes to the engineering database or drawing storage system, or any changes to the processes and procedures used with these systems shall be approved by the Chief, Engineering Branch or designee, prior to change.

(3) Provide an electronic system for the storage, maintenance, and retrieval of electronically generated drawings.

(4) Store historical data of engineering documents including, but not limited to:
   (a) Engineering Work Orders (EWO) in accordance with AOD 33842, *Preparation of Engineering Work Orders*.
   (b) Fleet Modification Instructions in accordance with AOD 33819, *Fleet Modification Instructions*.

(5) Develop and maintain original and backup drawing database files to ensure that no loss of drawings or related data will occur because of hardware or software anomalies.

7.4 Inspection and Testing

7.4.1 Special Inspections

The Contractor shall identify when special inspections are required in accordance with AOD 33839, *Aircraft Configuration Control*.

7.5 Process Measurement and Improvement

The Contractor shall make recommendations to improve interfaces with other systems to improve operations efficiency, reliability, and safety in accordance with JPR 1281.9, Process Control and JPR 1281.14, Corrective and Preventive Actions, and Continual Improvement respectively.

A7 DFRC- ENGINEERING ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

A7.3 Document and Data Control

A7.3.1 Engineering Library

The Contractor shall perform all work in accordance with DCP-O-001, *Aircraft Maintenance Safety Manual* concerning the Drawing Control Process. The Contractor's responsibility includes but is not limited to:

(1) Create original CAD drawings from rough sketches.
(2) Modify existing CAD drawings from rough sketches or redlined prints.
(3) Update the files of drawings and associated records and maintain currency of drawing databases.
(4) Create and update the Drawing Tracking Records (DTR's).
(5) Maintain currency of CAD software and hardware used by this function.
(6) Maintain custody of all original drawings, sketches, and other related official drawings records.
(7) Create and distribute prints and copies of official drawings.
(8) Create and ensure secure custody of microfilm copies of archived drawings.
(9) Provide document control, re-production, distribution and storage of Configuration Control and related documents concerning engineering changes as required.
(10) Record and distribute minutes from Configuration Control and other designated meetings.

B7 LaRC- ENGINEERING ACTIVITIES, CENTER UNIQUE

Not applicable.

8 FORWARD OPERATING LOCATION (FOL) ACTIVITIES

Forward Operating Locations (FOL) support the operation of JSC aircraft. FOL's shall comply with all requirements of this SOW.

Contractor personnel at FOL's shall comply with the *JPR 1280.1, Quality Policy*. The Contractor QMS shall not contradict the requirements of the JSC QMS. See Section 4, Quality Management System for more information.

8.1 ELP FOL

8.1.1 Scope

The Contractor shall provide the services described in this SOW at the ELP FOL.

8.1.2 General Requirements

FOL's shall comply with all requirements of this SOW which parallel that of the EFD location except as indicated in this section.

8.1.3 Quality Management System

8.1.3.1 Safety and Health

The Contractor shall update and keep on file, Material Safety Data Sheet records for all required materials at the FOL.

8.1.3.1.1 Aircraft Recovery Plan

The Contractor shall establish and maintain an Aircraft Recovery Plan WI for each type aircraft in accordance with DRL item 3 and the local airport requirements.

8.1.3.1.2 Environmental Health Program Representative/Liaison

The Contractor shall provide an Environmental Health Program Representative/Liaison to perform the duties identified in Section 4.18.3.3.1.

8.1.4 Management Activities

The Contractor shall exercise management and operational control at ELP FOL, and retain full responsibility for performance requirements set forth in this SOW. The CO/COTR reserves the right to make the final determination regarding whom shall perform maintenance on aircraft, engines, appliances, and ground support equipment.

8.1.5 Maintenance Activities

Note: Normal weekday flying/maintenance operations shall be conducted between the hours of 0730 and 2300 for operations and four ten hour days for the T38 Depot Program.

The Contractor's responsibilities include but are not limited to:

(1) Support MMA, STA and T-38 aircraft operations.
(2) Support weekend astronaut training requirements at EDW.
(3) Support the T38 Depot Program

(4) Support all NASA aircraft operations, as required, during Terminal Countdown Demonstration Test (TCDT), launch and landings.
(5) Provide maintenance support for transit NASA aircraft. See Section 6.4.
(6) Perform all phases of inspections and maintenance on the 377 Super Guppy, MMA and STA aircraft in accordance with Boeing, Airbus, NASA and Gulfstream maintenance practices.
(7) Keep aircraft hangared whenever possible, or when directed by NASA.
(8) Adhere to the corrosion control program for all aircraft on station in accordance with AOD 33827, *Aircraft Corrosion Control Program*.
(9) Provide personnel to perform high and low power engine runs on 377 Super Guppy, MMA, STA and T-38 aircraft in accordance with Section 11.9.2.5.

8.1.5.1 Support Equipment

The Contractor's responsibility includes but is not limited to:

(1) Perform inspections on all support equipment. All safety discrepancies shall be corrected prior to use.
(2) Inspect maintenance stands prior to use.
(3) Repair powered and non-powered equipment. If repairs are required on equipment beyond local maintenance capability, arrangements will be made to return the equipment to EFD or an authorized repair facility.

.1.6 Engineering Activities

The Contractor shall provide engineering support for FOL's. Routine engineering support is provided by the Contractor at EFD.

8.1.7 Logistics Activities

The Contractor's responsibility includes but is not limited to:

(1) Use the NASA Aircraft Management Information System (NAMIS) at EFD for inventory management. Parts requisitions shall be through the NASA aircraft maintenance data system.
(2) Maintain a forward supply point. Inventory levels shall be coordinated through NASA maintenance, logistics, and Contractor management.
(3) Tag all equipment returned to EFD is as required by Section 4.8. A notation as to whether it is being returned for repair or excess shall be attached.
(4) Ship equipment utilizing NASA JSC aircraft whenever possible.
(5) Ship by commercial means whenever Government transportation is not available.
(6) Perform all logistics operations support for maintenance activities at the FOL.
(7) Perform an annual inventory of all Government assets stored at this FOL. All adjustment to the inventory shall be reported to the Director of Logistics, EFD.

8 1.8 Personnel Requirements

.8.1 Administrative and Management Personnel

The Contractor's responsibility includes but is not limited to:

(1) Provide a work center supervisor.
(2) Provide administrative support.
(3) Provide for travel requests, travel arrangements, lodging and expense reporting for TDY Contractor personnel.

8.1.8.2 Maintenance Support Personnel

The Contractor shall provide personnel to perform the duties as identified in Section 11.9.2.

8.1.8.3 Quality Support Personnel

The Contractor's responsibility includes but is not limited to:

(1) Provide Production Inspectors.
(2) Provide a QAR independent from the maintenance task or management function.
(3) Provide a Safety and Health Officer.
(4) Provide a Environmental Health Program Representative/Liaison.

SECTION 8- FORWARD OPERATING LOCATION ACTIVITIES

8.2 EDW FOL

8.2.1 Scope

The Contractor shall provide the services described in this SOW at the EDW FOL.

8.2.2 General Requirements

EDW FOL's shall comply with all requirements of this SOW which parallel that of the EFD location except as indicated in this section.

8.2.3 Quality Management System

8.2.3.1 Safety and Health

The Contractor shall update and keep on file, Material Safety Data Sheet records for all required materials.

8.2.3.1.1 Aircraft Recovery Plan

The Contractor shall establish and maintain an Aircraft Recovery Plan WI for each type aircraft in accordance with DRL item 3 and local airport requirements.

2.4 Management Activities

The Contractor shall exercise management and operational control at EDW FOL, and retain full responsibility for performance requirements set forth in this SOW. The CO/COTR reserves the right to make the final determination regarding whom shall perform maintenance on aircraft, engines, appliances, and ground support equipment.

8.2.5 Maintenance Activities

Note: Normal weekday flying/maintenance operations shall be conducted between the hours of 0730 and 1615.

The Contractor's responsibility includes but is not limited to:

(1) Support STA weekend astronaut training requirements at EDW.
(2) Support SCA proficiency flights, orbiter ferry flights, and maintenance delivery flights, at EDW and other facilities.
(3) Perform inspections and maintenance on the SCA in accordance with NASA and Boeing maintenance practices.

8.2.5.1 Support Equipment

The Contractor shall perform user inspections on all support equipment. Prior to use, all safety discrepancies shall be corrected.

8.2.6 Engineering Activities

The Contractor shall provide engineering support for EDW FOL's. Normal engineering support is provided by the Contractor at EFD.

SECTION 8- FORWARD OPERATING LOCATION ACTIVITIES

8.2.7 Logistics Activities

The Contractor's responsibility includes but is not limited to:

(1) Use the NASA Aircraft Management Information System (NAMIS) for control of NASA assets. Parts requisitions should be through the NASA aircraft maintenance data system or faxed to EFD logistics.
(2) Maintain a forward supply point at this location. Inventory levels shall be coordinated through NASA maintenance.
(3) Perform logistics support for the heavy maintenance Contractor, if required. If the AMMP Contractor does not have the asset in stock, NASA Maintenance and Logistics will determine which Contractor will procure the item.
(4) Ship by commercial means whenever Government transportation is not available. The use of Commercial Bill of Lading (CBL) will be used whenever possible.
(5) Perform an annual inventory of all Government assets stored at this FOL. All adjustment to the inventory shall be reported to the Director of Logistics, EFD.

8.2.8 Personnel Requirements

8.2.8.1 Administrative and Management Personnel

The Contractor's responsibility includes but is not limited to:

(1) Provide a work center supervisor.
(2) Provide for travel requests, travel arrangements, lodging and expense reporting for TDY Contractor personnel.

8.2.8.2 Maintenance Support Personnel

The Contractor shall provide personnel to perform the duties identified in Section 11.9.2.

8.2.8.3 Quality Support Personnel

The Contractor shall provide Production Inspector personnel to support maintenance services required for aircraft and aircraft programs as listed in this SOW.

.8 DFRC- FOL ACTIVITIES, CENTER UNIQUE

Not applicable.

B8 LaRC- FOL ACTIVITIES, CENTER UNIQUE

Not applicable.

9 LOGISTIC ACTIVITIES

The Contractor shall control procurement procedures in accordance with Federal, State, and Local regulations including but not limited to; NPD 4100.1, *Supply Support and Material Management Policy*, JSC SLP 4.6, *Procurement*, AOD 33829, *Logistics* and AOD 33862, *Aircraft Logistics and Maintenance System Requirements*.

9.1 Acquisition

The Contractor shall perform provisioning, property control, receipt and inspection, packing, shipping, delivery, redistribution, and disposal functions that are necessary to meet the requirements of this contract. The Contractor shall use the Government furnished automated logistics support system, currently the NASA Aircraft Management Information System (NAMIS).

The Contractor shall procure, when possible, through the NASA, Federal or DoD supply system. The Contractor shall, on a quarterly basis, compare items procurable by both DoD and commercial means, for best price. The Contractor shall make this decision taking into consideration cost, freight, reparability, and core charge.

9.1.1 Procurement

The Contractor shall operate a Logistics system that procures from both DoD and Commercial sources. The Contractor's responsibility includes but is not limited to:

(1) Maintain optimum stock levels on all inventory required to support AOD. Stock levels on items shall be determined in accordance with NAMIS or may be determined by special or yearly demand for rotable items, semi-annually for high value consumables, and quarterly for low value consumable items.

(2) Procure non-stock items in support of AOD requirements.

(3) Coordinate with and obtain approval from CO/COTR or authorized representative prior to ordering any item containing a hazardous constituent.

(4) Review all DoD order requirements for valid priority codes and quantities.

(5) Make all necessary changes to DoD requisitions prior to transmittal.

(6) Follow up on all delinquent DoD orders and make cancellations of items when deemed appropriate.

(7) Review DoD order notices, make necessary changes, and initiate follow-up action on Due-ins and Due-outs.

(8) Prepare AOD Form 1307, *Purchase Request Worksheet* for any item greater than $1,000 (facility). This form shall be signed by the designated person assigned by the CO.

(9) Obtain prior approval from the COTR for all commercial purchases greater than $10,000.

(10) Transmit DoD orders to various Federal depots on a daily basis and receive status updates on all orders by utilizing Defense Automatic Addressing System Center (DAASC) Asynchronous Message Entry System (DAMES) software.

(11) On discrepant DOD receipts, regardless of dollar value, if the receipts is an overage, an unacceptable substitute, or damaged, and if the dollar amount is greater than $50 for General Services Administration (GSA) items or greater than $100 for DOD items, submit through WEBSDR the required information.

(12) *Reserved.*

(13) Send a copy of the completed ROD to JSC's Financial Management Division (FMD) and to the appropriate depot. The Contractor is responsible for ROD's on material overages, shortages, and damages (OS&D) problems only, JSC's FMD is responsible for financial ROD's.

(14) Initiate and document follow-up action on any ROD not responded to within 30 calendar days. The Contractor shall take follow-up action within 2 workdays after the 30 calendar day period.

9.1.2 Affirmative Procurement Program

The Contractor shall verify purchase orders and invoices ensuring the accountable records match. The Contractor shall update the NAMIS cost data as required and include a summary in the monthly progress report in accordance with DRL item 9. The Contractor shall complete a yearly 5-year forecast of DoD spares. This forecast shall be completed and transmitted via Requirements Data Exchange List (RDEL) during the first quarter of each calendar year.

1.3 Management of Inventory

The Contractor shall have a proactive inventory management system that follows all FAR's. The Contractor's responsibility includes but is not limited to:

(1) Manage the inventory of all stocked assets in accordance with AOD 33880, *NASA Aircraft Management Information System (NAMIS) User's Guide.* This includes designation of controlled items or other items requiring specific consideration. This includes all repairable items that have been processed through the Repair Processing Center (RPC)/Backshop system. All end item assets, to include aircraft engines, will be tracked in the NAMIS.

(2) Control of assets, federally or commercially procured, with a value of $5,000 or greater that does not fall under NASA Equipment Management System (NEMS) control. This includes, but not limited to, aircraft assets.

(3) Review stock items, which have been in the NAMIS inventory for at least 12 months with little or no usage, for retention or elimination. The Contractor shall contact users of potential excess items for disposition. The Contractor shall initiate disposal actions and appropriate transactions in the NAMIS for item excess.

(4) Maintain optimum inventory utilization and levels.

(5) Replenish stock based on demand levels.

(6) Issue controls on assets for designated users and designated program assets as determined by NASA. This includes scarce aircraft parts, which are no longer in production nor are easily obtainable.

(7) Record all suspense transactions, receipts and issues in the NAMIS.

9.2 Receiving

9.2.1 Inbound Freight

(1) The Contractor shall receive all inbound freight shipments at the Building 270 receiving dock. The Contractor shall perform initial receipt and in-checking inspection of all inbound freight and process all transportation documentation. The inspection shall include, but is not limited to: annotating and resolving any visible OS&D, ensuring the number of pieces reflected on the delivery document matches the number actually received, routing the material to the requestor or to inspection, and ensuring material received has proper and expeditious disposition (See Section 4.15). Receiving inspections shall be performed in accordance with AOD 33868, *Receiving Inspection on Manufactured Aircraft Parts, Special Tooling, and Equipment*. The contractor is authorized to direct ship freight to the operating locations.

(2) The Contractor shall review documents to determine if shipment is properly marked "NMCS." If the asset is marked NMCS, the Contractor shall process the receipt and create a due-out release. The government furnished automated logistics system utilized to receive and notify the appropriate activities of receipt of NMCS assets.

(3) The Contractor shall identify incoming material against the applicable documentation. All freight not identifiable to a document will be researched for proper disposition. The Contractor shall hold unidentifiable shipments pending correct documentation.

(4) For all OS&D occurrences, the Contractor employee discovering the discrepancy shall promptly notify their supervisor and the carrier and prepare a discrepancy report the same workday as OS&D discovery. Claims will be processed in accordance 41 CFR Part 102-117, *Transportation Management.*

(5) The Contractor shall ensure inbound freight claim data is current and accurate at all times and provide AOD and the Contractor with the status on all open claims. The data shall include but are not limited to:

(a) The Purchase Request (PR) number.
(b) Date the discrepancy was discovered.
(c) Description of the freight involved.
(d) Claim number.
(e) Type of discrepancy.
(f) Carrier.
(g) Quantity or number and weight of freight involved.
(h) Value of freight involved.
(i) Freight on Board (FOB) point as stated on the PR.
(j) Remarks to include date claim was closed and resolution.

(6) The Contractor shall ensure special handling instructions are complied with for all inbound freight.

(7) The Contractor shall promptly refrigerate appropriate packages as soon as possible to prevent damage after physical receipt at AOD. Items shall be kept refrigerated until processed, delivered to destination, or picked up by the customer.

(8) The Contractor shall segregate chemicals and caustic substances from other stock immediately upon physical receipt. These substances shall be segregated as long as the Contractor is in possession of the material.

(9) The Contractor shall receive all Class B explosives at the receiving area prior to storage at the explosive storage area, located at the Texas Air National Guard Base, Ellington Field.

(10) Class C explosives shall be off-loaded and processed through the receiving area. Explosives shall be kept in explosive proof container(s) until delivery to the explosive storage area. This area is located in Texas Air National Guard facilities at Ellington. Receipt processing and delivery of Class C explosives shall be accomplished by the close of the business day the items are received.

(11) All lithium batteries shall be received and handled in accordance with JSC 18661, *Safety Requirements and Procedures for Handling and Disposal of Lithium Cells/Batteries*. The Contractor shall maintain a copy of this document in the receiving area.

(12) The Contractor shall ensure pilferable items are secure during the entire receipt process to guard against theft. Pilferable items such as office supplies, batteries, etc., shall be stored in a secure location until delivered to destination.

(13) For NASA procured items, the Contractor shall enter the item into the NAMIS and notify the addressee. All effort will be made by NASA to assure that the Contractor is aware of in bound NASA procured freight.

(14) The Contractor shall follow proper procedures for receipt/storage of hazardous materials. These items are generally in the Federal Class Groups 6500, 6800, 8000, and 9100. The Contractor shall ensure the required MSDS accompany the material. If MSDS does not accompany freight as required, receiving personnel shall contact the Contractor's Occupational Health and Safety Office. If the item is a stocked item, ensure a MSDS is filed in the warehouse.

9.2.2 Inbound Freight Log

The Contractor shall process all inbound freight in NAMIS. After updating the database, the Contractor shall move property to be stocked or issued. Equipment received on behalf of other contractors will not be processed through NAMIS.

9.2.3 Processing AOD Supply Items

The Contractor shall enter in the NAMIS all receipts that are to replenish AOD supply inventory at the time of inspection.

9.2.4 Material Returns

(1) The Contractor shall update the NAMIS database to record Turn-in Stock and Ship Stock.

(2) The Contractor shall process customer returns, ensuring the appropriate transaction occurs in the NAMIS to record the return as applicable. The Contractor shall segregate returned material from normal receipts until disposition is determined. Material will be returned to stock or disposed of through Redistribution and Utilization (R & U), NASA JSC. Asset returns to vendors for exchange or to Depot for credit is desired when feasible.

9.2.5 Non-Stock Receipts *(Reserved.)*

9.2.6 Stock Receipts

The Contractor shall process all consigned material receipts into inventory. Processing includes: inspection, ensuring all material meets criteria for storage, count, stamp documentation requirements, and updating the NAMIS.

9.2.7 Equipment Receipts

(1) The Contractor shall be responsible for processing equipment received at AOD, assigning and maintaining voucher numbers for the acquisition documents, and physically tagging equipment that meets the tagging criteria with a Contractor Equipment Control Number (CECN) tag. Items in this category include, but are not limited to:

(a) Assets identified by Exceptability, Recoverability, Reparability Code S and U with an acquisition value of $1,000 or more but less than $5,000.

(b) All expendable shop tools and equipment with an acquisition value of $500 or more.

(c) Low cost expendable shop tools and equipment deemed pilferable. A separate log shall be maintained for CECN items for positive control.

(2) The Contractor shall prepare a claim folder when concealed damage is discovered during inspection. Claims not resolved within 30 days shall be reported to NASA for further action. The Contractor shall promptly notify the supervisor of concealed damage and prepare claim folder on the same workday discrepancy is discovered.

(3) If equipment meets NEMS criteria for tagging, the Contractor shall notify the NASA Property Branch of the requirement. NASA Property will affix a NEMS tag to the item. The Contractor shall send DD Form 1149, *Requisition and Invoice Shipping Document*, one copy of the original receiving documents, and a copy of the receipt/inspection transmittal form to the NASA Property Administrator to effect transfer of accountability to NASA in accordance with JSC Support Contractor Procedures and Guidelines.

9.2.8 Repairable Asset Control

The Contractor shall perform all functions required to track repairable assets. The Contractor shall maintain a Due In From Maintenance (DIFM) system to include a Repair Processing Center (RPC), which shall track all repairable assets from issue to return to supply. This includes coordination of document numbers and serial numbers, when applicable, for issued assets, transportation, and tracking of assets while in the repair cycle.

9.2.9 Warranty Management

The Contractor shall maintain a warranty tracking system through the NAMIS. This system will track all warranty items throughout their warranty lifetime, including those items returned with warranties after repair. This system shall provide the capability to identify all items by part and serial number, date received, date issued to maintenance, aircraft issued against, date(s) returned for service, hours on unit at removal, vendor's validation of warranty call, and/or vendor's charges for "Cannot Duplicate" (CND) inspection and return.

9.3 Property Management

9.3.1 Property Control System

The Contractor shall develop, implement, and maintain a property control system, which provides accountability and user responsibility for all property furnished to, or acquired by, the Contractor. This system shall include all data from time of contract initiation, and as augmented by acquisition, through final disposal.

9.3.2 Inventory Schedule

The Contractor shall develop and provide an annual inventory schedule to the NASA Property Administrator and the CO/COTR. This inventory shall include program stock, flight hardware, and critical spare items stored at all AOD facilities in accordance with the NPR 4100.1, *NASA Materials Inventory Management Manual*. This schedule shall be included in the COM. For all NASA tagged equipment (NEMS) in the Contractors possession, an annual inventory will be conducted unless otherwise directed.

Schedule shall be complete and available at least 30 calendar days prior to October 1 for the upcoming FY.

9.3.3 Program Stock Inventory

The Contractor shall conduct sample inventories to reconcile NAMIS stock record balances with assets on hand. All discrepancies between the recorded balance and the physical count will be researched, and the cause of the discrepancy will be determined.

(1) The Contractor shall conduct inventories according to the schedule approved by the NASA Property Administrator. Count, research, analyze, and complete inventories within 5 working days for sample inventories and 30 calendar days for lot (wall-to-wall) inventories.

(2) The Contractor shall freeze records before the count process takes place. The Contractor shall accomplish first and second counts and the same person shall not count the same item on both counts. The Contractor shall submit the original supporting documentation to reflect inventory adjustments (to include NAMIS screen prints of details) to the AOD Logistics Lead. After review of count sheets, an Inventory Adjustment Voucher will be prepared for the approval of the NASA Property Administrator.

(3) Counts shall be accurate. Documented original count sheets, with documentation attached, shall be submitted to the NASA Property Administrator.

(4) The Contractor shall operate the supply system in an efficient and effective manner throughout the inventory process, ensuring customer support is maintained. Customer support shall not be jeopardized.

9.3.4 Inventory Control

The Contractor shall conduct inventories according to the contract and approved by the NASA Property Administrator. All inventories under perpetual control will be inventoried annually using sampling procedures outlined in the NAMIS users manual. The inventory control record, the freeze on records, and the count sheets will be generated in NAMIS as requested by the NASA Property Administrator.

9.4 Storage and Issue

9.4.1 Material Warehousing

The Contractor's responsibility includes but is not limited to:

(1) Warehouse material for storage and future issue. NASA supplied warehouse facilities are identified in Section 4.18.2. The Contractor shall establish controls to ensure placement of material in a storage location in a safe and secure manner, providing easy access, identification, and retrieval.

(2) Verify that identity, quantity, and unit of issue of incoming material to be stored conforms to receiving paperwork. The Contractor shall resolve any discrepancies.

(3) Place the material in a storage location. Material shall be placed in a safe, secure manner, providing easy identification and access.

(4) Ensure items requiring refrigeration are promptly moved to NASA provided refrigerated storage.

.4.2 Routine Issues and Redistribution

Upon receipt of a issue request, the Contractor shall select stock to fill the request and prepare and physically stage material for customer delivery or pickup.

9.4.3 Bench Stock

The Contractor's responsibility includes but is not limited to:

(1) Maintain current inventories and restocking levels for all maintenance work areas that maintain bench stock. Bench stock listings shall be reviewed monthly for restocking and lists updated yearly for changes in requirements and levels.

(2) Pull material for issue, ensuring the material is issued to the correct organization or project. The Contractor shall identify and count all issued material, with the exception of bulk issue items such as rivets, which may be weighed.

9.4.4 Customer Service

The Contractor shall respond to oral or written customer service requests, which include: part number verification, asset availability, inventory count of an individual item, and requests to physically view material. Assistance should be provided within 8-work hours after request is made.

.4.4.1 Call-Out After Center Support Hours

The Contractor shall provide 24-hour a day call-out support when a request is initiated outside of normal operating hours. The Contractor shall provide a 24-hour a day point of contact. Call-out work shall be processed within 4 hours after the logistics personnel arrival at the counter.

9.4.5 Work Stoppage Requests

The Contractor shall provide a work stoppage counter for customers to walk up and receive immediate service. The Contractor shall ensure order documents are valid and approved.

9.4.5.1 NASA Tagged Equipment

The Contractor shall physically store equipment until tagged by NASA Property personnel. Equipment is subject to the same receipt, storage and issue criteria as non-tagged program stock; however, actual physical inventory responsibility lies with the property custodian. If NASA Property personnel are not able to affix a NEMS tag within 48-hours of receipt, property may be issued to a property custodian and tagging shall be accomplished in place.

The Contractor shall annotate the NASA tag number on issue and receipt documents for tagged equipment if not already present. Tagged equipment shall be fully accounted for in NAMIS at all times. The Contractor shall record the tag number on the receiving paperwork if not already present.

All NEMS tagged items are to be inventoried on an annual basis.

SECTION 9- LOGISTICS

9.4.6 Freight Shipments

The Contractor shall prepare all routine shipments of equipment and materials from Ellington Field. The Contractor shall determine the best method of shipping. Factors to weigh are mission criticality, shipping expense, and availability of transportation. The Contractor shall coordinate all Government Bills of Lading (GBL) for property that will be exported outside of the Continental United States and Commercial Bills of Lading (CBL) in accordance with JB9W-09, *How to Prepare and Process JSC Form 290, "Shipping Document."* The Contractor shall obtain the carrier's representative signature on all bill of lading for all shipments. The Contractor shall properly package, prepare, and ship all routine shipments within 4 workdays of receipt. Packing and crating spare aircraft parts shall be completed in accordance with outlines specified in USAF T.O. 00-85B-3, *How to Package Air Force Spares*, or standard packing and crating methods. Government shipment is subject to the terms and conditions listed in 41 CFR Part 102-117, *Transportation Management* and 41 CFR 102-118.

9.4.7 Hazardous Shipments

The Contractor shall package and prepare hazardous materials for shipment. The Contractor shall ensure that all shipments containing hazardous materials are packaged, packed, marked, labeled, and documented in compliance with the DOT Hazardous Materials Regulations in Title 49, CFR, the International Civil Aviation Organizations (ICAO) Technical Instructions For The Safe Transportation Of Dangerous Goods, the International Maritime Organizations (IMO) Dangerous Goods Code, and the International Air Transport Associatio. (IATA) Dangerous Goods Regulations, as appropriate.

9.4.8 Excess Disposal

The Contractor's responsibility includes but is not limited to:

(1) Dispose of excess stock and equipment in accordance with NPD 4300.1 *Personal Property Disposal Policy*. Excess disposal must be staged for movement to Redistribution and Utilization (R&U) within 5 workdays.
(2) Prepare and physically stage material for movement to R&U and arrange for the delivery of materials/equipment to owning organization or R&U.
(3) Return to DoD sources all items that are deemed repairable or serviceable excess. Every effort should be made to assure all assets that have been procured from the DoD system are no longer serviceable and are returned to DoD for credit. A credit for all unserviceable assets should be the ultimate outcome.

9.4.9 Scrap

(1) The Contractor shall dispose of scrap in accordance with NPD 4300.1 *Personal Property Disposal Policy*. Scrap disposal must be staged for movement to R&U and a JSC Form 25A, *Request for Turn or Issue of Excess Property*, prepared prior to shipment.
(2) Scrap metals shall be loaded in the dumpster provided. When full, the NASA R & U Office shall be contacted for pick up.

SECTION 9- LOGISTICS

.9 DFRC- LOGISTIC ACTIVITIES, CENTER UNIQUE

Logistics support is provided by this contract. A separate Government contract is in place for some purchases.

B9 LaRC- LOGISTIC ACTIVITIES, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

The Contractor shall control procurement procedures in accordance with LAPD 4200.1, *Equipment Management Program*, LAPD 4300.2, *Program Recovery of Precious Metals*, and LAPD 4100.1, *Materials Inventory Management Program.* Applicable FAR's shall be used along with applicable NASA guidelines and directives to meet the requirements of all NASA Langley aircraft.

SECTION 10- PERSONNEL REQUIREMENTS

10 PERSONNEL REQUIREMENTS

The Contractor shall:

(1) Provide fully trained, qualified, and certified personnel to perform work under this contract. Specific contract requirements are identified in Section 4, Quality Management System.
(2) Ensure appropriate personnel shall have the ability to obtain and posses a security clearance of Secret.
(3) Identify the training, qualification, and certification requirements of all personnel in a *Training, Qualification, and Certification Program (TQCP)* Work Instruction in accordance with Section 4.18.1.1.
(4) Provide personnel to support any JSC aircraft at any location, as the need arises.

Note: NASA may restrict the access of any employee, or prospective employee, identified as a potential threat to the health, safety, security, or operational mission of the installation and its personnel.

10.1 Work Force

The Contractor shall provide a work force to support the SOW. The Contractor shall provide personnel rosters in accordance with DRL item 13.

10.1.1 Normal Hours of Operation

Normal hours of operation for JSC are 0630 to 2345.

The Contractor shall provide personnel for varied work schedules to meet mission requirements.

10.1.2 Personnel Identification

The Contractor shall make a wall mounted photo tree with the names and pictures of all technicians and employees who interface daily with flight crew operations personnel.

10.2 Personal Attire, Appearance, and Protective Equipment

(1) Contractor personnel shall present a neat, clean, and well-groomed appearance. Jewelry or other forms of attire that, if lost, could constitute a FOD or safety hazard, shall not be worn in and around aircraft or aircraft related equipment.
(2) Contract personnel shall wear NASA identification badges except when in the vicinity of aircraft or around mechanical equipment where they could be considered as a safety or FOD hazard.
(3) Technicians shall be easily identified as a NASA Contractor employee. Non-supervisory personnel shall wear uniforms with embroidered badges that clearly depict the employee's name and company except when wearing company T-shirts.
(4) The Contractor shall ensure personnel are provided with, trained in the use of, and wear protective equipment when working in hazardous areas or on critical aircraft

surfaces when required. Company headwear is authorized. Personal Protective Equipment (PPE) requirements include:

(a) Aprons meeting the requirements of ANSI Z41.1.
(b) Breathing Air in accordance with 29 CFR 1910.134 (Grade D air, or better).
(c) Eye and Face Protection- glasses/goggles in accordance with 29 CFR 1910.133 and ANSI Z87.1.
(d) Fall Protection in accordance with 29 CFR 1910.66
(e) Film Badges/Pocket Dosimeters in accordance with ANSI/IEEE C95.1.
(f) Foot Protection in accordance with 29 CFR 1910.136 and ANSI Z41.1.
(g) Hand Protection- gloves in accordance with 29 CFR 1910.138.
(h) Hearing Protection- sound attenuators in accordance with 29 CFR 1910.95 and "HEW" publication No. 76-120.1975.
(i) Respiratory protection equipment in accordance with 29 CFR 1910.134 and ANSI Z88.2.

10.3 Personnel Travel

(1) The Contractor shall provide personnel to support NASA deployments. The level of experience and qualification shall be the primary consideration in determining which Contractor personnel are selected to support deployments.
(2) The Contractor, in consultation with the CO/COTR, shall determine from which facility personnel will be selected to support each deployment.
(3) The Contractor may be required to fly on Government aircraft in support of various missions to support troubleshooting and repair of aircraft or systems.
(4) Contractor personnel traveling overseas shall meet all health, passport, air carrier and security requirements.

10.4 Training- All Personnel

The Contractor shall ensure personnel receive the applicable training required by this SOW within 3 months of employment or prior to assignment, unless otherwise specified. Specific safety precautions relative to maintenance tasks are contained in aircraft or support equipment technical data. The Contractor shall ensure personnel obtain physical examinations in accordance with the applicable regulations governing the work task. The Contractor shall ensure that all personnel are trained, qualified, and certified for all tasks assigned to them. NASA will pay for all job specific training required by this section. This training includes:

(1) Aircraft maintenance data collection system within 6 months of employment.
(2) Cardiopulmonary Resuscitation in accordance with NASA and American Health Association procedures.
(3) Computer Security Training in accordance with the Office of Management and Budget Circular A-130, Appendix III, *Security of Federal Automated Information Resources.*
(4) Emergency Action Plan.
(5) Eye and Face Protection in accordance with 29 CFR 1910.133 and ANSI Z87.1-1.
(6) Electrical Safety in accordance with 29 CFR 1910.331-360.

(7) Fire Safety and Housekeeping Practices in accordance with JPR 1700.1, JSC Safety and Health Handbook.
(8) First Aid in accordance with NASA and American Red Cross procedures.
(9) Hand Protection in accordance with 29 CFR 1910.133.
(10) Handling Materials in accordance with 29 CFR 1910.176.
(11) Hangar door operation in accordance with the applicable manufacturers instructions or OJT checklist.
(12) Hazard Communication Program in accordance with 29 CFR 1910.1200.
(13) Hazardous Materials Handling and Storage in accordance with 29 CFR 1910.106 and 29 CFR 1910.108.
(14) Head Protection in accordance with 29 CFR 1910.135.
(15) Hearing Conservation Program in accordance with 29 CFR 1910.95 and NASA Health Standard on Hearing Conservation in accordance with NHS/IH-1845.11.
(16) Ionizing Radiation in accordance with 29 CFR 1910.1096.
(17) JPR 1700.1, JSC Safety and Health Handbook.
(18) Lockout/Tagout Program in accordance with 29 CFR 1910.147.
(19) Machinery and Machine Guarding in accordance with 29 CFR 1910.211-219.
(20) Manlifts in accordance with 29 CFR 1910.68.
(21) Multi-Piece Rim Wheels in accordance with 29 CFR 1910.177 and NHS/IH-1845-11.
(22) NASA Safety Standard for Lifting Devices and Equipment in accordance with NSS/GO/1740.9.
(23) Nonionizing Radiation in accordance with 29 CFR 1910.97.
(24) Occupational Foot Protection in accordance with 29 CFR 1910.136.
(25) Powered Industrial Trucks in accordance with 29 CFR 1910.178.
(26) Radiological Health Manual in accordance with JSCM 186OD.
(27) Respiratory Protection Program in accordance with 29 CFR 1910.134.
(28) Shop Safety in accordance with JPR 1700.1, JSC Safety and Health Handbook.
(29) Scaffolds in accordance with 29 CFR 1910.29.
(30) Signs/barriers in accordance with 29 CFR 1910.97.
(31) Spray Finishing Using Flammable and Combustible materials in accordance with 29 CFR 1910.107.
(32) Reporting and Correcting Hazards in accordance with JPR 1700.1, JSC Safety and Health Handbook.
(33) Texas Department of Health, Bureau of Radiation Control.
(34) Vehicle Mounted Elevating and Rotating Work Platforms in accordance with 29 CFR 1910.67.
(35) Welding and Cutting Safety in accordance with ANSI Z49.1.

10.5 Administrative and Management Support Personnel

The Contractor shall provide management personnel to ensure all work is performed in accordance with this SOW.

SECTION 10- PERSONNEL REQUIREMENTS

10.5.1 Document and Data Control Personnel

10.5.1.1 Document Control Personnel

10.5.1.1.1 Document Control Process Owners

The Contractor shall provide personnel who shall perform the duties identified in Section 4.5.1.1.

10.5.1.1.2 Technical Library Clerks

The Contractor shall provide personnel to perform the duties identified in Section 4.5.1.3.1:

(1) Qualification:
  (a) Technical library clerks shall be familiar with USAF T.O. 00-5-1, *Air Force Technical Order System*, or
  (b) Shall have experience with technical library management.

(2) Certification: None.

10.5.1.1.3 Technical Library Support Personnel

The Contractor shall provide personnel to perform the duties identified in Section 4.5.1.3.2:

(1) Qualification:
  (a) Technical library support personnel shall be familiar with USAF T.O. 00-5-1, *Air Force Technical Order System,* or
  (b) Shall have experience with technical library management.

(2) Certification: None.

10.5.1.2 Data Control Personnel

10.5.1.2.1 Database Administrator

The Contractor shall provide personnel to perform the duties identified in Section 4.5.2.2:

(1) Qualification: Must be proficient with computer information systems.

(2) Certification: None.

10.5.2 Maintenance Control Personnel

The Contractor shall provide personnel who perform the duties identified in Section 6.2.1.

10.5.2.1 Weekend Duty- Maintenance Control Supervisor

The Contractor shall provide personnel who perform the duties identified in Section 6.2.2.

SECTION 10- PERSONNEL REQUIREMENTS

10.5.2.2 Maintenance Controllers

(1) Qualification:
(a) Shall have at least 3 years experience in aircraft maintenance control.
(b) Must be proficient with computer information systems.
(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Maintenance Controllers are encouraged to have a FAA Airframe "A" and Powerplant "P" certification.

10.5.3 Quality Records Personnel

10.5.3.1 Quality Records Clerk

The Contractor shall provide personnel to perform the duties identified in Section 4.16.3:

(1) Qualification:
(a) Shall have experience in records management and shall receive training on the following within 3 months of assignment:
(1) 36 CFR Chapter XII, Subchapter B, *Records Management.*
(2) JPR 1440.3, *JSC Files and Records Management Procedures*.
(3) NPR 1441.1, *NASA Records Retention Schedules*.
(b) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Sections 43.9-11, *Maintenance Records,* and 14 CFR Section 91.417, *Maintenance Records* within 6 months of assignment.
(2) Certification: None

10.5.4 Safety and Health Personnel

The Contractor shall provide safety and health personnel to support the programs listed in this SOW.

10.5.4.1 Safety and Health Officer

The Contractor shall provide a Safety and Health Officer, reporting directly to the General Manager, to perform the duties identified in Section 4.18.3.2.1:

(1) Qualification:
(a) Shall have at least 5 years aviation experience or a bachelors degree in an aviation or safety and health related field.
(b) Shall have at least 3 years experience as an aviation safety officer or an aviation quality assurance manager and be familiar in OSHA standards applicable to this contract.
(c) Shall be trained in accordance with JPR 1700.1, JSC Safety and Health Handbook within 3 months of employment.
(d) Shall exercise management oversight on the following programs:
(1) Aircraft Recovery Plan
(2) Confined Space Entry
(3) Fall Protection
(4) Hazard Assessment

(5) Hearing Conservation Program
(6) Heat Stress
(7) Personal Protective Equipment
(8) Radiographic Program
(9) Respirator Protection Program
(10) Voluntary Protection Program (VPP) as it applies to the JSC Safety and Health Program.

(e) Shall be trained on OSHA, EPA, ANSI, and applicable DoD standards prior to performance under this contract.
(f) Shall be trained in emergency response to the incident commander level in accordance with 29 CFR 1910 within 6 months of employment and receive refresher training annually.
(g) Shall maintain currency by attending 2 advanced safety courses per year.

(2) Additional duties may include:
(a) Course Instructor in accordance with Section 10.8.2.
(b) Assistant Fire Marshall in accordance with Section 10.5.3.3.
(c) Fire Warden or alternate in accordance with Section 10.5.3.5.
(d) OJT Trainer in accordance with Section 10.8.4.

(3) Certification:
(a) Hold a bachelors degree in aviation or safety and health related field from an accredited college or university or have 5 years aviation experience.
(b) Shall be certified to conduct First Aid Training in accordance with American Red Cross procedures.
(d) Shall be certified to conduct Cardiopulmonary Resuscitation (CPR) training in accordance with American Heart Association procedures.
(d) FAA "A" and "P" certification in accordance with 14 CFR Part 65 is desired.

10.5.4.2 Assistant Safety and Health Officer

The Contractor shall provide a person to assist the Contractor Safety and Health Officer with the qualifications and certifications listed in Section 10.5.4.1 above. This person shall be responsible for assisting in the performance of duties identified in Section 4.18.3.2.1.

10.5.4.3 Assistant Fire Marshall

The Contractor shall provide a person to assist the NASA AOD Fire Marshal who performs the duties identified in Section 4.18.3.1.1. The Assistant Fire Marshall may be an additional duty of the Safety and Health Officer.

Qualification: Shall receive Fire Safety Training in accordance with JPR 1700.1, JSC Safety and Health Handbook prior to performing assistant fire marshal duties, and requalify every 3 years.

10.5.4.4 Facility Manager Assistant

The Contractor shall provide Facility Manager Assistants who performs the duties identified in Section 4.18.2.1.1:

(1) Qualification:
(a) The location and proper use or operation of all power panels, circuit breakers, utility shut-off valves and switches, fire alarm pull-boxes, fire extinguishers, eye wash stations, chemical spill kits, and all other fire, safety or emergency equipment installed or housed therein.
(b) General fire codes, safety codes, OSHA standards, and T.O.s pertaining to the facility.
(c) MSDS's for all chemicals stored or used in the facility.
(d) Shall receive Facility Manager training in accordance with JPR 1700.1, JSC Safety and Health Handbook.

10.5.4.5 Fire Wardens- Alternates and Assistants

The Contractor shall provide fire warden alternates and assistants who report directly to the fire marshal and perform the duties identified in Section 4.18.3.1.2:

(1) Qualification:
(a) Shall work in the building in which they are assigned fire warden duties.
(b) Shall be familiar with building evacuation plans.
(c) Shall be familiar with the location of fire equipment, fire extinguishers, and fire alarm boxes.
(d) Shall be appointed in writing by the NASA fire marshal.
(e) Shall receive Fire Safety Training in accordance with JPR 1700.1, JSC Safety and Health Handbook prior to performing fire warden duties and requalify every 3 years.

(2) Certification: None.

10.5.4.6 Environmental Health Program Representative/Liaison

The Contractor shall provide personnel who perform the duties identified in Section 4.18.3.4.1:

(1) Qualification:
(a) Shall attend at least 1 environmental related refresher course each year.
(b) Shall be capable of exercising management oversight of the following programs:
(1) Asbestos Abatement.
(2) Hazard Assessment.
(3) Hazardous Waste, Handling, Accumulation and Disposal.
(4) Shall receive environmental protection training in accordance with JPR 1700.1, JSC Safety and Health Handbook.

(2) Certification: Hold a bachelors degree in an environmental related field from an accredited college or university or have 5 years aviation experience.

10.5.5 Work Center Supervisor/Foreman

The Contractor shall provide an individual directly responsible for work center production, efficient personnel utilization, workload scheduling, and equipment/parts for each work center.

(1) Qualification:

(a) Shall receive environmental protection training.
(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.
(c) Personnel assigned to type-certificated aircraft shall receive training on 14 CFR Part 43, Maintenance, Preventive Maintenance, Rebuilding and Alteration and 14 CFR Part 91,General Operating and Flight rules within 6 months of assignment.

(2) Additional duties may include:
(a) Aircraft Specific Mishap Qualification in accordance with Section 10.9.3.2.
(b) Fire Warden- Alternate and Assistant in accordance with Section 10.5.3.5.
(c) Technical Library Support in accordance with Section 10.5.1.

(3) Certification: None.

10.6 Engineering Support Personnel

The Contractor shall provide engineers and engineering support staff who perform the maintenance engineering duties identified in Section 7, Engineering Activities.

10.6.1 Engineers

10.6.1.1 Aircraft Mechanical/Structural Engineers

The Contractor shall provide aircraft mechanical/structural engineers who perform the duties identified in Section 7.2 and subsections:

(1) Qualification:
(a) Shall have at least 5 years engineering experience with aircraft and ground support equipment. This experience includes design, analysis, modification, and repair. Experience in aircraft maintenance engineering or structural repair is required.
(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Hold an engineering degree from an accredited college or university prior to employment.

10.6.1.2 Aeronautical Engineers

The Contractor shall provide aeronautical engineers who perform the duties identified in Section 7.2 and subsections:

(1) Qualification:
(a) Shall have at least 3 years engineering experience with aircraft. This experience includes aerodynamics, aircraft performance, aircraft systems, system design, maintenance, modification, and repair.
(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Hold an engineering degree from an accredited college or university prior to employment.

10.6.1.3 Avionics/Electronics Engineers

The Contractor shall provide electrical engineers who perform the duties identified in Section 7.2 and subsections:

(1) Qualification:
   (a) Shall have at least 3 years engineering experience with aircraft. This experience includes selection, specification, circuit design, avionics, and electrical systems maintenance, modification, and repair.
   (b) Shall be familiar with ARINC and Mil-Std data buses.
   (c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Hold an engineering degree from an accredited college or university prior to employment.

10.6.1.4 Field Engineer/Technician

The Contractor shall provide field engineer/technicians who perform the duties identified in Section 7.2 and subsections:

(1) Qualification:
   (a) Shall have at least 15 years engineering experience with aircraft systems repair and modification.
   (b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Hold a 2-year technical degree, or equivalent, from an accredited college or university prior to employment.

10.6.2 FAA Designated Engineering Representative (DER)

The Contractor shall provide, or have access to, FAA Designated Engineering Representatives (DER) certified in accordance with 14 CFR Part 183.

10.6.3 Designers

The Contractor shall provide Designers who perform the duties identified in Section 7:

(1) Qualification:
   (a) Design/Drafting personnel shall be proficient in computer aided AutoCAD prior to employment.
   (b) Understand the basic principles of aircraft design.
   (c) Proficient with the preparation of mechanical drawings, cad modeling techniques, electrical schematics, and wire lists.
   (d) Experience in preparing production drawings in accordance with ASME Y14.100-2000.

(2) Certification: None.

10.6.4 Engineering Configuration Managers and Clerical Staff

The Contractor shall provide Engineering Configuration Managers and Clerical Staff who manage, organize, protect, retrieve, access, and catalog engineering data in accordance with Section 7.3 and Section 4.16:

(1) Qualification:
(a) Shall have 6 months experience in records management.
(b) Shall receive training on the following within 3 months of assignment:
(1) 36 CFR Chapter XII, Subchapter B, *Records Management.*
(2) JPR 1440.3, *JSC Files and Records Management Procedures.*
(3) NPR 1441.1, *NASA Records Retention Schedules.*
(2) Certification: None.

10.7 Logistics Support Personnel

The Contractor shall provide logistics support personnel who perform the services required for NASA aircraft and aircraft programs as listed in this SOW.

10.7.1 Procurement Specialists

The Contractor shall provide procurement specialists who perform the duties identified in Section 9, Logistics Activities:

(1) Qualification:
(a) Personnel assigned duties as a procurement specialist shall have experience in procurement or receive OJT training.
(b) Shall be familiar with FAR, NASA FAR Supplement, ANSI, EPA, and OSHA standards involving the procurement of safety and personnel protective equipment.
(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.
(2) Certification: Attend a NASA approved negotiation course within 6 months of employment.

10.7.2 Logistics Monitor

The Contractor shall provide a Logistics Monitor who perform supply and logistics operations at ELP:

(1) Qualification:
(a) Shall receive OJT training on supply and logistic operations within 3 months of employment or prior to assignment.
(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.
(2) Additional duties are identified in Section 10.9.2.
(3) Certification: None.

10.7.3 Supply Technician

The Contractor shall provide Supply Technicians who perform the duties identified in Section 9, Logistics Activities:

(1) Qualification: Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.
(2) Additional duties are identified in Section 10.9.2.

(3) Certification: None.

10.8 Quality Control Personnel Support

The Contractor shall provide quality control personnel who perform the duties identified as listed in this SOW:

(1) Qualification: Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are identified in Section 10.9.2.

10.8.1 Aircraft Maintenance Program Monitor

The Contractor shall provide an Aircraft Maintenance Program Monitor who performs the duties identified in Section 4.9.5.

10.8.2 Course Instructor

The Contractor shall provide Course Instructors who perform the duties identified in Section 10.4:

(1) Qualification:
   (a) Course Instructors shall have 6 months experience instructing in a classroom environment and organizing course/training syllabus.
   (b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Certification: Shall be a graduate of a military certified instructor school or civilian equivalent.

10.8.3 Deficiency/Trend Analyst

The Contractor shall provide Deficiency/Trend Analysts who perform the duties identified in AOD 33816, *Trend Analysis*:

(1) Qualification: Deficiency/Trend Analysts shall have at least 2 years experience on aircraft or engines.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: FAA "A" or "P" certificate is recommended in accordance with 14 CFR Part 65.

10.8.4 OJT Trainer

The Contractor shall provide OJT Trainers.

(1) Qualification: OJT Trainers shall conduct training on tasks within their respective specialty and only when they are qualified on that particular task or equipment themselves.

(2) Certification: As required by the respective specialty.

10.8.5 Production Inspectors

The Contractor shall provide Production Inspectors (PI) who perform the duties identified in Section 4.10.4.1. PI's shall have the following prior to performing production inspections:

(1) Qualification:
- (a) Shall have at least 3 years aviation experience.
- (b) Shall be qualified in the primary technician duty position.
- (c) Shall pass a written examination administered by the Contractor QC office prior to performing PI duties and annually thereafter.
- (d) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.
- (e) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Part 43, Maintenance, Preventive Maintenance, Rebuilding and Alteration and 14 CFR Part 91, General Operating and Flight rules within 6 months of assignment.

(2) Certification:

FAA Inspection Authorization (IA) in accordance with 14 CFR Part 65 is desirable. As a minimum, the final inspector who performs inspections on type-certificated aircraft for major repairs or alterations must possess an FAA IA authorization in accordance with 14 CFR Part 65. The exception is the T-38 Depot Program technicians are not required FAA certifications.

- (a) Airframe Inspector- FAA "A" certificate in accordance with 14 CFR Part 65
- (b) Comm/Nav Shop Inspector- FAA "A" certification in accordance with 14 CFR Part 65 or Federal Communication Commission (FCC) license.
- (c) Electrical inspector- FAA "A" certificate in accordance with 14 CFR Part 65.
- (d) Engine inspectors- FAA "P" certificate in accordance with 14 CFR Part 65.
- (e) Parachute Inspectors- FAA Senior Parachute Rigger's certificate in accordance with14 CFR Part 65.

10.8.6 Quality Assurance Representatives

The Contractor shall provide Quality Assurance Representatives (QAR) who support the Contractor's quality program and perform the duties identified in Section 4.10.4.2:

(1) Shall have the same qualification and certification requirements of technicians they train when performing PI, Course Instructor, or OJT Trainer duties.

(2) Shall be familiar with ASI9100/9110 *American National Standard, Quality Systems-Model for Quality Assurance in Design, Development, Production, Installation and Servicing* quality standards.

(3) QAR additional duties may include:
- (a) Aircraft Maintenance Program Monitor in accordance with Section 10.8.5.
- (b) Aircraft Mishap Qualification in accordance with Section 10.9.3.2.
- (c) Course Instructor in accordance with Section 10.8.1.
- (d) Production Inspector in accordance with Section 11.8.5.
- (e) OJT Trainer in accordance with Section 10.8.4.
- (f) Weight and Balance Officer in accordance with Section 10.8.8.

10.8.6.1 Airframe QAR

The Contractor shall provide QARs with an airframe specialty:

(1) Qualification:
  (a) Shall have at least 3 years experience on airframes.
  (b) Personnel assigned to type-certificated aircraft shall receive training on14 CFR Part 43, Maintenance, Preventive Maintenance, Rebuilding and Alteration and14 CFR Part 91, General Operating and Flight rules within 6 months of assignment.

(2) Certification:
  (a) QAR's who perform as production inspectors on airframes shall have a FAA airframe (A) certification in accordance with 14 CFR Part 65.
  (b) QAR's who perform inspections on type-certificated aircraft for major repairs or alterations shall have a FAA Inspector Authorization (IA) in accordance with14 CFR Part 65.

10.8.6.2 Avionic QAR

The Contractor shall provide QARs with an avionic specialty:

(1) Qualification: shall have at least 3 years experience on modern aircraft avionics equipment.

(2) Certification:
  (a) QARs who perform as production inspectors on avionics equipment shall have a FAA airframe (A) certification in accordance with14 CFR Part 65.
  (b) QARs who perform as production inspectors on type-certificated aircraft shall have a FAA Inspector Authorization (IA) in accordance with 14 CFR Part 65.

10.8.6.3 Electrical QAR

The Contractor shall provide QARs with an electrical specialty:

(1) Qualification:
  (a) Shall have at least 3 years experience on aircraft electrical systems.
  (b) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Sections 43.9-11, *Maintenance Records* and 14 CFR Section 91.417, *Maintenance Records* within 6 months of assignment.

(2) Certification:
  (a) QARs who perform as production inspectors on aircraft electrical equipment shall have a FAA airframe (A) certification in accordance with14 CFR Part 65.
  (b) QARs who perform as production inspectors on certificated aircraft shall have a FAA Inspector Authorization (IA) in accordance with14 CFR Part 65.

10.8.6.4 Engine QAR

The Contractor shall provide QARs with an engine specialty:

(1) Qualification:
  (a) Shall have at least 3 years experience on aircraft engines.

(b) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Sections 43.9-11, *Maintenance Records* and 14 CFR Section 91.417, *Maintenance Records* within 6 months of assignment.

(2) Certification:

(a) QARs who perform as production inspectors on engines shall have a FAA Powerplant "P" certification in accordance with14 CFR Part 65.

(b) QAR's who perform as production inspectors on certificated aircraft shall have a FAA Inspection Authorization "IA" in accordance with 14 CFR Part 65.

10.8.6.5 Personal Equipment QAR

The Contractor shall provide QAR's with a personal equipment specialty:

(1) QAR's who do not have a FAA Master/Senior Parachute Rigger Certification may not perform normal duties as a parachute repack "production inspector".

(2) QAR's, under certain circumstances, may perform as limited production inspectors (less parachute repacks) under specific NASA approved circumstances as a designated PE Production Inspector Augmentee. Once approved, augmentees would be limited to perform "production inspection" duties for no more than a 90 day period.

(3) The Contractor Quality Control (QAR) shall provide monitoring and surveillance on all ALSS items as required to ensure compliance with appropriate ALSS technical data.

(4) QAR's may provide oversight and confirmation of calibrated measurements taken during maintenance accomplished on ALSS items, to include parachutes, as deemed appropriate.

10.8.7 Training Officer

The Contractor shall provide a Training Officer who perform the duties identified in Section 4.18.1.2. The Training Officer shall have the following prior to employment:

(1) Qualification:

(a) Shall have experience instructing in a classroom environment, organizing course/training syllabi, and organizing training reports.

(b) Shall have experience with computer based training (CBT) systems.

(2) Certification: The Training Officer shall be a graduate of a military instructor school or civilian equivalent.

10.8.8 Weight and Balance Officer

The Contractor shall provide a QAR with the duties as a Weight and Balance Officer (WBO) and perform the duties identified in Section 4.9.12.1. The WBO shall have the following prior to assignment:

(1) Qualification:

(a) Shall have experience performing weight and balance functions.

(b) Shall receive training on NPR 1441.1, *NASA Records Retention Schedules* within 3 months of assignment.

(c) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Sections 43.9-11, *Maintenance Records* and 14 CFR Section 91.417, *Maintenance Records* within 6 months of assignment.

(2) Certification:

(a) Shall have a FAA "A" certification in accordance with 14 CFR Part 65. T38 Depot Program technicians are not required FAA certification.

(b) Shall have completed the Automated Weight and Balance System (AWBS) training prior to assignment.

10.8.8.1 Weight and Balance Officer Assistants

The Contractor shall provide Weight and Balance Officer Assistants who perform the duties identified in Section 4.9.12.1.1. The WBO Assistants shall have the following prior to assignment:

(1) Qualification:

(a) Shall receive training on NPR 1441.1, *NASA Records Retention Schedules* within 3 months of assignment.

(b) Personnel assigned to the type-certificated aircraft shall receive training on 14 CFR Sections 43.9-11, *Maintenance Records* and 14 CFR Section 91.417, *Maintenance Records* within 6 months of assignment.

(c) Shall pass a written and practical examination administered by the Contractor QC Office.

(2) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65. The T38 Depot Program technicians are not required FAA certification.

(b) Shall have completed the Automated Weight and Balance System (AWBS) program training or FAA equivalent.

10.9 Support Personnel

The Contractor shall provide support personnel who perform scheduled and unscheduled maintenance, preventive maintenance, rebuilding and alterations on airframe, engines, appliances, and support equipment.

10.9.1 Qualification and Certification- All personnel

(1) Personnel shall have the following within 3 months of employment and prior to performing the tasks identified for the duty position:

(a) Shall receive initial aircraft specific familiarization by a Course Instructor or OJT trainer, or receive a supervisor and Quality Assurance Representative (QAR) evaluation of qualification.

(b) Shall be able to read, interpret and follow drawings, schematics, and diagrams.

(c) Shall receive training on the maintenance data collection system.

(d) Shall receive flightline safety, tool control, and FOD Prevention Training within 3 months of employment.

(e) Shall receive hangar fire system training within 3 months of assignment.

(f) Shall receive electrical safety training within 3 months of employment.

(g) Shall receive initial training in daily corrosion control and preservation measures specified in accordance with 1-1-689, *Avionics Cleaning and Corrosion Prevention/Control* and 1-1-691, *Aircraft Weapons System Cleaning and Corrosion Control* or aircraft specific technical data.

(2) Personnel who do not meet the certification requirements may request a waiver from the CO/COTR. Technicians who do not have the appropriate training, qualification, and certification shall only perform inspection and maintenance activities under the supervision of an appropriately FAA rated mechanic and the general privileges and limitations of 14 CFR Part 65- *Certification: Airmen Other Than Flight Crewmembers* shall apply. The T38 Depot Program technicians are not required FAA certification.

(3) All personnel shall be subject to task evaluations in accordance with the course training syllabus or OJT training checklists provided in the Personnel, Qualifications, and Training Program Work Instruction.

(4) All technicians shall be qualified and expected to perform in one or more basic tasks other than their primary duty position within 12 months of employment.

10.9.2 Additional Duties: All Personnel

The Contractor shall provide personnel who perform the additional duties identified below.

10.9.2.1 Course Instructor in accordance with Section 10.8.2.

10.9.2.2 Crane Operator (Aerospace Ground Equipment, G-1159/STA Airframe, Engine, and Hydraulic Technicians). Personnel assigned to perform additional duties as a Crane Operator shall:

(1) Receive NASA Safety Standard for Lifting Devices and Equipment training in accordance with NSS/GO/1740.9 and 29 CFR 1910.179 prior to operating a crane.

(2) For critical lift equipment and operations identified in NSS/GO/1740.9, re-qualify annually.

(3) For non-critical lift equipment and operations identified in NSS/GO/1740.9, re-qualify bi-annually.

10.9.2.3 Critical Lift Operator/Manager

The Contractor shall appoint and train a critical lift operator/manager whose duties include planning, coordinating, and executing all critical lift requirements. Specific requirements are contained in the JSC Material Handling Policy and in NASA-STD-8719.9. Critical lift activities include the lifting operations on national assets.

10.9.2.4 Doppler Radar Support

The Contractor shall appoint and train personnel who maintain the Doppler Weather Radar Unit and coordinate with the vendor for repair.

10.9.2.5 Engine Run Qualification

Contractor personnel are subject to engine run procedure checks by engine run qualified NASA QA or designated representatives after they have been qualified.

(1) 377 Super Guppy Aircraft (Low Power/Below Flight Idle).

The Contractor shall provide at least one qualified 377 Super Guppy/Allison 501-D22C engine run technician to run Super Guppy engines as required at all power settings:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial 377 Super Guppy engine run training to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the contractor.

(2) B-747 Shuttle Carrier Aircraft.

The Contractor shall provide at least one qualified B-747, Shuttle Carrier Aircraft/Pratt and Whitney JT9D-7J engine run technician to run SCA engines as required at all power settings.

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial SCA engine run training from a NASA approved training institute to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the contractor.

(3) DC-9 Aircraft Engine Run

The Contractor shall provide at least one qualified DC-9/ Pratt and Whitney JT-8D-9 engine run technician to run DC-9 engines as required at all power settings:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial DC-9 engine run training from an approved training institute to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the contractor.

(4) GIII/GII/STA Engine Run

The Contractor shall provide at least one qualified Rolls Royce Spey engine run technician to run engines as required at all power settings:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial engine run training from an approved training institute to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the contractor.

(5) T-38A/N Engine Run High Power (Above 70% RPM).

The Contractor shall provide at least one qualified T-38A/N/J85 engine run technician per work shift who:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.

(b) Shall receive initial T-38 engine run training to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the Contractor.

(6) T-38A/N Engine Run Low Power (Below 70% RPM).

The Contractor shall provide at least one qualified T-38A/N/J85 engine run technician per work shift who:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial T-38 engine run training to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the Contractor.

(7) WB-57 Engine Run.

The Contractor shall provide at least one qualified WB-57F/ Pratt and Whitney TF-33-P11/J-60-P9 engine run technician to run WB-57F engines as required at all power settings:

(a) Shall be assigned to the Airframe or Engine Technician primary duty position.
(b) Shall receive initial WB-57F engine run training to include engine trim and troubleshooting procedures.
(c) Shall pass a written examination annually administered by the Contractor QC office. Practical evaluations shall be administered by the contractor.

10.9.2.6 Fire Warden- Alternate and Assistant in accordance with Section 10.5.3.5.

10.9.2.7 Forklift Operator

Personnel assigned to perform additional duties as a forklift operator shall receive forklift safety for powered industrial trucks training prior to operating a forklift and re-qualify annually in accordance with 29 CFR 1910.178.

10.9.2.8 Fuel Cell Maintenance

Confined Space Safety Training is required for technicians who perform fuel cell maintenance, monitor equipment, and monitor personnel who enter fuel tanks. The Contractor shall:

(1) Have experience on aircraft fuel systems and be assigned to the Airframe Technician primary duty position.
(2) Pass a physical examination in accordance with 29 CFR 1910.134.
(3) Receive a respirator fit check in accordance with 29 CFR 1910.134.
(4) Receive the initial Confined Space Safety training in accordance with 29 CFR 1910.146.
(5) Be certified in First Aid in accordance with American Red Cross procedures.
(6) Be certified in Cardiopulmonary Respiration in accordance with American Heart Association procedures.
(7) Requalify annually in accordance with 29 CFR 1910.1311.

10.9.2.9 Logistics Monitor in accordance with Section 10.7.2.

10.9.2.10 OJT Trainer in accordance with Section 10.8.4.

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10.9.2.11 Production Inspector in accordance with Section 10.8.5.

10.9.2.12 Technical Library Support in accordance with Section 10.5.1.1.3.

10.9.2.13 Weight and Balance Officer Assistant in accordance with Section 10.8.8.1.

10.9.3 Specific Training, Qualification, and Certification Requirements

10.9.3.1 Aerospace Ground Equipment (AGE) Shop Mechanic

The Contractor shall provide personnel who perform the duties identified in Section 6.5.1:

(1) Qualification:

(a) Personnel who perform maintenance on AGE equipment shall have experience maintaining aircraft support equipment and shall be proficient in trouble shooting and maintaining mechanical, hydraulic, pneumatic, and electrical systems, and components.

(b) Shall receive AGE maintenance training prior to performing maintenance on support equipment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: None.

10.9.3.2 Airframe Technician

The Contractor shall provide Airframe Technicians who perform aircraft maintenance, preventive maintenance, rebuilding, and alterations. Personnel shall meet the following qualifications prior to performing aircraft maintenance:

(1) Qualification:

(a) Shall receive aircraft specific familiarization training within 3 months of employment.

(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties may include:

(a) Aircraft Specific Mishap Qualification:

(1) Shall be qualified in the Airframe Technician duty position.

(2) Receive training on the *Aircraft Mishap Plan* in accordance with Section 4.9.2.

(b) G1159A, G-1159/Shuttle Training Aircraft, C9, B747 APU Operation:

Personnel assigned to perform APU operation duties shall receive APU run training and certification prior to operating the APU.

(c) Engine Run in accordance with Section 10.9.2.5.

(d) Weight and Balance Officer Assistant in accordance with Section 10.8.8.1.

(3) Certification: FAA "A" certification is required for the personnel who perform maintenance, preventive maintenance, or alteration of an aircraft or appliance in accordance with 14 CFR Part 65. The T38 Depot Program technicians are not required FAA certification.

10.9.3.3 Battery/Generator Shop Technician

The Contractor shall provide Battery/Generator Shop Technicians who perform the duties identified in Section 6.5.2. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have experience on aircraft and shall receive battery shop safety training in accordance with JPR 1700.1, JSC Safety and Health Handbook.

(b) Shall receive hazardous training on specific aircraft batteries within 3 months of employment.

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform shop maintenance on aircraft batteries.

(b) Shall receive battery training from an approved military or civilian equivalent school or have prior experience before performing battery maintenance.

10.9.3.4 Communication/Navigation Shop Technician

The Contractor shall provide Comm/Nav Shop Technicians who perform the duties identified in Section 6.5.3. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have experience on modern avionic aircraft systems.

(b) Shall receive Comm/Nav shop familiarization training within 3 months of employment.

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65 is desired for personnel who perform maintenance on aircraft Avionics/Electrical systems. NASA will allow hands on experience in lieu of an "A" license. The T38 Depot Maintenance Program technicians are not required FAA certification.

(b) Certified in crimping procedures in accordance with an approved military or NASA sponsored school.

(c) Certified in soldering procedures in accordance with an approved military or a NASA sponsored school in accordance with NASA-STD-8739.3, *Soldered Electrical Connections.*

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10.9.3.5 Corrosion Control/Paint Technician

The Contractor shall provide Paint/Corrosion Control personnel who perform the duties identified in Section 6.5.11. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have 2 years experience in paint removal by means of chemical or plastic media blast or other state-of-the art removal methodologies, surface preparation, and primer/paint application experience on aircraft and associated parts.

(b) Shall receive Spray Finishing Using Flammable and Combustible Materials familiarization training in accordance with 29 CFR 1910.107.

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: FAA "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform corrosion control procedures on aircraft. The T38 Depot Program technicians are not required FAA certification.

10.9.3.6 Egress Technician

The Contractor shall provide Egress Technicians who perform the duties identified in Section 6.5.4:

(1) Qualification:

(a) Shall have at least 2 years egress experience on aircraft.

(b) Personnel shall receive Martin/Baker MK US16LN Ejection Seat Maintenance training within 3 months of employment.

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties may include:

(a) T-38 Canopy Rigging:
Personnel shall receive T-38 canopy rigging training prior to performing rigging procedures on T-38 canopies.

(b) Martin/Baker MK US16LN Ejection Seat Maintenance.
Personnel shall receive Martin/Baker Ejection Seat Maintenance training within 6 months of employment.

(c) WB-57F Canopy Rigging:
Personnel shall receive WB-57F canopy rigging training prior to performing rigging procedures on WB-57F canopies.

(d) Other additional duties as identified in Section 10.9.2.

(3) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform maintenance on egress systems. The T38 Depot Program technicians are not required FAA certification.

(b) Shall complete a DoD or original equipment manufacturer aircraft ejection seat course to include Class B, C, and D explosive training prior to performing maintenance on egress equipment.

10.9.3.7 Electrical Technician

The Contractor shall provide Electrical Technicians who perform the duties identified in Section 6.5.5. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 3 years of electrical experience on aircraft.
(b) Shall receive aircraft specific electrical familiarization training within 3 months of employment.
(c) Shall receive electrical shop familiarization training within 3 months of employment.
(d) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65 is desired for personnel who perform maintenance on aircraft electrical systems. The T38 Depot Program technicians are not required FAA certification.
(b) Certified in crimping procedures in accordance with an approved military or NASA sponsored school.
(c) Certified in soldering procedures in accordance with an approved military or a NASA sponsored school in accordance with NASA-STD-8739.3, *Soldered Electrical Connections*.

10.9.3.8 Engine Technician

The Contractor shall provide Engine Technicians who perform maintenance, preventive maintenance, or alterations on aircraft engines. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 2 years experience on jet engines and receive aircraft specific engine familiarization training within 3 months of employment.
(b) Shall receive engine shop familiarization training within 3 months of employment.
(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties may include:

(a) J-85 Shop Maintenance:
Personnel shall receive maintenance training on J-85 engines prior to performing depot level engine shop maintenance.
(b) Engine Test Cell Maintenance:

Personnel shall receive engine test cell maintenance training prior to performing maintenance on engines in the test cell.

(c) See Additional Duties- All Technicians, Section 10.9.2.

(3) Certification: FAA "P" certification in accordance with 14 CFR Part 65 is required for personnel who perform maintenance, preventive maintenance, or alterations on aircraft engines. The T38 Depot Program technicians are not required FAA certification.

10.9.3.9 Hydraulic Technician

The Contractor shall provide Hydraulic Technicians who perform the duties identified in Section 6.5.7. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 2 years experience on aircraft and receive aircraft specific hydraulic system familiarization training within 3 months of employment.

(b) Shall receive shop familiarization training within 3 months of employment.

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: FAA airframe "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform maintenance on aircraft hydraulic systems. The T38 Depot Program technicians are not required FAA certification.

10.9.3.10 Mechanical Accessories Technician

The Contractor shall provide Mechanical Equipment Technicians who perform the duties identified in Section 6.5.8. Personnel shall meet the following qualifications prior to performing aircraft maintenance:

(1) Qualification:

(a) Shall receive Mechanical Equipment (M/E) shop familiarization training within 3 months of employment.

(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) FAA "A" certification is required for the personnel listed below who perform maintenance, preventive maintenance, or alteration of an aircraft or appliance in accordance with 14 CFR Part 65.

(b) FAA "P" certification in accordance with 14 CFR Part 65 is required for personnel who perform maintenance, preventive maintenance, or alterations on aircraft engines. The T38 Depot Program technicians are not required FAA certification.

10.9.3.11 Reserved.

10.9.3.12 Non-Destructive Inspection (NDI) Technician

The Contractor shall provide NDI technicians who perform the duties identified in Section 6.5.9. Technicians shall have the following prior to performing NDT procedures:

(1) Qualification:

(a) Shall have at least 3 years experience on NDI procedures.

(b) Shall maintain a NDI/NDT Level-II qualification in accordance with NAS 410, *NAS Certification and Qualification of Non-destructive Test Personnel.*

(c) Shall receive Joint Oil Analysis Program (JOAP) analysis training within 3 months of employment.

(d) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) Technicians performing NDI shall be certified in radiography standard IAW American Society of Non-Destructive Testing (ASNT).

(b) NDI technicians performing NDI work on FAA certified aircraft shall have a FAA airframe (A) or powerplant (P) certification in accordance with 14 CFR Part 65, as appropriate. T38 Depot Program technicians are not required FAA certification.

10.9.3.13 Personal Equipment Technician

The Contractor shall provide Personal Equipment Technicians who perform the duties identified in Section 6.5.10. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 2 years experience on flight crew equipment and receive shop familiarization training within 3 months of employment.

(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties may include:

(a) Pressure Suit Technician:

The Contractor shall provide at least one qualified Pressure Suit Technician per work shift as required by the mission schedule. Personnel shall receive pressure suit training prior to performing maintenance on pressure suits.

(b) Parachute Technician:

The Contractor shall provide at least one qualified Parachute Technician per work shift as required by the mission schedule. Personnel shall receive parachute training prior to performing maintenance on parachutes.

(c) Other additional duties are as identified in Section 10.9.2.

(3) Certification:

(a) Shall be a graduate of a DoD or manufacturer Pressure Suit Course.

(b) FAA Senior Parachute Rigger certification in accordance with 14 CFR Part 65 is required for Personal Equipment Technicians who perform maintenance on aviator personal equipment.

10.9.3.14 Sheetmetal Technician

The Contractor shall provide Sheetmetal Technicians who perform the duties identified in Section 6.5.12. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have 2 years experience on aircraft.

(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: FAA "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform sheetmetal maintenance on aircraft and aircraft components. The T38 Depot Program technicians are not required FAA certification.

10.9.3.15 Simulation Maintenance Technicians- T38

The Contractor shall provide Simulation Maintenance Technicians on the T-38 who perform the duties identified in Section 6.5.5.2. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 3 years experience maintaining simulation hardware.

(b) Receive the applicable training identified in Section 10.4.

(2) Certification: A Federal Communication Commission (FCC) license is desired.

10.9.3.16 Welder

The Contractor shall provide Welders who perform the duties identified in Section 6.5.13. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have 3 years specialized experience in aircraft welding.

(b) Shall meet the requirements for general metals and aircraft alloys welding in accordance with TO 00-25-252 and AWS D17.1, *Specification for Fusion Welding for Aerospace Applications.*

(c) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: Certificated in accordance with T.O. 00-25-252 and AWS D17.1, *Specification for Fusion Welding for Aerospace Applications* and recertify annually.

10.9.3.17 Wheel and Tire Technician

The Contractor shall provide Wheel and Tire Technicians who perform the duties identified in Section 6.5.14. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Personnel assigned duties as a Wheel and Tire Technician shall have experience on aircraft wheels and tires.

(b) Shall receive the applicable training identified in Section 10.4 within 3 months of employment or prior to assignment.

(2) Additional duties are as identified in Section 10.9.2.

(3) Certification: FAA "A" certification in accordance with 14 CFR Part 65 is required for personnel who perform shop maintenance on aircraft wheels and tires.

SECTION 10- PERSONNEL REQUIREMENTS

A10 DFRC- PERSONNEL REQUIREMENTS, CENTER UNIQUE

A10.1.1 Normal Hours of Operation

Normal hours of operation for DFRC are 0700 to 1630.

All work functions are normally performed on a standard eight-hour day shift, however, provisions can be made for varied work schedules to meet programmatic requirements. In some cases, as directed by the CO/COTR, certain tasks may require second, third, or split shift operations as well as overtime. The Contractor may work overtime as required to meet DFRC mission requirements until within one percent of the performance threshold. At that point, all overtime shall be approved by the CO/COTR. The Contractor is responsible for maintaining continuity of ongoing work activities at all times.

A10.2 Personal Attire, Appearance, and Protective Equipment

(1) Personal appearance of employees shall be neat and professional. Work clothing for mechanics and technicians shall display the Contractor's name and logo and shall be in compliance with clothing requirements as detailed in the DCP-O-001, *Aircraft Maintenance & Safety Manual.*

(2) NASA issued badges are worn by Contractor employees at all times on site, except in situations and locations where they can be a work place hazard.

A10.5 Administrative and Management Support Personnel

A10.5.2 Maintenance Control Personnel

A10.5.2.1 Weekend Duty- Maintenance Control Supervisor

Not applicable.

A10.5.4 Safety and Health Personnel

A10.5.4.2 Assistant Safety and Health Officer

Not applicable.

A10.5.4.3 Assistant Fire Marshall

Not applicable.

A10.5.4.4 Facility Manager Assistant

Not applicable.

A10.5.4.5 Fire Wardens- Alternates and Assistants

Not applicable.

A10.6 Engineering Support Personnel

A10.6.1 Engineers

Not applicable.

A10.7 Logistics Support Personnel

Currently, logistics support is provided by a separate Government contract.

A10.8 Quality Control Personnel Support

A10.8.1 Aircraft Maintenance Program Monitor

Not applicable.

A10.8.2 Course Instructor

Not applicable.

A10.8.3 Deficiency/Trend Analyst

Not applicable.

A10.8.6 Quality Assurance Representatives

Not applicable.

A10.8.8 Weight and Balance Officer

Not applicable.

A10.9 Support Personnel

A10.9.2 Additional Duties: All Personnel

A10.9.2.1 Course Instructor

Not applicable.

A10.9.2.4 Doppler Radar Support

Not applicable.

A10.9.2.6 Fire Warden- Alternate and Assistant

Not applicable.

A10.9.2.9 Logistics Monitor

Not applicable.

A10.9.2.13 Weight and Balance Officer Assistant

Not applicable.

A10.9.3 Specific Training, Qualification, and Certification Requirements

A10.9.3.1 Aerospace Ground Equipment (AGE) Shop Mechanic

Not applicable.

A10.9.3.3 Battery/Generator Shop Technician

Not applicable.

A10.9.3.4 Communication/Navigation Shop Technician

Not applicable.

A10.9.3.5 Corrosion Control/Paint Technician

Not applicable.

A10.9.3.7 Avionics/Electrical Technician

The Contractor shall provide Avionics Technicians who perform maintenance on aircraft electrical and avionic systems. Technicians shall have the following prior to performing maintenance:

(1) Qualification:

(a) Shall have at least 3 years of electrical/avionic experience on mission management and support aircraft.

(b) Shall have at least 5 years of electrical/avionic experience on research aircraft.

(c) Shall receive aircraft specific electrical/avionic familiarization training within 3 months of employment.

(d) Shall receive electrical/avionic shop familiarization training within 3 months of employment.

(e) Shall have the applicable training identified in Section 10.4.

(2) Certification:

(a) FAA "A" certification in accordance with 14 CFR Part 65 is desired for personnel who perform maintenance on aircraft Avionics/Electrical systems. NASA will allow hands on experience in lieu of an "A" license.

(b) Certified in crimping procedures in accordance with an approved military or NASA sponsored school.

(c) Certified in soldering procedures in accordance with an approved military or a NASA sponsored school in accordance with NASA-STD-8739.3, *Soldered Electrical Connections.*

A10.9.3.10 Mechanical Accessories Technician

Not applicable.

A10.9.3.11 Model Design and Fabrication Technician

The Contractor shall provide Model Design and Fabrication technicians who perform the duties identified in Section A6.5.15. Technicians shall have the following:

(1) Qualification: Shall have 5 years experience performing mechanical fabrications. This experience includes planning, layout, fabrication of mechanical models, instruments, and other specialized prototype experimental hardware including both machined, sheet metal and tubing fabrications.

(2) Certification: None.

A10.9.3.12 Non-Destructive Inspection (NDI) Technician

Contractor technicians performing x-ray or radiography shall participate in the NASA Ionization Radiation training program.

A10.9.3.13 Personal Equipment Technician

Not applicable.

A10.9.3.14 Sheetmetal Technician

Not applicable.

A10.9.3.15 Simulation Maintenance Technicians- T38

Not applicable.

A10.9.3.16 Welder

Not applicable.

A10.9.3.17 Wheel and Tire Technician

Not applicable.

SECTION 10- PERSONNEL REQUIREMENTS

B10 LaRC- PERSONNEL REQUIREMENTS, CENTER UNIQUE

B10.1.1 Normal Hours of Operation

Normal hours of operation are 0700 to 1530, Monday through Friday. After hours and weekend work required to support missions/flight operations.

B10.5 Administrative and Management Support Personnel

B10.5.1 Document and Data Control Personnel

B10.5.1.1.2 Technical Library Clerk:

(1) Qualification:
Due to the nature of information contained in the QAO Technical Library, the Technical Library Clerk shall require a Secret level clearance. Although a security clearance is not necessary for the onsite work performance for other task areas, the Contractor may be required to travel to military or other controlled fields where a Secret clearance is mandatory.

(2) Certification: None.

B10.5.1.2 Data Control Personnel

Not applicable.

B10.5.2 Maintenance Control Personnel

Not applicable.

B10.5.4 Safety and Health Personnel

B10.5.4.2 Assistant Safety and Health Officer

Not applicable.

B10.5.4.3 Assistant Fire Marshall

Not applicable.

B10.5.4.4 Facility Manager Assistant

Not applicable.

B10.5.4.5 Fire Wardens- Alternates and Assistants

Not applicable.

B10.6 Engineering Support Personnel

B10.6.1 Engineers

Not applicable.

B10.7 Logistics Support Personnel

Not applicable.

B10.8 Quality Control Personnel Support

B10.8.1 Aircraft Maintenance Program Monitor

Not applicable.

B10.8.2 Course Instructor

Not applicable.

B10.8.3 Deficiency/Trend Analyst

Not applicable.

B10.8.6 Quality Assurance Representatives

Not applicable.

B10.8.8 Weight and Balance Officer

Not applicable.

B10.9 Support Personnel

B10.9.2 Additional Duties: All Personnel

B10.9.2.1 Course Instructor

Not applicable.

B10.9.2.4 Doppler Radar Support

Not applicable.

B10.9.2.6 Fire Warden- Alternate and Assistant

Not applicable.

B10.9.2.9 Logistics Monitor

Not applicable.

B10.9.2.13 Weight and Balance Officer Assistant

Not applicable.

B10.9.3 Specific Training, Qualification, and Certification Requirements

B10.9.3.3 Battery/Generator Shop Technician

Not applicable.

B10.9.3.5 Corrosion Control/Paint Technician

Not applicable.

B10.9.3.9 Hydraulic Technician

Not applicable.

B10.9.3.10 Mechanical Accessories Technician

Not applicable.

B10.9.3.11 Model Design and Fabrication Technician

Not applicable.

B10.9.3.12 Non-Destructive Inspection (NDI) Technician

Not applicable.

B10.9.3.15 Simulation Maintenance Technicians- T38

Not applicable.

B10.9.3.16 Welder

Not applicable.

B10.9.3.17 Wheel and Tire Technician

Not applicable.

SECTION 11
OPTION 1--FLIGHT OPERATIONS

11 OPTION 1--FLIGHT OPERATIONS

The Contractor shall provide flight operations support for the aircraft operations identified in this SOW. NPD 7900.4, Aircraft Operations Management defines the procedures and guidelines for management, utilization, operation, and control of NASA aircraft.

Contractor personnel shall comply with the JPD 1280.1, Lyndon B. Johnson Space Center Quality Policy. The Contractor QMS shall not contradict the requirements of the JSC QMS. The minimum requirements of the JSC QMS shall apply. See Section 4, Quality Management System for more information.

11.1 Flight Crew

The Contractor shall provide flight crew personnel to operate mission management or program (project) aircraft, as delineated by specific task order(s). Operational requirements will be provided to the Contractor by the CO/COTR through the NASA/JSC AOD Flight Operations Branch. Specific duty requirements are identified in NPR 7900.3, Aircraft Operations Management, and this SOW.

11.1.1 Flight Crew Performance Standards

(1) All crewmembers shall comply with the provisions set forth in NPR 7900.3, Aircraft Operations Management, FAA, Original Equipment Manufacturer (OEM), and other applicable directives, regulations, and instructions.

(2) The Contractor aircrew shall maintain performance standards in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II. These standards include, but are not limited to:

(a) Safety Precautions.
Knowledge of safety precautions identified in the applicable aircraft technical data.

(b) Airfield Operations.
Knowledge of airfield operations.

(c) Normal Procedures.
Knowledge of normal aircraft operations identified in the applicable aircraft technical data.

(d) Emergency Procedures.
All applicable boldface procedures demonstrated without reference to the checklist.

(e) Aircraft Systems.
The examiner may randomly select any system(s) for the student to demonstrate adequate skill and knowledge.

(f) System Limitations.
Knowledge of engine limitations demonstrated without reference to the checklist.

(3) Aircrews flying Mission Management aircraft transporting officially approved passengers in response to Government travel requirements shall conduct operations in accordance with 14 CFR Part 91, General Operating and Flight Rules, and the JSC Aircraft Operations Procedures. The Contractor aircrew shall operate NASA Mission Management Aircraft as civil aircraft when carrying passengers.

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OPTION 1--FLIGHT OPERATIONS

(4) The Contractor aircrew shall input aircraft discrepancies into the NALCOMIS database in accordance with AOD 33851, Maintenance Action Form Work Instruction NASA Form 1671, and AOD 33833, One-Time Flight/Off-Station Maintenance.

11.1.2 Proficiency, Currency, and Certification

Contractor flight crew personnel shall maintain proficiency, currency, and annual requirements in accordance with NPR 7900.3, Aircraft Operations Management and AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II or applicable AOD WI.

The Contractor shall maintain aircrew training records, which shall include: aircrew qualifications, copies of medical and FAA certificates, training status, experience, and provide this information to the Chief Pilot (or designee) upon the request of the Government.

The Government will provide training and qualification checks for Contractor aircrew, including required periodic simulator training. A NASA authorized flight surgeon will provide periodic flight physicals for aircrew.

The Government may, with appropriate notification to the Contractor, designate the requirement for contract aircrews to operate different aircraft, or the existing aircraft with configuration changes. The Government will provide additional training when aircraft equipment, configuration, model, or type is changed.

The Contractor shall operate the designated aircraft in compliance with the current editions of the applicable aircraft flight manuals and other official aircraft documents.
Mixed Contractor and Government aircrew may be required on an occasional basis to perform aircrew training, functional checks, technical evaluations, or mission operations.

11.2 Aircrew Activities

(1) Program Support (project) aircraft operations shall be conducted in accordance with JSC/AOD approved operational directives and the NPR 7900.3, Aircraft Operations Management. Aircraft will normally be operated as public aircraft for this mission.
(2) Training Operations: The Mission Management aircraft will be used for some types of recurrent and other required qualification training for aircrew. Such training in the aircraft shall be conducted on a non-interference basis with Mission Management operations.

11.2.1 Pilots

The Contractor shall provide pilots whose duties include but are not limited to:
(1) Identified in NPR 7900.3, Aircraft Operations Management.
(2) Perform preflight, thruflight, and postflight inspections on NASA aircraft in accordance with the Aircraft Flight Manual or NASA approved flight crew checklists.
(3) Perform normal and emergency procedures in accordance with the Aircraft Flight Manual and NASA approved flight crew checklists.
(4) Perform Functional Check Flights or Operational Checks on aircraft in accordance wi' AOD 33824, Functional Check Flights and Operational Checks, and applicable aircrat. checklists.

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(5) Perform Operational Readiness Reviews on aircraft prior to deployment in accordance with AOD 33872, Operation Readiness Reviews.

11.2.2 Flight Engineers

The Contractor shall provide Flight Engineers whose duties include but are not limited to:

(1) Identified in NPR 7900.3, Aircraft Operations Management.
(2) Perform preflight, thruflight, and postflight inspections on NASA aircraft in accordance with the Aircraft Flight Manual or NASA approved flight crew checklists.
(3) Perform normal and emergency procedures in accordance with the Aircraft Flight Manual and NASA approved flight crew checklists.
(4) Perform Functional Check Flights or Operational Checks on aircraft in accordance with AOD 33824, Functional Check Flights and Operational Checks, and applicable aircraft checklists.
(5) Perform Operational Readiness Reviews on aircraft prior to deployment in accordance with AOD 33872, Operation Readiness Reviews.
(6) Perform ground engine runs when requested by maintenance personnel. Flight engineers who perform ground engine runs shall be certified in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II.
(7) Assist in trouble-shooting aircraft systems if requested by maintenance personnel.

11.2.3 Loadmasters

The Contractor shall provide Loadmasters whose duties include but are not limited to:

(1) Identified in NPR 7900.3, Aircraft Operations Management.
(2) Perform preflight, thruflight, and postflight inspections on NASA aircraft in accordance with the Aircraft Flight Manual or NASA approved flight crew checklists.
(3) Perform normal and emergency procedures in accordance with the Aircraft Flight Manual and NASA approved flight crew checklists.
(4) Perform Operational Readiness Reviews on aircraft prior to deployment in accordance with AOD 33872, Operation Readiness Reviews.

11.2.4 Mission Managers

The Contractor shall provide Mission Managers whose duties include but are not limited to:

(1) Identified in NPR 7900.3, Aircraft Operations Management.
(2) Perform preflight, thruflight, and postflight inspections on NASA aircraft in accordance with the Aircraft Flight Manual or NASA approved flight crew checklists.
(3) Perform normal and emergency procedures in accordance with the Aircraft Flight Manual and NASA approved flight crew checklists.
(4) Perform Operational Readiness Reviews on aircraft prior to deployment in accordance with AOD 33872, Operation Readiness Reviews.

2.5 Flight Instructors

The Contractor shall provide qualified and certified personnel who shall perform Flight Instructor duties in accordance with AOD established procedures.

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11.2.6 Operations/Scheduling Officer

The Contractor shall provide personnel qualified to operate the duty/scheduling office.

11.3 Personnel Requirements

11.3.1 Flight Crew Operations Personnel

The Contractor shall provide Flight Crew Operations Personnel who shall perform the services required for JSC aircraft and aircraft programs as listed in this SOW.

11.3.2 Qualification and Certification- All personnel

(1) Personnel shall have the following within 6 months of employment and prior to performing the tasks identified for the duty position:

(a) Shall receive initial aircraft specific familiarization and certification in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II, or receive an evaluation of qualification by the Chief of Aircraft Operations, or his designated representative.

(b) Shall receive the applicable training identified in Section 11.

(2) Personnel who do not meet the certification requirements may request a waiver from NASA Headquarters via the CO/COTR.

(3) All personnel shall be subject to task evaluation checks by NASA Operations personn or designated representatives, after they have been qualified.

11.3.3 Pilots

The Contractor shall provide personnel to perform Pilot duties in accordance with Section 13.2.1.

(1) Qualification:

(a) Shall have the experience required by NPD 7900.4, Aircraft Operations Management prior to employment.

(b) Pass an initial physical examination and annually thereafter. Pilots 55 years of age and older shall be medically certified every 6 months. Details of these requirements are available in NPR 7900.3, Aircraft Operations Management.

(2) Additional duties may include:

(a) Course Instructor in accordance with Section 11.8.2.

(b) Flight Instructor in accordance with Section 13.2.5.

(3) Certification:

(a) Shall maintain certification in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II.

11.3.4 Flight Engineers

The Contractor shall provide Flight Engineers who shall perform the duties in accordance with Section 13.2.2.

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(1) Qualification:

(a) Shall have the experience required by NPD 7900.4, Aircraft Operations Management prior to employment.

(b) Pass an initial physical examination and annually thereafter. Details of these requirements are available in NPR 7900.3, Aircraft Operations Management,

(2) Additional duties may include:

(a) Course Instructor in accordance with Section 11.8.2.
(b) Flight Instructor in accordance with Section 13.3.5.
(c) Quality Assurance Technical Representative in accordance with Section 11.8.6.

(3) Certification:

(a) Shall maintain certification in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II.

(b) FAA "A" and "P" certification in accordance with 14 CFR Part 65, Certification: Airmen Other Than Flight Crewmembers, is required on Mission Management Aircraft in accordance with NHB 7920.3, NASA Administrative Aircraft Operations Manual.

(c) FAA Flight Engineer certification in accordance with 14 CFR Part 63, Certification: Flight Crewmembers Other Than Pilots, is desired.

1.3.5 Loadmasters

The Contractor shall provide Loadmasters who shall perform the duties in Section 13.2.3.

(1) Qualification:

(a) Shall have the experience required by NPD 7900.4, Aircraft Operations Management, prior to employment.

(b) Pass an initial physical examination and annually thereafter. Details of these requirements are available in NPR 7900.3, Aircraft Operations Management.

(2) Additional duties may include:

(a) Course Instructor in accordance with Section 11.8.2.
(b) Flight Instructor in accordance with Section 13.2.5.
(c) Supply Technician in accordance with Section 11.7.3.
(d) Weight and Balance Officer Assistants in accordance with Section 4.9.12.1.1.

(3) Certification: Shall maintain certification in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II.

11.3.6 Mission Managers

The Contractor shall provide Mission Managers who shall perform the duties identified in Section 13.2.4.

(1) Qualification:

(a) Shall have the experience required by NPD 7900.4, Aircraft Operations Management, prior to employment.

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(b) Pass an initial physical examination and annually thereafter. Details of these requirements are available in NPR 7900.3, Aircraft Operations Management.

(2) Additional duties may include:

(a) Course Instructor in accordance with Section 11.8.2.

(3) Certification:

(a) Shall maintain certification in accordance with NPD 7900.4, Aircraft Operations Management.

(b) FAA Dispatcher certification in accordance with 14 CFR Part 65, Certification: Airmen Other Than Flight Crewmembers, is desired.

11.3.7 Flight Instructors

The Contractor shall provide Flight Instructors who shall perform the duties identified in Section 13.2.5.

(1) Qualification:

(a) Shall have the experience required by NPD 7900.4, Aircraft Operations Management, prior to employment.

(b) Pass an initial physical examination and annually thereafter. Details of these requirements are available in NPR 7900.3, Aircraft Operations Management.

(2) Certification: Shall maintain certification in accordance with AOD 09295, Aircraft Operations and Training Procedures, Research and Mission Support Aircraft Volume II.

11.3.8 Operations/Scheduling Officer

The Contractor shall provide personnel who shall perform Operations/Scheduling Officer duties.

(1) Qualification- Shall have the experience required by NPD 7900.4, Aircraft Operations Management, prior to employment.

(2) Certification: FAA Dispatcher certification in accordance with 14 CFR Part 65, Certification: Airmen Other Than Flight Crewmembers, is desired.

11.3.9 Other Operations Support Personnel

11.3.9.1 Air Traffic Control Tower Operators

The Contractor shall provide personnel who shall perform Air Traffic Controller duties.

Certification: FAA air traffic control tower operator certificate in accordance with 14 CFR Part 65, Certification: Airmen Other Than Flight Crewmembers.

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A11 OPTION 1- DFRC FLIGHT OPERATIONS, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

A11.3 Personnel Requirements

A11.3.3 Flight Crews

The Contractor shall provide flight crew services for the various assigned aircraft flight operations identified in this SOW. Flight crew(s) members are but not limited to:

- Pilots (to include instructors)
- Flight Engineers
- Flight Mechanics
- Navigators
- Simulator training/instructor personnel
- Other flight crews as needed to support the flight operations systems and platforms

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OPTION 1--FLIGHT OPERATIONS

B11 LaRC FLIGHT OPERATIONS, CENTER UNIQUE

The Contractor shall perform the basic requirements of the SOW unless otherwise specified in this section as identified in Section 3.2.1.

APPENDIX A- DEFINITIONS

Reference Federal Acquisition Regulation Part 18-45- *Government Property, Definitions* and 14 CRF Part 1- *Definitions* for more information.

Abort- The failure of an aircraft to complete its planned mission.

Alteration, Major- an alteration not listed in the aircraft, aircraft engine, or propeller specifications-

(1) That might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or
(2) That is not done according to accepted practices or cannot be done by elementary operations.

Aircraft Classification-

Mission Management Aircraft (MMA)- Those administrative aircraft certified by the Federal Aviation Administration and used primarily for passenger transport. These include aircraft used to transport management and staff personnel on official travel for the purpose of satisfying mission requirements or other travel for the conduct of agency business.

Program Support Aircraft- Aircraft used to support programs and operations other than the direct production and acquisition of data. This includes, but is not limited to, astronaut training, safety chase, photo chase, cargo transport, flight training, range surveillance, launch security, and command and control.

Air Abort- A discrepancy causing an aircraft to return (land) after takeoff without completing its mission.

Bench Check- Any action by maintenance in determining the condition, status of an item, or determination of capability or lack of capability to return an item removed for a malfunction or alleged malfunction to a serviceable status.

Cannibalization- The removal of a component not available from normal sources to make a second piece of equipment functional.

Certification- The formal process of a third-party evaluation and approval of a person's knowledge, skills, and competence to perform a function in comparison to an established criteria.

Configuration Control Panel Directives (CCPD)- The CCPD is the vehicle used by NASA management to approve and validate the concept behind flight-critical configuration changes to all JSC aircraft and their associated support systems. Modifications to GSE will also require a CCPD.

Continued Airworthiness Requirements- Mandatory requirements for the modification, replacement of parts, or inspection of aircraft and amendment of operating limitations and procedures.

Check or Inspect- A through examination of the items to determine identity, security, condition, and operation.

APPENDIX A- DEFINITIONS

Correction of Discrepancies- Test, repair, overhaul, or replace as defined and authorized by the applicable technical data.

Customer-Supplied Product (CSP)- Products, such as payloads and flight equipment, owned by NASA or another contractor for the purpose of flight processing, testing, storage, analysis, modification, and/or fabrication.

De-Dock Meeting- A formal meeting between NASA representatives and the Contractor after an aircraft phase inspection has been accomplished.

Discrepancies- All items noted and recorded that does not conform to the requirements or specifications.

Discrepancy Notice (DN)- A discrepancy tracking method used by STA personnel to document, track and resolve off-nominal occurrences on the STA, ADAS, AVaS, ATE, and other STA support systems

Discrepancy, Repeat- A discrepancy that reoccurs within 2 flights or an obvious defect that extends beyond 2 flights.

Downgrade- The change of a discrepancy status from non-flyable to flyable.

Due in for Maintenance (DIFM)- A system to track the status and location of repairable aircraft assets. Repairable aircraft parts due to be returned for repair/overhaul either at field level or depot level.

Engineering Project- An aircraft or engine requiring engineering analysis or involvement in order to resolve issues which are beyond standard maintenance practices.

Engineering Work Order (EWO)- The purpose of the EWO is to provide: (1) authorization to perform specific tasks (2) historical data records, and (3) in-process inspection verification.

Estimated Time-In Commission (ETIC)- Estimated date/time aircraft maintenance actions will be completed.

Familiar- to receive OJT training or have a working knowledge for the area identified.

FOL- A facility owned by Johnson Space Center where aircraft maintenance and operations are performed and is designated as a forward operating location.

Functional Check Flight (FCF)- A comprehensive check of all aircraft significant systems in accordance with published procedures.

FCF Release- After successful completion of all maintenance actions, which require an FCF, an aircraft will be released for routine flight.

Fleet Modification Instructions (FMI)- A modification to be incorporated on an entire aircraft fleet.

Flight Readiness Review (FRR)- The Contractor reviews all maintenance and modifications with NASA management, maintenance, engineering, and quality assurance before the aircraft is released for flight.

Fully Mission Capable (FMC)- An aircraft capable of safely fulfilling the mission for which it is assigned. Also, see In-Commission (operational Ready).

APPENDIX A- DEFINITIONS

Functional or Operational Check (or Test)- The testing and checking of function and operation of the component either on the aircraft or in shops, using equipment, procedures, and limits in the applicable technical data.

Ground Abort- A discrepancy discovered on the ground after the aircraft has been assigned, delaying, or canceling the flight.

Ground Support Equipment- Equipment necessary to service, repair, operate, and test aircraft.

Hazardous Duty- Services provided in areas specified in JSCI 1710.2 "Limitation to Work Shift of Personnel Associated with JSC Hazardous Activities."

Hand Tool- A tool commonly used on aircraft such as screwdrivers, wrenches, sockets, which may be easily purchased from a local vendor.

In-Commission (Operationally Ready)- An aircraft capable of safely fulfilling the mission for which it is assigned. Also see Fully Mission Capable.

Job Qualification Standard (JQS)- A checklist that identifies the minimum training requirements for a specific task.

Life-Limited Part- Any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.

Life Status- The accumulated cycles, hours, or any other mandatory replacement limit of a life-limited part.

Maintenance- The inspection, overhaul, repair, preservation, and the replacement of parts, but excludes preventive maintenance.

Maintenance Delay- Any mission which is delayed due to a detected or suspected maintenance malfunction discovered by an aircrew and/or maintenance personnel, that can be corrected by the maintenance contractor within 1 hour from the received time of the reported malfunction, will be classified as a maintenance delay and not a ground abort.

Maintenance

Depot Level- Those maintenance activities to augment stocks of serviceable material and to support organizational and intermediate maintenance activities by more extensive shop facilities and equipment, and personnel of higher technical skill than are normally available at the lower levels of maintenance. It normally consists of repairing, modifying, overhauling, reclaiming, or rebuilding parts, assemblies, subassemblies, components, and end items, the emergency manufacturing of unavailable parts and providing technical assistance to using activities and intermediate maintenance organizations.

Intermediate Level- Intermediate level maintenance normally consists of calibrating, repairing, or replacing damaged or unserviceable parts, components, or assemblies, modification of material, emergency manufacturing of unavailable parts, and providing technical assistance to using organizations. Intermediate level maintenance is sometimes indistinguishable from organization level maintenance except for its more in-depth maintenance capability.

APPENDIX A- DEFINITIONS

Organization Level- That maintenance activity performed by a using organization on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies.

Preventive- Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.

Scheduled Maintenance- Calendar, events, cycle or hourly intervals for each aircraft, engine, appliance, and associated support equipment required by the maintenance program.

Unscheduled Maintenance- Maintenance performed on inoperative instruments, equipment, aircraft systems, or when unplanned repairs are required.

Maintenance Slip- Aircraft missing a scheduled flight by more than 1 hour due to maintenance.

Major alteration- An alteration not listed in the aircraft, aircraft engine, or propeller specifications: (1) That might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or (2) That is not done according to accepted practices or cannot be done by elementary operations.

Major repair- A repair: (1) That, if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or (2) That is not done according to accepted practices or cannot be done by elementary operations.

Material Review Board (MRB)- The objective of the MRB is to provide technical repair instructions when no other technical data is available or the existing technical publications, engineering drawings, or procedures are inadequate (does not apply to FAA certified aircraft).

May- An acceptable or suggested means of accomplishment.

NALCOMIS- The NASA Aviation Logistics Command Management Information System (NALCOMIS) is used by maintenance, quality, and management personnel to track maintenance performed on aircraft, engines and appliances.

NASA Aircraft Management Information System (NAMIS)- A Government furnished aircraft inventory maintenance management system used by logistics, which interfaces with other NASA computers.

NASA Aircraft Maintenance Management System- Either NALCOMIS or NAMIS.

National Asset- Definition as it applies to NASA: A unique government asset (aircraft) that if lost, destroyed, or damaged would cause the inability of the government to perform the mission. Special work requirements are defined in the aircraft peculiar work instructions.

Nonconformance- Items audited and found to be an unsatisfactory process or procedure as it applies to the quality management system (QMS).

Non-Stock Items- Items which are purchased for a one time requirement and are not intended to be stock listed.

APPENDIX A- DEFINITIONS

On-the-job training- Non-classroom training that focuses on performing actual job tasks to build skill proficiency. OJT is done under the guidance of someone experienced and fully qualified in that job or task.

Operational Check Flight- The airborne operational check of any system, which cannot be fully checked for proper operation on the ground.

Potentially Hazardous Item- An end item, element, system, subsystem, article, or component with the potential for exposure of personnel, facilities, equipment, or the environment to hazards arising from performance of work, use, handling, manufacturing, packaging, transportation, storage, inspection, or disposal.

Pre-Dock Meeting- A formal meeting between NASA representatives and the Contractor prior to the input of the aircraft for scheduled maintenance to establish the projected workload, the provisions required, and the schedule for accomplishment.

Production Inspection- An inspection performed by a production inspector that confirms the correct operation of the product and verifies the technical data requirements have been met.

Project Aircraft- An aircraft with a problem that cannot be solved with normal maintenance technical data, requiring engineering assistance. Specific anomalies will also cause an aircraft to become a project.

Project Engine- An engine with a problem that cannot be solved with normal maintenance technical data, requiring engineering assistance. Specific anomalies will also cause an engine to become a project.

Qualifications- Training or competencies, which provide an individual the necessary skills, knowledge, or credentials to perform a specific function.

Quality Management System (QMS)- The organizational structure, procedures, processes, and resources needed to implement quality management.

Records- Records are defined by 44 U.S.C. Sec. 3301 as:

Quality Management System Records-

"all books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them." Extracted from JPG 1440.3, *JSC Files and Records Management.*

Aircraft Maintenance Records-

Aircraft records indicating the performance of preventive maintenance, rebuilds, or alterations to an aircraft, airframe, aircraft engine, propeller, appliance, or component part.

Active Records-

- Records of tasks, which have not been repeated or superceded as referenced in the Aircraft Maintenance Program.

APPENDIX A- DEFINITIONS

- Records of Service Changes and other similar quality records of changes to an aircraft. These records include hard copy media.

Inactive Records- Inactive aircraft maintenance records are records of tasks, which have been repeated or superceded as referenced in the Aircraft Maintenance Program. These records include hard copy media.

Repair, Major- A repair:
(1) That, if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or
(2) That is not done according to accepted practices or cannot be done by elementary operations.

Repair Processing Center (RPC)- The controlling center for a DIFM system.

Sensitive Equipment and Parts- Equipment that is vulnerable to pilferage, valuable, or expensive to replace, and is essential to mission accomplishment.

Service Change- Any modification performed on the aircraft or support system that changes the original design, or when required by the aircraft manufacture, to include Aircraft Service Changes, Airworthiness Directives (AD), Customer Bulletins (CB), Engineering Order (EO), Engineering Work Orders (EWO), Fleet Modification Instructions (FMI), STA Engineering Work Orders (SEWO), Service Bulletins (SB), Software Change Request (SCR), Time Change Technical Orders (TCTO), etc.

Serviceable Condition- The condition of an item that is capable of performing its purpose and function to the requirements for which it is originally intended.

Servicing- The replenishing of all fluids, fuel, oil, water methanol, as well as cleaning the aircraft exterior and interior, cleaning food dispensing equipment, ice chests, coffee pots, hot cups, chemical toilets, as required. This may also include storage of meals on the aircraft.

Shall- The instruction or procedure prefaced by "shall" is mandatory.

Shadowing- A cutout for each compartment of a tool box/cabinet especially designed to fit a tool and to readily identify any missing items.

Sortie- One or more completed flights per day, equivalent to 1 takeoff and 1 full stop landing.

System Level Procedure (SLP)- SLPs implement QMS principles and practices, define responsibilities of affected functions, and describe the relationships between these functions as they pertain to implementation. SLPs apply across organizations and describe what is to be done when, where, and by whom.

Technical Manual Revision (TMR)- NASA requirement to change the manufacture's technical data.

Training- The process of providing knowledge and skills to individuals to better enable them to perform their current duties or future duties. Training may include job-specific training such as a series of instructions or proficiency demonstrations leading to a qualification.

APPENDIX A- DEFINITIONS

Type Certificated- Aircraft with FAA airworthiness certificates.

Work Instruction- Documents that describe how to accomplish specific job activities needed to ensure consistent working methods and achieve the required quality standard.

Work Request- A work requirement that is provided in writing to the Contractor in accordance with the task order provision of this contract.

APPENDIX B- ACRONYMS

A	Airframe License (FAA)
AC	Advisory Circular (FAA)
ACD	Aircraft Change Directives
AD	Airworthiness Directive (FAA)
ADAMS-4	Automated Technical Order Management System (DFRC)
ADAS	Advanced Digital Avionics System (STA)
AF	Air Force
AFB	Air Force Base
AFC	Airframe Change (DFRC)
AFM	Air Force Manual
AFR	Air Force Regulation
AFS	Agency Filing Scheme
AGE	Aerospace Ground Equipment
AHRS	Attitude/Heading Reference System
AirSC	Airborne Systems Competency
AIS	Automated Information System
ALC	Air Logistics Center???
AM&SM	Aircraft Maintenance and Safety Manual (DFRC)
AMD	Average Monthly Demand
AMMP	Aircraft Maintenance and Modification Program
AMP	Aircraft Maintenance Program
ANSI	American National Standards Institute
ANST	American Society of Non-Destructive Testing
AOD	Aircraft Operations Division
AOG	Aircraft on Ground
APU	Auxiliary Power Unit
ARES	Advanced Remote Earth Sensing
ASB	Aircraft Systems Branch (LaRC)
ASC	Aircraft Service Change
ATA	Air Transport Association
ATE	Automated Test Equipment
ATP	Acceptance Test Procedures
AVaS	Advanced Validation System
BMC	Beyond Maintenance Capability
BPO	Basic Post Flight
CAD	Computer Aided Design
CAM	Contractor Acquired Material
CB	Customer Bulletin
CBA	Collective Bargaining Agreement
CBPO	Combined Preflight and Basic Post Flight
CBT	Computer Based Training
CCB	Configuration Control Board (DFRC)
CCPD	Configuration Control Panel Directives
CECN	Contractor Equipment Control Number
CFO	Chief Financial Officer
CFR	Code of Federal Regulation
CIO	Chief Information Officer
CMP	Computerized Maintenance Program (G-II and G-III)
CNC	Computer Numerical Control
CND	Cannot Duplicate
CO	Contract Officer
COM	Contractor's Operating Manual
COTR	Contract Officer's Technical Representative
CPR	Cardiopulmonary Resuscitation
C/W	Complied With
DAASC	Defense Automatic Addressing System Center
DAMES	Defense Automatic Addressing System Center (DAASC) Asynchronous Message Entry System
DCP	Dryden Center Process
DER	Designated Engineering Representative (FAA)
DFRC	Dryden Flight Research Center
DIFM	Due in from Maintenance
DMO	Document Management Office

APPENDIX B- ACRONYMS

DN	Discrepancy Notices
DoD	Department of Defense
DOP	Dryden Operating Process
DOT	Department of Transportation
DRD	Document Requirement Description
DRL	Document Requirements List
DTR	Drawing Tracking Record (DFRC)
EAFB	Edwards Air Force Base
ECN	Equipment Control Number
EFD	Ellington Field
EDT	Electronic Data Transmittal
EDW	Edwards Air Force Base, California
EHP	Environmental Health Program
EHS	Environmental Health and Safety
ELP	El Paso, Texas
EO	Engineering Order
EO	Executive Order
ET	Eddy Current
EPA	Environmental Protection Agency
ETIC	Estimated Time-in-Commission
EWO	Engineering Work Order
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation or Federal Acquisition Regulation
FBO	Fixed Base Operator
FCC	Federal Communication Commission
FCF	Functional Check Flight
FCS	Federal Catalog System
FEA	Finite Element Analysis
FIP	Federal Information Processing
FMC	Fully Mission Capable
FMD	Financial Management Division (NASA)
FMEA	Failure modes and effects analysis
FMI	Fleet Modification Instruction
FOB	Freight on Board
FOCS	Flight Operations and Support Center (Langley)
FOD	Foreign Object Damage/Debris
FOL	Forward Operating Location
FPMR	Federal Property Management Regulation
FRR	Flight Readiness Review
FY	Fiscal Year
G-I	Gulfstream 159 Aircraft
G-II	Gulfstream 1159 Aircraft
GAC	Gulfstream Aerospace Corporation
GAMM	General Aviation Maintenance Manual (Langley)
GFE	Government Furnished Equipment.
GFM	Government Furnished Material
GPS	Global Positioning System
GSA	General Services Administration
HAR	Hazard Analysis Report
HUD	Heads-up Display
I/T	Information Technology
IA	Inspector Authorization (FAA)
IAOP	Intercenter Aircraft Operations Panel (NASA Headquarters)
IATA	International Air Transport Association
ICAO	International Civil Aviation Organizations
ICC	Interstate Commerce Commission
ICRL	Individual Component Repair Listing
IDMS	ISO Document Management System (DFRC)
IG	Inspector General
IMO	International Maritime Organizations
ISO	International Organization for Standardization
JCALS	Joint Computer Aided Acquisition and Logistics Support (DFRC)

APPENDIX B- ACRONYMS

JOAP	Joint Oil Analysis Program
JPG	JSC Procedure Guide
JPR	
JQS	Job Qualification Standard
JSC	Johnson Space Center
JSCM	Johnson Space Center Management Directive
KSC	Kennedy Space Center
L/D	Lift over drag
LAN	Local Area Network
LaRC	Langley Research Center
LRU	Line Replaceable Unit
MAF	Maintenance Action Form
MD	Maintenance Directive (DFRC)
MEDS	Multifunction Electronic Display System
MEL	Minimum Equipment List
METRO	Meteorology (LaRC)
MIG	Metal Inert Gas (Welding)
MIP	Maintenance Inspection Point
MMA	Mission Management Aircraft
MOA	Memorandum of Agreement (DFRC)
MORT	Management Oversight and Risk Tree
MRB	Material Review Board
MSDS	Material Safety Data Sheet
MSBLS	Microwave Scanning Beam Landing System
MT	Magnetic Particle
MTT	Multi-task Trainer
NALCOMIS	NASA Automated Logistics Operating Maintenance Information System
NAMIS	NASA Aircraft Management Information System
NASA	National Aeronautics and Space Administration
NATEC	Naval Air Technical Data and Engineering Service Command (DFRC)
NCAR	National Committee for Atmospheric Research
NDI	Non-Destructive Inspection
NDT	Non-Destructive Technician
NEMS	NASA Equipment Management System
NFS	NASA FAR Supplement
NISN	NASA Information System Network
NMI	NASA Management Instruction
NPG	NASA Policy Guideline
NPR	
NRTS	Not Repairable at this station
NSN	National Stock Number
NSTS	
NTSB	National Transportation Safety Board
O&M	Operation and Maintenance (DFRC)
ODIN	Outsourcing Desktop Initiative
ODO	Operations Duty Officer (NASA)
OEM	Original Equipment Manufacturer
OJT	On-the-Job Training
OMB	Office of Management & Budget
OMI	Operation and Maintenance Instructions (DFRC)
OMRS	Operational Maintenance Requirements System (DFRC)
OS & D	Overages, Shortages or Damages
OSHA	Occupational Safety & Health Administration
OTI	One Time Inspection
P	Powerplant License (FAA)
PI	Production Inspection/Inspector
PI	Process Instruction (DFRC)
PM	Periodic Maintenance
PO	Purchase Order
POC	Point of Contact
PPA	Personal Parachute Assembly.
PR	Purchase Request

APPENDIX B- ACRONYMS

PRE	Preflight
PS	Process Specification (DFRC)
PT	Penetrant Inspection
Q	Quality Check
QA	Quality Assurance (NASA)
QAO	Quality Assurance Office (Langley)
QAR	Quality Assurance Representative (Contractor)
QC	Quality Control (Contractor)
QMS	Quality Management System
QS	Quality System
QSA	Quality Surveillance Audit
OSHA	Occupational Safety and Health Administration
R & U	Redistribution and Utilization
RDEL	Requirements Data Exchange List
ROD	Report of Discrepancy
RFP	Request For Proposal
RPC	Repair Processing Center
RT	Radiographic Inspection
SAE	
SAME	Similar Aircraft Management Equipment (DFRC)
SAR	Safety Assessment Report
SB	Service Bulletin
SCA	Shuttle Carrier Aircraft
SCR	STA Change Request
SEWO	STA Engineering Work Order
SF	Standard Form
SLF	Shuttle Landing Facility
SLP	System Level Procedure
SMP	Standard Maintenance Procedure
SMQ	Subject Mater Qualifier
SOP	Standard Operating Procedures
SOW	Statement of Work
SSR	Secure Storage Room
SSPP	System Safety Program Plan
STA	Shuttle Training Aircraft
STS	Space Transportation System
TAC	Texas Administrative Code
TBD	To Be Determined
T.O.	Technical Order
TCAS	Terminal Collision Avoidance System
TCDT	Terminal Countdown Demonstration Test
TCEQ	Texas Commission on Environmental Quality
TCTO	Time Compliance Technical Order
TD	Technical Directive
TDY	Temporary Duty
TIG	Tungsten Inert Gas (Welding)
TIRF	Transmittal/Information Request Form
TMR	Technical Manual Revision
TP-FRP	
TQCP	Training, Qualification, and Certification Plan
TTE	Task Transmittal Engineering
UPS	Un-interruptible Power Supply
USAF	United States Air Force
UT	Ultrasonic Inspection
VPLR	Vacuum Packed Life Raft
VPP	OSHA Voluntary Protection Program
WBO	Weight and Balance Officer
WBS	Work Breakdown Structure
WI	Work Instruction
X-68	Shuttle Landing Facility, Kennedy Space Center

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

JSC- TECHNICAL PERFORMANCE GOALS **NOTES**

(1) All goals are tracked on a monthly basis.
(2) Surpassing performance goals demonstrates greater performance excellence.

- **Aircraft delayed discrepancies** **Goal** **A**
  All T-38 aircraft total .....4 discrepancies per aircraft
  All STA/G-2 aircraft .....4 discrepancies per aircraft
  All other aircraft .....5 discrepancies per aircraft

- **Engineering operations** **Goal** **B**
  Engineering projects completed on schedule 80%
  Project aircraft, FCF, Ops checks completed on first attempt 75%

- **FCF effectiveness** **Goal** **C**
  T-38 Aircraft 75%
  STA/G-II aircraft 75%
  Other aircraft 75%

- **Full mission capable aircraft percentage Goal** **D**
  T-38 aircraft 77%
  STA/G-2 aircraft 60%
  Other aircraft 75%

- **Mission effectiveness** **Goal** **E**
  T-38 aircraft 97%
  STA/G-2 aircraft 92%
  Other aircraft 92%

- **Operational Check effectiveness** **Goal** **F**
  T-38 aircraft 80%
  STA/G-II aircraft 80%
  Other aircraft 80%

- **Quality Issues** **Goal** **G**
  QSA's- Minimum of 25 performed by the Contractor QC with a success rate for each 80%
  ASA's success rate, Contractor QC 80%
  Document, Data, and Process Audits by NASA QA. Three metrics are measured:
  (1) QSA- Quality Surveillance Audit 80%
  (2) Process Audits 80%
  (3) Documentation: Hard, Soft, and Electronic Data Entry

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

- Documentation page errors.....No more than 1 typo per page
Repeat pilot discrepancies on
all aircraft models .....12 discrepancies
Tool control non-conformances .....2 non-conformances

- **Sortie abort rate** **Goal** **H**
  T-38 aircraft 2%
  STA aircraft 2%
  Other aircraft 2%

- **Scheduled ETIC work days versus actual work days used** **Goal** **I**
  T-38 aircraft .....ETIC + 10%
  STA/G-II .....ETIC + 10%
  Other aircraft .....ETIC + 10%

- **STA training missions maintenance lost** **Goal** **J**
  Total missions 6%

MANAGEMENT PERFORMANCE GOALS

- **Overtime efficiency** **Goal** **K**
  Percent of allowable used .....7% of the 10% allowable

- **Support Shops** **Goal** **L**
  Total shop backlog .....1000 awaiting maintenance
  Items processed 90%
  Error rate for egress and life support systems. 0%
  Tow tractor mission capable 80%
  Portable Lighting/Generators 75%

- **Training accomplished** **Goal** **M**
  Technical .....200 hours
  Safety .....100 hours

- **T-38 aircraft fleet time** **Goal** **N**
  Average time .....225 +/- 5 hours

OTHER PERFORMANCE GOALS

- **Aircraft parts cannibalizations** **Goal** **O**
  T-38 aircraft .....1 per 3 aircraft
  STA/G-II .....2 per aircraft

- **J-85 engine data.....Goal**
  Unplanned shop visit rate .....8% **P**
  Spares .....4% **Q**

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

J-85 fleet time	450 +/- 10 hours	R
• **Logistics data**	**Goal**	S
T-38 NMCS rate Percentage	2%	
• **Safety and health**	**Goal**	T
Mishaps	No assigned goal	
Close call reports	Proactive participation	
Lost time injury frequency	No assigned goal	
Lost time injury severity	No assigned goal	
Recordable GSA vehicle damage	No assigned goal	
OSHA/EPA violations	No assigned goal	
Open safety discrepancies	No assigned goal	
Proactive - safety/training initiatives	95%	
• **T-38 aircraft issues**	**Goal**	U
Maintenance labor-hour per flight hour	17 hours	
Maintenance delays	1.5 delays monthly	
• **Lightning Detection System**	**Goal**	
Operational and not out of service more than 3 consecutive days	90%	
• **Flight Operations**	**Goal**	
Flight Crew Performance (Pilots, Flight Engineers and Loadmasters)		
• Safety Precautions	100%	V
• Airfield Operations	90%	X
• Normal Procedures	80%	W
• Emergency Procedures	100%	W
• Aircraft Systems	75%	X
• System Limitations	90%	X
• Currency	90%	X
• Mission Completion	95%	Y
Mission Managers	**Goal**	
• Safety Precautions	99%	V
• Mission Preparation	85%	Z
• Operational Readiness	85%	AA
• Mission Completion	90%	Y
Operations/Scheduling	**Goal**	
• Assignment of Aircrew to Mission	85%	AB

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

Air Traffic Control Tower Operator	Goal
• Currency	No assigned goal

NOTES

A. This goal indicates the number of aircraft discrepancies not worked and carried over to the next month.

B. This goal indicates the percentage number of engineering TTE's requests outsourced due to high workloads or lack of expertise and engineering projects completed on time.

C. This goal indicates the percentage number the FCF's flown and released on the first attempt.

D. This goal indicates the number of aircraft fully mission capable verses the total number aircraft in the NASA AOD inventory for each type. Aircraft in inspection status are included against the fully mission capable rate.

E. This goal indicates the percentage number of aircraft missions flown and successfully completed.

F. This goal indicates the percentage number of operational checks flown and released on the first attempt.

G. This goal indicates:
(1) The number of Quality Surveillance Audits (QSA's) and Annual Shop Audits (ASA's) performed by the contractor and their success rate
(2) The success rate of the Document, Data, and Process Audits performed by NASA QA.
(3) The number of pilot recorded discrepancies repeated.
(4) NASA or Contractor Audits where Tool Control was the contributing factor for the non-conformance rating.

H. This goal indicates the number of missions flown verses the number of missions air or ground aborted because the mission could not be completed. Ground aborts are not counted if they are spared.

I. This goal indicates the number of scheduled work days (ETIC) after the inspection look phase or project scope in work days is determined verses the total amount of work days taken for completion; plus an allowable ten percent.

J. This goal indicates the total percentage number of STA training missions flown verses missions lost due to grounding maintenance discrepancies.

K. This goal indicates the percentage number of allowable overtime hours by contract verses the amount of actual overtime percentage hours used.

L. This goal indicates the total number of aircraft components awaiting maintenance in all the support shops carried over to the next month. These numbers exclude parts that are part of sets, i.e. bolts and compressor blades. Sets will count as one

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

component. Percentage of egress and life support work performed error free. Percentage of AGE needed for mission accomplishment.

M. This goal indicates the training hours accomplished in each category.

N. This goal indicates the average of all aircraft time remaining until the next major inspection is due.

O. This goal indicates the number of aircraft repaired by parts from another aircraft.

P. This goal indicates the number of unscheduled J-85 engine shop visits.

Q. This goal indicates the number of spare J-85 engines on the ready line after all aircraft are assigned engines.

R. This goal indicates the averaged time on the J-85 fleet remaining until next major inspection.

S. This goal indicates the percentage of aircraft that are not mission capable because they are awaiting a supply action.

T. NASA views safety as a critical mission requirement. NASA further believes when the proper safety measures are applied, all accidents are preventable. Safety measures must be uniformly applied when performing aircraft maintenance so the best possible aircraft may be provided to NASA aircrews. The categories Lost Time Injury Frequency; Close Call Reports submitted (participation in the close call reporting system is highly encouraged); Lost Time Injury Severity; Recordable GSA Vehicle Damage; OSHA/EPA Violations, and Open Safety Discrepancies carried over during the monthly recording period (within the contractors control) will be scored in overall compliance and a proactive safety attitude presented.

U. These goals indicate the T-38 aircraft maintenance labor-hour per flight hour; total maintenance delays that cause the aircraft not to fly at its scheduled departure time and the number of aircraft fully painted per month percentage.

V. This goal reflects the percent of time, while operating NASA aircraft or preparing for a NASA mission, the individual should perform in a safe manner. NASA views safety as a critical mission requirement. NASA further believes when the proper safety measures are applied, all accidents are preventable.

W. This goal reflects the percent of compliance with prescribed standards.

X. This goal reflects the goal achievable through ground and flight evaluations. This goal can also be determined through operation of NASA equipment.

Y. This goal is determined by the aircrews' not completing the stated mission due to non-mechanical or other out side influences.

Z. This goal reflects the percentage of times the mission is completed with out major changes to the original mission plan.

AA. This goal indicates the number of occurrences that the aircrew is not ready to support an operational mission.

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

AB. This goal indicates the number of occurrences that aircrews are scheduled to meet the published flight schedule.

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

DFRC- TECHNICAL PERFORMANCE GOALS

Contractor will be evaluated against performance criteria outlined in the NASA/Dryden provided metrics document that defines the goal and percentage that the contractor is expected to meet or exceed in order to qualify for award fee.

- **Aircraft delayed discrepancies** **Goal** **A**
  - All F-18 aircraft total ..... 4 per aircraft
  - All King air aircraft ..... 4 per aircraft
  - All other aircraft ..... 5 per aircraft
- **Engineering operations** **Goal** **B**
  - Engineering projects completed on schedule 80%
  - Project aircraft, FCF, Ops checks completed on first attempt 75%
- **FCF effectiveness** **Goal** **C**
  - Support aircraft..... 80%
  - Other aircraft 80%
- **Full mission capable aircraft percentage** **Goal** **D**
  - Support aircraft ..... 70 %
  - Other aircraft 70%
- **Mission effectiveness** **Goal** **E**
  - Support aircraft 80%
  - Other aircraft 80%
- **Operational Check effectiveness** **Goal** **F**
  - Support aircraft 80%
  - Other aircraft 80%
- **Quality Issues** **Goal** **G**
  - QSA's- Success rate (NASA QA) 80%
  - Repeat pilot discrepancies on all aircraft models ..... 2 discrepancies
  - Computer: aircraft maintenance errors ..... 10% of all
  - Measuring and test equipment..... 1 non-conformance
  - Tool control ..... 1 non-conformance
- **Sortie abort rate** **Goal** **H**
  - F-18 aircraft 2%
  - King Air aircraft 2%
  - Other aircraft 2%

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

- **Scheduled ETIC work days versus actual days used** — **Goal** — **I**
  - F-18 aircraft ..... ETIC + 10%
  - King Air ..... ETIC + 10%
  - Other aircraft ..... ETIC + 10%
- **Aircraft maintenance delays** — **Goal** — **J**
  - F-18 aircraft 1%
  - King Air 1%
  - Other aircraft 1%

MANAGEMENT PERFORMANCE GOALS

- **Overtime efficiency** — **Goal** — **K**
  - Percent of allowable used ..... 5% of the allowable
- **Training accomplished** — **Goal** — **L**
  - Technical ..... 200 hours
  - Safety ..... 100 hours
- **F-18 aircraft fleet time** — **Goal** — **M**
  - Average time 200
- **King Air aircraft fleet time** — **Goal** — **M**
  - Average time 200

OTHER PERFORMANCE GOALS

- **Aircraft parts cannibalizations** — **Goal** — **N**
  - F-18 aircraft ..... 2 cannibalization per 3 aircraft
  - King Air ..... 1 cannibalization per aircraft
- **Logistics data** — **Goal** — **O**
  - F-18 NMCS % rate ..... No assigned goal
- **Safety and health** — **Goal** — **P**
  - Mishaps 0
  - Close call reports ..... Proactive participation
  - Lost time injury frequency 0
  - Proactive - safety/training initiatives 95%
- **Flight Operations** — **Goal**
  - **Flight Crew Performance** — **Goal**
    (Pilots, Flight Engineers and Loadmasters)
    - Safety Precautions — 100% — **Q**
    - Airfield Operations — 90% — **S**
    - Normal Procedures — 80% — **R**

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

• Emergency Procedures	100%	R
• Aircraft Systems	75%	S
• System Limitations	90%	S
• Currency	90%	S
• Mission Completion	95%	T

NOTES

A. This goal indicates the number of aircraft discrepancies not worked and carried over to the next month.

B. This goal indicates the percentage number of engineering TTE's (requests) outsourced due to high workloads or lack of expertise and engineering projects completed on time.

C. This goal indicates the percentage number the FCF's flown and released on the first attempt.

D. This goal indicates the number of aircraft fully mission capable verses the total number aircraft in the NASA DFRC inventory for each type. Aircraft in inspection status are included against the fully mission capable rate.

E. This goal indicates the percentage number of aircraft missions flown and successfully completed.

F. This goal indicates the percentage number of operational checks flown and released on the first attempt.

G. This goal indicates:
(1) The number of Quality Surveillance Audits (QSA's) and Annual Shop Audits (ASA's) performed by the contractor and their success rate.
(2) The success rate of the Document, Data, and Process Audits performed by NASA QA.
(3) The number of pilot recorded discrepancies repeated.
(4) NASA or Contractor Audits where Tool Control was the contributing factor for the non-conformance rating.

H. This goal indicates the number of missions flown verses the number of missions air or ground aborted because the mission could not be completed. Ground aborts are not counted if they are spared.

I. This goal indicates the number of scheduled work days (ETIC) after the inspection look phase or project scope in work days is determined verses the total amount of work days taken for completion; plus an allowable ten percent.

J. This goal indicates the total percentage number of NASA DFRC missions flown verses missions lost due to grounding maintenance discrepancies.

K. This goal indicates the percentage number of allowable overtime hours by contract verses the amount of actual overtime percentage hours used.

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

L. This goal indicates the training hours accomplished in each category.

M. This goal indicates the average amount of time remaining until the next major inspection is due.

N. This goal indicates the number of aircraft repaired by parts from another aircraft.

O. This goal indicates the percentage of aircraft that are not mission capable because they are awaiting a supply action.

P. NASA views safety as a critical mission requirement. NASA further believes when the proper safety measures are applied, all accidents are preventable. Safety measures must be uniformly applied when performing aircraft maintenance so the best possible aircraft may be provided to NASA aircrews. The categories Lost Time Injury Frequency; Close Call Reports submitted (participation in the close call reporting system is highly encouraged); Lost Time Injury Severity; Recordable GSA Vehicle Damage; OSHA/EPA Violations, and Open Safety Discrepancies carried over during the monthly recording period (within the contractors control) will be scored in overall compliance and a proactive safety attitude presented.

Q. This goal reflects the percent of time, while operating NASA aircraft or preparing for a NASA mission, the individual should perform in a safe manner. NASA views safety as a critical mission requirement. NASA further believes when the proper safety measures are applied, all accidents are preventable.

R. This goal reflects the percent of compliance with prescribed standards.

S. This goal reflects the goal achievable through ground and flight evaluations. This goal can also be determined through operation of NASA equipment.

T. This goal is determined by the aircrew's ability to not complete the stated mission due to non-mechanical or other out side influences.

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

LaRC- TECHNICAL PERFORMANCE GOALS

• **Quality Issues**	**Goal**	**NOTES**
Aircraft Maintenance Records		
Aircraft historical records	10 days	A
Aircraft record accuracy	97%	B
Service Change accuracy	95%	C
Weight and Balance processes	100%	D
Equipment records updated	Every 7 days	E
Final inspections on major maintenance	97%	F
• **Maintenance Issues**	**Goal**	
Preflight, post-flight, and periodic checks when scheduled	95%	G
• **Scheduled ETIC work days versus actual work days used**	**Goal**	
Meeting predicted schedules	90%	H

MANAGEMENT PERFORMANCE GOALS

• **Full mission capable aircraft percentage**	**Goal**	
Aircraft FMC success rate	75%	I
• **FCF effectiveness**	**Goal**	J
FCF success rate	90%	
• **Mission effectiveness**	**Goal**	K
Aircraft flown	95%	
• **Support Shops**		
AGE FMC	95%	L
AGE scheduled maintenance ETIC	98%	M
Comm/Nav Shop		
Equipment Calibrations FMC	98%	N
Batteries FMC	95%	O
Avionics spares	95%	P
Personal Equipment Shop		
Equipment FMC	95%	Q
PE scheduled maintenance ETIC	98%	R

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

OTHER PERFORMANCE GOALS	Goal	
• **Procurement/Stock**		
Aircraft spare parts inventory	90%	S

NOTES

A. This goal indicates the incorporation of aircraft maintenance records of newly acquired aircraft into the QAO database.

B. This goal indicates the percentage of aircraft records reviewed without errors.

C. This goal indicates the percentage of service change record accuracy concerning airworthiness directives and manufacturer service bulletins to determine their applicability to the aircraft/accessories.

D. This goal indicates the percentage of error free weighing, computation, and recording of weight and balance processes. This includes weight and balance record accuracy for all assigned aircraft.

E. This goal indicates the equipment records reviewed and updated and the appropriate reports distributed.

F. This goal indicates the percentage of error free inspections of major maintenance items per GAMM on assigned aircraft.

G. This goal indicates the percentage of error free preflight, post-flight, and periodic checks.

H. This goal indicates meeting the agreed upon output date schedule.

I. This goal indicates the percentage of aircraft FMC.

J. This goal indicates the success rate of FCF's following maintenance actions.

K. This goal indicates the percentage of missions that are successfully completed.

L. This goal indicates the percentage of AGE FMC.

M. This goal indicates the percentage of AGE scheduled inspections that meet the ETIC.

N. This goal indicates the percentage of equipment calibrated by the Comm/Nav Shop maintained as FMC.

O. This goal indicates the percentage of batteries maintained as FMC.

P. This goal indicates the percentage of the total compliment of avionic spares maintained as FMC.

Q. This goal indicates the percentage of PE equipment maintained as FMC.

R. This goal indicates the percentage of PE scheduled inspections that meet the ETIC.

APPENDIX C
MONTHLY MAINTENANCE PERFORMANCE GOALS

S. This goal indicates the timely acquisition of aircraft parts, stocking in the proper location in the stockroom, the accuracy of the ordering information, and controlling access to the logistics area.

SECTION D

PACKAGING AND MARKING

D.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -
No FAR By-reference Clauses In Section D.

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -
No NASA By-reference Clauses In Section D.

D.2 PACKAGING, HANDLING, AND TRANSPORTATION (NFS 1852.211-70) (SEP 2005)

(a) The Contractor shall comply with NASA Procedural Requirements (NPR 6000.1, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components" as may be supplemented by the statement of work or specifications of this contract, for all items designated as Class I, II, or III.

(b) The Contractor's packaging, handling, and transportation procedures may be used, in whole or in part, subject to the written approval of the Contracting Officer, provided (1) the Contractor's procedures are not in conflict with any requirements of this contract, and (2) the requirements of this contract shall take precedence in the event of any conflict with the Contractor's procedures.

(c) The Contractor must place the requirements of this clause in all subcontracts for items that will become components of deliverable Class I, II, or III items.

(End of clause)

(END OF SECTION)

SECTION E

INSPECTION AND ACCEPTANCE

E.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -

52.246-3 INSPECTION OF SUPPLIES-COST REIMBURSEMENT (MAY 2001)
52.246-5 INSPECTION OF SERVICES-COST REIMBURSEMENT (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -

1852.246-73 HUMAN SPACE FLIGHT ITEM (MAR 1997).

E.2 INSPECTION AND ACCEPTANCE

Preliminary inspection and acceptance shall be accomplished by the Contracting Officer (or Administrative Contracting Officer) or his/her duly authorized representative at JSC, DFRC, and LaRC or at other locations as dictated by the Statement of Work. Final inspection and acceptance shall be accomplished by the Contracting Officer or his/her duly authorized representative at NASA Lyndon B. Johnson Space Center or at other locations as dictated by the Statement of Work.

(End of clause)

E.3 HIGHER LEVEL CONTRACT QUALITY REQUIREMENTS (FAR 52.246-11) (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below. The Contractor shall have a quality program that complies with the International Organization for Standardization document Q9001-2000, Quality Systems- Model for Quality Assurance in Design, Development, Production, Installation, and Servicing. Third party registration is not required.

(End of clause)

E.4 QUALITY ASSURANCE SURVEILLANCE PLAN

A quality assurance surveillance plan will be developed and implemented by the contracting officer's technical representative (COTR) as part of the contract administration and monitoring activities conducted to assure that the Government receives products and services that conform to the contract requirements. The nature and extent of the quality assurance surveillance contemplated in this plan will be based, on specific content of the contractor's quality management system.

(End of clause)

(END OF SECTION)

SECTION E
INSPECTION AND ACCEPTANCE

E.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -

52.246-3 INSPECTION OF SUPPLIES-COST REIMBURSEMENT (MAY 2001)
52.246-5 INSPECTION OF SERVICES-COST REIMBURSEMENT (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -

1852.246-73 HUMAN SPACE FLIGHT ITEM (MAR 1997).

E.2 INSPECTION AND ACCEPTANCE

Preliminary inspection and acceptance shall be accomplished by the Contracting Officer (or Administrative Contracting Officer) or his/her duly authorized representative at JSC, DFRC, and LaRC or at other locations as dictated by the Statement of Work. Final inspection and acceptance shall be accomplished by the Contracting Officer or his/her duly authorized representative at NASA Lyndon B. Johnson Space Center or at other locations as dictated by the Statement of Work.

(End of clause)

E.3 HIGHER LEVEL CONTRACT QUALITY REQUIREMENTS (FAR 52.246-11) (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below. The Contractor shall have a quality program that complies with the International Organization for Standardization document AS9110, Quality Management System for Aerospace, Requirements for Aircraft Maintenance. Third party registration is not required.

(End of clause)

E.4 QUALITY ASSURANCE SURVEILLANCE PLAN

A quality assurance surveillance plan will be developed and implemented by the contracting officer's technical representative (COTR) as part of the contract administration and monitoring activities conducted to assure that the Government receives products and services that conform to the contract requirements. The nature and extent of the quality assurance surveillance contemplated in this plan will be based, on specific content of the contractor's quality management system.

(End of clause)

(END OF SECTION)

SECTION F

DELIVERIES OR PERFORMANCE

F.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -
52.242-15 STOP WORK ORDER (AUG 1989)-ALTERNATE I (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -
No NASA By-reference clauses in Section F.

F.2 PERIOD OF PERFORMANCE

The period of performance of this contract shall be September 1, 2009 through February 28, 2010.

(End of clause)

F.3 OPTION TO EXTEND PERIOD OF PERFORMANCE

The Government may require the contractor to continue to perform services under this contract. The Contracting Officer may exercise this option(s) by issuance of a unilateral contract modification 30 days or more before the completion date set forth in Section F.2. Should the option be exercised, the resultant contract will include all terms and conditions of the basic contract as it exists immediately prior to the exercise of the option except for the following changes:

Option 1:

B.3 entitled "ESTIMATED COST AND AWARD FEE" will be modified to reflect the addition of $ b4 to the estimated cost and $ b4 to the maximum available award fee.

B.3.1.1 will be modified to reflect the addition of $ b4 to the estimated cost and b4 to the maximum available award fee.

B.3.1.2 will be modified to reflect the addition of b4 to the estimated cost and $ b4 to the maximum available award fee.

B.3.1.3 will be modified to reflect the addition of b4 to the estimated cost and b4 to the maximum available award fee.

F.2 entitled "PERIOD OF PERFORMANCE" will be modified to state:

SECTION F

DELIVERIES OR PERFORMANCE

"The Period of Performance of this contract shall be September 1, 2009 through February 28, 2011."

H.3 entitled "ELEVEL-OF-EFFORT (COST)" will be modified to reflect the addition of b4 total direct labor hours.

H.3.1 will be modified to reflect the addition of b4 total direct labor hours.

H.3.2 will be modified to reflect the addition of b4 total direct labor hours.

H.3.3 will be modified to reflect the addition of b4 total direct labor hours.

I.7 entitled "PAYMENT OF OVERTIME PREMIUMS" will be modified to reflect an addition of b4 ___

Option 2:

B.3 entitled "ESTIMATED COST AND AWARD FEE" will be modified to reflect the addition of b4 to the estimated cost and b4 to the maximum available award fee.

B.3.1.1 will be modified to reflect the addition of b4 to the estimated cost and b4 ___ to the maximum available award fee.

B.3.1.2 will be modified to reflect the addition of $ b4 to the estimated cost and b4 to the maximum available award fee.

B.3.1.3 will be modified to reflect the addition of b4 ___ to the estimated cost and $ b4 to the maximum available award fee.

F.2 entitled "PERIOD OF PERFORMANCE" will be modified to state:

"The Period of Performance of this contract shall be September 1, 2009 through February 29, 2012."

H.3 entitled "ELEVEL-OF-EFFORT (COST)" will be modified to reflect the addition of b4 total direct labor hours.

H.3.1 will be modified to reflect the addition of b4 total direct labor hours.

H.3.2 will be modified to reflect the addition of b4 total direct labor hours.

SECTION F

DELIVERIES OR PERFORMANCE

H.3.3 will be modified to reflect the addition of b4 otal direct labor hours.

I.7 entitled "PAYMENT OF OVERTIME PREMIUMS" will be modified to reflect an addition of b4

The total duration of this contract, including the exercise of any option under this clause shall not exceed 2 years and 6 months.

(End of clause)

F.4 OPTION FOR THE INCREMENTAL INCREASE OF EFFORT REQUIRED DURING CONTRACT PERFORMANCE

The Government may increase the number of direct labor hours required to be furnished during the period of performance by an amount ranging from b4 direct labor hours. If the Government elects to exercise its option to increase the number of direct labor hours to be furnished, the Contractor will be so notified by a contract modification executed by the Contracting Officer. The terms and conditions relating the Government's option rights as provided herein are as follows:

(a) The Government may increase the direct labor hours to be furnished (up to the maximum amount specified) by the exercise of one option, or by the exercise of multiple options, during the period of performance.

(b) (1) If the Government exercises one or more options pursuant to this provision for JSC, the estimated cost and fee values will be increased as follows:

(i) For options exercised during the base period, the estimated cost and award fee will be increased by b4 and b4, respectively, for every hour ordered by the exercise of an option.

(ii) For options exercised during F.3 Option 1, the estimated cost and award fee will be increased by b4 and b4, respectively, for every hour ordered by the exercise of an option.

(iii) For options exercised during F.3 Option 2, the estimated cost and award fee will be increased by $ b4 and b4 respectively, for every hour ordered by the exercise of an option.

(b) (2) If the Government exercises one or more options pursuant to this provision for DFRC, the estimated cost and fee values will be increased as follows:

(i) For options exercised during the base period, the estimated cost and award fee will be increased by b4 and $ b4 respectively, for every hour ordered by the exercise of an option.

(ii) For options exercised during F.3 Option 1, the estimated cost and award fee will be increased by b4 and b4, respectively, for every hour ordered by the exercise of an option.

(iii) For options exercised during F.3 Option 2, the estimated cost and award fee will be increased by $ b4 and $ b4, respectively, for every hour ordered by the exercise of an option.

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(b) (3) If the Government exercises one or more options pursuant to this provision for LaRC, the estimated cost and fee values will be increased as follows:

(i) For options exercised during the base period, the estimated cost and award fee will be increased by b4 and b4 respectively, for every hour ordered by the exercise of an option.

(ii) For options exercised during F.3 Option 1, the estimated cost and award fee will be increased by b4 and b4 respectively, for every hour ordered by the exercise of an option.

(iii) For options exercised during F.3 Option 2, the estimated cost and award fee will be increased by b4 and b4, respectively, for every hour ordered by the exercise of an option.

(End of clause)

F.5 OPTION 1- FLIGHT OPERATIONS (SECTION 11 of the SOW)

The Government may elect to exercise the option for flight operations ranging from 1 to b4 direct labor hours during the period of performance. The Contracting Officer may exercise this option by issuance of a unilateral contract modification before the required commencement of work 30 calendar days in advance. The terms and conditions relating the Government's option rights as provided herein are as follows:

(a) The Government may increase the direct labor hours to be furnished (up to the maximum amount specified) by the exercise of one option, or by the exercise of multiple options, for flight operations, during the period of performance.

(b) (1) If the Government exercises one or more options pursuant to this provision for JSC, the estimated cost and fee values for every hour ordered by the exercise of an option will be increased as follows:

Flight Operations	Values	09/01/09-02/28/10 Base Period	03/01/10-02/28/11 F.3 Option 1	03/01/11-02/29/12 F.3 Option 2
Pilot	Standard Time (S/T) Estimated Cost			
	S/T Award Fee	b4	b4	b4
	S/T Total			
	Overtime (OT) Estimated Cost			
	OT Award Fee			
	OT Total			
Flight Engineers	S/T Estimated Cost			
	S/T Award Fee			
	S/T Total			

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	OT Estimated Cost			
	OT Award Fee			
	OT Total			
Loadmasters	S/T Estimated Cost			
	S/T Award Fee			
	S/T Total			
	OT Estimated Cost	b4	b4	b4
	OT Award Fee			
	OT Total			
Mission Managers	S/T Estimated Cost			
	S/T Award Fee			
	S/T Total			
	OT Estimated Cost			
	OT Award Fee			
	OT Total			
Flight Instructors	S/T Estimated Cost			
	S/T Award Fee			
	S/T Total			
	OT Estimated Cost			
	OT Award Fee			
	OT Total			

(b) (2) If the Government exercises one or more options pursuant to this provision for DFRC, the estimated cost and fee values for every hour ordered by the exercise of an option will be increased as follows:

Flight Operations	Values	09/01/09-02/28/10 Base Period	03/01/10-02/28/11 F.3 Option 1	03/01/11-02/29/12 F.3 Option 2
Pilot	S/T Estimated Cost			
	S/T Award Fee			
	S/T Total	b4		
	OT Estimated Cost		b4	b4
	OT Award Fee			
	OT Total			
Flight Engineer	Estimated Cost			
	Award Fee			
	Total			
	OT Estimated Cost			
	OT Award Fee			

	OT Total	
Flight Engineer	Estimated Cost	
A/C Ops	Award Fee	
	Total	

b4

Navigator	S/T Estimated Cost	
	S/T Award Fee	
	S/T Total	
	OT Estimated Cost	
	OT Award Fee	
	OT Total	

b4

(b) (3) If the Government exercises one or more options pursuant to this provision for LaRC, the estimated cost and fee values for every hour ordered by the exercise of an option will be increased as follows:

Flight Operations	Values	09/01/09-02/28/10 Base Period	03/01/10-02/28/11 F.3 Option 1	03/01/11-02/29/12 F.3 Option 2
Pilot	Estimated Cost			
	Award Fee			
	Total			

b4

(End of clause)

F.6 BILLS OF LADING (NFS 1852.247-73) (JUN 2002)

The purpose of this clause is to define when a commercial bill of lading or a government bill of lading is to be used when shipments of deliverable items under this contract are f.o.b. origin.

(a) Commercial Bills of Lading.
All domestic shipments shall be made via commercial bills of lading (CBLs). The Contractor shall prepay domestic transportation charges. The Government shall reimburse the Contractor for these charges if they are added to the invoice as a separate line item supported by the paid freight receipts. If paid receipts in support of the invoice are not obtainable, a statement as described below must be completed, signed by an authorized company representative, and attached to the invoice.
"I certify that the shipments identified below have been made, transportation charges have been paid by (company name), and paid freight or comparable receipts are not obtainable.

Contract or Order Number: **NNJ09JE44C**

Destination: **Destination**.

(b) Government Bills of Lading.

(1) International (export) and domestic overseas shipments of items deliverable under this contract shall be made by Government bills of lading (GBLs). As used in this clause, "domestic overseas" means non-continental United States, i.e. Hawaii, Commonwealth of Puerto Rico, and possessions of the United States.

(2) At least 15 days before shipment, the Contractor shall request in writing GBLs from: Silvia Hanagriff, Lead, Center Transportation, 2101 NASA Road One, Mail Code JB7, Houston, TX 77058. If time is limited, requests may be by telephone: 281-483-3208. Requests for GBLs shall include the following information.

(i) Item identification/ description.
(ii) Origin and destination.
(iii) Individual and total weights.
(iv) Dimensional Weight.
(v) Dimensions and total cubic footage.
(vi) Total number of pieces.
(vii) Total dollar value.
(viii) Other pertinent data.

(End of clause)

F.7 SHIPPING INSTRUCTIONS

All documentation shall be shipped to the address below:

Parcel Post Shipments and Freight Shipments
Ship to:
NASA
Ellington Field, Bldg. 270
Houston, TX 77034

Mark for: Accountable Property Officer
Contract Number: **NNJ09JE44C**

(End of clause)

F.8 FLIGHT ITEM (JSC 52.247-95) (SEP 1989)

Block 16 of each Department of Defense Form 250 prepared for hardware or equipment to be shipped under this contract must be annotated as follows in 1/4-inch letters or larger by hand printing or rubber stamp:

'THIS IS A FLIGHT ITEM: OR "THIS IS MISSION ESSENTIAL GROUND SUPPORT EQUIPMENT," as applicable.

(End of clause)

(END OF SECTION)

SECTION G

CONTRACT ADMINISTRATION DATA

G.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) -

52.245-9 USE AND CHARGES (JUN 2007)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) -

1852.223-71 FREQUENCY AUTHORIZATION (DEC 1988)
1852.227-70 NEW TECHNOLOGY (MAY 2002)
1852.227-86 COMMERCIAL COMPUTER SOFTWARE – LICENSING (DEC 1987)
1852.242-71 TRAVEL OUTSIDE OF THE UNITED STATES (DEC 1988)
1852.242-73 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (DEVIATION)(SEP 2007)ALT I (DEVIATION)(SEP 2007)

G.2 SECURITY CLAUSES

G.2.1 SECURITY/BADGING REQUIREMENTS FOR FOREIGN NATIONAL VISITORS AND EMPLOYEES/REPRESENTATIVES OF FOREIGN CONTRACTORS (JSC 52.204-91) (JAN 2006)

(a) An employee of a domestic Johnson Space Center (JSC) contractor or its subcontractor who is not a U.S. citizen (foreign national) may not be admitted to the JSC site for purposes of performing work without special arrangements. In addition, all employees or representatives of a foreign JSC contractor/subcontractor may not be admitted to the JSC site without special arrangements. For employees as described above, advance notice must be given to the Security Office of the host installation [JSC or White Sands Test Facility (WSTF)] at least three weeks prior to the scheduled need for access to the site so that instructions on obtaining access may be provided. Contractors should be aware that approval for access to the site and issuance of a badge may take much longer than three weeks and sufficient lead time must be allowed to accommodate the approval process.

(b) All visit/badge requests for persons described in (a) above must be entered in the NASA Foreign National Management System (NFNMS) for acceptance, review, concurrence, and approval purposes. When an authorized company official requests a JSC or WSTF badge for site access, he/she is certifying that steps have been taken to ensure that its contractor or subcontractor employees, visitors, or representatives will not be given access to export-controlled or classified information for which they are not authorized. These individuals shall serve as the contractor's representative(s) in certifying that all visit/badge request forms are processed in accordance with JSC and WSTF security and export control procedures. No foreign national, representative, or resident alien contractor/subcontractor employee shall be granted access into JSC or WSTF

until approved and processed through the NFNMS. Unescorted access will not be granted unless a favorable National Agency Check (NAC) has been completed by the JSC Security Office, and an approved NASA Foreign National Visitor Security/Technology Control Plan (STTCP), (previously called the Access Control Plan) has been submitted and approved.

(c) The contractor agrees that it will not employ for the performance of work onsite at JSC or WSTF any individuals who are not legally authorized to work in the United States. If the JSC or WSTF Industrial Security Specialist or the contracting officer has reason to believe that any employee of the contractor may not be legally authorized to work in the United States and/or on the contract, the contractor may be required to furnish copies of Form I-9 (Employment Eligibility Verification), U.S. Department of Labor Application for Alien Employment Certification, and any other type of employment authorization document.

The contractor agrees to provide the information requested by JSC or WSTF Security Office in order to comply with NASA policy directives and guidelines related to foreign visits to NASA facilities so that (1) the visitor/employee/ representative may be allowed access to JSC or other NASA centers for performance of this contract, (2) required investigations can be conducted, and (3) required annual or revalidation reports can be submitted to NASA Headquarters. All requested information must be submitted in a timely manner in accordance with instructions provided by JSC or any other center to be visited.

(End of clause)

G.2.1.2 EL PASO INTERNATIONAL AIRPORT 10-YEAR FINGER PRINT CRIMINAL HISTORY CHECK

All contractor employees who require unescorted access to the El Paso International Airport Security Identification Display Area (SIDA) shall submit his/her fingerprints to the United States Office of Personnel Management for a fingerprint-based criminal history record check. The contractor may contact the El Paso International Airport Badging Office at 915-780-4750 to make an appointment for fingerprinting.

(End of clause)

G.2.1.3 SECURITY REGISTRATION AND IDENTIFICATION BADGES--ON-SITE CONTRACTORS, EXCLUDING CONSTRUCTION (DFRC 52.204-90) (FEB 2001)

(a) All persons engaged in work at Dryden Flight Research Center are required to be registered and badged by the Security Office, and to follow all security regulations and requirements.

(b) The Contractor is responsible for assuring that each employee or company representative wears his/her issued identification badge at all times while they

are within the boundaries Dryden Flight Research Center. Badges shall be worn above the waist in such a manner as to be clearly visible.

(c) (1) The Contractor shall ensure that all employees who are terminated or who are no longer connected with the work being performed under this contract are processed out through the Security Office. Badges, keys, vehicle passes/decals, and other Government property must be accounted for and returned. If a computer account has been established, the account must be deactivated.

(2) The Government shall notify the Contractor if any terminated employee has not been processed out through the Security Office Check-out Procedures. The Contractor then has 30 days in which to process the terminated employee without penalty. After 30 days, a Bill of Collection will be issued by the Government in the amount of $500 for each terminated employee that has not been properly processed out.

(d) U.S. Citizens and Permanent Resident Aliens. On the first day of work, the employee will check in at the NASA Visitor Badging Office, Building 4825. A temporary badge will be issued and the employee will be directed to the work site. As soon as practical, the employee must bring the completed "Non-Government Employee Security Badging Packet," NASA Form 531 to the Employee Badging Office (Building 4825). Employees will need to submit a completed packet for each badge issued, including renewals. Fingerprints will be taken if necessary and a permanent badge will be issued. All terminating employees must check out through the Employee Badging Office.

(e) Foreign Nationals (Passports, Visas, Non-Immigrant Aliens). A National Agency Check (NAC) is a prerequisite for a foreign national, making it necessary that all paperwork be submitted to the Security Office, Code XAS, M/S D-4825, at least 60 days in advance of the anticipated entry date. The Security Office will provide guidance as to what paperwork and type of visa are required.

(f) Reserve Gate Procedure. In the event of a labor dispute the Government may restrict entrance and exit of the Contractor's employees and the Contractor's suppliers to a specified gate at Dryden Flight Research Center, pursuant to Chapter 4 of NASA Handbook 5200.1A, "Industrial Labor Relations Manual." The Contractor agrees to have all employees rebadged and to direct them and their suppliers to utilize only the designated gate.

(End of Clause)

G.2.1.4 SECURITY PROGRAM/NON-U.S. CITIZEN EMPLOYEE ACCESS REQUIREMENTS (LaRC 52.204-910) (JUL 2002)

(a) Access to the LaRC by contractor non-U.S. citizen employees, including employees in permanent resident alien status, shall be approved in accordance with NPG 1371.2 and LMS-CP 4850. Administrative processing requires advance notice of between 20 to 45 days depending on the nationality of the non-U.S. citizen. Access authorization shall be for a maximum of one year, and must be reevaluated annually. Non-U.S. citizen employees must be under escort at all times while on Center by a U.S. citizen issued a LaRC identification badge.

(b) Request for Center access in excess of 90 days requires that a background investigation be conducted on the non-U.S. citizen employee. The processing of a background investigation required the submittal of a NASA Form 531, "Name Check Request," and a fingerprint card application. Normal processing time for a background investigation is approximately 90 days. A favorably adjudicated background investigation shall allow non-U.S. citizen contractor employee limited unescorted access to the Center. Access shall be limited to work areas identified and deemed necessary and entry and egress to that site.

(End of clause)

G.3 AWARD FEE FOR SERVICE CONTRACTS (NFS 1852.216-76) (JUN 2000)

Award fees will be determined by JSC, DFRC, and LaRC individually under the provisions of this contract. Attachment J-2 provides the amount of award fee available in each period.

(a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause 1852.216-85, "Estimated Cost and Award Fee" in this contract.

(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 Attachment J-2. 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 payment office (see G.4) 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 at Attachment J-2. Award fee, which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

(f) (1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the Contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80 percent or the prior period's evaluation score.

(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.

(4) Provisional award fee payments will be made prior to the first award fee determination by the Government.

(g) Award fee determinations are unilateral decisions made solely at the discretion of the Government.

(End of clause)

G.4 SUBMISSION OF VOUCHERS FOR PAYMENT (NFS 1852.216-87) (MAR 1998)

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

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

NASA Shared Services Center
Financial Management Division (FMD) – Accounts Payable
Bldg. 1111
C. Road,
Stennis Space Center, MS 39529

(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.

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(2) Three 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 to the appropriate NASA Contracting Officer/Administrative Contracting Officer;

(ii) Copy 2 Auditor;
(iii) Copy 3 Contractor;
(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers for 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:

For JSC:
NASA Lyndon B. Johnson Space Center
Institutional Procurement Office
Attn: Nancy Robb/BJ4
Houston, TX 77058-3696

For DFRC:
NASA Dryden Flight Research Center
Attn: Contracting Officer, Mail Stop 1422
P.O. Box 273
Edwards, CA 93523-0273

For LaRC:
NASA Langley Research Center
Office of Procurement
Attn: Michael T. Stubbs, Mail Stop 126
Hampton, VA 23681-0001

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.

(End of clause)

G.5 JSC HAZARDOUS MATERIALS USE (JSC 52.223-92) (DEC 1999)

(a) This clause is JSC-unique, and the requirements are in addition to any U.S. Environmental Protection Agency, U.S. Occupational Safety and Health Administration, or other state or Federal regulation or statute. Therefore, the following requirements do NOT supercede any statutory or regulatory requirements for any entity subject to this clause.

(b) "Hazardous materials," for the purposes of this clause, consist of the following:

(1) Those materials defined as "highly hazardous chemicals" in Occupational Safety and Health Administration Process Safety Management Regulation, 29 Code of Federal Regulation 1010.119, without regard for quantity.

(2) Those "extremely hazardous substances" subject to the emergency planning requirements in the Environmental Protection Agency Emergency Planning and Community Right-to-Know Regulation, 40 Code of Federal Regulation 355, Part 355, without regard for quantity.

(3) Those "hazardous substances" subject to the release notification requirements under Environmental Protection Agency's Emergency Planning and Community Right-to-Know Regulation, 40 Code of Federal Regulation 302.4, without regard for quantity.

(4) Any radioisotope material or device that produces ionizing radiation.

(5) Any Class II, III, or IV laser as defined by the American National Standards Institute No. Z136.1 (1986)

(6) Any explosive or any pyrotechnics.

(7) Any pesticide.

(c) The contractor shall develop and maintain an inventory listing the identity and quantity of hazardous materials stored or used onsite at JSC for the performance of the contract.

(d) The contractor shall ensure that the proper training of its employees in the use and inherent hazards of these materials is accomplished prior to use.

(e) The contractor shall notify the JSC Occupational Health and Test Support Office (SD13) prior to any initial use or different application of these materials.

(f) The contractor shall use all hazardous materials properly and take all necessary precautions to ensure no harm is done to humans or the environment.

(g) The contractor shall insert the substance of this clause, including this Paragraph with appropriate changes of designations of the parties, in subcontracts under which hazardous materials will be utilized, or may reasonably be expected to be utilized, onsite at JSC.

(h) In the event the contractor fails or refuses to comply with any aspect of this clause, such failure or refusal may be considered a material breach of this contract.

(End of clause)

G.6 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NFS 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:

Title	Office Code	Address (including zip code)
New Technology Representative	AT	NASA, Lyndon B. Johnson Space Center Technology Transfer and Commercialization Office Houston, TX 77058-3696
Patent Representative	AL	NASA, Lyndon B. Johnson Space Center, Office of Chief Counsel, Houston, TX 77058-3696

(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. Inquires 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.

(End of clause)

G.7 UNDERSTANDING WITH RESPECT TO COST VARIATIONS

The estimated cost of this contract is based on cost estimates for a number of cost elements such as direct labor, skills mix, materials and travel. One or more of these estimates was made by the Government and provided to the Contractor in the solicitation leading to this contract. The parties recognize that the Contractor's obligation to perform tasks within the scope of the Statement of Work could result in actual Contractor expenditures, which are greater or less than the Government's estimates provided to the Contractor for the related cost element. Should such be the case, the parties agree that there will be no adjustment to the fee provided for in this contract, nor to any other terms and conditions hereof, except the contract estimated cost, should that become necessary. Any such adjustment in estimated cost will be subject to the terms of the "Limitation of Cost" or "Limitation of Funds" clause hereof, whichever is applicable.

(End of clause)

G.8 RESERVED

(CONTINUED ON PAGE G-9)

G.9 TECHNICAL DIRECTION (NFS 1852.242-70) (SEP 1993)

(a) Performance of the work under this contract is subject to the written technical direction of a Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NFS 1842.270. "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.

(CONTINUED ON PAGE G-10)

(b) The COTR does not have the authority to, and shall not, issue any instruction 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) Constitutes a basis for any 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 instruction 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 15 calendar 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 with 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.

(End of clause)

G.10 IDENTIFICATION OF EMPLOYEES (JSC 52.242-92) (OCT 2006)

At all times while on Government property, the contractor, subcontractors, their employees, and agents shall wear badges which will be issued by the NASA Badging & Visitor Control Office, located in Building 110 at the Johnson Space Center (JSC), or at the Main Gate at the White Sands Test Facility (WSTF). JSC employee credentials and visitor badges will be issued only between the hours of 6:00 a.m. to 7:30 p.m., Monday through Friday, and 7:30 am to 3:00 pm on Saturday. WSTF employee badges will be issued only between the hours of 8 a.m. to 2 p.m., Monday through Friday. WSTF visitor

badges will be issued on a 7-day-a-week, 24-hour-a-day basis. Resident aliens and foreign nationals/representatives shall be issued green foreign national badges.

Each individual who wears a badge shall be required to sign personally for the badge. The contractor shall be held accountable for issued badges and all other related items and must assure that they are returned to the NASA Badging & Visitor Control Offices upon completion of work under the contract in accordance with Security Management Directive (SMD) 500-15, "Security Termination Procedures." Failure to comply with the NASA contractor termination procedures upon completion of the work (e.g., return of badges, decals, keys, Controlled Access Area cards, clearance terminations, JSC Public Key Infrastructure (PKI)/special program deletions, etc.) may result in final payment being delayed.

(End of clause)

G.11 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED PROPERTY (DEVIATION) (NFS 1852.245-70) (SEP 2007) ALT I (DEVIATION) (SEP 2007)

(a) The Contractor shall provide all property required for the performance of this contract. The Contractor shall not acquire or construct items of property to which the Government will have title under the provisions of this contract without the Contracting Officer's written authorization. Property which will be acquired as a deliverable end item as material or as a component for incorporation into a deliverable end item is exempt from this requirement.

(b) (1) In the event the Contractor is unable to provide the property necessary for performance, and the Contractor requests provision of property by the Government, the Contractor's request shall--

(i) Justify the need for the property;

(ii) Provide the reasons why contractor-owned property cannot be used;

(iii) Describe the property in sufficient detail to enable the Government to screen its inventories for available property or to otherwise acquire property, including applicable manufacturer, model, part, catalog, National Stock Number or other pertinent identifiers;

(iv) Combine requests for quantities of items with identical descriptions and estimated values when the estimated values do not exceed $100,000 per unit; and

(v) Include only a single unit when the acquisition or construction value equals or exceeds $100,000.

(2) Contracting Officer authorization is required for items the Contractor intends to manufacture as well as those it intends to purchase.

(3) The Contractor shall submit requests to the Contracting Officer no less than 30 days in advance of the date the Contractor would, should it receive authorization, acquire or begin fabrication of the item.

(c) The Contractor shall maintain copies of Contracting Officer authorizations, appropriately cross-referenced to the individual property record, within its property management system.

(d) Property furnished from Government excess sources is provided as-is, where-is. The Government makes no warranty regarding its applicability for performance of the contract or its ability to operate. Failure of property obtained from Government excess sources under this clause is insufficient reason for submission of requests for equitable adjustments discussed in the clause at 52.245-1, Government Property.

(e) In the event the Contracting Officer issues written authorization to provide property, the Contractor shall screen Government sources to determine the availability of property from Government inventory or excess property.

(1) The Contractor shall review NASA inventories and other authorized Federal excess sources for availability of items that meet the performance requirements of the requested property.

(i) If the Contractor determines that a suitable item is available from NASA supply inventory, it shall request the item using applicable Center procedures.

(ii) If the Contractor determines that an item within NASA or Federal excess is suitable, it shall contact the Center Industrial Property Officer to arrange for transfer of the item from the identified source to the Contractor.

(2) If the Contractor determines that the required property is not available from inventory or excess sources, the Contractor shall note the acquisition file with a list of sources reviewed and the findings regarding the lack of availability. If the required property is available, but unsuitable for use, the contractor shall document the rationale for rejection of available property. The Contractor shall retain appropriate cross-referenced documentary evidence of the outcome of those screening efforts as part of its property records system.

G.12 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (NFS 1852.245-71) (DEVIATION) (SEP 2007) (ALT I) (DEVIATION) (SEP 2007)

(a) The Government property described in paragraph (c) of this clause may 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 unless authorized by the contracting officer under (b)(1)(iv). Under this clause, the Government retains accountability for, and title to, the property, and the Contractor shall comply with the following:

NASA Procedural Requirements (NPR) 4100, NASA Materials Inventory Management Manual

NASA Procedural Requirements (NPR) 4200, NASA Equipment Management Procedural Requirements

NASA Procedural Requirement (NPR) 4300, NASA Personal Property Disposal Procedural Requirements

Property not recorded in NASA property systems must be managed in accordance with the requirements of FAR 52.245-1.

The Contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and 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, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished within NASA management information systems prescribed 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 shall not utilize the installation's central receiving facility for receipt of contractor-acquired property. However, the Contractor shall provide listings suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.

(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 52.245-1, Government Property, 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 Industrial Property Officer. The property shall be considered Government furnished and the Contractor shall assume accountability and financial reporting responsibility. The Contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR 52.245-1, Government Property, until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by contractors.

(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) of this clause 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.

(c) The following property and services are provided if checked.

X (1) Office space, work area space, and utilities. Government telephones are available for official purposes only.
X (2) Office furniture.
X (3) Property listed in Section J, attachment J-4.
(ii) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records.
(iii) 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.
_ (4) Supplies from stores stock.
X (5) Publications and blank forms stocked by the installation.
X (6) Safety and fire protection for Contractor personnel and facilities.
X (7) Installation service facilities listed in Section J, attachment J-5.
X (8) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.
X (9) Cafeteria privileges for Contractor employees during normal operating hours.
X (10) Building maintenance for facilities occupied by Contractor personnel.
X (11) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

(End of clause)

G.13 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (DEVIATION) (NFS 1852.245-73) (SEP 2007)

(a) The Contractor shall submit annually a NASA Form (NF) 1018, NASA Property in the Custody of Contractors, in accordance with the provisions of 1845.505-14, the instructions on the form, subpart 1845.71, and any supplemental instructions for the current reporting period issued by NASA.

(b) (1) Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.

(2) The Contractor shall mail the original signed NF 1018 directly to the cognizant NASA Center Deputy Chief Financial Officer, Finance, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(3) One copy shall be submitted (through the Department of Defense (DOD) Property Administrator if contract administration has been delegated to DOD) to the following address: NASA, Lyndon B. Johnson Space Center unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(c) (1) The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. Some activity may be estimated for the month of September, if necessary, to ensure the NF 1018 is received when due. However, contractors' procedures must document the process for developing these estimates based on planned activity such as planned purchases or NASA Form 533 (NF 533 Contractor Financial Management Report) cost estimates. It should be supported and documented by historical experience or other corroborating evidence, and be retained in accordance with FAR Subpart 4.7, Contractor Records Retention. Contractors shall validate the reasonableness of the estimates and associated methodology by comparing them to the actual activity once that data is available, and adjust them accordingly. In addition, differences between the estimated cost and actual cost must be adjusted during the next reporting period. Contractors shall have formal policies and procedures, which address the validation of NF 1018 data, including data from subcontractors, and the identification and timely reporting of errors. The objective of this validation is to ensure that information reported is accurate and in compliance with the NASA FAR Supplement. If errors are discovered on NF 1018 after submission, the contractor shall contact the cognizant NASA Center Industrial Property Officer (IPO) within 30 days after discovery of the error to discuss corrective action.

(2) The Contracting Officer may, in NASA's interest, withhold payment until a reserve not exceeding $25,000 or 5 percent of the amount of the contract, whichever is less, has been set aside, if the Contractor fails to submit annual NF 1018 reports in accordance with 1845.505-14 and any supplemental instructions for the current reporting period issued by NASA. Such reserve shall be withheld until the Contracting Officer has determined that NASA has received the required reports. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(d) A final report shall be submitted within 30 days after disposition of all property subject to reporting when the contract performance period is complete in accordance with (b)(1) through (3) of this clause.

(End of clause)

SECTION G

CONTRACT ADMINISTRATION DATA

G.14 PROPERTY MANAGEMENT CHANGES (DEVIATION) (NFS 1852.245-75) (SEP 2007)

(a) The Contractor shall submit any changes to standards and practices used for management and control of Government property under this contract to the assigned property administrator and Industrial Property Officer (IPO), prior to making the change whenever the change --

(1) Employs a standard that allows increase in thresholds or changes the timing for reporting loss, damage, or destruction of property;

(2) Alters physical inventory timing or procedures;

(3) Alters recordkeeping practices;

(4) Alters practices for recording the transport or delivery of Government property; or

(5) Alters practices for disposition of Government property.

(b) The Contractor shall contact the IPO at:

JA/Joe H. Nixon,
NASA. Lyndon B. Johnson Space Station
Houston, TX 77058
Telephone number: 281-483-6668
Email: joe.h.nixon@nasa.gov.

(End of clause)

G.15 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (DEVIATION) (NFS 1852.245-76)(SEP 2007)

(a) For performance of work under this contract, the Government will make available Government property identified in Attachment J-5 of this contract on a no-charge-for-use basis pursuant to the clause at FAR 52.245-1, Government Property. The Contractor shall use this property in the performance of this contract at NAS Johnson Space Center, Ellington Field, and at other location(s) as may be approved by the Contracting Officer. Under FAR 52.245-1, the Contractor is accountable for the identified property.

(End of clause)

G.16 NASA RECORDS MANAGEMENT

The contractor shall create, maintain, preserve, and dispose of NASA records in accordance with NPG 1441.1D "NASA Records Retention Schedules."

(End of clause)

G.17 CENTER UNIQUE CLAUSES

Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), and clauses with no designation cover all work at JSC, DFRC, and LaRC. Unless otherwise noted, clauses commencing with JSC, DFRC, or LaRC are only applicable to the appropriate Center, as follows: JSC – Johnson Space Center, DFRC – Dryden Research Center, LaRC – Langley Research Center.

(End of clause)

G.18 EMERGENCY PREPAREDNESS AND RESPONSE

The Contractor's obligation may include resolution of unusual or emergency situations. The Contractor may be required to assist NASA, within the general scope of work, but in currently unidentified ways, in preparation for, or in response to emergencies. Obligations under this requirement shall only arise when one or more of the criteria at FAR 18.001, enabling NASA to utilize "Emergency Acquisition Flexibilities", are met. If the emergency preparedness and response requirements result in changes to the contract, all contract adjustments will be processed in accordance with the Changes clause of this contract.

(End of clause)

(END OF SECTION)

SECTION G
CONTRACT ADMINISTRATION DATA

G.18 EMERGENCY PREPAREDNESS AND RESPONSE

The Contractor's obligation may include resolution of unusual or emergency situations. The Contractor may be required to assist NASA, within the general scope of work, but in currently unidentified ways, in preparation for, or in response to emergencies. Obligations under this requirement shall only arise when one or more of the criteria at FAR 18.001, enabling NASA to utilize "Emergency Acquisition Flexibilities", are met. If the emergency preparedness and response requirements result in changes to the contract, all contract adjustments will be processed in accordance with the Changes clause of this contract.

(End of clause)

G.19 SPECIAL INVOICING INSTRUCTIONS FOR CONTRACTS CONTAINING RECOVERY ACT FUNDS

In addition to the requirements set forth in any payment and invoicing clauses contained within the contract, the following special requirements apply to those contracts with work authorized under the American Recovery and Reinvestment Act (ARRA) of 2009

- All requests for payment for work performed subject to the Recovery Act shall be submitted separately from requests for payment for any other work performed under the contract.

- All requests for payment for work on contracts, funded in whole or in part, with Recovery Act funds, shall identify the applicable Contract Line Item Number(s) (CLINs) associated with the supplies or services being invoiced. The CLIN will be identified in the Task Order.

- All invoices/vouchers shall be submitted via e-mail with no more than one invoice/voucher per e-mail submissions. Invoices shall be submitted to NSSC-AccountsPayable@nasa.gov.

- The NASA Shared Services Center is the Designated Billing Office for Recovery Act invoices except for cost type contracts where DCAA is designated as the billing office for verification of vouchers.

(END OF SECTION)

SECTION H

SPECIAL CONTRACT REQUIREMENTS

H.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

No FAR By-reference clauses in Section H.

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

1852.208-81	RESTRICTIONS ON PRINTING AND DUPLICATING (NOV 2004)
1852.223-76	FEDERAL AUTOMOTIVE STATISTICAL TOOL REPORTING (JUL 2003)
1852.225-70	EXPORT LICENSES (FEB 2000) ALTERNATE I (FEB 2000) (Insert JSC, DFRC, LaRC)
1852.228-71	AIRCRAFT FLIGHT RISKS (DEC 1988)
1852.228-72	CROSS-WAIVER OF LIABILITY FOR SPACE SHUTTLE SERVICES (SEP 1993)
1852.228-76	CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES (DEC 1994)
1852.246-70	MISSION CRITICAL SPACE SYSTEM PERSONNEL RELIABILITY PROGRAM (MAR 1997)
1852.247-71	PROTECTION OF THE FLORIDA MANATEE (MAR 1989)

H.2 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

This contract incorporates Section K, Representations, Certifications, and Other Statements of Offerors, as set forth in the Contractor's proposal **NNJ0408247027R**, dated **22 June 09**, by reference, with the same force and effect as if it were given in full text.

(End of clause)

H.3 LEVEL-OF-EFFORT (COST)

(a) During the term of the contract, the Contractor is obligated to provide not less than 90% nor more than 110% of 64 total direct labor hours.

(b) "Direct labor hours" are those productive hours expended by Contractor personnel, including subcontracted personnel, in performing work requirements described in the Statement of Work or elsewhere in this contract that are charged as direct labor under the Contractor's established accounting policy and procedures.

(c) Once the maximum number of direct labor hours is reached or the contract term has ended, the Contractor's requirements under the contract are fulfilled, even though the specified work may not have been completed. The Contractor is not authorized to exceed the maximum of the direct labor hours specified in paragraph (a) unless a bilateral contract modification is executed. Any estimated cost and fee(s) adjustments for any additional direct labor hours shall be based solely upon the quantity of additional hours being added to the maximum number of direct labor hours specified in this clause.

(d) The fee, if any, is based upon the furnishing of at least the specified minimum number of direct labor hours, including subcontract hours. If the Contractor provides less than that specified minimum number of hours prior to expiration of the contract term, and the Government has not invoked its rights under the Termination clause of this contract to adjust the contract for such reduced effort, the Contracting Officer may unilaterally make an equitable downward adjustment to the contract fee. The downward adjustment in fee will be based upon the difference between the minimum direct labor hours specified under this clause and the amount of direct labor hours provided by the Contractor. Prior to making such an adjustment, the Contracting Officer will request the Contractor provide a written discussion of any extenuating circumstances (e.g., productivity improvements or reductions in contract scope) which contributed to the underrun. Any information provided by the Contractor will be considered by the Contracting Officer in determining the amount of the downward adjustment in fee.

H.3.1 Johnson Space Center

The number of hours specified in (a)(1) above is revised to read as follows:

(a) (1) During the term of the contract, the Contractor is obligated to provide not less than 90% nor more than 110% of b4 total direct labor hours.

H.3.2 Dryden Flight Research Center

The number of hours specified in (a)(1) above is revised to read as follows:

(a) (1) During the term of the contract, the Contractor is obligated to provide not less than 90% nor more than 110% of b4 total direct labor hours.

H.3.3 Langley Research Center

The number of hours specified in (a)(1) above is revised to read as follows:

(a) (1) During the term of the contract, the Contractor is obligated to provide not less than 90% nor more than 110% of b4 total direct labor hours.

(End of clause)

H.4 <u>SMALL BUSINESS SUBCONTRACTING GOALS</u> (JSC 52.219-90) (OCT 2006) (Applies to JSC, DFRC, and LaRC)

For purposes of this clause, the terms, "HUBZone Small Business Concern," "Small Disadvantaged Business Concern," "Service-Disabled, Veteran-Owned Small Business Concern, "Veteran-Owned Small Business Concern,"" "Women-Owned Small Business Concern," and "Historically Black College or University (HBCU)" are defined in paragraph 2.101 of the Federal Acquisition Regulation.

The total small business goal, expressed as a percent of total contract value including options, is 20 percent.. The small business percentage goal, includes the following goals expressed as a percent of total contract value:

Small Business	20 percent
Small Disadvantaged Business Concerns	3 percent

Woman-Owned Small Business Concerns	10 percent
HUBZone Small Business Concerns	2 percent
Veteran-Owned Small Business Concern	2 percent
Service-Disabled, Veteran-Owned Small Business Concern	.5 percent
HBCU's (includes other minority institutions)	.2 percent.

(End of clause)

H.5 ACCESS TO SENSITIVE INFORMATION (NFS 1852.237-72) (JUN 2005)

(a) As used in this clause, "sensitive information" refers to information that a contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.

(b) To assist NASA in accomplishing management activities and administrative functions, the Contractor shall provide the services specified elsewhere in this contract.

(c) If performing this contract entails access to sensitive information, as defined above, the Contractor agrees to -

(1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in another procurement.

(2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(3) Allow access to sensitive information only to those employees that need it to perform services under this contract.

(4) Preclude access and disclosure of sensitive information to persons and entities outside of the Contractor's organization.

(5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.

(6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(d) The Contractor will comply with all procedures and obligations specified in its Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.

(e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of government contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and

regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a government contractor.

(f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information

(End of clause)

H.6 RELEASE OF SENSITIVE INFORMATION. (NFS 1852.237-73) (JUN 2005)

(a) As used in this clause, "sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.

(b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

(c) (1) The Contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the Contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

> This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at NFS 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages [insert page numbers or other identification of pages].

Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

> Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document.

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

(d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

(1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.

(2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.

(3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(4) Allow access to sensitive information only to those employees that need it to perform services under its contract.

(5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.

(6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.

(7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

(g) The Contractor shall insert this clause, including this paragraph (g), suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of clause)

H.7 KEY PERSONNEL AND FACILITIES (NFS 1852.235-71) (MAR 1989)

(a) The personnel and/or facilities listed below (or specified in the contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the Contractor shall (1) notify the Contracting Officer reasonably in advance and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract.

(b) The Contractor shall make no diversion without the Contracting Officer's written consent; provided, that the Contracting Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause.

(c) The list of personnel and/or facilities (shown below or as specified in the contract Schedule) may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

	JSC	DFRC	LaRC
Position/Functional Area	**Personnel**	**Personnel**	**Personnel**
General Manager			
Engineering Manager			
Logistics Manager			
Maintenance Manager			
Quality Control Manager			
Safety and Health Officer			
DFRC Site Manager			
LaRC Site Manager			

(End of clause)

H. 8 CONTRACTOR EMPLOYEE TRAINING

All training required by the Statement of Work, Section C-11, when approved by NASA, shall be considered allowable under this contract.

(End of clause)

H.9 PHASE-IN/PHASE-OUT PLAN

The Contractor shall provide phase-in services, if required, in accordance with Section J-9, Phase-In/Phase Out Plan.

Also, the Contractor shall phase-out at contract end in a cooperative manner with the Government and new contractor to allow for continuity of services and smooth transition. See FAR 52.237-3, Continuity of Service and Section J-2, Award Fee Evaluation Plan.

(End of clause)

H.10 TASK ORDERING PROCEDURE. (NFS 1852.216-80) (OCT 1996):

(a) Only the Contracting Officer may issue task orders to the Contractor, providing specific authorization or direction to perform work within the scope of the contract and as specified in the schedule. The Contractor may incur costs under this 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 functional 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.

(3) A request for a task plan from the Contractor to include the technical approach, period of performance, appropriate cost information, and any other information required to determine the reasonableness of the Contractor's proposal.

(c) Within 10 calendar days after receipt of the Contracting Officer's request, the Contractor shall submit a task plan conforming to the request.

(d) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as a minimum, the following:

(1) Date of the order.

(2) Contract number and order number.

(3) Functional 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.

(4) Performance standards, and where appropriate, quality assurance standards.

(5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.

(6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.

(7) Delivery/performance schedule including start and end dates.

(8) If contract funding is by individual task order, accounting and appropriation data.

(e) The Contractor shall provide acknowledgment of receipt to the Contracting Officer within 5 calendar days after receipt of the task order.

(f) 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.

(g) The Contracting Officer may amend tasks in the same manner in which they were issued

(h) 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.

(End of clause)

H.11 SAFETY AND HEALTH. (NFS 1852.223-70) (APR 2002)

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

(b) The Contractor shall take all reasonable safety and occupational health measures in performing this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and occupational health and with the safety and occupational health standards, specifications, reporting requirements, and any other relevant requirements of this contract.

(c) The Contractor shall take, or cause to be taken, any other safety, and occupational 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 clause of the contract.

(d) 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, or Close Call (a situation or occurrence with no injury, no damage or only minor damage (less than $1,000) but possesses the potential to cause any type mishap, or any injury, damage, or negative mission impact) that may be of immediate interest to NASA, 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. In addition, 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.

(e) The Contractor shall investigate all work-related incidents, accidents, and Close Calls, 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.

(f) (1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. When the Contracting Officer becomes aware of noncompliance that may

pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. 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 (f)(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.

(g) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (g) and any applicable Schedule provisions and clauses, with appropriate changes of designations of the parties, in all solicitations and subcontracts of every tier, when one or more of the following conditions exist:

(1) The work will be conducted completely or partly on premises owned or controlled by the Government.

(2) The work includes construction, alteration, or repair of facilities in excess of the simplified acquisition threshold.

(3) The work, regardless of place of performance, involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value equipment or property, and the hazards are not adequately addressed by Occupational Safety and Health Administration (OSHA) or Department of Transportation (DOT) regulations (if applicable).

(4) When the Contractor (or subcontractor or supplier) determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.

(h) The Contractor (or subcontractor or supplier) may exclude the provisions of paragraph (g) from its solicitation(s) and subcontract(s) of every tier when it determines that the clause is not necessary because the application of the OSHA and DOT (if applicable) regulations constitute adequate safety and occupational health protection. When a determination is made to exclude the provisions of paragraph (g) from a solicitation and subcontract, the Contractor must notify and provide the basis for the determination to the Contracting Officer. In subcontracts of every tier above the micro-purchase threshold for which paragraph (g) does not apply, the Contractor (or subcontractor or supplier) shall insert the substance of paragraphs (a), (b), (c), and (f) of this clause).

(i) 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 occupational health measures under this clause.

(j) The contractor shall continually update the safety and health plan when necessary. In particular, the Contractor shall furnish a list of all hazardous operations to be performed, 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 --

(1) Written hazardous operating procedures for all hazardous operations; and/or

(2) Qualification standards for personnel involved in hazardous operations.

(End of clause)

H.12 MAJOR BREACH OF SAFETY OR SECURITY (NFS 1852.223-75) (FEB 2002)

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. Safety is essential to NASA and is a material part of this contract. NASA's safety priority is to protect:

(1) the public;

(2) astronauts and pilots;

(3) the NASA workforce (including contractor employees working on NASA contracts); and

(4) high-value equipment and property. A major breach of safety may constitute a breach of contract that entitles the Government to exercise any of its rights and remedies applicable to material parts of this contract, including termination for default. A major breach of safety must be related directly to the work on the contract. A major breach of safety is an act or omission of the Contractor that consists of an accident, incident, or exposure resulting in a fatality or mission failure; or in damage to equipment or property equal to or greater than $1 million; or in any "willful" or "repeat" violation cited by the Occupational Safety and Health Administration (OSHA) or by a state agency operating under an OSHA approved plan.

(b) Security is the condition of safeguarding against espionage, sabotage, crime (including computer crime), or attack. A major breach of security may constitute a breach of contract that entitles the Government to exercise any of its rights and remedies applicable to material parts of this contract, including termination for default. A major breach of security may occur on or off Government installations, but must be related directly to the work on the contract. A major breach of security is an act or omission by the Contractor that results in compromise of classified information, illegal technology transfer, workplace violence resulting in criminal conviction, sabotage, compromise or denial of information technology services, equipment or property damage from vandalism greater than $250,000, or theft greater than $250,000.

(c) In the event of a major breach of safety or security, the Contractor shall report the breach to the Contracting Officer. If directed by the Contracting Officer, the Contractor shall conduct its own investigation and report the results to the Government. The Contractor shall cooperate with the Government investigation, if conducted.

(End of clause)

H.13 OBSERVANCE OF LEGAL HOLIDAYS (NFS1852.242-72)(AUG 1992)

(a) The on-site Government personnel observe the following holidays:
New Year's Day
Labor Day
Martin Luther King, Jr.'s Birthday
Columbus Day
President's Day
Veterans Day
Memorial Day
Thanksgiving Day
Independence Day
Christmas Day
Any other day designated by Federal statute, Executive order, or the President's proclamation.

(b) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(End of clause)

H.14 OBSERVATION OF SAFETY STAND DOWN DAY BY CONTRACTOR EMPLOYEES (LaRC 52.223-92) (OCT 2004)

The Langley Research Center (LaRC) Safety Stand Down Day is an annual event dedicated to learnng best practes for a safe work environment. When the LaRC Director designates all or a portion of a day as Safety Stand Down Day (or equivalent), the Contractor shall require all onsite employees to participaet in all Safety Stand Down Day activities at LaRC. Normal work activities, with the exception of critical services (e.g., physical and computer security), will be suspended."

(End of clause)

H.15 ENVIRONMENTAL AND ENERGY CONSERVATION REQUIREMENTS) (JSC Procurement Instruction 52.223-93) (May 2008)

(a) The Contractor shall ensure that all work performed and equipment used to fulfill the requirements of this contract are in compliance with all Federal, state, and local regulations and public laws, and the following NASA JSC directives: JPD 8500.1, JSC Environmental Excellence Policy; JPR 8550.1, JSC Environmental Compliance Procedural Requirements; JPR 8553.1, JSC Environmental Management System Manual; CWI JE9W-06, EMS Aspect/Impact Assessment and EMP Process; NPR 8570.1, Energy Efficiency and Water Conservation; JSC's Energy and Water Conservation 5-Year Plan; and CWI J69W-03, Energy Conservation. The Contractor shall provide data on affirmative procurement, waste reduction activity, energy efficient product procurement, and ozone depleting substances in accordance with DRD 21, Environmental and Energy Consuming Product Compliance Reports.

(b) The Government remains the owner and operator of record for all environmental activities conducted at NASA owned properties unless otherwise documented in a

signed agreement between NASA and the Contractor. The Contractor is advised that activities performed at JSC and associated facilities are subject to Federal, state and local regulatory agency inspections to review compliance with environmental laws and regulations. For on-site issues, JSC's Environmental Office will be the single point of contact with Federal and state regulatory agencies and their representatives unless otherwise directed by the Contracting Officer or the Environmental Office. The Contractor shall immediately notify the JSC Environmental Office when contacted by external regulatory agency representatives and shall cooperate fully. The Contractor shall complete, maintain, and make available to the Contracting Officer, JSC Environmental Office, JSC Energy Manager, or regulatory agency personnel all documentation relating to environmental compliance matters under applicable laws. The Contractor shall immediately notify the JSC Environmental Office upon issuance of a Notice of Violation or noncompliance to the Contractor.

(c) Should a Notice of Violation, Notice of Noncompliance, Notice of Deficiency, or similar regulatory agency notice be issued to the Government as a facility owner/operator on account of the actions or inactions of the Contractor or one of its subcontractors in the performance of work under this contract, the Contractor shall fully cooperate with the Government in correcting any problems and defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

(End of clause)

H.16 ADMINISTRATIVE LEAVE (JSC Procurement Instruction 52.242-94)(SEP 2008)

(a) When the NASA installation grants administrative leave to its Government employees (e.g. as a result of inclement weather, potentially hazardous conditions, or other special circumstances), the following personnel should also be dismissed upon notification of a center closure provided by the Contracting Officer:

1. Contractor personnel working on-site; and
2. Contractor personnel dedicated to the contract effort who are
   A. working off-site within 10 miles of JSC; and
   B. unable to perform their NASA contract duties at their off-site location because their normal place of business has been or is expected to be negatively impacted by an emergency situtation (e.g. has sustained damage, has been evacuated, etc.).

However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

(b) Administrative leave granted under this clause shall be subject to modification or termination by the Contracting Officer and in all instances shall be subject to the availability of funds. The cost of salaries and wages to the Contractor for the period of any such excused absence shall be a reimbursable item of cost under

this contract for effected employees in accordance with the Contractor's established accounting policy.

1. If a labor hour-based contract, administrative leave granted under this clause shall be accounted for consistent with productive hours under this contract for employees in accordance with the Contractor's established accounting policy.
2. For fixed price contracts based on other than labor hours for deliverables, the Contracting Officer and Contractor shall as a precondition to any reminbursement negotiate an advanced agreement to determine the appropriate method in which to grant administrative leave under this clause.
3. All invoices requesting payment under this clause shall be marked as "Administrative Leave in accordance with 52.242-94, Administrative Leave." All such invoices paid will be subject to review, audit, and revision when routine operations re-commence.

(c) The Contractor shall include this clause in all services subcontracts that include personnel in the categories described in (a) above.

(End of clause)

H.17 PROTECTION OF THE FLORIDA MANATEE. (NFS 1852.247-71) (MAR 1989)

(a) Pursuant to the Endangered Species Act of 1973 (Pub. L. 93-205), as amended, and the Marine Mammals Protection Act of 1972 (Pub. L. 92-522), the Florida Manatee (Trichechus Manatus) has been designated an endangered species, and the Banana and Indian Rivers within and adjacent to NASA's Kennedy Space Center (KSC) have been designated as a critical habitat of the Florida Manatee.

(b) Contractor personnel involved in vessel operations, dockside work, and selected disassembly functions shall be provided training relative to (1) habits and characteristics of the Florida Manatee, (2) provisions of the applicable laws, (3) personal liability of workers under the laws, and (4) operational restrictions imposed by KSC.

(c) All vessel operations shall be conducted within the posted speed restrictions, and vessels shall be operated at minimum controllable speeds in all KSC waters. Shallow-water operations are prohibited.

(d) Training will be conducted by personnel of the U.S. Fish and Wildlife Service (USFWS). The contractor agrees to cooperate with the USFWS by allowing access at reasonable times and places (including shipboard) to USFWS personnel, and by making available such contractor personnel as are required to have the training. Arrangements for training will be made as follows:

(1) For personnel involved in tug, barge, or marine operations, through the Lockheed Space Operations Contractor, Transportation Coordination Center, Kennedy Space Center, Florida, telephone (407) 867-5330.

(2) For all other personnel, through the Systems Training and Employee Development Branch, Code PM-TNG, telephone (407) 867-2737.

(e) The contractor shall incorporate the provisions of this clause in applicable subcontracts (including vendor deliveries).

(End of clause)

(END OF SECTION)

SECTION H

SPECIAL CONTRACT REQUIREMENTS

PART II - CONTRACT CLAUSES
SECTION I - CONTRACT CLAUSES

I.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

52.202-1	DEFINITIONS (JUL 2004)
52.203-3	GRATUITIES (APR 1984)
52.203-5	COVENANT AGAINST CONTINGENT FEES (APR 1984)
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)
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 (SEP 2007)
52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS & CONDUCT (DEC 2008)
52.204-2	SECURITY REQUIREMENTS (AUG 1996)
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)
52.204-7	CENTRAL CONTRACTING REGISTRATION (APR 2008)
52.204-9	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (SEP 2007)
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (SEP 2006)
52.211-5	MATERIAL REQUIREMENTS (AUG 2000)
52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (APR 2008)
52.215-2	AUDIT AND RECORDS--NEGOTIATION (JUN 1999)
52.215-8	ORDER OF PRECEDENCE-UNIFORM CONTRACT FORMAT (OCT 1997)
52.215-10	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (OCT 1997)
52.215-12	SUBCONTRACTOR COST OR PRICING DATA (OCT 1997)
52.215-14	INTEGRITY OF UNIT PRICES (OCT 1997)
52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2004)
52.215-18	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (JUL 2005)
52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA - MODIFICATIONS (OCT 1997)
52.216-7	ALLOWABLE COST AND PAYMENT (DEC 2002)
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)

52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN (APR 2008) ALTERNATE II (OCT 2001)
52.219-16	LIQUIDATED DAMAGES--SUBCONTRACTING PLAN (JAN 1999)
52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)
52.222-3	CONVICT LABOR (JUN 2003)
52.222-4	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT-OVERTIME COMPENSATION (JUL 2005)
52.222-19	CHILD LABOR – COOPERATION WITH AUTHORITIES AND REMEDIES (FEB 2008)
52.222-21	PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
52.222-26	EQUAL OPPORTUNITY (MAR 2007)
52.222-29	NOTIFICATION OF VISA DENIAL (JUN 2003)
52.222-35	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-39	NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES (DEC 2004)
52.222-41	SERVICE CONTRACT ACT OF 1965, (NOV 2007)
52.222-50	COMBATING TRAFFICKING IN PERSONS (AUG 2007)
52.222-54	EMPLOYMENT ELIGIBILITY VERIFICATION (JAN 2009)
52.223-3	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997) ALTERNATE 1 (JAN 1997)
52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (AUG 2003) ALTERNATE I (AUG 2003) ALTERNATE II (AUG 2003)
52.223-10	WASTE REDUCTION PROGRAM (AUG 2000)
52.223-12	REFRIGERATION EQUIPMENT AND AIR CONDITIONERS (MAY 1995)
52.223-14	TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)
52.224-1	PRIVACY ACT NOTIFICATION (APR 1984)
52.224-2	PRIVACY ACT (APR 1984)
52.225-5	TRADE AGREEMENTS (JUN 2009)
52.225-8	DUTY-FREE ENTRY (FEB 2000) (g) (4) IN THE BLANKS INSERT: "NASA", "TBD" AND "SEE BLOCK 7 SF 33.
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)
52.227-1	AUTHORIZATION AND CONSENT (DEC 2007)
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)
52.227-14	RIGHTS IN DATA - GENERAL (DEC 2007) AS MODIFIED BY NASA FAR SUPPLEMENT 1852.227-14 RIGHTS IN DATA—GENERAL
52.228-7	INSURANCE--LIABILITY TO THIRD PERSONS (MAR 1996)
52.229-10	STATE OF NEW MEXICO GROSS RECEIPTS AND COMPENSATING TAX (APR 2003)
52.230-2	COST ACCOUNTING STANDARDS (OCT 2008)

PART II - CONTRACT CLAUSES
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52.230-6	ADMINISTRATION OF COST ACCOUNTING STANDARDS (MAR 2008)
52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)
52.232-17	INTEREST (OCT 2008)
52.232-18	AVAILABILITY OF FUNDS (APR 1984)
52.232-22	LIMITATION OF FUNDS (APR 1984)
52.232-23	ASSIGNMENT OF CLAIMS (JAN 1986)
52.232-25	PROMPT PAYMENT (OCT 2008) ALTERNATE I (FEB 2002)
52.232-34	PAYMENT BY ELECTRONIC FUNDS TRANSFER-OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999) (Insert 15 days after contract award)
52.232-35	DESIGNATION OF OFFICE FOR GOVERNMENT RECEIPT OF ELECTRONIC FUNDS TRANSFER INFORMATION (MAY 1999) (Insert – See addresses in Clause G.4)
52.233-1	DISPUTES (JUL 2002) ALTERNATE I (DEC 1991)
52.233-3	PROTEST AFTER AWARD (AUG 1996) ALTERNATE I (JUN 1985)
52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)
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 (MAY 2001)
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 II (APR 1984)
52.244-2	SUBCONTRACTS (JUN 2007)--ALTERNATE I (JUN 2007) (INSERT IN PARAGRAPH (d) SUBCONTRACTS IN EXCESS OF $100,000)
52.244-5	COMPETITION IN SUBCONTRACTING (DEC 1996)
52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2008)
52.245-1	GOVERNMENT PROPERTY (JUN 2007)
52.245-9	USE AND CHARGES (JUN 2007)
52.246-23	LIMITATION OF LIABILITY (FEB 1997)
52.246-25	LIMITATION OF LIABILITY--SERVICES (FEB 1997)
52.247-1	COMMERCIAL BILL OF LADING NOTATIONS (FEB 2006)
52.247-63	PREFERENCE FOR U.S. FLAG AIR CARRIERS (JUN 2003)
52.247-64	PREFERENCE FOR PRIVATELY OWNED U.S. FLAG COMMERCIAL VESSELS (FEB 2006)
52.248-1	VALUE ENGINEERING (FEB 2000)
52.249-6	TERMINATION (COST-REIMBURSEMENT) (MAY 2004)
52.249-14	EXCUSABLE DELAYS (APR 1984)
52.251-1	GOVERNMENT SUPPLY SOURCES (APR 1984)
52.251-2	INTERAGENCY FLEET MANAGEMENT SYSTEM VEHICLES AND RELATED SERVICES (JAN 1991)
52.253-1	COMPUTER GENERATED FORMS (JAN 1991)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

1852.216-89	ASSIGNMENT AND RELEASE FORMS (JUL 1997)
1852.219-74	USE OF RURAL AREA SMALL BUSINESSES (SEP 1990)
1852.219-75	SMALL BUSINESS SUBCONTRACTING REPORTING (MAY 1999)
1852.219-76	NASA 8 PERCENT GOAL (JUL 1997)
1852.219-79	MENTOR REQUIREMENTS AND EVALUATION (MAR 1999)
1852.223-74	DRUG- AND ALCOHOL-FREE WORKFORCE (MAR 1996)
1852.228-75	MINIMUM INSURANCE COVERAGE (OCT 1988)
1852.237-70	EMERGENCY EVACUATION PROCEDURES (DEC 1988)
1852.237-72	ACCESS TO SENSITIVE INFORMATION (JUN 2005)
1852.242-78	EMERGENCY MEDICAL SERVICES AND EVACUATION (APR 2001)
1852.243-71	SHARED SAVINGS (MAR 1997)

(END OF BY REFERENCE SECTION)

I.2 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 these addresses:

Federal Acquisition Regulation Internet address - http://www.arnet.gov.far/

NASA FAR Supplement Internet address - http://www.hq.nasa.gov/office/procurement/reg/nfstoc.htm

(End of clause)

I.3 APPROVAL OF CONTRACT (FAR 52.204-1) (DEC 1989)

This contract is subject to written approval of the JSC Procurement Officer and shall not be binding until so approved.

(End of clause)

I.4 SECURITY CLASSIFICATION REQUIREMENTS (NFS 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 TOP SECRET. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Attachment J-8.

(End of clause)

I.5 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (NFS 1852.204-76) (MAY 2008)(DEVIATION)

(a) The Contractor shall be responsible for information and information technology (IT) security when --

(1) The Contractor or its subcontractors must obtain physical or electronic (i.e., authentication level 2 and above as defined in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-63, Electronic

Authentication Guideline) access to NASA's computer systems, networks, or IT infrastructure; or

(2) Information categorized as low, moderate, or high by the Federal Information Processing Standards (FIPS) 199, Standards for Security Categorization of Federal Information and Information Systems is stored, generated, processed, or exchanged by NASA or on behalf of NASA by a contractor or subcontractor, regardless of whether the information resides on a NASA or a contractor/subcontractor's information system.

(b) IT Security Requirements.

(1) Within 30 days after contract award, a Contractor shall submit to the Contracting Officer for NASA approval an IT Security Plan, Risk Assessment, and FIPS 199, Standards for Security Categorization of Federal Information and Information Systems, Assessment. These plans and assessments, including annual updates shall be incorporated into the contract as compliance documents.

(i) The IT system security plan shall be prepared consistent, in form and content, with NIST SP 800-18, Guide for Developing Security Plans for Federal Information Systems, and any additions/augmentations described in NASA Procedural Requirements (NPR) 2810, Security of Information Technology. The security plan shall identify and document appropriate IT security controls consistent with the sensitivity of the information and the requirements of Federal Information Processing Standards (FIPS) 200, Recommended Security Controls for Federal Information Systems. The plan shall be reviewed and updated in accordance with NIST SP 800-26, Security Self-Assessment Guide for Information Technology Systems, and FIPS 200, on a yearly basis.

(ii) The risk assessment shall be prepared consistent, in form and content, with NIST SP 800-30, Risk Management Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The risk assessment shall be updated on a yearly basis.

(iii) The FIPS 199 assessment shall identify all information types as well as the "high water mark," as defined in FIPS 199, of the processed, stored, or transmitted information necessary to fulfill the contractual requirements.

(2) The Contractor shall produce contingency plans consistent, in form and content, with NIST SP 800-34, Contingency Planning Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The Contractor shall perform yearly "Classroom Exercises." "Functional Exercises," shall be coordinated with the Center CIOs and be conducted once every three years, with the first conducted within the first two years of contract award. These exercises are defined and described in NIST SP 800-34.

(3) The Contractor shall ensure coordination of its incident response team with the NASA Incident Response Center (NASIRC) and the NASA Security Operations Center, ensuring that incidents are reported consistent with NIST SP 800-61, Computer Security Incident Reporting Guide, and the United States Computer Emergency Readiness Team's (US-CERT) Concept of Operations for reporting security incidents. Specifically, any confirmed incident of a system containing NASA data or controlling NASA assets shall be reported to NASIRC within one

hour that results in unauthorized access, loss or modification of NASA data, or denial of service affecting the availability of NASA data.

(4) The Contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPR 2810 requirements. The Contractor may use web-based training available from NASA to meet this requirement.

(5) The Contractor shall provide NASA, including the NASA Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in performance of the contract. Access shall be provided to the extent required to carry out IT security inspection, investigation, and/or audits to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA information or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime. To facilitate mandatory reviews, the Contractor shall ensure appropriate compartmentalization of NASA information, stored and/or processed, either by information systems in direct support of the contract or that are incidental to the contract.

(6) The Contractor shall ensure that system administrators who perform tasks that have a material impact on IT security and operations demonstrate knowledge appropriate to those tasks. Knowledge is demonstrated through the NASA System Administrator Security Certification Program. A system administrator is one who provides IT services (including network services, file storage, and/or web services) to someone other than themselves and takes or assumes the responsibility for the security and administrative controls of that service. Within 30 days after contract award, the Contractor shall provide to the Contracting Officer a list of all system administrator positions and personnel filling those positions, along with a schedule that ensures certification of all personnel within 90 days after contract award. Additionally, the Contractor should report all personnel changes which impact system administrator positions within 5 days of the personnel change and ensure these individuals obtain System Administrator certification within 90 days after the change.

(7) The Contractor shall ensure that NASA's Sensitive But Unclassified (SBU) information as defined in NPR 1600.1, NASA Security Program Procedural Requirements, which includes privacy information, is encrypted in storage and transmission.

(8) When the Contractor is located at a NASA Center or installation or is using NASA IP address space, the Contractor shall --

(i) Submit requests for non-NASA provided external Internet connections to the Contracting Officer for approval by the Network Security Configuration Control Board (NSCCB);

(ii) Comply with the NASA CIO metrics including patch management, operating systems and application configuration guidelines, vulnerability scanning, incident reporting, system administrator certification, and security training; and

(iii) Utilize the NASA Public Key Infrastructure (PKI) for all encrypted communication or non-repudiation requirements within NASA when secure email capability is required.

(c) Physical and Logical Access Requirements.

(1) Contractor personnel requiring access to IT systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPR 2810 and Chapter 4, NPR 1600.1, NASA Security Program Procedural Requirements. NASA shall provide screening, appropriate to the highest risk level, of the IT systems and information accessed, using, as a minimum, National Agency Check with Inquiries (NACI). The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of NASA, interim access may be granted pending completion of the required investigation and final access determination. For Contractors who will reside on a NASA Center or installation, the security screening required for all required access (e.g., installation, facility, IT, information, etc.) is consolidated to ensure only one investigation is conducted based on the highest risk level. Contractors not residing on a NASA installation will be screened based on their IT access risk level determination only. See NPR 1600.1, Chapter 4.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk).

(i) IT-1 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) IT-2 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" information whose cost to replace exceeds one million dollars.

(iii) IT-3 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the Contractor for NASA whose function or information has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as established in Chapter 4, NPR 1600.1.

(4) The Contractor may conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate to the Contracting Officer that the procedures used by the Contractor are

equivalent to NASA's personnel screening procedures for the risk level assigned for the IT position.

(5) Subject to approval of the Contracting Officer, the Contractor may forgo screening of Contractor personnel for those individuals who have proof of a --
  (i) Current or recent national security clearances (within last three years);
  (ii) Screening conducted by NASA within the last three years that meets or exceeds the screening requirements of the IT position; or
  (iii) Screening conducted by the Contractor, within the last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer and concurred on by the CCS.

(d) The Contracting Officer may waive the requirements of paragraphs (b) and (c)(1) through (c)(3) upon request of the Contractor. The Contractor shall provide all relevant information requested by the Contracting Officer to support the waiver request.

(e) The Contractor shall contact the Contracting Officer for any documents, information, or forms necessary to comply with the requirements of this clause.

(f) At the completion of the contract, the contractor shall return all NASA information and IT resources provided to the contractor during the performance of the contract and certify that all NASA information has been purged from contractor-owned systems used in the performance of the contract.

(g) The Contractor shall insert this clause, including this paragraph (g), in all subcontracts
  (1) Have physical or electronic access to NASA's computer systems, networks, or IT infrastructure; or
  (2) Use information systems to generate, store, process, or exchange data with NASA or on behalf of NASA, regardless of whether the data resides on a NASA or a contractor's information system.

(End of clause)

I.6 NOTIFICATION OF OWNERSHIP CHANGES. (FAR 52.215-19) (OCT 1997)

(a) The Contractor shall make the following notifications in writing:
  (1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.
  (2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall—
  (1) Maintain current, accurate, and complete inventory records of assets and their costs;
  (2) Provide the ACO or designated representative ready access to the records upon request;
  (3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

I.7 OMBUDSMAN (NFS 1852.215-84) (OCT 2003)

(a) 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.

(b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman, Melanie W. Saunders, at 281-483-0490, e-mail melanie.w.saunders@nasa.gov. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail james.a.balinskas@nasa.gov. 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.

(End of clause)

I.8 PAYMENT FOR OVERTIME PREMIUMS (52.222-2) (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium does not exceed 64 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.

* Insert either "zero" or the dollar amount agreed to during negotiations. The inserted figure does not apply to the exceptions in paragraph (a)(1) through (a)(4) of the clause.

(End of clause)

I.9 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

Employee Class Monetary Wage--Fringe Benefits - See Attachment J-6.

(End of clause)

I.10 DRUG-FREE WORKPLACE (FAR 52.223-6) (MAY 2001)

(a) Definitions. As used in this clause-
"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract where employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration-

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about-

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by paragraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by paragraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will-

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction;

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of paragraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract or default, and suspension or debarment.

(End of clause)

I.11 NOTICE OF RADIOACTIVE MATERIALS (FAR 52.223-7) (JAN 1997)

(a) The Contractor shall notify the Contracting Officer or designee, in writing, 5 working days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in Title 10 of the Code of Federal Regulations, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items which contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior

contracts, the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall--

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted.

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and all containers in which such items, parts or subassemblies are delivered to the Government shall be clearly marked and labeled as required by the latest revision of MIL-STD 129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

(End of clause)

I.12 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA DESIGNATED PRODUCTS (FAR 52.223-9) (MAY 2008)

(a) Definitions. As used in this clause-

"Postconsumer material" means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material."

"Recovered material" means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall-

(1) Estimate the percentage of the total recovered material content for EPA-designated item(s) delivered and/or used in contract performance, including, if applicable, the percentage of post-consumer material content; and

(2) Submit this estimate to the Contracting Officer.

(End of clause)

I.13 OZONE-DEPLETING SUBSTANCES (FAR 52.223-11) (MAY 2001)

(a) *Definition.* "Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as-

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR part 82, Subpart E, as follows:

Warning

Contains (or manufactured with, if applicable) * (TBD), a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

* The Contractor shall insert the name of the substance(s).

(End of clause)

I.14 RELEASE OF SENSITIVE INFORMATION (NFS 1852.237-73)(JUN 2005)

(a) As used in this clause, "sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.

(b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

(c) (1) The Contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the Contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

"This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at NFS 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages [insert page numbers or other identification of pages]."

Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

"Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document."

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

(d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

(1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.

(2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.

(3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(4) Allow access to sensitive information only to those employees that need it to perform services under its contract.

(5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.

(6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.

(7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security

Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of (

(g) The Contractor shall insert this clause, including this paragraph (g), suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of clause)

I.15 SUBMISSION OF TRANSPORTATION DOCUMENTS FOR AUDIT (52.247-67)(FEB 2006)

(a) The Contractor shall submit to the address identified below, for prepayment audit, transportation documents on which the United States will assume freight charges that were paid—

(1) By the Contractor under a cost-reimbursement contract; and

(2) By a first-tier subcontractor under a cost-reimbursement subcontract thereunder.

(b) Cost-reimbursement Contractors shall only submit for audit those bills of lading with freight shipment charges exceeding $100. Bills under $100 shall be retained on-site by the Contractor and made available for on-site audits. This exception only applies to freight shipment bills and is not intended to apply to bills and invoices for any other transportation services.

(c) Contractors shall submit the above referenced transportation documents to—

General Services Administration
Attn: FWA
1800 F Street, NW
Washington, DC 20405.

(End of clause)

I.16 ALTERATIONS IN CONTRACT (FAR 52.252-4) (APR 1984)

Portions of this contract are altered as follows:

Clause 52.243-2, Changes - Cost-Reimbursement, is modified by deleting the 30-day reference and inserting a reference to 60 days in lieu thereof.

(End of clause)

I.17 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.

(End of clause)

(END OF SECTION)

ATTACHMENT J

Attachment	Title	Page
J-1	Data Requirements List (DRL) and Data Requirements Description (DRD)	J-1-1
J-2	Award Fee Evaluation Plan	J-2-1
J-3	Safety and Health Plan	J-3-1
J-4	Installation Accountable Government Property	J-4-1
J-5	Government-Furnished Property	J-5-1
J-6	U. S. Department of Labor Wage Determination	J-6-1
J-7	Small Business Subcontracting Plan (TBD)	J-7-1
J-8	Department of Defense Contract Security Classification Specification	J-8-1
J-9	Phase-In/Phase-Out Plan	J-9-1
J-10	PIV Card Issuance Procedures	J-10-1

ATTACHMENT J-1

Data Requirements List (DRL) and Data Requirements Description (DRD

(Continued)

Short Form Instructions for Completing JSC Form 2323 & 2323A

For more detailed instruction, see JSC-STD-123.

DRL IDENTIFICATION

a. **Title** - Enter nomenclature descriptive of activity to which the DRL pertains, such as project, contract, statement of work, or request for proposal.
b. **Contract/RFP Number** - Enter contract number or RFP number, if applicable.
c. **Date** - Enter DRL preparation date as follows: Month-Day-Year. Subsequent modification dates may also be entered in this block.

LINE ITEM IDENTIFICATION

1. **Line Item No.** - Number line items sequentially, 1 through 999. Items 1, 2, 3, 4 are preprinted on JSC Form 2323. JSC Form 2323A is numbered 5 and following.

2. **DRD Title** - Enter DRD title from block 1 of JSC Form 2341.

3. **Data Type - Check the appropriate data type. Additinal detail needed to clarify types or define subtypes may be added in block 9, REMARKS:**

   (1) Written Approval - Data requiring written approval by the NASA OPR before implementation into procurement or development program.

   (2) Mandatory Submittal - Data submitted to NASA for coordination, information, review, and/or managment control.

   (3) Submittal upon Request - Data prepared and retained by respndent to be made available to requiring organization upon request.

4. Frequency - Enter frequency of submittal code as follows:

Code	Description	Code	Description	Code	Description
AD	As Directed	DA	Daily	RD	As Released
AN	Annually	DD	Deferred Delivery	RT	One Time and Revisions
AR	As Required	MO	Monthly	SA	SemiAnnually
BE	Biennually (Every other yr.)	OT	One Time	TY	Three Per Year
BM	Bimonthly (Every other mo.)	PV	Per Vehicle	UR	Upon Request
BW	Biweekly (Every other week)	QU	Quarterly	WK	Weekly

5. **As-Of Date** - If reports are of a recurring nature, give as-of date (cutoff date and due date: e.g., 15/1 indicated input cutoff date of 15th and due date of 1st). Amplify in Remarks, Item 9, if necessary.

6. **First Submittal** - Enter Month/Day/Year of initial submittal. If calendar date is not scheduled, enter number of days preceding or following event to which data requirement is related (e.g., 90 days prior to launch). Amplify in Remarks, Item 9, if necessary.

7. **Copies** - Complete 7a and 7b as specified below.

   a. **Type** - Enter code as follows:

Code	Definition	Code	Definition
PRINT	Printed Copies	MICRO	Microfilm Aperture Cards
REPRO	Reproducible Copy	OTHER	Explain Remarks, Item 9

   b. **Number** - Enter number of copies required opposite each type of copy furnished.

8. **DISTRIBUTION** - List current codes or addresses and names of organizations which are to receive copies of documents generated under the DRD. If more than one copy is required, so indicate in parenthesis by recipient's name. Continue ona blank sheet if necessary.

9. **REMARKS** - Enter in this space.

   a. Reference to specific work statement paragraph as applicable to explain relationship of data to task.
   b. Additional submittal information, if necessary.
   c. Comments which explain an entry made in any block of the DRL.
   d. OPR for a specific DRD, if different from contract COTR.

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.: **Aircraft Maintenance and Modification Program**

b. Contract/RFP No.: NNJ09JE44C/NNJ08247027R

c. DRL Date/Mod Date: 08/14/2008

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
1	**RESERVED** **Work Instruction**	☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request					
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks				
2	**Commercial Monthly Purchase Expenditures**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	MO	30/15 Contract start	10/151/09	Repro	1
	8. Distribution *(Continue on a blank sheet if needed)* JSC: CC3		9. Remarks SOW Section 5.3 and DRD 10				
3	**Contractor's Operations Manual**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after Contract start	12/01/09	Repro	24
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA2, CC, CC2 (4 copies), CC3 (3 copies), CC4, CC5, DFRC: A1422, OD T-20 (2 copies), OG 2802 (3 copies), OM 1734 LaRC: (5 copies)		9. Remarks SOW Sections 4 and 5.2				
4	**Environmental Health Program Plan**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after Contract start	12/01/09	Repro	13
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA2, CC, CC2, CC3 DFRC: A1422, S2128, SH4850B, OD T-20, OG 2802, OM 1734 LaRC: (2 copies)JSC: CC3		9. Remarks SOW Section 4.18.4 and 5.2				

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.: **Aircraft Maintenance and Modification Program**

b. Contract/RFP No.: NNJ09JE44C/NNJ08247027R

c. DRL Date/Mod Date: 08/14/2008 / 01/05/2010

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
1	**RESERVED** **Work Instruction**	☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request					
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks				
2	**Commercial Monthly Purchase Expenditures**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	MO	30/15 Contract start	10/151/09	Repro	1
	8. Distribution *(Continue on a blank sheet if needed)* JSC: CC3		9. Remarks SOW Section 5.3 and DRD 10				
3	**Contractor's Operations Manual**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after Contract start	12/01/09	Repro	20
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA2, CC, CC2 (4 copies), CC3 (3 copies), CC4, CC5, DFRC: Code A M/S 1422, Code O M/S 2802 (2 copies) LaRC: (5 copies)		9. Remarks SOW Sections 4 and 5.2				
4	**Environmental Health Program Plan**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after Contract start	12/01/09	Repro	12
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA2, CC, CC2, CC3 DFRC: Code A M/S 1422, Code S M/S 2128, Code SH M/S 4850B, Code O M/S 2802, Code OM M/S 1734 LaRC: (2 copies)		9. Remarks SOW Section 4.18.4 and 5.2				

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.	b. Contract/RFP No.	c. DRL Date/Mod Date
Aircraft Maintenance and Modification Program	NNJ09JE44C/NNJ08247027R	08/14/2008 / 01/05/2010

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a.	b. Number
5	RESERVED	☐ (1) Written approval					

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	b. Number
6	SA-1-16 Lessons Learned Program Plan & Lessons Learned	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	AR	90 days after contract start	AR 12/01/09	Repro	11

8. Distribution *(Continue on a blank sheet if needed)*

JSC: BJ4, CA, CC, CC3, LF, NS2
DFRC: Code A M/S 1422, Code S M/S 2128, Code O M/S 2802
LaRC: (2 copies)

9. Remarks

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	b. Number
7	Monthly Progress Reports	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	MO	30/15	10/15/09	Repro	11

8. Distribution *(Continue on a blank sheet if needed)*

JSC: BJ4, CA, CC, CC2, CC3, CC4, CC5
DFRC: Code A M/S 1422, Code O M/S 2802
LaRC: (2 copies)

9. Remarks

SOW Section 5/2

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies	b. Number
8	NASA Contractor Financial Management Data	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	#See block 9	#See block 9	#See Block 9	Repro	14

8. Distribution *(Continue on a blank sheet if needed)*

JSC: BJ4, CC (2 copies), LF6, LV (2 copies)
DFRC: Code A Mailstop 1422 (2 copies), Code O Mailstop 2802, and Code CF Mailstop 1013
LaRC: (4 Copies)

9. Remarks

#See DRD.

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.
Aircraft Maintenance and Modification Program

b. Contract/RFP No.
NNJ09JE44C/NNJ08247027R

c. DRL Date/Mod Date
08/14/2008 / 01/05/2010

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
9	**Notification of Potential Labor Dispute & Contingency Strike Plan**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	See block 9	See block 9	09/01/09	Repro	9

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BD, BJ4, CC, JSC Labor Relations Officer
DFRC: Code A M/S 1422 (2 Copies), Code O M/S 2802
LaRC: (2 copies)

9. Remarks
SOW Section 5.2.
Submit at contract start and update if there is any indication of a potential labor unrest or potential picketing activity.

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
10	**Reports Required for Logistics**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	AR	See block 9	See DRD	Repro	7

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4, CC, CC3, JB3, LF6
LaRC: 2 copies

9. Remarks
SOW 5.3 and 9

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
11	**Roster of Contract Personnel**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	QU	Start of Contract	Start of Contract	Repro	12

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4, CA2, CC, CC2, CC3, CC4, CC5
DFRC: Code A M/S 1422, Code O M/S 2802
LaRC: (3 copies)

9. Remarks
SOW Section 5.3 and 10
Informal memorandum response is acceptable.

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
12	**Safety and Health Plan JSC/LaRC**	☒ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	See block 9	See block 9	See block 9	Repro	7

8. Distribution *(Continue on a blank sheet if needed)*
JSC: CA, CC2, CC3, CC4, CC5
LaRC: (2 copies)

9. Remarks
SOW Sections 5.2 and 4.18.3.2.3
Submit with proposal.

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.
Aircraft Maintenance and Modification Program

b. Contract/RFP No.
NNJ09JE44C/NNJ08247027R

c. DRL Date/Mod Date
08/14/2008 /01/05/2010

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
13	**Safety and Health Plan, DFRC**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	See block 9	See block 9	See block 9	Repro	4
	8. Distribution *(Continue on a blank sheet if needed)* DFRC: Code A M/S 1422, Code S M/S 2128, Code SH M/S 4850B, Code O M/S 2802		9. Remarks SOW Section A4.18.3.2 Submit with proposal.				
14	**Safety and Health Program Self Evaluation**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	UR	N/A	09/30/10	Print	13
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA, CC2, CC3, CC4, CC5, NS2 DFRC: Code A M/S 1422, Code S M/S 2128, Code SH M/S 4850B, Code O M/S 2802 LaRC: (2 copies)		9. Remarks SOW Section 5.2				
15	**SA-1-14 Monthly Safety and Health Metrics**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	MO	Start of Contract	10/01/09	Print	15
	8. Distribution *(Continue on a blank sheet if needed)* JSC: BJ4, CA, CC, CC2, CC3, CC4, CC5, NS/Safety and Test Operations Division (2 copies), SD3/Occupational Health Officer (1 copy) DFRC: Code A M/S 1422, Code SH M/S 4850B, Code O M/S 2802 LaRC: (2 copies)		9. Remarks SOW 5.2				
16	**RESERVED**	☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request					
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks				

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.: **Aircraft Maintenance and Modification Program**

b. Contract/RFP No.: NNJ09JE44C/NNJ08247027R

c. DRL Date/Mod Date: 08/14/200 / 01/05/2010

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
17	**Small Business Subcontracting Plan & Reports**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after contract start	12/01/09	Repro	7

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4, CC
DFRC: Code A M/S 1422 (2 copies), Code O M/S 2802
LaRC: (2 copies)

9. Remarks
SOW Section 5.3

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
18	**Training, Qualification, & Certification Program Work Instruction**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	90 days after contract start	12/01/09	Print	10

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4, CA2, CC, CC2, CC3
DFRC: Code A M/S 1422, Code SH M/S 4850B, Code O M/S 2802
LaRC: (2 copies)

9. Remarks
SOW Section 4.18.1.1

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
19	**Wage/Salary & Fringe Benefit Data**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	AN	#See Block 9	#See Block 9	Repro	6

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4, JSC Labor Relations Officer
DFRC: Code A M/S 1422, Code O M/S 2802
LaRC: (2 copies)

9. Remarks
SOW Section 5.3
See DRD

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies a. Type	7. Copies b. Number
20	**Reprocurement Data Package**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	RT	Start of contract	See Block 9	Repro	1

8. Distribution *(Continue on a blank sheet if needed)*
JSC: BJ4

9. Remarks
Submit 1 year prior to contract end

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS LIST (DRL)

(See reverser for instructions)
Based on JSC-STD-123

a. Title of Contract, Project, SOW, etc.	b. Contract/RFP No.	c. DRL Date/Mod Date
Aircraft Maintenance and Modification Program	NNJ09JE44C/NNJ08247027R	08/14/2008

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies
21	**Environmental & Energy Consuming Product Compliance Reports**	☐ (1) Written approval ☒ (2) Mandatory Submittal ☐ (3) Submitted upon request	AN	09/30/09	01/15/10	a. Type: Repro b. Number: 3
	8. Distribution *(Continue on a blank sheet if needed)* JSC: CC, JE, BJ4		9. Remarks SOW Section 5.3			

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies
		☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request				a. Type b. Number
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks			

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies
		☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request				a. Type b. Number
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks			

1. Line item no.	2. DRD Title	3. Data type	4. Frequency	5. As of date	6. 1st sub. date	7. Copies
		☐ (1) Written approval ☐ (2) Mandatory Submittal ☐ (3) Submitted upon request				a. Type b. Number
	8. Distribution *(Continue on a blank sheet if needed)*		9. Remarks			

JSC Form 2323 (Rev May 1, 1991) (MS Word August 1995)

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

nstructions for Completing JSC Form 2341

General. JSC Form 2341 will be prepared to describe the content and provide preparation information for data required to support of JSC programs. For more detailed instructions, see JSC STD-123.

1. **DRD Title.** Enter the title of data or document required. The title should include a principal noun which best establishes the basic concept of the data.
2. **Date of current DRD version.** If an existing DRD is revised, enter the revision date. For a new DRD, enter origination date.
3. **DRL Line Item.** Enter the individual line item number from block 1 of JSC Form 2323, "JSC Data Requirements List," as completed for a specific procurement.

RFP/Contract No. The assigned procurement office enters the number of the specific procurement document to which the DRD is attached.

4. **Use.** Enter a synopsis of the intended use of the document. Include the reason for the requirement and identify the using organization if necessary.
5. **DRD Category.** Check the type of information described. SR&QA DRD's must be approved by a representative of the JSC Safety, Reliability, and Quality Assurance Office.
6. **References** *(Optional).* List applicable documents (NASA or JSC manuals, military specifications, Federal standards, NASA procurement regulations, etc.) containing additional information concerning the data requirements. If original DRD refers to obsolete documents, these should be deleted when the DRD is revised.
7. **Interrelationships** *(Optional).* Enter other data requirements or passages in the same SOW that will affect or be affected by this DRD. References to paragraphs in the SOW may not be substituted for the information in block 8.
8. **Preparation Information.** Provide instructions for preparation of the data required. JSC STD-123 contains suggestions for completing this section. If additional pages are required, use blank 8 1/2 X 11 inch sheets.

DRD's are listed in a separte file.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

31. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No. (Procurement completes)
RESERVED		1	

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
	☐ Technical ☐ Administrative ☐ SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDa) (Optional)*

8. Preparation Information *(Include complete instructions for document preparation)*

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Commercial Monthly Purchase Expenditures	Aug 14, 2008	**2**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

The report shall be generated from information in the Government supplied information system. Such information is derived from appropriate coding on all local purchase transactions for review by the COTR representative.

5. DRD Category: *(check one)*

- [ ] Technical
- [x] Administrative
- [ ] SR & QA

6. References *(Optional)*

7. Interrelationships *(e.g., with other DRDa) (Optional)*

Section 5.3, DRD item 10

8. Preparation Information *(Include complete instructions for document preparation)*

The interrelationships for this DRD are as follows:
DRL line item 10, Reports Required for Logistics

1. The report shall be generated from information in the Government supplied information system (NAMIS). Such information is derived from appropriate coding on all local purchase transactions.
2. The report shall accumulate cost data for monthly and year-to-date expenditures for aircraft, projects, and ground support equipment in the general categories of parts, repairs, services, stock, and other miscellaneous categories.

2.a These costs shall be subtotaled by aircraft type, project, category, and function with a separate item by item accounting for each sub-group.

2.b An example of portions of this report is attached.

(Continued on Page 2)

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

Commercial Monthly Purchase Expenditures
Example

Commerical Monthly Purchase Expenditures from 19960331 to 19960430

ACCOUNT	CURRENT MONTH	CUMULATIVE (year)
WB57 Parts	1234.56	2469.12
WB57 Repairs	345.67	691.34
WB57 Services	56.78	113.56
Sub-Total:	5555.55	11111.10
AESD		
GSE Parts	XXXX.XX	YYYYY.YY
GSE Repairs	XXX.XX	YYY.YY
GSE Services	ZZZZ.ZZ	QQQQ.QQ
Sub-Total:	MMMM.MM	PPPP.PP
DC-9 Parts	XXXX.XX	YYYYY.YY
DC-9 Repairs	XXX.XX	YYY.YY
DC-9 Services	ZZZZ.ZZ	QQQQ.QQ
Sub-Total:	MMMM.MM	PPPP.PP
General - VEH Lease, El Paso	XXXX.XX	YYYYY.YY
General- Pager/Phone Services	XXX.XX	YYY.YY
General- Equipment Cal/Repair	ZZZZ.ZZ	QQQQ.QQ
Sub-Total:	MMMM.MM	PPPP.PP
TOTAL:	**DDDDD.CC**	**DDDDD.CC**

WB 57 Parts

MR/PO No.	Vender Name	Description	Amount
30980406	General Metals	Sheet, STNL	234.56
30987457	J.C. Carter	Paint	345.67
34908788	Van Duesen	Cleaner	456.78
		TOTAL	1090.95

WB 57 Repairs

MR/PO No.	Vender Name	Description	Amount
32145689	Vedga Precision	Transponder	4513.66
31234709	Johnson Garage	Tire Service	515.34
		TOTAL	5028.00

WB 57 Services

MR/PO No.	Vender Name	Description	Amount
43128907	Astro-Weld	Weld Clamp per Dwg	444.44
		TOTAL	444.44

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Contractor's Operations Manual (COM)	March 18, 2009	**3**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

To describe the functions, policies, procedures, and documentation utilized by the Contractor in the performance of this contract.

5. DRD Category: *(check one)*

- [ ] Technical
- [X] Administrative
- [ ] SR & QA

6. References *(Optional)*

AOD 12454, Maintenance, Engineering, and Quality Procedures

7. Interrelationships *(e.g., with other DRDa) (Optional)*

SOW Section 4 and 5.2

8. Preparation Information *(Include complete instructions for document preparation)*

The Contractor shall prepare a Contractor's Operations Manual (COM) for critical processes contained within this Statement of Work where more detailed information on the scope of the process or procedure is required to align or augment the process with the Contractor's Quality Management System.

Format and Contents:

Must be available to management in hard copy media and workforce in electronic media.

The COM shall include, but not be limited to:

1. Cover page – to include the following signatures:
   a. Contractor
   b. Contracting Officer
   c. Assistant Branch Chief, Aircraft Systems Section
   d. Assistant Branch Chief, Quality Assurance Section

   Other signatures may be required at the discretion of the Government.
2. Table of Contents
3. Body of Contractor's Operation Manual

a. The COM sections shall be easily traceable to sections and requirements of the Statement of Work. The COM developed for the Center unique requirements at DFRC and LaRC will be in addition to the COM requirements outlined herein.

b. The Contractor shall define and document its policy for quality, including objectives for quality, its commitments to quality. The quality policy shall be relevant to the organizational goals and the expectations. The Contractor shall ensure that this policy is understood, implemented and maintained at all levels of the organization.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Environmental Health Program Plan	Aug 14, 2008	**4**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

To comply with mandatory environmental health program.

5. DRD Category: *(check one)*
- [ ] Technical
- [ ] Administrative
- [x] SR & QA

6. References *(Optional)*

See below.

7. Interrelationships *(e.g., with other DRDa) (Optional)*

Section 4.18.3.3 and 5.2, DRD item 12

8. Preparation Information *(Include complete instructions for document preparation)*

The interrelationships for this DRD are as follows:
DRL line item 12, Safety and Health Plan

Applicable references for this DRD are as follows, as revised:
40 CFR 52.21,Prevention of Significant Deterioration of Air Quality.
40 CFR 60, Standards of Performance for New Stationary Sources.
40 CFR 61, National Emission Standards for Hazardous Air Pollutants.
40 CFR 68, Chemical Accident Prevention Provisions.
40 CFR 71, Federal Operating Permit Programs.
40 CFR 82, Protection of Stratospheric Ozone.
40 CFR 261, Identification and Listing of Hazardous Waste.
40 CFR 262, Standards Applicable to Generators of Hazardous Waste.
Executive Order, EO 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances.
Executive Order, EO 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.
Executive Order, EO 12873, Federal Acquisition, Recycling and Waste Prevention.
EF Plans, EF's Source Reduction and Waste Minimization Pollution Prevention Plan.
JPR 1700.1, JSC Safety and Health Handbook-Policy, Requirements, Instructions, and Guidelines.
JMI 1740.11, Policy for Providing Safe Access to Electrical Equipment and/or Systems.
JMI 1741.01, Mitigation of Lead Emissions and Exposures Associated with Painting and Paint Removal Operations.
JMI 4200.01, Disposal of Riprap Materials.
JPD 8500.1, JSC Environmental Excellence Policy
JPR 8550.1, Environmental Compliance Procedural Requirements
JPD 8820.2, Facility Construction, Rehabilitation, Modification, and Repair.
TCEQ, 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste.
TCEQ, 30 TAC Chapter 101, General Air Quality Rules.
TNRCC Air Rules, Chapter 103, Procedural Rules.
TCEQ, 30 TAC Chapter 111, Control of Air Pollution from Visible Emissions and Particulate Matter.
TCEQ, 30 TAC Chapter 112, Control of Air Pollution from Sulfur Compounds
TCEQ, 30 TAC Chapter 113, Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants
TCEQ, 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles.
TCEQ, 30 TAC Chapter 115, Control of Air Pollution from Volatile Organic Compounds (VOCs).
TCEQ, 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.
TCEQ, 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds.
TCEQ, 30 TAC Chapter 118, Control of Air Pollution Episodes.
TNRCC Air Rules, Chapter 119, Control of Air Pollution Carbon Monoxide (Regulation IX).
TNRCC Air Rules, Chapter 120, Control of Air Pollution Hazardous Waste and Solid Waste Management Facilities (Regulation X).
TCEQ, 30 TAC Chapter 122, Federal Operating Permits Program

1. The Contractor shall develop and implement an Environmental, Health and Safety (EHS) Program. The EHS program shall identify how the Contractor will conduct its activities to ensure that all applicable laws, regulations, permits, and NASA policies are complied with. NASA's pollution prevention strategy is to reduce the generation of all waste streams to all environmental media, thereby minimizing the impact on the environment and managing the cost of wastes and emissions in accordance with JPR 8550.1, Environmental Compliance Procedural Requirements.

2. The Contractor shall conduct all activities in accordance with all local, state, federal regulations, executive orders and NASA and JSC policies and permits. The Contractor shall conduct all its activities in a manner that ensures all necessary environmental, safety, health and regulatory specifications and criteria are implemented in a way that offers maximum protection to human life, the environment and property, and minimizes the pollutants generated.

3. The proper use, collection and accumulation of wastes generated during the accomplishment of activities are the responsibility of the Contractor. NASA retains regulatory generator status for all wastes generated on NASA property during the accomplishment of Contractor activities associated with NASA's mission. NASA also holds all permits, authorizations and registrations for all environmental media. The Contractor shall provide information, documentation and records when requested by NASA in order to allow NASA to meet all regulatory and permitting requirements.

4. In the event that an authorized federal, state, or local authority assesses a monetary fine or penalty against the government for violations or environmental, health or safety laws, regulations, or requirements caused by Contractor negligence or failure to comply with the contract terms and conditions, the Contractor shall reimburse the government for the amount of that fine and other government-incurred expenses.

5. The Contractor shall develop and implement a pollution prevention (source reduction and waste minimization) program. The goal will be to reduce the amount in toxicity of all chemicals, wastes, air emissions, wastewater discharges, storm water discharges, trash or other source of pollutants. The program shall use the U.S. EPA's philosophy in developing and implementing the program. The EPA indicates that source reduction (no generation of waste) is preferable to recycling (the reuse or reclamation of a waste material). Recycling is preferable to treatment of a waste and treatment is preferable to disposal. Disposal should be utilized only if no other feasible options exist.

6. The Contractor shall integrate pollution opportunity assessments into all project planning activities, placing emphasis on minimizing and where feasible eliminating the generation of hazardous materials, hazardous wastes and regulated air emissions. Cost benefit analysis, including all environmental costs and the Contractor shall be used as part of the opportunity assessment and decision making process.

7. Documentation.
   The Contractor will acknowledge the following as standing requests of the Government and to be handled as described below.

7.a Environmental Health Program Corrective Action Report
   (1) The Contractor shall perform corrective action immediately upon identifying a problem. All inspections and corrective actions shall be documented on forms or in the format identified by NASA.
   (2) Report to be delivered to the following as a minimum:
      BJ4, Contracting Officer.
      CA2, Chief, Aviation Safety Office.
      CC22, Assistant Branch Chief, QA Section
      CC23, Assistant Branch Chief, Aircraft Systems.
      CC3, Chief, Aircraft Engineering Branch

7.b Pollution Prevention Report
   (1) The Contractor shall submit a report to NASA annually at contract anniversary date and shall include:
      a. Previous year report.
      b. All pollution prevention opportunities identified.
      c. The cost for implementing projects.
      d. The cost savings or cost avoidance associated with implementing projects.

(2) Report to be delivered to the following as a minimum:
CA2, Chief Aviation Safety Office.
CC22, Assistant Branch Chief, QA Section
CC23, Assistant Branch Chief, Aircraft Systems.
CC3, Chief, Aircraft Engineering Branch

7.c Surface Coating Report

(1) Surface coating information shall be documented and shall include as a minimum:
a. Name of painter
b. Date
c. Noun name and type coating and the JSC MSDS number*
d. Application time start/stop
e. Quantity used to the nearest 1/10 gallon
f. Name of coating and JSC MSDS number
g. Noun name and type of catalyst and JSC MSDS number*
h. Noun name and type of thinner and JSC MSDS number*
i. Specific location including paint booth, hangar and outside operations
j. Equipment used
* JSC MSDS numbers shall be assigned to all chemicals that are used more than one time.

(2) Copies of surface coating records will be submitted to NASA on a monthly basis by the 5th working day of the following month.

(3) Report to be delivered to the following as a minimum:
CA2, Chief Aviation Safety Office.
CC22, Assistant Branch Chief, QA Section
CC23, Assistant Branch Chief, Aircraft Systems.
CC3, Chief, Aircraft Engineering Branch
JJ12, Environmental Services.

7.d Work Element Pollution Report

(1) The Contractor shall identify work elements that can be tracked on a calendar year basis, in order to determine the amount of waste generated per unit of work. An example of a work element that may be associated with waste generation is the number of items painted in a year (related to the amount of waste paint or solvents generated), the number of engine overhauls performed in a year (related to the amount of waste jet fuel or contaminated rags generated), or the number of aircraft washed per year (the amount of wastewater generated). Regardless of the work element selected, the element must be related to the amount of waste produced.

(2) Both the work elements performed and the wastes associated with them shall be reported to NASA by June 1 of each year for the previous year.

(3) The Contractor shall document the rationale for selecting the appropriate units of work measured.

(4) Report to be delivered to the following as a minimum:
CA2, Chief, Aviation Safety Office.
CC22, Assistant Branch Chief, QA Section
CC23, Assistant Branch Chief, Aircraft Systems.
CC3, Chief, Aircraft Engineering Branch

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No. (Procurement completes)
RESERVED		**5**	

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
	☐ Technical ☐ Administrative ☐ SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*

8. Preparation Information *(Include complete instructions for document preparation)*

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

RESERVED – DRL 5

RESERVED – DRL 5

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Current Version Date	3. DRL Line Item No.	RFP/Contract No. (Procureme completes)
SA-1-16, Lessons Learned Program Plan and Lessons Learned	08/05	6	NNJ08247027R/NNJ09JE44C

4. Use (Define need for, intended use of, and/or anticipated results of data)
Establishes Process for obtaining Lessons Learned from Contractor for possible publication in JSC Lessons Learned Database and NASA Lessons Learned Information System (LLIS)
***The Office of Primary Responsibility for this DRD is the JSC Office of the Chief Engineer

5. DRD Category: *(check one)* ☐ Technical ☐ Administrative ☒ SR&QA

6. References *(Optional)*
AG-CWI-001, "WI for JSC Lessons Learned Process"
NPR 7120.5C, "NASA Program and Project Management Processes and Requirements"
NPR 7120.6, "Lessons Learned Process"
NPR 8621.1, "NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping"
NPR 8715.3, "NASA Safety Manual"

7. Interrelationships *(e.g., with other DRDs) (Optional)*

8. Preparation Information (Include complete instructions for document preparation)

Lessons Learned Program Plan. The contractor will develop and implement a lessons learned program plan consistent with the areas defined in the statement of work and/or the work breakdown structure. The lessons learned program plan will include:

a. Lessons learned program structure and management responsibility for lessons learned.
b. Lessons Learned advocacy throughout the contracted effort.
c. Approach to selection, review, and validation of lessons learned using contract and government assets.
d. Approach used to balance trade secret and security imperatives vice government rights in data and the need to capture lessons for publicatio in Government information systems and processes.
e. The dissemination of lessons learned throughout appropriate NASA programs including the retrieval and dissemination of lessons published in the JSC Lessons Learned Database and the NASA Lessons Learned Information System.
f. Information on the successful use of retrieved lessons including how they were used, by whom, for what purposed, and implementation detail delivered to the Government as additional recommendations for previously published lessons.
g. Goals for the contractor's lessons learned program including schedules, scope, breadth, quality, and quantity of lessons the government can expect as delivered lessons. Appropriate metrics for identification, publication, and dissemination are highly desirable.
h. The approach to the selection of media to be used for of supporting data inclusion with each lesson learned (such as photographs, analyses, diagrams, schematics, drawings, and streamed video.)

Access to the JSC Lessons Learned Database and the NASA Lessons Learned Information System.

1. To obtain access privileges to the JSC Lesson learned Database, JSC Domain Internet access is required to enter and review lessons learned information. The JSC lessons learned databases is accessible at http://iss-www.jsc.nasa.gov/ss/issapt/lldb/.
2. To obtain access to the NASA Lessons Learned Information System, go to http://llis.gsfc.nasa.gov/ and follow instructions.

Criteria for Selecting Lessons Learned. Uncommon insight arising from any event or observation that will benefit from sharing with a larger community of interested parties. Lessons learned are intended to prevent recurrence of undesirable events and to allow NASA and its team members to capitalize to the greatest extent practical on unique successes requiring documented insight for retrieval on demand. Sharing of lessons with other Government agencies is also expected.

Frequency of submission for lessons learned. As follows (in order of decreasing Government preference):

a. Data entry to the JSC LLDB or NASA LLIS within 30 days of a triggering event;
b. Within 30 days of a program milestone, mishap investigation, or hazard or other engineering analysis / evaluation is completed; or
c. 30 days prior to end of contract evaluation period or 45 days prior to end of contract, whichever is applicable.

Distribution of Lessons.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

Lessons are distributed by entry into the JSC Lessons Learned Database which submits lessons to the NASA Lessons learned Information System once approved and published. The NASA Lessons Learned Information System may be used directly if the contractor is outside the JSC domain or firewall.

Contracting Officer's Technical Representative (COTR) (1 copy)

Content of Lessons.

Subject - one line subject of the lesson.

Lesson Learned - usually one sentence that describes insight gained

Description of Event - narrative that describes what happened.

Recommendations - may be an action plan, suggestion, etc., that was adopted at event source.

Supporting documentation – submit as needed to augment understanding of lesson (photographs with or without pointers and text labels), illustrations, drawings, etc.)

Contact name and e-mail address (for follow up by Government prior to publication of lesson)

Definitions. Refer to NASA LLIS at http://llis.gsfc.nasa.gov/ and AG-CWI-001for definitions of terms used.

Evaluation of Contactor Lessons Learned Program performance.

The following characteristics are evaluated by the Government in order of decreasing importance:

1. Effectiveness of approach to lessons learned advocacy.
2. Ability to recognize and capitalize on lessons learned in a timely manner.
3. Breadth of participation by the contracted effort to include from where lessons originate for publication and to whom lessons are disseminated for use by contract assets.
4. Technical quality of lessons submitted including thoroughness and readiness of supporting documentation for publication.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Monthly Progress Reports	Aug 14, 2008	7	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
This report is for NASA Management.	☐ Technical ☒ Administrative ☐ SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
	Section 5.3

8. Preparation Information *(Include complete instructions for document preparation)*

Monthly Progress Report

1. The Contractor shall present a Monthly Progress Report to include the information indicated below. The Contractor shall submit progress reports of all work accomplished during each month of contract performance. The report format will be as requested by the CO/COTR. Photographs and illustrations may be included as appropriate.

   The report shall include:

   (a) A quantitative description of overall progress.
   (b) A description of any new problems which may impede performance and proposed corrective actions.
   (c) A discussion and plan for work to be performed during the next monthly reporting period.
   (d) A graphic chart, prepared in the manner prescribed by the CO/COTR, reflecting direct labor-hours by month plus projected personnel-loading for the period of contract performance.
   (e) Expenditure for emergency logistics support as required by the SOW.

1.1 Section I--Executive Summary

1. Contract Status
2. Problem Areas/Proposed Resolutions
3. Major Accomplishments
4. Monthly Aircraft Summary Data
5. Overtime Expenditure by Program/Project
6. Ground Abort Report
7. Air Abort Report
8. Performance Goal Statistics
9. Hours Comparison (Compared to Contract Base Line)
10. Safety, Health, Environmental

1.2 Section II--Text/Data

1. Maintenance
2. Aircraft Modification(s) Status
3. Engineering
4. Quality Control
   (a) Audits--QSA and QPA
   (b) Corrective Action
   (c) Training Reports
   The Contractor shall submit a report of all training accomplished each month. The report format shall include, but is not limited to, the following:
   1. Type training scheduled versus training accomplished.
   2. The number of personnel and type due within 30 days.

3. The number of personnel and type overdue training requirements.
4. Hours expended for training- safety and technical.

(d) Trend Analyst Report(s)
(e) Repairable Item Backlog Report

5. Logistics
6. Personnel
7. Performance Recognition
8. Travel

1.3 Section III--Logistics

1. DoD Transaction Summary
2. Monthly Financial Summary
3. Spare Parts Utilized
4. Spare Parts Utilized Definitions

1.4 Section IV--Direct Labor-Hour Distribution

1. Total Program Summary
2. Total Contract Summary as applicable
3. Space Flight Readiness (T-38) Program
4. Mission Management Aircraft
5. Shuttle Training Aircraft (Modified G-1159) Program
6. Zero G Aircraft (DC-9) Program
7. Shuttle Carrier Aircraft (B-747) Program
8. Research (WB-57) Program/Project
9. Orbiter Parachute Support
10. Transient Aircraft Support
11. Other T-38 Center Support
12. Super Guppy (377 SGT) Program
13. T-38 Touch Labor
14. Special Purpose Touch Labor
15. Man-Hours by Department Summary/Project

1.5 Section V--Safety and Health and Environmental

1. Mishaps
2. Close-Call Reports
3. Lost Time Injury Severity
4. Recordable GSA Damage
5. OSHA/EPA Violations
6. Open Safety Discrepancies
7. Proactive- Safety/Training Initiatives

1.6 Acronym List

1.7 Report on Contract Goals (See Section C, Appendix C, Performance Goals)

DFRC Report Requirements:

A1.1 Section I--Executive Summary

1. Contract Status
2. Hours
3. Level-of-Effort/Overtime Charts
4. Overtime Expenditure by Program
5. Ground Abort Report
6. Air Abort Report
7. Performance Goal Statistics
9. Summary Data
10. Notes, Hours Comparison

A1.2 Section II--Text/Data

1. Maintenance
2. Aircraft Modification(s) Status
3. Engineering
4. Quality Control
   (a) Training Reports
   The Contractor shall submit a report of all training accomplished each month. The report format shall include, but is not limited to, the following:
   1. Type training scheduled versus training accomplished.
   2. The number of personnel and type due within 30 days.

A1.3 Section III--Logistics

1. DoD Transaction Summary
2. Monthly Financial Summary
3. Spare Parts Utilized
4. Spare Parts Utilized Definitions

A1.4 Section IV--Direct Labor-Hour Distribution

1. Total Program Summary
2. Total Contract Summary as applicable
3. Beechcraft King Air B200 Administrative Aircraft
4. Gulfstream III Administrative Aircraft
5. McDonald-Douglas F-18A/B Aircraft
6. Man-Hours by Department Summary
7. Proactive- Safety/Training Initiatives

A1.5 Glossary

A1.6 Report on Contract Goals (See Section C, Appendix C, Performance Goals)

LaRC Report Requirements:

B1. 6 Month – 1 Year Forecast on Time Change/Life Limited Parts
List all 781 D&E Time Change/Life Limited Part due within next 6 months to 1 year, list by Tail Number.

B2. Mission Capable Aircraft
Monthly listing of each aircraft's availability for scheduling flights. Percentage of days available out of total workdays per month. List by Tail Number.

B3. Completed Flight Effectiveness Report
Monthly listing of percentage of scheduled flights not canceled due to maintenance. List by Tail Number.

B4. Successful FCF Completed
Monthly listing of FCF's that are passed and do not require rework or grounding of the aircraft. Minor write-up's after major maintenance or modification are acceptable. List by Tail Number.

B5. Percentage Calibrations Performed on Time
Monthly report of calibrations of test equipment and tools (Maintenance, Avionics, Quality Assurance and Stockroom) that are complied with on time. List by Maintenance, Avionics, QA.

B6. Status of Overdue Calibrations
Monthly report on overdue calibrations of test equipment and tools. Reason they are overdue and schedule for completion.

B7. Percentage Battery Maintenance Completed
Monthly report of the scheduled Battery Shop Maintenance completed on time. Status and justification of any work not completed on time.

B8. Status of Ground Support Equipment plus 6-Month Forecast
Monthly report of Ground Support Equipment, maintenance and inspections completed. Status and justification of any work not completed. Six-month forecast of upcoming requirements.

B9. Status of Personal Survival Equipment plus 6-Month Forecast
Monthly report of Personal Survival Equipment maintenance and inspections completed. Status and justification of any work not completed. Six-month forecast of upcoming requirements.

B10. Monthly Report on Status of Outstanding Procurements
Monthly report on status of all outstanding procurements. This report shall include:
- When ordered by buyer
- Estimated due date
- Any problems holding up order

B11. Flight Hours by Tail Number to Date (FY and CY)
Monthly report by Tail Number of cumulative flight hours, documented from Form LF 115, both FY and CY.

B12. Status of all Parts and Materials (estimated price, actual price, date due and date received)
Monthly report of all parts and materials ordered by Tail Number to include:
- Purchase Order #
- Date Ordered
- Estimated Price
- Actual Price
- Date Due
- Date Received

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
NASA Contractor Financial Management Data	03/10/2009	**8**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
Provide a basis for reporting and evaluating cost and expenditures in support of this contract.	[ ] Technical [X] Administrative [ ] SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
NPR 9501.2D, NASA Contractor Financial Management Reporting	

8. Preparation Information *(Include complete instructions for document preparation)*

The NASA Form 533 (NF533) reports provide data necessary for the following:

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, and resulting in liabilities reflected on the financial statements.

Cost is a financial measurement of resources used in accomplishing a specified purpose, such as performing a service, carrying out an activity, acquiring an asset, or completing a unit of work or project. **NPR 9501.2D, NASA Contractor Financial Management Reporting**, or its most current revision, identifies the cost reporting requirements for a contract.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment. Examples of accrual accounting for common cost elements reported on the NASA Form 533 follow:

Cost Element	
Labor	Reported to NASA as hours are incurred.
Equipment & Materials (commercial off the shelf)	Generally reported to NASA when received and accepted by the contractor.
Manufactured Equipment	Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs or the use of supplemental information obtained from the vendor are acceptable methods used to calculate the cost accrual amount.
Leases	Reported to NASA using a proration over the life of the lease.
Travel	Reported to NASA as costs are incurred.
Subcontracts	Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material, they should be separately identified on NASA Form 533 reports. The prime contractor shall include in the total cost of each subdivision of work the accrued cost (including fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub-divisions of work. Data submitted by the subcontractor should be

	structured similar to the prime contractor's NASA Form 533 to enable the prime contractor to properly report to NASA. For Firm Fixed Price subcontracts with a contract value greater than $500,000, the prime contractor is required to document the methodology used to generate the sub- contractor costs reported and provide this information to the Contracting Officer and Center Deputy Chief Financial Officer (Finance).
Unfilled Orders	Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.
Fee	Should be accrued as earned using a consistent and auditable method to determine the amount. For example: an acceptable method would be to use historical data to determine the amount to accrue each month. Fee should be reported on the NASA Form 533 following the "Total Cost" line. Award fee must be reported by the following categories: Base Fee, Fee Earned, Interim Fee, Provisional Fee, Potential Additional Fee, and Total Fee. If any of the above fee categories do not pertain, they should not be included in the NASA Form 533.
Prompt Payment Discounts	Cumulative cost reported to NASA should be the full incurred cost. The prompt payment discount amount taken should be reported as a separate line item on the NASA Form 533 below the cumulative cost amounts for the contract.

The NASA Form 533 reports are the official cost documents used at NASA for cost type, price redetermination, and fixed price incentive contracts. The data contained in the reports must be auditable using Generally Accepted Accounting Principles. Supplemental cost reports submitted in addition to the NASA Form 533 must be reconcilable to the NASA Form 533.

The due dates for the NASA Form 533M and NASA Form 533Q reports are outlined in Chapter 3 of NPR 9501.2D, NASA Contractor Financial Management Reporting. The following is a summary of the NASA Form 533 due date requirements.

NASA Form 533 Report	**Due Date**
NASA Form 533M, Monthly Contractor Financial Management Report	Due not later than the 10th operating day following the close of the contractor's monthly accounting period or the 15th day of the calendar month, whichever is earlier.
NASA Form 533Q, Quarterly Contractor Financial Management Report	Due not later than the 15th day of the month preceding the quarter being reported.

The due dates reflect the date the NASA Form 533 reports are received by personnel on the distribution list, not the date the reports are generated or mailed by the contractor. It is critical that the NASA Form 533 reports are submitted in a timely manner to ensure adequate time for NASA to analyze and record the cost into the NASA accounting system.

Uncompensated overtime hours worked should be reported on NASA Form 533 reports as a separate line item or in the footnotes.

For contracts which have multiple schedules, a summary NASA Form 533 is required to provide a cumulative from inception cost for the contract, regardless of schedule.

NASA Form 533 report is required in the NASA Form 533Q format to be used as a baseline for the life of the contract. The initial (baseline) NASA Form 533Q report shall be submitted by the contractor 30 days after contract start of March 1, 2009. The initial report shall reflect the original contract value detailed by negotiated reporting categories and shall be the original contract baseline plan. In addition to the initial (baseline) report, monthly NASA Form 533 reporting shall begin no later than 30 days after the incurrence of cost.

Column 7b (planned cost incurred/hours worked for the month) and 7d (cumulative planned cost incurred/ hou worked) of the NASA Form 533M represent the negotiated baseline plan for the contract. There may not be a relationship between the estimates provided in columns 8 of the NASA Form 533M to columns 7b and 7d. Columns 7b and 7d represent the legally binding contract negotiated baseline plan plus all authorized changes. Short and long-term cost estimates, which include all data entered in columns 8 and 9a on the NASA Form 533M and NASA Form 533Q reports, shall be based on the most current and reliable information available.

Prior period cost adjustments should be reported in column 7a and 7c of NASA Form 533M and column 7a of the NASA Form 533Q with a footnote discussing the reasons for and amounts of the adjustments.

Monthly NASA Form 533 reporting is no longer required once the contract is physically complete, provided the final cost report includes actual cost only (no estimates or forecasts). The contractor must continue to submit monthly NASA Form 533 reports as long as estimates for the following period are included. If the final cost of a contract changes after the submission of the "final" contractor cost report, the contractor must submit a revised NASA Form 533 report in the month the cost change is recognized.

FOR THE JOHNSON SPACE CENTER

1. The Contractor and all applicable sub-contractors shall submit cost and expenditures on NASA Form 533M (NF533M) and NASA Form 533Q (NF533Q) prepared in the format and in accordance with the instructions contained in the NPR 9501.2D, NASA Contractor Financial Management Reporting. Deviations from what information/data is required shall not be made. The accrual method of accounting shall be used to report costs to NASA. Costs shall be identified and recorded in the period of time when the benefit is received or incurred without regard to the date of payment. For example, equipment shall be reported as cost when it is received and accepted by the Contractor, not when the invoice is paid.

2. The NASA Form 533M report is due not later than the 10th operating day following close of the Contractor's accounting period or the 15th day of the calendar month, whichever is earlier. The NASA Form 533Q report is due not later than the 15th day of the month preceding the quarter being reported in columns 8a, 8b, and 8c (e.g., report for the quarter beginning October is due no later than September 15). The due dates reflect the date the reports are received by the Contracting Officer (and others listed on the distribution), not the date the reports are generated or mailed by the Contractor. An initial NASA Form 533Q, in complete detail and time-phased over the life of the contract, reflecting the original contract value, is required 30 days after contract start of March 1, 2009.

3. The reports (both NASA Form 533M and NASA Form 533Q) are the official cost document used at NASA for cost type, price determination, and fixed price incentive contracts. The data contained in the reports (both NASA Form 533M and NASA Form 533Q) must be auditable using Generally Accepted Accounting Principles. Supplemental cost reports submitted in addition to the reports (both NASA Form 533M and NASA Form 533Q) must be reconcilable to the reports (both NASA Form 533M and NASA Form 533Q).

4. The reports (both NASA Form 533M and NASA Form 533Q) shall be produced at two different levels as follows:

4.a Total Contract Level
This level shall contain summary data for the entire contract including:
(1) All years
(2) First and Second Years
(3) Third Year
(4) Fourth Year
(5) Fifth Year

4.b Work Breakdown Structure (WBS) Level
This level shall contain data at the summary level for each element of the WBS in the section below and shall be reconcilable to the Total Contract level.
(1) Labor Hours shall be reported as follows:

Total Straight Time Hours
Total Overtime Hours
Total Labor Hours
Straight Time Direct Hours
Overtime Direct Hours
Total Direct Hours
Straight Time Indirect Hours
Overtime Indirect Hours
Paid Leave Hours
Total Indirect Hours

(2) As a minimum, the elements of cost to be reported are as follows:
Labor Cost
Straight Time
Overtime
Materials
Subcontracts
Travel & Subsistence
Other Direct Cost
Overhead
Fringe Benefits
Other Overhead
Total Direct Cost
G&A
Subtotal Cost
Fee
Total Cost and Fee

If the contractor's accounting system differs from the above elements of cost, the elements may be revised on approval of the Contracting Officer.

Cost variance reporting and a reconciliation of changes are required in accordance with NPR 9501.2D, NASA Contractor Financial Management Reporting, paragraph 3.6.

5. The format for the reports (both NASA Form 533M and NASA Form 533Q) are contained in NPR 9501.2D, NASA Contractor Financial Management Reporting. The following additional columns shall be included in the reports:

5.a Government Fiscal Year (GFY) Cumulative Through
Actual cumulative total from October 1st of the current year through the prior month.

5.b GFY Cost at Completion
Estimated cost at the end of the current Government fiscal year (October through September).

6. Adjustments to Prior Period

Adjustments to prior period resource expenditures identified during the reporting period shall be reported in the current month actual (column 7.a), the CTD actual (column 7.c), and itemized/explained as a footnote in the reports (both NASA Form 533M and NASA Form 533Q).

7. WBS

The WBS structure shall accommodate modifications/upgrades and Overhaul and Inspection by aircraft type (exception WB-57 by individual aircraft) to include 4b(1) and (2) reporting. Each modification and upgrade shall be a separate WBS. Upgrades/Modifications of less than $100K overall value maybe consolidated into a WBS category of "Miscellaneous Upgrades/Modifications.
The following WBS Structure shall be utilized:
1.0 Total Contract Summary as applicable
1.1 Space Flight Readiness (T-38) Program

1.2 Reserved
1.3 Shuttle Training Aircraft (Modified G-1159) Program
1.4 Program Support Aircraft (G-1159)
1.5 Mission Management Aircraft
1.6 Zero G Aircraft (DC9) Program
1.7 Shuttle Carrier Aircraft (B-747) Program
1.8 Research (WB-57) Program, N926 - Project
1.9 Research (WB-57) Program, N928 - Project
1.10 Orbiter Parachute Support

1.11 Transient Aircraft Support (Excludes Other NASA Centers)
1.12 Other T-38 Center Support
1.13 Super Guppy (377 SGT) Program
1.14 Other NASA Centers Aircraft Support
1.14.1 Dryden Flight Research Center (for example)
1.14.2 Langley Research Center (for example)

8. Substitution of Contractor's Reports
Contractor's internal automated printout reports may be substituted for the NASA Form 533 reporting formats, with the Contracting Officer's approval, so long as the substitute reports contain data elements equivalent to the corresponding NASA Form 533's.

9. Detailed Monthly Variance Analysis
Variances greater than 5% must be accounted for.

9.a Variances by WBS between the contractor's current month estimate and the current month actual cost shall be explained.

9.b Variances between the contractor's current month plan and the current month actual cost shall be explained b reporting element at the total center contract level.

10. Distribution for the NASA Form 533M and NASA Form 533Q is as follows:
BJ4/Contracting Officer*
CC/Contracting Officer Technical Representative* (2 copies)
LF6/Cost Accounting*
LI/Analyst* (2 copies)

(*Names to be supplied upon contract award.)

11. FOR DRYDEN FLIGHT RESEARCH CENTER:

The contractor shall provide a separate NASA Form 533M (NF533M) and NASA Form 533Q (NF533Q) for the Dryden Flight Research Center to include items 1 through 10 above incorporating the following exceptions:

4.b The contractor will require subcontractors with cost-reimbursement contracts to submit the NASA Form 533M and NASA Form 533Q identifying costs by element of cost as described in 4 above. However, subcontractors are only required to identify costs at the total subcontract level and not by WBS element. Subcontractors may submit NASA Form 533M and NASA Form 533Q under separate cover.

7. WBS
2.0 Total
2.1 F-18 Chase Aircraft Program
2.2 NASA 7 Administrative Aircraft Program
2.3 King Air Project/Administrative aircraft Program
2.4 C-17 Maintenance support
2.5 Engineering Technical Services

2.6 Air Crew

10. Distribution for the NASA Form 533M and NASA Form 533Q is as follows:
Administrative Contracting Officer*/Mail Stop D-1422 - One paper copy and electronic submission
Contracting Officer Technical Representative*/Mail Stop D-T-20 – electronic submission
Financial Management Office*/Mail Stop D-1013 – electronic submission
Resource Management Office*/Mail Stop T-37 electronic submission
(*Names to be supplied upon contract award.)

12. FOR LANGLEY RESEARCH CENTER:

The contractor shall provide a separate NASA Form 533M (NF533M) and NASA Form 533Q (NF533Q) for the Langley Research Center to include items 1 through 10 above incorporating the following exceptions:

4.b(2) After G&A add:
Labor and Related Cost
Material & Travel Cost

7. WBS
The following WBS structure shall be used:
3.1 OV-10A Project Support Aircraft
3.2 UH-1H Project Support Aircraft
3.3 B-200 Mission Management Aircraft
3.4 Cessna 206 Project Support Aircraft
3.5 Lancair Project Support Aircraft
3.6 Cirrus Project Support Aircraft
3.7 Other Program Support

10. Distribution for the NASA Form 533M and NASA Form 533Q is as follows:
Administrative Contracting Officer*
Contracting Officer Technical Representative*
Cost Accounting*
Analyst*
(*Names and mail codes to be supplied upon contract award.)

13. Summary Total Contract Level to include Johnson, Dryden, and Langley

This level shall contain summary data totaling Johnson, Dryden, and Langley including 4.b(1) and (2) above.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Notification of Potential Labor Dispute and Contingency Strike Plan	08/14/08	**9**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
The Notification of Potential Labor Dispute and Contingency Strike Plan will be used by the NASA Contracting Officer and the Contract Labor Relations Office to facilitate the coordination of activities between the Contractor and the affected NASA operational directorates to ensure that necessary steps are taken to prepare for any potential strike situations and to prevent the disruption of work.	[ ] Technical [X] Administrative [ ] SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDa) (Optional)*
FAR 52.222-1	**SOW Section 5.2**

8. Preparation Information *(Include complete instructions for document preparation)*

DISTRIBUTION: BJ4, Contracting Officer
BA2/Connie Pritchard, Contract Labor Relations Officer

INITIAL SUBMISSION: Start of contract.

SUBMISSION FREQUENCY: As required.

DATA PREPARATION INFORMATION:

SCOPE: A Notification of Potential Labor Dispute must be submitted at the first indication of potential labor unrest and 45 days prior to the expiration of any Collective Bargaining Agreement. The Notification shall describe the situation that has the potential of impacting the contract and provide the corrective actions initiated. A Contingency Strike Plan must be submitted at contract start and updated if there is any indication of a potential labor unrest or potential picketing activity. The Notification of Potential Labor Dispute and Contingency Strike Plan are required for the prime and any subcontractors supporting this contract. Copies of all Collective Bargaining Agreements must be provided within 30 days of ratification.

APPLICABLE DOCUMENTS: None

CONTENTS: The Notification of Potential Labor Dispute shall describe the situation that has the potential of impacting the timely performance of the contract, it should provide the planned negotiation dates with organized labor, and describe other corrective actions initiated. Notification should be made prior to the expiration of collective bargaining agreements, prior to any significant changes to existing working conditions or pay practices, or any situation that could impact the performance of the contract through labor unrest. The Contingency Strike Plan shall describe the Contractor's plan for assuring the timely performance of the work under this contract during a strike or work stoppage situation. As a minimum, contents should include: information on implementation of the strike plan, a pre-strike checklist for managers and supervisors, a description of how critical work will be performed, an organization chart of the strike committee membership, phone numbers of key management personnel, and standards of conduct policies during the strike.

FORMAT: Contractor format is acceptable.

MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Reports Required for Logistics	Aug 14, 2008	10	NNJ08247027R/NNJ09JE44C

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

These reports are required to determine the effectiveness of the Property Management System and as indicators of the volume of logistics activity. These reports will be forwarded to NASA Headquarters.

5. DRD Category: *(check one)*
- [ ] Technical
- [X] Administrative
- [ ] SR & QA

6. References *(Optional)*

NPD 4100.1, Supply Support and Materials Management Policy

7. Interrelationships *(e.g., with other DRDa) (Optional)*

SOW Sections 5.3 and 9

8. Preparation Information *(Include complete instructions for document preparation)*

Applicable references for this DRD are as follows:
NPD 4100.1, Supply Support and Materials Management Policy.

The interrelationships for this DRD are as follows:
DRL line item 2, Commercial Monthly Purchase Expenditures

The following reports are required to be prepared when on site storage of $75,000 of program stock is stored in one on-site location.

1. Data Input for NASA Form 1324, Semiannual Report of Personal Property Management Operations
   This semi-annual report defines the following line item data elements of 3/15 and 9/15 of each year:

   Material Inventory Status
   Material Inventory Activity
   Material Acquisition Activity
   Material Receiving Activity
   Logistics Personnel Resources Report

   Reference: NPG 4100.1D, *NASA Materials Inventory Management Manual.*
   Due Dates: 3/25 and 9/25.

2. Data Input for NASA FMD 1489, *Semi-annual Analysis of Fixed Inventory Assets*:
   This semi-annual report defines the following monetary data elements as of 3/15 and 9/15 of each year.

   Starting Price; Price of Receipts, Price of Issues, Ending Price

   Note: This will be reported by each Object Class Code stocked in the storeroom. Separate reports are required for Stores, Program, and Standby stock (see the JSC Stocks Stock Catalog prefaces for a detailed explanation of these codes).

   Reference: NPR 4100.1, NASA Materials Inventory Management Manual.

   Due Dates: 3/25 and 9/25.
   * Forms for Data Input are available through JB3/Contract Property Management Branch.

3. NASA Form 1619, Physical Inventory of Materials Annual Report:

   This annual report identifies the sampling inventory actions completed by the Contractor. This report contains the following data by Object Class Code (see the JSC Stores Stock Catalog preface for a detailed explanation of these codes).

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

3.a Line items and dollar value of items inventoried.
3.b Number of line items with variance
3.c Dollar value of discrepant items, including overage, shortage, and gross discrepancies.
3d Identify whether inventory items are stores, program, or standby stock, and also identify the staff hours and dollar value expended in accomplishing and reconciling the inventory.
3.e A brief explanation of cause of discrepancies and actions to minimize the chance for recurrence.

Reference: NPR 4100.1, NASA Materials Inventory Management Manual.
Due Date: 9/25.

Note: All the above are to treat Contractor-Acquired Material (CAM) and Government-Furnished Material as one lot.

4. Quarterly Report of Contractor-Acquired Material (CAM):

This report will consist of two transfer documents (DD Form 1149, Requisition and Invoice/Shipping Document) that identify material purchased and received by the Contractor for on-site use. The two documents will be differentiated as follows:

4.a Items bought for direct consumption on site.
4.b Items issued to storeroom(s) that will impact the dollar value of assets on hand.
The DD Form 1149 will be transferring accountability of these assets to NASA and will be accompanied by requisitions, issue documents, engineering work orders (if flight material destined for a bond room), or any other similar form approved for use by the JSC Property Administrator. The DD Form 1149 shall identify total number of line items and total value.

Reference: JSCM 5151 (current version)
Due Date: 15 working days after the end of Fiscal Year Quarter.

5. Annual Report of Exchange/Sale:

As defined by the NASA Property Administrator Transaction submitted 15 days after the end of each governm fiscal/year.

6. Financial reporting of NASA Form (NF) 1018, NASA Property in the Custody of Contractors. The Contractor shall submit annually a NASA Form 1018 in accordance with NASA FAR Supplement clause 52.245-73 (Section G of the Contract). 1845.505-14, the instructions on the form and 1845-71. A copy shall also be sent to LF6, Cost Accounting, Reporting & Property Branch.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Roster of Contract Personnel	Aug 14, 2008	**11**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
To identify Contract Personnel.	☐ Technical ☒ Administrative ☐ SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDa) (Optional)*
	SOW Section 5.3 and 10.1

8. Preparation Information *(Include complete instructions for document preparation)*

The Contractor shall prepare a roster of all personnel employed by the Contractor and it will be updated each quarter, or when required by the CO.

The Contractor's format will be acceptable.

1. This roster shall include:
1.a Date of Roster.
1.b Name of Contractor.
1.c Name of employee.
1.d Employee identification number.
1.e Title/Duty Position (to include additional duty qualifications).
1.f Business Phone Number.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Current Version Date	3. DRL Line	RFP/Contract No. (Procurement completes)
Safety and Health Plan JSC/LARC	04/08 (replaces 09/07b version)	**12**	**NNJ08247027R/NNJ09JE44C**

4. Use (Define need for, intended use of, and/or anticipated results of data)

Establishes Safety and Health Compliance Plan for Contractors providing support to JSC organizations

***The Office of Primary Responsibility for this DRD is the JSC Safety and Test Operations Division

5. DRD Category: *(check one)*		Technical		Administrative	X	SR&QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual JSC 17773, Instructions for Preparation of Hazard Analysis for JSC Ground Operations JPR 1700.1 JSC Safety and Health Handbook	Safety and Health Program Self Evaluation

Frequency of Submission. Initial submission with the proposal. Upon NASA approval, the Contractor's Safety and Health Compliance Plan become a Contractual Requirement.

Distribution: After the plan is approved by NASA, the CO will retain the plan in the Contract file. The Contractor will send additional copies to each of the following:
Contracting Officer (1 hard copy, 1 electronic copy)
NS/Safety and Test Operations Division (2 hard copies, 1 electronic copy)
JSC Occupational Health Officer (1 hard copy)
JSC Emergency Preparedness Office (1 hard copy)

Subsequent Revisions to the Plan: Review the plan annually or as directed by the CO. The plan shall be updated to meet the latest OSHA, JSC, and VPP requirements. Provide a copy of the updated plan with the changes highlighted to the distribution list above at the start of each Contract year. If no changes are required after the annual review, notify the individuals in the distribution list in writing to that affect.

Other Deliverables: The requirements for this plan as detailed in the instructions on plan content below include instructions for specific reports and data to be submitted to the Government. These instructions are to be included in the plan and represent contractual commitments by the Contractor to provide this information.

Format:

1. Cover page - to include as a minimum, blocks for the signatures of Contractor's project manager and designated safety official; NASA COTR; JSC Safety and Test Operations Division: JSC Occupational Health Officer: and the NASA Contracting Officer. Other signatures may be required at the discretion of the Government. Once approved by NASA, signatures will be collected and the plan placed on the contract.

2. Table of Contents. See content below.

3. Body of plan - as required. Contractor's format is acceptable but should be aligned with the elements of the content below.

4. When preparing its plan, the Offeror/Contractor is expected to review all the items below and tailor its plan accordingly. The plan will clearly identify those resources to be provided by the Contractor and proposed resources to be provided by the Government. This review and supporting rationale is to be made available to the Government as part of this plan. It can be documented as a checklist or outline, inserted directly in the body of the plan, or in any format developed by the Contractor that clearly conveys the results of this review including the basis for any underlying assumptions.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

Details:

1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION

1.1 Policy: Provide the Contractor's safety and health compliance policy statement with the plan. Compare the Contractor's policy statement with those of NASA and OSHA and discuss any differences.

1.2 Goals and Objectives. Describe your approach to the following:

1.2.1 Specific annual safety and health goals and objectives to be met.

1.2.2 Methods to be used, if any, to improve on the Days Away Case Rate (DACR), the Total Recordable Injury Rate (TRIR), and the total Days Away plus Restricted Duty plus Job Transfer (DART).

1.3 Management Leadership. Describe management's procedures for implementing its sustaining commitment to safety and health compliance through visible management activities and initiatives including a commitment to exercise management prerogatives to ensure workplace safety and health. Describe processes and procedures to making this visible in all Contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

1.4 Employee Involvement. Describe procedures to promote, implement, and sustain employee (e.g., non-supervisory) involvement in safety and health compliance program development, implementation and decision-making. Describe the scope and breadth of employee participation to be achieved so that approximate safety and health risk areas of the Contract are equitably represented. Describe methods to be used to obtain employee buy in and address the behavioral aspects of safety.

1.5 Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other Contractors, or other pecial responsibilities and support). As a minimum, the Contractor will identify the following:

1.5.1 Safety Representative - identify by title, the individual who will be trained and certified in accordance with JPR 1700.1 to be responsive to Center-wide safety, health and fire protection concerns and goals, and who will participate in meetings and other activities related to the JSC Safety and Health program.

1.5.2 Company Physician/Occupational Injury/illness case manager - identify a point of contact who is responsible for the transfer or receipt of company medical data and who will be the primary contact for the company in the event any employee suffers a work related injury or illness (such as the company physician) by name, address, and telephone number to the JSC Occupational Medicine Clinic, mail code SD32. This will facilitate communication of medical data to Contractor management. Prompt notification to the JSC Occupational Medicine Clinic shall be given of any changes that occur in the identity of the point of contact.

1.5.3 Building Fire Wardens - provide a roster of fire wardens at the start of each Contract year (their names, telephone numbers and pagers, and mail codes). Contractor fire wardens are needed to facilitate the JSC fire safety program, including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives. Fire wardens will be trained in accordance with JPR 1700.1. The Roster shall be maintained by letter to the JSC Safety and Test Operations Division, mail code NS2, with copies to the Contracting Officer and the Contracting Officers Technical Representative. The initial letter shall be received by the Government not later than 15 days after contract start.

1.5.4 Designated Safety Official - identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.

1.6 Provision of Authority. Describe consistency of the plan for compliance with applicable NASA and JSC requirements and contractual direction as well as applicable Federal, State, and Local regulations and how compliance will be maintained throughout the life of the contract.

1.7 Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe, healthful, and environmentally compliant manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.

1.8 Program Evaluation. Describe your approach to safety and health program evaluation. The program evaluation consists of:

1.8.1 [RESERVED.]

1.8.2 A written self-evaluation report to be delivered once per year. The self evaluation shall be provided for the Contractor performance evaluation. The self-evaluation shall follow the VPP program evaluation report format found in OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual, Appendix C, "Format for Annual Submissions", as mandated by the cognizant OSHA regional office. Contractors who have submitted a written self-evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self-evaluation provided that all action plans and status are updated. The self-evaluation shall as a minimum cover the elements of the approved safety and health plan.

1.9 Miscellaneous Reports. The Contractor will acknowledge the following as standing requests of the Government and to be handled as described below.

1.9.1 Roster of Terminated Employees. Identify personnel terminated by the contractor. Send to the JSC Occupational Health Officer, no later than 30 days after the end of each contract year. At the contractor's discretion, the report may be submitted for personnel changes during the previous year or cumulated for all years. Information required:

a. Date of report, Contractor identity, and Contract number.

b. For each person listed, provide name, social security number, and date of termination.

c. Name, address, and telephone number of Contractor representative to be contacted for questions or other information.

1.9.2 Material Safety Data Sheets (MSDS). The Contractor shall prepare and/or deliver MSDS for hazardous materials brought onto Government property or included in products delivered to the Government. This data is required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication", EPA "Emergency Planning and Community Right-to-Know (EPCRA, ref. 40 CFR 302, 311, 312); and the Texas Department of Health (TDH, ref. Chapters 505-507 of the Health and Safety Code), and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. This inventory is also required by JPR 1700.1, "JSC Safety and Health Handbook", as revised. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central MSDS Repository, maintained by the JSC Occupational Medicine Occupational Health contractor, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrive with the material and is needed for immediate use, the MSDS shall be delivered to the Central MSDS Repository by close of business of the next working day after it enters the site.

1.9.3 Hazardous Materials Inventory. The Contractor shall compile an inventory report of all hazardous materials it has located on Government property quarterly, and which is within the scope of 29 CFR 1910.1200, "Hazard Communication"; and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. This inventory is also required by JPR 1700.1, "JSC Safety and Health Handbook", as revised. The call for this inventory and instructions for delivery will be issued by the JSC Occupational Medicine Occupational Health contractor, mail code SD33. This information shall use the format used by JSC for chemical inventory compilation to provide the following:

a. The identity of the material (product number, chemical, manufacturer, and NSN as available.

b. The location of the material by building, room and area/cabinet number.

c. The quantity of each material normally kept at each location (number of containers, container size, type container, unit of measure, conversion factor, storage temp & pressure, physical state/form, specific gravity, total pounds).

d. Peak quantity stored.

e. Actual or estimated rate of annual usage of each chemical.

1.10 Government Access to Safety and Health Program Documentation. The Contractor shall recognize, in its plan, that all safety and health documentation (including relevant personnel records) be available for inspection or audit at the Government's request. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For Contractor activities conducted on NASA property, the Contractor will identify what records will made available to the Government in accordance with the criteria of OSHA as implemented in JPR 1700.1, "JSC Safety and Health Handbook", as revised. For the purpose of this plan, safety and health documentation includes but is not limited to: logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, or emergency preparedness.

1.11 Review and Modification of Safety Requirements. The Contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative (**COTR**) in accordance with established contractual procedures.

1.12 Procurement. Identify procedures used to assure that procurements are reviewed for safety and health compliance considerations and that specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.

1.13 Certified Professional Resources. Discuss your access to certified professional resources for safety and health protection. Discuss their roles in motivation/awareness, worksite analysis, hazard prevention and control, and training.

2. WORKSITE ANALYSIS

.1 ANALYSIS OF Worksite Hazards. . Contractor worksite hazards shall be systematically identified through a combination of urveys, analyses, and inspections of the workplace, investigations of mishaps and close calls, and the collection and trend analysis of safety and health data such as: records of occupational injuries and illnesses, findings and observations from preventive maintenance activities, facilities related incidents related to partial or full loss of systems functions; etc. Describe how hazards identified by any of the techniques identified below shall be ranked, processed, and mitigated in accordance with JPR 1700.1. All hazards on NASA property, which are immediately dangerous to life or health, shall be reported immediately to the Safety and Test Operations Division. All safety engineering products that address operations, equipment, etc., on NASA property will be subject to JSC Safety and Test Operations Division review and concurrence unless otherwise waived by the JSC Safety and Test Operations Division.

2.2 Industrial Hygiene. Describe your industrial hygiene program and how it will be coordinated with the JSC Government provided resources for industrial hygiene. In the event corporate resources are used to determine workplace exposures, copies of all monitoring data shall be provided to JSC Occupational Medicine Occupational Health contractor within 15 days of receipt of results.

2.3 Hazard Identification. Describe the procedures and techniques to be utilized to compile an inventory of hazards associated with the work to be performed on this Contract. This inventory of hazards shall address the work specified in this Contract as well as operations and work environments in the vicinity or in close proximity to Contract operations. The results will be reported to the Government in a manner suitable for inclusion in facilities baseline documentation as a permanent record of the facility. Specific techniques to be considered include:

2.3.1 Comprehensive Survey - A "wall to wall" engineering assessment of the Contractor's worksite, which includes the Government furnished facilities to be used by the contractor and the immediate vicinity in which contractual work or tasks will be performed. This assessment encompasses facilities, equipment, materials, and processes.

2.3.22 Change (Pre-use) Analysis - Typically addresses modifications in facilities, equipment, processes, and materials (including waste); and related procedures for operations and maintenance. Change analyses periodically will be driven by new or modified regulatory and NASA requirements.

2.3.3 Hazard Analysis - May address facilities, systems/subsystems, operations, processes, materials (including waste), and specific tasks or jobs. Analyses and report formats will be in accordance with JSC 17773, "Preparing of Hazard Analyses for JSC Ground Operations."

2.3.4 The Contractors safety plan will describe the flow of the findings of the comprehensive survey of hazards into hazard analyses and job hazard analyses and subsequently into controls such as design, operations, processes, procedures, performance standards, and training. The contractor will discuss its approach to notify NASA and other parties external to the contract work of its identified hazards and subsequent analyses and controls.

2.4 Inspections. Includes assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The Contractor will describe administrative requirements and procedures for control of regularly scheduled inspections for fire and explosion hazards. The Contractor has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify:

a. Discrepancies between observed conditions and current requirements, and,
b. New (not previously identified) or modified hazards.

c. Use of JSC's Hazard Abatement Tracking System to manage hazards onsite at JSC (see paragraph 3.12 below).

2.5 Protective Equipment - Set forth procedures for obtaining, inspecting, and maintaining all appropriate protective equipment, as required, or reference written procedures pertaining to this subject. Set forth methods for keeping records of such inspections and maintenance programs.

2.6 Employee Reports of Hazards - Identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The Contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation/awareness activities.

2.7 Accident and Record Analysis

2.7.1 Mishap Investigation – identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The Contractor will describe the methods to be used to report and investigate mishaps on NASA property and on Contractor or third party property. The Contractor will describe its procedures for implementing immediate notification of NASA using the call tree in 2.7.1.a below. The use of the quick incident reports found at the lower center of the home page of the NASA Incident Reporting Information System (IRIS) at https://nasa.ex3host.com/iris/newmenu/login.asp and use of NASA forms as specified in JPR1700.1 or any alternate forms used by Contractor. The contingency plan will emphasize timely notification of NASA; preliminary and formal investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; preparation and submission of a formal report to NASA; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The Contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The Contractor will include appropriate details to address the following:
Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form is NOT available from JSC or NASA forms management; it can be obtained from the following link: http://jschandbook.jsc.nasa.gov/ .

a. The Contractor will include a mishap contingency plan as part of the Safety and Health Plan which meets the requirements of NPR 8621.1B, "NASA Procedural Requirement for Mishap and Close Call Reporting, Investigating, and Recordkeeping", and JPR 1700.1, **"JSC Safety and Health Handbook". The plan will identify the method of immediately notifying NASA in the advent of a type A or B mishap or C property damage mishap and close call with equivalent potential so NASA may take custody of the mishap scene and initiate its investigation as soon as it is safe following the mishap. The Contractor will immediately contact the JSC Safety and Test Operations Division at 281-483-1935 for guidance when a Type A or B mishap or Type C property damage mishap occurs in the course of performing work on a NASA Contract in whole or in part. The contingency plan will clearly identify the Government investigation as taking precedence over any contractor investigation.

b. For Type C injuries and all lower level mishaps, the Contractor will perform its own investigation and submit a report to NASA in accordance with the requirements of NPR 8621.1. The Contractor will ensure that NASA is promptly notified of any Type D mishap so that NASA provides a civil servant to oversee the investigation in an ex officio capacity prior to start of any formal investigation. All initial reports and selected follow up reporting will be accomplished using IRIS.

c. When a NASA investigation is required, witnesses will be identified and their names and contact information provided to NASA investigator but witness statement must be requested and collected by NASA. Such statements will be retained by the Government as part of the mishap file in accordance with NPR 8621.1.

d. The Contractor will deliver to NASA mishap reports which shall include the data specified in NPR 8621.1 for the level of mishap. NASA approval and endorsements will be required as specified in NPR 8621.1 and included in the approved Safety and Health Plan.

2.7.2 Trend Analysis – Describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.). Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the Contractor will discuss method of providing data as follows.

a. Accident/Incident Summary Report – The Contractor shall prepare and deliver Accident/Incident Summary Reports as specified on JSC Form 288, "Accident/Incident Statistics" as revised. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and close calls shall be described in summary form along with current status. Negative reports are also required monthly. Report frequency is monthly; date due is the 10th days of the month following each month reported. Report to be delivered to the JSC S & MA Directorate through the Safety and Test Operations Division, mail code NS2, by fax to 281-244-0426 or by attaching to an e-mail and transmitting to JSC-Safety-Report-Submittals@mail.nasa.gov.

b. Log of Occupational Injuries/Illnesses

i. For each establishment on and off NASA property that performs work on this Contract, the Contractor shall deliver, to the Government, a copy of its annual summary of occupational injuries and illnesses (OSHA 300 and OSHA 300A or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5 If the Contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in Contractor's format is acceptable (such as loss runs from insurance carrier) which contains the data required by JSC Form 288.

ii. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g. not later than February 15 of the year following).

3. HAZARD PREVENTION AND CONTROL

3.1 Identified hazards must be eliminated or controlled. In the multiple employer environment of the Center, it is required that hazards including discrepancies and corrective actions be collected in a Center wide information system Hazard Abatement Tracking System (HATS) for risk management purposes. Describe your approach to implementing this requirement.

3.2 Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence (see JPR 1700.1). Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, energies, etc.). Discuss need for coordination with safety, health, and emergency authorities at NASA.

3.3 Hazardous Operations and Processes. Establish methods for notification of personnel when hazardous operations and processes are to be performed in their facilities or when hazardous conditions are found to exist during the course of this Contract. JPR 1700.1 will serve as a guide for defining, classifying, and prioritizing hazardous operations; 29 CFR 1910.119 will be the guide for hazardous processes when the material or process meets the requirements therein. Develop and maintain a list of hazardous operations and processes to be performed during the life of this Contract. The list of hazardous operations and processes will be provided to JSC as part of the plan for review and approval. JSC and the Contractor will decide jointly which operations and processes are to be considered hazardous, with JSC as the final authority. Before hazardous operations or processes commence, the Contractor will develop a schedule to develop written procedures with particular emphasis on identifying the job safety steps required. NASA will have access on request to any Contractor data necessary to verify implementation. For all identified operations or processes that may have safety or health implications outside Contract operations, the Contractor shall identify such circumstances to the JSC Safety and Test Operations Division and Occupational Health Officer who will provide additional instructions for further NASA management review and approval.

3.4 Written Procedures. Identification of methods to assure that the relevant hazardous situations and proper controls are identified in documentation such as inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.

3.5 Hazardous Operations Permits. Identify facilities, operations and/or tasks where hazardous operations permits will be required as specified in JPR 1700.1 such as confined space entry, hot work, etc. Set forth guidance to adhere to established NAS JSC procedures. Clearly state the role of the safety group or function to control such permits.

3.6 Operations Involving Potential Asbestos Exposures. Set forth method by which compliance is assured with JSC Asbestos Control Program as established in JPR 1700.1, as revised.

3.7 Operations Involving Exposures to Toxic or Unhealthful Materials. Such operations must be evaluated by the JSC Occupational Health Office and must be properly controlled as advised by same. JSC Occupational Medicine must be notified prior to initiation of any new or modified operation potentially hazardous to health.

3.8 [Reserved.].

3.9 Baseline Documentation. Discuss the Contractor's responsibilities for maintaining facilities baseline documentation in accordance with JSC requirements. The Contractor will implement any facilities baseline documentation tasks (including safety engineering) as provided in the Contractor's plan approved by NASA or as required by Government direction.

3.10 Preventive Maintenance. Discuss approach to preventive maintenance. Describe scope, frequency, and supporting rationale for your preventive maintenance program including facilities and/or equipment to be emphasized or de-emphasized. Discuss methods to promote awareness in the NASA community (such as alerts, safety flashes, etc.) when preventive maintenance reveals design or operational concerns in facilities and equipment (and related processes where applicable).

3.11 Medical (Occupational Healthcare) Program. Discuss the Contractor's medical surveillance program and injury/illness case management to evaluate personnel and workplace conditions to identify specific health issues and prevent degradation of personnel health as a result of occupational exposures. Discuss approach to Cardiopulmonary Resuscitation (CPR), first aid, and, return to work policies and the use of Government provided medical and emergency facilities for the initial treatment of occupational injuries/illnesses.

3.12. Hazard Correction and Tracking. Discuss your system for correcting and tracking safety, health, and environmental hazards with particular emphasis on integration with JSC's Hazard Abatement Process (found on line @ http://www.srqa.jsc.nasa.gov/HATS/). (The scope is restricted to establishments at JSC, Sonny Carter Training Facility, and Ellington Field.) This includes the following:

3.12.1 .1Personnel Awareness of Hazards. Discuss your approach to communicate unsafe conditions and approved countermeasures to your employees. Discuss your approach to communicating such conditions to the Government and other Contractors whose personnel may be exposed to such unsafe conditions. Discuss communications with Facility Managers. Discuss use of the NASA Lessons Learned Information System for both obtaining lessons from other sources and as a repository for lessons learned during performance of the Contract.

3.12.22 Interim and Final Abatement Plans - Describe how you will approach interim and final abatement of hazards. Describe how you will provide data to the JSC HATS for all hazards within Contractor-occupied facilities that are not finally abated (all interim and final abatement actions completed) within 30 days of discovery. Discuss your approach to posting such plans using JSC Form 1240, "JSC Notice of Safety or Health and Action Plan", or equivalent. Discuss compatibility of your system with JSC's role of facility managers in abatement planning, implementation, and verification.

3.13 Disciplinary System. Describe your system for ensuring safety and health discipline in your personnel (including subcontractors). Describe your approach to modifying personnel behaviors when personnel are exhibiting discrepant safety and health performance.

3.14 Emergency Preparedness. Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, etc. Discuss compliance with 29 CFR 1910.120 (HAZWOPER) and role in JSC Incident Command System (see JPR 1700.1 for details). Discuss methods to be used for notification of JSC emergency forces including emergency dispatcher, safety hotline, director's safety hotline, etc. Discuss establishment of pre-planning strategies through procedures, training, drills, etc. Discuss methods to verify emergency readiness.

4. SAFETY AND HEALTH TRAINING

4. . Discuss the following:

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

4.1 Describe the Contractor's training program including identification of responsibility for training employees to assure understanding of safe work practices, hazard recognition, and appropriate responses for protective and/or emergency countermeasures, including training to meet Federal, State, and Local regulatory requirements.

4.2 Describe approach to identifying training needs including traceability to exercises such as job safety analyses, performance evaluation profiles, hazard analyses, mishap investigations, trend analyses, etc.

4.3 Describe approach to training personnel in the proper use and care of personal protective equipment (PPE).

4.4 Discuss tailoring of training towards specific audiences (management, supervisors, and employees) and topics (safety orientation for new hires, specific training for certain tasks or operations).

4.5 Discuss approach to ensure that training is retained and practiced. Discuss personnel certification programs. Certifications should include documentation that training requirements and physical conditions have been satisfied (examples include physical examination, testing, and on-the-job performance).

4.6 Address utilization of JSC safety and health training resources (such as asbestos worker training/certification, hazard communication, confined space entry, lockout/tagout, etc.) as appropriate with particular emphasis on programs designed for the multiple employer work environment on NASA property. If the Contractor wishes to train their personnel in any regulatory mandated training, an agreement will be secured with JSC Occupational Safety Branch and Occupational Health and Test Operations Division and the JSC Occupational Health OfficerSupport office prior to beginning training. The agreement will ensure that safety and health training resources available from NASA are utilized where appropriate.

4.7 Discuss approach to making all training materials and training records available available to NASA, and other Federal, state, and local agencies for their review upon request.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Safety and Health Plan, DFRC	Aug 14, 2008	13	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

Establishes Safety, Health, and Environmental Compliance Plan for Contractors providing support to DFRC organizations

***The Office of Primary Responsibility for this DRD is the JSC Safety, Reliability, and Quality Assurance Office

5. DRD Category: *(check one)*

- [ ] Technical
- [ ] Administrative
- [x] SR & QA

6. References *(Optional)*

NPR 8715.3, JPR 1700.1, OSHA, NPR 8621.1

7. Interrelationships *(e.g., with other DRDa) (Optional)*

SOW Section A4.18.3.2

8. Preparation Information *(Include complete instructions for document preparation)*

NOTE: UPON NASA APPROVAL, THE CONTRACTOR'S SAFETY, HEALTH, and ENVIRONMENTAL COMPLIANCE PLAN ("The Plan") BECOMES A CONTRACTUAL REQUIREMENT.

Frequency of submission. The Contractor shall submit a Safety and Health Plan not later than 90 days after contract start.

Distribution. After the plan is approved by NASA, the Contracting Officer will retain the plan in the contract file. The Contractor will send additional copies to each of the following:
DFRC, Mail Code A1422, Contracting Officer (1 copy).
DFRC, Mail Code S2128, Office of Safety and Mission Assurance (1 copy).
DFRC, Mail Code SH4850B, Safety Health and Environmental Office (1 copy).
DFRC, Mail Code OD, T-20, Contracting Officer's technical Representative (1 copy).
DFRC, Mail Code OG 2802, Chief of Maintenance (1 copy).

Authority: FAR 52.223-1 through -5, -10; NFS 18-23.70, 18-52.223-70, 18-52.223-73.

The Contractor shall develop a detailed Safety and Health plan showing how the Contractor intends to protect the life, health and well being of Contractor and NASA employees as well as how the Contractor will protect Government property and equipment. The Safety plan shall comply with the NASA Safety and Requirements Document NPR 8715.3, NASA General Safety Program Requirements, DCP-S-027 NASA Shop Safety Procedures, the Department of Labor Occupational and Health Standards 29 CFR 1910, and applicable Dryden Safety Procedures. Dryden safety procedures are controlled and available from the Dryden Management System Web site. Safety procedures are identified as Dryden Center Procedures (DCP's) and/or Operating Procedures (DOP's)

The plan shall describe the tasks and activities of Safety and Health Management, Safety and Health personnel, as well as the responsibilities of each Employee to assure the identification, evaluation and elimination/control of safety and health concerns.
The plan shall, as a minimum, include the following:

a. Organizational flow chart(s) that illustrate the functional relationships and lines of communications between Safety, Health and other organizational elements.
b. Description of the Safety and Health Management function within the organization, including the process through which management decisions will be made.
c. Description of the Management controls that will be utilized to insure safety and health regulations.
d. Description of the responsibility, authority and accountability of Safety and Health personnel tasked to identify and resolve safety and health issues.
e. Descriptions of the Safety program measurement system, including measurements, metrics and trend analysis methods.

Continued

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

f. Description of the processes to notify the local CO/COTR and Safety and Health organization of critical and catastrophic hazards and mishaps.
g. Description of the Contractors corrective action plan and request for deviations and/or waivers to NASA safety and health requirements.
h. Description of anticipated hazards, hazardous materials and hazardous operations and how these hazards will be mitigated.
i. Means of program evaluation--sets forth duties, methods and frequency for internal evaluation of the safety and health program. Identifies who performs evaluations and to whom evaluations are reported as well as who approves corrective action, and methods for altering plan,
   - Training on use of Portable First Aid Fire Extinguishers
   - Training for Confined Space entry. Confined Space entry must be done IAW DCP-S-022. Training is bi-annual and medial examination must be done annually.
   - Respirator training, fit test and medical examination are required annually IAW DCP-S-036.
   - Training on all Hangar Fire Suppression Systems.
   - Other training maybe required as necessary for the job, i.e. Hazardous Communication (required for everyone), hydrazine, ionizing radiation.

Contractor shall wear a respirator when working/repairing aircraft or related equipment or in the performance of related activities, when required.

In addition, the Contractor shall implement a program that addresses motivation and awareness. This program will ensure employee compliance with proper safety practices. It will require reporting any unsafe practices and conditions that may exist in the employees' work site to the Resident Site Manager; who in turn, shall notify the CO/COTR as soon as reasonably possible. The intent is to note and correct any safety and health problems at an early stage.

Safety, Health, and Environmental Compliance

The Contractor is responsible for compliance with all Government (federal, state, and local), NASA, and DFRC safety, health and Environmental compliance regulations applicable to the performance of this SOW. All work shall be carried out in accordance with the provisions of:

(1) CAL/OSHA. Division of Industrial Safety, Title 8, California Code of Regulations.
(2) California Department of Health Services (CDHS), Hazardous Waste Management, Title 22, California Code of Regulations.
(3) Occupational Safety and Health Standards (OSHA), Code of Federal Regulations, Title 29. Environmental Protection Agency (EPA), Protection of Environment, Code of Federal Regulation, Title 40.
(4) Dryden Health and Safety Manual.
(5) NFPA 40 (Aircraft Maintenance).

The Contractor shall reimburse the Government for any civil or criminal fines or penalties resulting from health and safety or environmental infractions caused by the Contractor's negligence. An effective drug-free work place policy is required. Smoking policy, while on duty, shall conform to NASA and OSHA standards.

All aircraft welding requirement operations will be accomplished IAW NFPA. 407-6-1 (Aircraft Maintenance). Before any welding on or around aircraft, a representative from the Safety, Health and Environmental Office shall issue a welding permit form #592.

The Contractor shall brief all its employees on safety regulations, safety equipment usage, and safety procedures pertaining to handling, servicing, and maintenance of aircraft assigned Government Furnished Equipment (GFE), and all other tasks specified in this SOW. The Contractor shall be responsible for ensuring that all assigned GFE is maintained, calibrated, in safe operating condition, and used only by trained, certified, and qualified individuals.

Use of the Chemical Crib

The Contractor shall strictly adhere to the guidelines of the DFRC Chemical Crib Management Plan (Draft of 1/15/98 or most current) and Executive Order 12856. All hazardous materials at DFRC shall be included in the DFRC Chemical Crib System and will be available for authorized use as required.

HAZARDOUS MATERIALS

1 The Dryden Hazardous Material Officer provides technical direction concerning these processes.

2 The requisition of hazardous materials shall be in accordance with NASA-DFRC Chemical Management Handbook or current management plan.

3 Prior to the initial application or use of any hazardous materials, the Contractor shall submit, to the CO/COTR, the Material Safety Data Sheet (MSDS) and manufacturer's instructions, and a statement of the Contractor's intended use, location, purpose, and method of application. The Contractor shall obtain specific approval of the CO/COTR prior to performing any work at DFRC on known or suspected hazardous materials.

4 The Contractor shall conduct its operations so as to minimize use and release of hazardous or polluting substances after use, shall collect, package, label, and provide temporary storage of hazardous waste in accordance with applicable laws and regulations. The Contractor shall notify the NASA DFRC Code SH (Industrial Safety Office) of hazardous waste disposal requirements and coordinate with code SH and its Contractor(s) to ensure proper removal and disposal of hazardous waste by NASA or the NASA designated Contractor.

4.1 The Contractor shall comply with all applicable federal, state, NASA/DFRC, and local environmental management regulations, requirements and standards. The Contractor shall take precautions in the performance of work under this contract to protect the safety and health of its employees, to protect the safety and health of all persons in or near the job site and to prevent damage to the environment, property, materials, supplies and equipment. The Contractor shall identify all wastes and waste producing processes including chemicals, paints, petroleum/oil/lubricant products and solvents, and their containers. Identification assistance may be obtained through the DFRC Safety Office.

4.2 The Contractor shall:

i. Conduct work in compliance with all applicable environmental requirements, including attending all required training courses.
ii. Report identified environmental protection problems through the Contractor line management to the Government.
iii. Provide support, guidance, and assistance to its employees in interpreting environmental policies, requirements and standards.
iv. Be environmentally active by being energy conscience and maximizing recycling and the use of recycled products wherever possible.

4.3 The Contractor shall establish and maintain internal environmental compliance controls for functional responsibilities for their own operations at DFRC.

MISHAP AND HAZARD REPORTING

The Contractor shall report all mishaps and hazardous conditions, verbally on occurrence, to the CO/COTR. In addition, the Contractor shall submit a written report of all mishaps and hazardous conditions to the CO/COTR as soon as reasonably possible after an occurrence, not to exceed two (2) working days.

The Contractor shall make other reports, as required by OSHA, NPR 8621.1, and Clause 18-52.223-70, Safety and Health. The NASA Form 1627, NASA Mishap Report, shall be submitted in accordance with the instructions on the form for types A, B or C mishap as defined in DCP-S-001, *Aircraft Mishap Response Procedure*. Shall meet the requirements for submission of Contractor Monthly Accident Report using DFRC Form 34.

The Contractor shall report to the CO/COTR, in writing, items in need of repair and requiring prompt attention, as soon as reasonably possible. The Contractor shall report any conflict between the requirements of a support task and those of the safety requirements to the CO/COTR for resolution prior to performing the task.

The Contractor shall report any mishaps to the CO/COTR as soon as reasonably possible, and shall make other reports, as required by OSHA, NPD 8621.1. The Contractor shall report hazardous conditions to the CO/COTR as soon as reasonably possible.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Safety and Health Program Self Evaluation	Aug 14, 2008	**14**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

Self evaluation of Contractor's safety and health program performance.

5. DRD Category: *(check one)*

- [ ] Technical
- [ ] Administrative
- [x] SR & QA

6. References *(Optional)*

JPR 1700.1 (as revised)

7. Interrelationships *(e.g., with other DRDa) (Optional)*

SOW Section 5.2

8. Preparation Information *(Include complete instructions for document preparation)*

1. The Contractor must conduct an annual self-evaluation of its safety and health program as required by its safety and health plan.
2. Information required:

2.a. The internal assessment of safety and health program effectiveness during the report period (i.e., the previous year) indicating the status of goals or objectives previously established and areas of strength and weakness in Contractor safety program performance.

2.b. Safety and health concerns and resolutions relating to JSC operations which may have been identified during the report period.

2.c. Unresolved safety and health concerns relating to JSC operations which the Contractor feels merit attention of JSC safety and health management.

2.d. The goals and objectives of the Contractor safety and health program for the next report period.

2.e. An analysis of the contractor's performance at JSC-administered establishments in each of the 32 Voluntary Protection Program sub-elements found in the Federal Register Notice 65:45649-45663, July 24, 2000.

2.f. Attach action plans for identified problem areas. Action plans must include schedule for periodic progress reports to the Government on a frequency agreed to by the Government and the Contractor for each problem area.

3. Format to be as required by the cognizant OSHA regional office. Contractors who have submitted a written self-evaluation as a VPP site may submit their original report to JSC in lieu of writing a new self - evaluation provided that all action plans and status are updated.
4. Report due September 30th of each year.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Current Version Date	3. DRL Line Item No.	RFP/Contract No. (Procureme completes)
SA-1-14, Monthly Safety and Health Metrics	04/08 (replaces 10/03 version)	15	NNJ08247027R/NNJ09JE44C

4. Use (Define need for, intended use of, and/or anticipated results of data)
Establishes selected Safety and Health Program metrics
***The Office of Primary Responsibility for this DRD is the JSC Safety, Reliability, and Quality Assurance Office

5. DRD Category: *(check one)* ☐ Technical ☐ Administrative ☒ SR&QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
JPR 1700.1 JSC Safety and Health Handbook	DRD SA-1-1

8. Preparation Information (Include complete instructions for document preparation)

Frequency of submission. Monthly by 10th of month following month being reported.

Distribution.
NS/Safety and Test Operations Division (2 copies)
SD3/Occupational Health Officer (1 copy)
Contracting Officer's Technical Representative (COTR) (1 copy)

Format: electronic to NS2, SD13; hard copy to COTR. Send as Excel spreadsheet or in tables compatible with MS Word.

Definitions. Refer to JPG 1700.1 and OSHA requirements for definitions of terms below.

Scope. The scope of the information required is limited to the JSC-administered establishments of Houston Texas at NASA Road One; Sonny Carter Training Facility; and Ellington Field.

Content.

I. Management Commitment and Employee Involvement.

Date of Management Safety Committee Meeting		Type/Title of Meeting	No. of Managers attending		No. of supervisors attending		No. of non-supervisory attending	
This month	Year to date		This month	Year to date	This month	Year to date	This month	Year to date

Include electronic copies of minutes or representative information

No. of Employee Safety Meeting		Type/Title of Meeting	No. of Employees attending		No. of managers/supervisors attending	
This month	Year to date		This month	Year to date	This month	Year to date

Include electronic copies of minutes or representative information

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

.. Worksite Analysis. Refer to JPG 1700.1 for definitions of terms.

)RD Item 15, SA-1014, Monthly Safety and Health Metrics

Division	No. of Hazard Analyses				No. of Job Safety Analyses				No. of Routine Inspections			
	Required		Performed		Required		Performed		Required		Performed	
	This month	Year to Date	This month	Year to Date	This month	Year to Date	This month	Year to Date	This month	Year to Date	This month	Year to Date
Total												

III. Hazard Prevention and Control - hazards below were found during routine and special inspections, close calls, mishap investigations, etc., and require correction.

No. of Hazards found			No. of Hazards closed <30 days			No. of Hazards open <30 days	No. of Hazards open >30 days			No. of Hazards closed >30 days			No. of JF1240s in place
Prior to month	This month	Year to date	Prior to month	This month	Year to date		Prior to month	This month	Year to date	Prior to month	This month	Year to date	

Attach copies (electronic ok if sent by e-mail) of JF 1240's (or equivalent) including monthly updates. Mark JF 1240's where abatement has been completed as closed.

IV. Safety and Health Training - List courses specific to loss control initiatives (such as slips/trips falls, material handling; etc.) Report other training as "Generic safety training not otherwise specified" (examples include Hazard Communication, Confined Space entry, HAZWOPER, system safety, job safety analysis, etc.) Do not include job proficiency course work where safety is an issue (such as radiography, welding, painting, etc.)

Course Title	No. to be Trained	No. Trained	On Schedule

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No. (Procurement completes)
RESERVED		**16**	

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)* ☐ Technical ☐ Administrative ☐ SR&QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*

8. Preparation Information *(Include complete instructions for document preparation)*

RESERVED - 16

RESERVED - 16

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

Small Business Subcontracting Plan & Reports		17	NNJ08247027R/NNJ09JE44C

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

To describe the Contractor's planned approach to Small Business Subcontracting and their reporting against this plan.

5. DRD Category: *(check one)*
- [ ] Technical
- [X] Administrative
- [ ] SR & QA

6. References *(Optional)*

FAR 19.702. FAR 52.219-8. FAR 52.219-9,NFS 1852.219-75 and NFS 1852.219-76.

7. Interrelationships *(e.g., with other DRDs)* *(Optional)*

SOW Section 5.3

8. Preparation Information *(Include complete instructions for document preparation)*

1. SCOPE
   The Small Business Subcontracting Plan shall be in compliance with FAR 52.219.9. The Small Business Subcontracting Reporting shall be in compliance with NFS 1852.219-75.
2. CONTENT
   The Subcontracting Plan must include the approach that the contractor intends to use in meeting the subcontracting goals. Any subcontractor whose offer is part of this proposal should be identified. For each subcontractor, the percentage of the proposal and any small business subcategory classification should be identified. For areas of potential future subcontracting, the contractor should identify the area of work, the percentage of contract that this is expected to encompass, potential subcontractors, and their small business or small subcategory classification. Describe the management approach to subcontracting with the small, small disadvantaged 8(a), Women-owned, HUBZoned, Veteran owned, and Service Disabled Veteran Owned companies and HBCU/MIs.
3. FORMAT:
   Contractor format is acceptable for the plan, reporting shall be in compliance with NFS 1852.219-75.
4 SUBMISSION:
   i. Subcontracting Plan:
      1. Initial – Due with proposal
      2. Approval – Prior to contract award
      3. Frequency – Subcontracting Plan to be updated in accordance with FAR 19.702.
   ii. Reports:
      1. All reports shall be submitted in accordance with FAR 52.219-9 and NFS 1852.219-75.
      2. In lieu of submitting a paper copy of the SF 294 and SF 295 Subcontracting Report for Individual Contracts. The contractor shall submit semi-annually and at contract completion to the NASA/JSC Contracting Officer electronically version of this data.
      3. Contractors are required to submit subcontracting data in the Electronic Subcontracting Reporting System (eSRS) which has replaced the paper Standard Forms 294 and 295 Summary Subcontracting Reports.
      4. All contractors are required to register and file both types of subcontracting reports using the eSRS system. The website to register is www.esrs.gov.
5 MAINTENANCE:: Revisions shall be incorporated by change page or complete reissue.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Training, Qualification, and Certification Program Work Instruction		**18**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

For the purpose of establishing policy regarding the training, qualification, and certification of personnel.

5. DRD Category: *(check one)*

- [ ] Technical
- [x] Administrative
- [ ] SR & QA

6. References *(Optional)*

ISO 4.18

7. Interrelationships *(e.g., with other DRDs) (Optional)*

SOW Section 4.18.1.1

8. Preparation Information *(Include complete instructions for document preparation)*

The interrelationships for this DRD are as follows:
DRL line item 3, Contract Operations Manual (COM)
DRL line item 7, Monthly Progress Report
DRL line item 12, Safety and Health Plan, JSC/LaRC
DRL line item 13, Safety and Health Plan, DFRC

The Contractor's format is acceptable.

1. The Contractor shall establish and maintain a *Training, Qualification, and Certification Program* to establish the Contractor's policy for training, qualification, and certification of all employees and shall include:

1.a A description of how the Contractor will establish and maintain a fully qualified work force throughout the term of the contract.

1.b The duty position of those personnel who will require training, qualification, or certification.

1.c Specific intervals of all training, qualifications, and certifications.

1.d Course training syllabus/Job Qualification Standards (JQS) on all training. Qualification standards shall contain levels of proficiency required for each type of training. Course training syllabus/Job Qualification Standards (JQS) shall be approved by the NASA Assistant Branch Chief, QA Section or their designated representative.

1.e OJT training checklists for all qualification requirements identified in this SOW. OJT training checklists shall be approved by the NASA Assistant Branch Chief, QA Section.

1.f Safety and health training required by Section 10, Personnel Requirements.

1.g Provide assessment or evaluations for improvement to the training process.

1.h Personnel evaluation criteria.

Task evaluations may be performed on personnel dispatched or assigned by a supervisor to perform the task unsupervised. OJT training checklists will be used as a standard for task evaluations.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Wage/Salary and Fringe Benefit Data	08/14/08	**19**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*

The Wage/Salary and Fringe Benefit Data will be used by the NASA Contracting Officer and the Contract Labor Relations Office to provide the necessary data for submittal of Standard Form (SF) 98, Notice of Intention to Make a Service Contract and Response to Notice, to the Department of Labor, and to assist in the monitoring of Service Contract Act compliance.

5. DRD Category: *(check one)*

- [ ] Technical
- [X] Administrative
- [ ] SR & QA

6. References *(Optional)*

FAR 52.222-41

7. Interrelationships *(e.g., with other DRDa) (Optional)*

SOW Section 5.3

8. Preparation Information *(Include complete instructions for document preparation)*

DISTRIBUTION: BJ4, Contracting Officer
BA2/Connie Pritchard, Contract Labor Relations Officer

INITIAL SUBMISSION: 30 Days following start of contract.

SUBMISSION FREQUENCY: Annually, 90 days prior to the anniversary date of the contract.

DATA PREPARATION INFORMATION:

SCOPE: The Wage/Salary and Fringe Benefit Data must be submitted by the Contractor, and any subcontractors which are subject to the provisions of the Service Contract Act, to the Contracting Federal Agency. This requirement is in accordance with FAR regulations 22.1007 and 22.1008.

APPLICABLE DOCUMENTS: None

CONTENTS: The Wage/Salary and Fringe Benefit Data should contain the data included in the enclosed DRD forms, titled "Wage/Salary Rate Information", "Fringe Benefit for Service Employees", and "Fringe Benefits per Collective Bargaining Agreement". The Wage/Salary Rate Information shall contain a listing of all exempt and nonexempt labor classifications working on the contract. Separate forms should be utilized for classifications working in different geographic areas and for each subcontractor. Wage determination numbers, appropriation labor organization names, and subcontractor names, must be reflected. All nonexempt labor classifications must be matched to wage determination classes or to Collective Bargaining Agreement (CBA) classifications if union represented employees are working on the contract. The current hourly rates should reflect the actual lowest and highest paid employees, along with a computed average rate. State the number of employees working in each category. Separate Fringe Benefit forms should be completed for nonrepresented classifications and for each separate CBA. A separate form must be completed for the prime and each subcontractor. Three copies and one electronic copy of each Collective Bargaining Agreement are required if organized labor is represented on your contract.

FORMAT: The Wage/Salary and Fringe Benefit Data should be in a format substantially the same as enclosed with this DRD. (Forms 2, 3, and 3A)

MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

JSC Form 2341 (Rev February 26, 2002) (MS Word August 1995) Previous editions are obsolete

Form 2

WORK SHEET FOR SF-98 DATA
WAGE RATE INFORMATION

CONTRACTORS LABOR CLASSIFICATION	WAGE DETERMINATION CLASSIFICATION	EXEMPT OF NONEXEMPT	UNION OR NONUNION	CURRENT HOURLY RATE	MYE NO OF EMPLOYEES
Illustration of required data:					
Project Manager	Not Required	E	N	$40.00	1
Supervisor	Not Required	E	N	$32.00	1
Electrical Engineer	Not Required	E	N	$26.50 - 30.00	3
Engineering Tech, Jr	Engineering Tech, I	N	N	$16.59 - 18.00	12
Electrical Technician	Electronics Tech Maint II	N	U	$21.33 - $24.00	4
Secretary	Secretary I	N	N	$14.67 - $17.50	2
File Clerk	General Clerk II	N	N	$12.97	1
Clerical Data Entry	Word Processor I	N	N	$11.45 - $12.90	3

Submit data in the above illustrated format for all labor classifications used, or planned to be used, on this contract. All nonexempt labor classifications must be matched to wage determination classes listed in the area wage determination or applicable collective bargaining agreement.

CONTRACTORS LABOR CLASSIFICATION	WAGE DETERMINATION CLASSIFICATION	EXEMPT OF NONEXEMPT	UNION OR NONUNION	CURRENT HOURLY RATE	MYE NO OF EMPLOYEES

WORK SHEET FOR SF-98 DATA
WAGE RATE INFORMATION

CONTRACTORS LABOR CLASSIFICATION	WAGE DETERMINATION CLASSIFICATION	EXEMPT OF NONEXEMPT	UNION OR NONUNION	CURRENT HOURLY RATE	MYE NO OF EMPLOYEES
Illustration of required data:					
Project Manager	Not Required	E	N	$35.00	1
Supervisor	Not Required	E	N	$28.00	1
Electrical Engineer	Not Required	E	N	$22.50 - $28.00	[illegible]
Technician, Jr	Elect Tech Main I	N	U	$13.38 - $15.50	1
Technician, Sr	Elect Tech Main II	N	U	$19.02 - $21.50	4
Secretary	Secretary I	N	N	$13.56 - $15.50	2
File Clerk	General Clerk II	N	N	$9.27	1
Clerical Data Entry	Word Processor I	N	N	$10.41 - $12.90	3

FRINGE BENEFITS PER COLLECTIVE BARGAINING AGREEMENT

For period from _____ to _____

Contractor:

Contract Number:

Number of employees in bargaining unit _____

Total number of employees on contract _____

1. Shift Differential: (Describe any pay over and above base rates for 2nd, 3rd, weekend, or other shifts.)

2. Health and Welfare Items and Other Fringe Items: (Indicate whether or not coverage is provided to employees and state current average hourly cost per employee covered by a Collective Bargaining Agreement.)

Item	Coverage Provided (Yes or No)	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition		
j. Other (Describe)		

3. Paid Absences:

	Service Requirement	Days per Year
a. Vacation		
b. Holiday		
c. Sick Leave		
d. Jury Leave		
e. Funeral Leave		
f. Military Leave		
g. Other (Describe)		

4. Severance Pay: (Briefly describe terms and amounts.)

5. Other Fringe Benefits: (Describe any other fringe benefits not included above, and show average hourly cost.)

6. Premium Pay: (Discuss all premium pay provisions not previously shown on this form.)

_____ _____
Signature of Company Representative Date

FRINGE BENEFITS FOR SERVICE EMPLOYEES

For Period from _____ to _____

Contractor:

Number of nonexempt employees on contract: _____

Total number of employees on contract: _____

1. Health and Welfare Items and Other Fringe Items:
(Indicate whether or not coverage is provided to employees and state current average hourly cost per service employee.)

Item	Coverage Provided	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical & Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

	Service Requirement	Days per Year
a. Vacation		
b. Holidays		
c. Sick Leave		
d. Jury Leave		
e. Funeral Leave		
f. Military Leave		
g. Other (Describe)		

_____ _____
Signature of Company Representative Date

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Reprocurement Data Package	03/17/09	**20**	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
Provide content and format requirements for delivery to NASA of all supporting documentation, equipment, data items and resource/cost information used to perform future reprocurement activities. **Note: This data may be disclosed to competing offerors in the future.**	☐ Technical ☒ Administrative ☐ SR & QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
Section H.	**Section 5.3**

8. Preparation information (Include complete instructions for document preparation)

SCOPE: Equipment and resource/cost information shall be submitted in accordance with thisData Requirement Description (DRD).

CONTENTS:

1. Labor resources:
   a. List of all direct labor skills by labor category, segregated by current work breakdown structure (WBS).
   b. An estimate of the number of indirect labor skills such as business or computer support normally charged through an indirect expense pool or through a service center expense.
   c. Current annual agerage wage rates for each labor category and when these wages were last adjusted for escalation. Also indicate whether any adjustments are projected to be made prior to contract expiration.
   d. The number of FTEs (Full Time Equivalents) and the estimated number of productive hours for each labor category currently on contract, segregated by WBS.
   e. Seniority level of all skills on the current contract.
2. Non-labor resources:
   a. List of all materials, equipment, travel, supplies, etc. and the incurred annual cost by WBS.
   b. Provide a discussion associated with the major items identified above, such as the materials estimate includes a prompt payment discount of TBD% due to large volume discounts you have negotiated with your vendors.
3. The projected liability cost associated with unused accrued paid leave associated with non-exempt personnel. Provide a copy of any Collective Bargaining Agreements in place and a current status of any upcoming negotiations with a union.
4. Equipment (additional information to that listed in #2 a., above):

List of all contractor-owned equipment (at the time of delivery of this DRD) being used in the performance of the contract. The list shall include:

   a. Description of the equipment (include make and model #).
   b. Location of the equipment (address, building and room #).
   c. Date purchased.
   d. Purchase price of the equipment.
   e. Current depreciated value of the equipment.

5. Items, for example, websites and internal work instructions developed for this contract that contain the following:
   a. Unique name of item.
   b. Version number, revision number, or release date as appropriate.
   c. Abstract describing purpose or use of item.
   d. Location of electronic copy (i.e. http://www.jsc.nasa.gov/ss/issapt.../)

FORMAT: Electronic format of all submissions shall be compatible with ODIN desktop standard applications or other standard tools as approved by the contracting officer. Organizational format of the supporting documentation shall be the contractor's format.

JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123. See work page for instructions.)

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No. (Procurement completes)
Environmental and Energy Consuming Product Compliance Reports		21	**NNJ08247027R/NNJ09JE44C**

4. Use *(Define need for, intended use of, and/or anticipated results of data)*	5. DRD Category: *(check one)*
Used to complete JSC's required annual report to NASA HQ on affirmative procurement, waste reduction, energy efficient product procurement, and ozone depleting substances.	☐ Technical X Administrative ☐ SR&QA

6. References *(Optional)*	7. Interrelationships *(e.g., with other DRDs) (Optional)*
JPR 8550.1, JPR 8553.1	

8. Preparation Information *(Include complete instructions for document preparation)*

I. Annual Affirmative Procurement Report

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information regarding the purchase by the Contractor (including subcontracts) of all products on the U. S. Environmental Protection Agency's Comprehensive Procurement Guideline list and items on the USDA Farm Bill Biobased list:

a. The total amount of each item purchased during the previous fiscal year in $,

b. The total amount of each listed item purchased during the previous fiscal year that contained at least the minimum recommended percenatges of recycled content or biobased content during the fiscal year in $,

c. The total amount of each listed item purchased during the previous fiscal year that contained some recycled content or biobased content but less than the minimum recommended percentages of recycled content or biobased content during the fiscal year in $,

d. The number of waivers and the name of the item each waiver was requested for submitted to the Environmental Office during the previous fiscal year,

e. The total amount purchased for each waivered item during the previous fiscal year in $, and

f. A narrative explanation of constraints for purchasing each item that did not meet affirmative procurement or biobased content requirements during the previous fiscal year.

II. Waste Reduction Activity Report

The Contractor shall track and report each January 15 to the JSC Environmental Office any new process improvements or programs undertaken by the Contractor (or subcontractors) that have contributed to waste reduction during the previous fiscal year. Waste reduction means increasing the percent of waste material diverted from the landfill. This may be accomplished through source reduction or by increasing reuse and recycling of items that would normally go to the landfill (trash). The information will be included in JSC's annual report to NASA HQ on waste reduction activities. Limit responses to one page or less per item. The response should include a description of the activity, the materials or wastes reduced, an estimated volume or weight of reduction, and a contact name and phone number for a person knowledgeable about the reduction activity.

FOR CONSTRUCTION/FACILITY MOD CONTRACTS ONLY

The Contractor shall track and report to the JSC Environmental Office the total weight in pounds of material sent to the landfill (this does not include shipments managed and paid for by the Environmental Office or their support contractor) and the total number of pounds of material recycled by media (scrap metal, wood, concrete, soil). The report is due within 30 days of completion of all waste generating and recycling activities or of final waste shipments associated with the project and in no case later than completion of the contract.

III. Annual Energy Efficiency Product Procurement Report

The Contractor shall report to the JSC Energy Manager, on January 15 of each year, information on purchases of energy consuming products made by the Contractor (including subcontracts) beginning upon contract start. This includes the purchase of premium efficiency motors and efficiency lighting covered by the Energy Policy Act of 2005. The report shall provide the following:

a. A list of all energy consuming products purchased during the previous fiscal year.

b. The total purchase cost of each item on the list.

c. A designation of which items were Energy Star or Federal Energy Management Program (FEMP)-sanctioned.

DRD Item 21, Environmental and Energy Consuming Product Compliance Reports

d. For each Energy Star or FEMP-sanctioned product purchased, provide:
   i. The simple payback value as determined by the contractor's life cycle cost analysis.
   ii. The annual savings in dollars and BTUs due to the purchase of the item
e. Metrics which show the effectiveness of the contractor's purchases
   i. Percentage of purchased products that are Energy Star and FEMP-sanctioned against the total number of energy consuming products purchased.
   ii. Total dollar value of the purchased products that are Energy Star and FEMP-sanctioned against the total dollar value of all energy consuming products purchased.

IV. Ozone Depleting Substances (ODS) Reports

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information for the previous fiscal year related to ODS equipment that the contractor purchases, owns, operates, maintains, or repairs on-site:

a. A list of the names of all EPA-Certified service technicians employed and their certification dates
b. A list of any ODS recovery/recycling equipment that will be used and copy of the 40 CFR 82.162 EPA registration
c. A list of any refrigeration/air conditioning units with a full charge of more than 50 pounds, not previously reported, including
   i. any identifying equipment numbers
   ii. the location of the equipment (building/room)
   iii. the owning organization or contract name and number
   iv. a narrative description of the equipment.
   v. refrigeration or air conditioning equipment with a full charge of > 50 pounds, permanently removed from service.

ATTACHMENT J-2

AWARD FEE EVALUATION PLAN

1.0 INTRODUCTION

In accordance with the provisions of NASA Award Fee Contracting Guide, FAR 16.405-2, and NFS 1816.405-270, an award fee evaluation procedure is hereby established for determination of award fee(s) payable under this contract. The payment of any award fee is contingent upon compliance with contractual requirements and performance to the degree specified in Appendix 1.

The Contractor's performance will be evaluated by the Government, in accordance with the procedures set forth below, at the expiration of each period specified in Appendix 2. The evaluation to be performed by the Government will be based on the Government's assessment of the Contractor's accomplishment of the various areas of work covered by the Statement of Work, in accordance with the criteria, weightings, procedures set forth below.

Performance determinations will be made at the end of each 6-month evaluation period as shown in Appendix 2.

2.0 ORGANIZATIONAL STRUCTURE

The following organizational structure is established for administering the award fee provisions of the contract.

a. Fee Determination Official (FDO) - The FDO, a senior NASA official, will determine the award fee earned and payable for each evaluation period.

b. Performance Evaluation Board (PEB) - A PEB, including a Chairman, will be appointed by the FDO. The Board will conduct an evaluation of the contractor's performance and submit a Performance Evaluation Report to the FDO covering the Board's findings and recommendations for each evaluation period.

c. Performance Monitors - One or more monitors will be assigned to each performance area to be evaluated. The assignment will be made by the PEB Chairman. The performance monitors will monitor, evaluate, and assess contractor performance in assigned areas. The performance monitors will prepare a Performance Monitor Report for the PEB.

3.0 EVALUATION PROCEDURES

a. A determination of the award fee earned for each evaluation period will be made by the FDO within 45 days after the end of the period. The method to be followed in monitoring, evaluation, and assessing contractor performance during the period, as well as for determining the award fee earned or paid, is described below.

b. On quarterly basis, monitors will evaluate and assess contractor performance, for the preceding quarter and discuss the results, both orally and in writing, with contractor personnel. This performance assessment will discuss specific areas, if any, where contractor performance has excelled and where future Contractor emphasis is necessary. The performance monitors will submit a six-month monitor report and make an oral presentation to the PEB at the end of each evaluation period.

c. The PEB will consider the performance monitor report and other performance information it obtains. The PEB will summarize its findings and

recommendations in the Performance Evaluation Board Report. The report will include an adjective rating and recommended overall performance score with supporting documentation.

d. The contractor may furnish a self-evaluation report within 10 calendar days after the expiration of each evaluation period to the Contracting Officer. The PEB will not submit its recommendation to the FDO until (1) the contractor's self-evaluation report has been received and considered, or (2) the contractor has provided written notification that a self-evaluation report will not be submitted, or (3) the 10-day period provided for submission of the report has expired.

e. The contractor will be notified by the Contracting Officer of the PEB evaluation and recommended rating and score and will be provided a summary of the Performance Evaluation Board Report. The contractor may be required to submit a corrective action plan by the PEB. The contractor may provide additional information for consideration by the FDO by notifying the Contracting Officer. Any additional information must be provided to the Contracting Officer within 7 calendar days of contractor receipt of the PEB recommended rating and score. This additional contractor information will be provided to the FDO by the Contracting Officer through the PEB Chairman.

f. The FDO will consider the recommendation of the PEB, information provided by the contractor, if any, and any other pertinent information in determining the amount of award fee for the period. The FDO's determination of the amount of award fee and the basis for this determination will be stated in a written Award Fee Determination.

g. The Contracting Officer will issue a unilateral modification to recognize the award fee earned by the contractor in accordance with Appendix 1 which includes adjective ratings, as well as, a numerical scoring system from 0 - 100. Earned award fee dollars are calculated by applying the total numerical score to available dollars. Notwithstanding the preceding, the contractor will not earn award fee for any evaluation period when the performance score is "poor/unsatisfactory" (less than 61).

4.0 AWARD FEE EVALUATION CRITERIA AND WEIGHTING

a. In evaluating the performance of the Contractor, the Government will evaluate major elements of Contractor performance including *Technical Performance, Management Performance, Small Business Subcontracting Goals, and Cost Performance.*

b. The criteria for evaluation of Contractor performance for determination of award fee are defined below. The technical, management, and cost evaluation criteria will be considered independently to determine the degree of success the Contractor has demonstrated in arriving at well-balanced contract performance. The specific weightings may be changed unilaterally by the Government, who will give the Contractor written notice prior to the beginning of the applicable evaluation period.

Evaluation Criteria	Weight
1. Technical Performance	45%
a. Quality and Quantity of Work	
b. Response and Schedules	
2. Management Performance	20%
a. Program Management	
b. Safety and Health Requirements	
3. Small Business Subcontracting Goals	10%
4. Cost Performance	25%

Cost performance evaluation shall be on the basis of the actual wrap rate compared to the contract baseline wrap rate. Wrap Rate is defined as follows. Total cost through G&A, and "Cost of Money", if applicable, less material, travel and their associated G&A, divided by total number of LOE hours expended during that evaluation period. Cost will never be below 25%.

The Contractor will be evaluated in the Award fee periods 1 and 5 for Phase-In/Phase-Out services, if appropriate.

A zero award fee may be given to a major safety violation or for a major breach of security during the performance period (see Section H, Clause H.9).

In order to earn any award fee, the Contractor must receive a numerical rating higher than 60. Appendix 1 hereto provides the performance level definition adjective ratings and corresponding numerical scores that will be used in evaluating performance. The numerical grade ranges corresponding to these adjective ratings, and their conversion to total percent of award fee earned are set forth in Appendix 3. Appendix 2 provides the distribution of the available maximum award fee for each evaluation period. Achievement of the performance goals set forth in Appendix C to the Statement of Work equates to an adjective rating of Good and a corresponding numerical score of 71 - 80.

5.0 SEPARATE AWARD FEE EVALUATIONS

Separate award fee evaluations and fee determinations will be made for JSC, DFRC, and LaRC.

Appendix 1

EVALUATION SCALE

ADJECTIVE RATING	RANGE OF POINTS	DESCRIPTION
Excellent	100 - 91	Of exceptional merit; exemplary performance in a timely, efficient and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
Very Good	90 - 81	Very effective performance, fully responsive to contract requirements; contract requirements accomplished in a timely, efficient, and economical manner for the most part; only minor deficiencies.
Good	80 - 71	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
Satisfactory	70 - 61	Meets or slightly exceeds minimum acceptable standards; adequate results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.
Poor/ Unsatisfactory	Less than 61	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.

ATTACHMENT J-2

Appendix 2

AWARD FEE EVALUATION PERIODS AND DISTRIBUTION

Period	Dates	Amount of Total Award Fee Available Johnson Space Center	Amount of Total Award Fee Available Dryden Flight Research Center	Amount of Total Award Fee Available Langley Research Center
BASE				
1	09/01/09-02/28/10			
OPTION 1				
2	03/01/10-08/31/10			
3	09/01/10-02/28/11	b4	b4	b4
OPTION 2				
4	03/01/11-08/31/11			
5	09/01/11-02/29/12			

ATTACHMENT J-2

Appendix 3
AWARD FEE SCORE CONVERSION CHART

POINTS	ADJECTIVE GRADE RANGE	% OF FEE
100		100.0
99		99.0
98		98.0
97		97.0
96		96.0
95	EXCELLENT	95.0
94		94.0
93		93.0
92		92.0
91		91.0
90		90.0
89		89.0
88		88.0
87		87.0
86	VERY GOOD	86.0
85		85.0
84		84.0
83		83.0
82		82.0
81		81.0
80		80.0
79		79.0
78		78.0
77		77.0
76		76.0
75	GOOD	75.0
74		74.0
73		73.0
72		72.0
71		71.0
70		70.0
69		69.0
68		68.0
67		67.0
66		66.0
65	SATISFACTORY	65.0
64		64.0
63		63.0
62		62.0
61		61.0
60 OR BELOW	UNSATISFACTORY	0

ATTACHMENT J-3

SAFETY AND HEALTH PLAN

TBD

bt

ATTACHMENT J-4

INSTALLATION ACCOUNTABLE GOVERNMENT PROPERTY

The listing of Installation Accountable Government Property (NASA Equipment Management System items) is hereby incorporated by reference.

See CD dated March 20, 2009.

ATTACHMENT J-5

GOVERNMENT PROPERTY

The listing of Government Property (including Bench Stock, Calibration Equipment, CECN Directory, Ground Support Equipment, Stock Number Directory Items, and Supply Point Items) is hereby incorporated by reference.

See CD dated March 20, 2009.

ATTACHMENT J-6

U. S. DEPARTMENT OF LABOR WAGE DETERMINATIONS

U. S Department of Labor Standard Form 98 and Wage Determinations included as follows are:

	Page No.
Standard Form (SF) 98 – Notice of Intention to Make a Service Contract and Response to Notice No. 62930	J-6-2
Wage Determination No. CBA-2005-3364, Rev. No. 1, 06/15/2007	J-6-5
Wage Determination No. CBA-2005-3365, Rev. No. 1, 08/08/2008	J-6-6
Wage Determination No. 2005-2516, Rev. No. 8, 07/23/2008	J-6-7
Wage Determination No. 2005-2044, Rev. No. 8, 05/29/2008	J-6-21
Wage Determination No. 2005-2544, Rev. No. 8, 05/29/2008	J-6-33
Wage Determination No. 2005-2512, Rev. No. 6, 07/23/2008	J-6-45
Wage Determination No. 2005-2048, Rev. No. 8, 05/29/2008	J-6-59

STANDARD FORM e98

January 1996

.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS
ADMINISTRATION

NOTICE OF INTENTION TO MAKE A SERVICE CONTRACT AND RESPONSE TO NOTICE

(See Instructions on Reverse)

1. NOTICE NO.
NASA
62930

MAIL TO:

Administrator
Wage and Hour Division
U.S. Department of Labor
Washington, DC 20210

2. Estimated solicitation date *(use numerals)*

Month	Day	Year
08	15	08

3. Estimated date bids or proposals to be opened or negotiations begun *(use numerals)*

Month	Day	Year
09	15	08

4. Date contract performance to begin *(use numerals)*

Month	Day	Year
03	01	09

5. PLACE(S) OF PERFORMANCE
Harris County, TX
El Paso County, TX
Kern County, CA
Los Angeles County, CA
Hampton County, VA

6. SERVICES TO BE PERFORMED *(describe)*

II: Maintenance & Modification of JSC Assigned Aircraft
Contract Year: 03/01/09 to 02/28/10

7. INFORMATION ABOUT PERFORMANCE

A. [X] Services now performed by a contractor
B. [ ] Services now performed by Federal employees
C. [ ] Services not presently being performed

8. IF BOX A IN ITEM 7 IS MARKED, COMPLETE ITEM 8 AS APPLICABLE

a. Name and address of incumbent contractor
CSC Applied Technologies, LLC
6500 West Freeway, Suite 600
rt Worth, TX 76116

b. Number(s) of any wage determination(s) in incumbent's contract
WD 05-2516, WD 05-2044, WD 05-2544, WD 05-2512, WD 05-2062, WD 2005-3364, WD 2005-3365

lame(s) of union(s) if services are being performed under collective bargaining greement(s). ***Important:*** Attach copies of current applicable collective bargaining agreements

IAM&AW, Local 1786, District 37
IAM&AW, Local 727P, District 725

9. OFFICIAL SUBMITTING NOTICE

SIGNED:	DATE
Original signed by	08/11/08
TYPE OR PRINT NAME	TELEPHONE NO.
Connie R. Pritchard Contract Labor Relations Officer	281-483-4121

10. TYPE OR PRINT NAME AND TITLE OF PERSON TO WHOM RESPONSE IS TO BE SENT
AND NAME AND ADDRESS OF DEPARTMENT OR AGENCY, BUREAU, DIVISION, ETC.

NASA Johnson Space Center
Attn: BA2/Connie R. Pritchard
2101 NASA Parkway
Houston, TX 77058

RESPONSE TO NOTICE
(by Department of Labor)

A. [X] The attached wage determination(s) listed below apply to procurement.
WD 05-2516 Rev 8, WD 05-2512 Rev 6, WD 05-2044 Rev 8, WD 05-2048 Rev 8, WD 05-2544 Rev 8
WD 2005-3364, WD 2005-3365

B. [ ] As of this date, no wage determination applicable to the specified locality and classes of employees is in effect.

C. [ ] From information supplied, the Service Contract Act does not apply *(see attached explanation)*.

D. [ ] Notice returned for additional information *(see attached explanation)*

Signed: _____
(U.S. Department of Labor)

_____
(Date)

3

COMPUTER-GENERATED 1/96

REGISTER OF WAGE DETERMINATION UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

William W. Gross
Director

Division of Wage Determinations

Wage Determination No.: CBA-2005-3364
Revision No.: 1
Date of Last Revision: 06/15/2007

State: Texas

Area: Harris

Employed on NASA Johnson Space Center contract for Aircraft Maintenance and Modification Program.

Collective Bargaining Agreement between contractor: CSC Applied Technoligies, LLC, and union: International Association of Machinists and Aerospace Workers, Local 1786, effective 9/16/2006 through 9/16/2009.

In accordance with Section 2(a) and 4(c) of the Service Contract Act, as amended, employees employed by the contractor(s) in performing services covered by the Collective Bargaining Agreement(s) are to be paid wage rates and fringe benefits set forth in the current collective bargaining agreement and modified extension agreement(s).

REGISTER OF WAGE DETERMINATION UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

William W. Gross
Director

Division of Wage Determinations

Wage Determination No.: CBA-2005-3365
Revision No.: 1
Date of Last Revision: 08/08/2008

State: California

Area: Kern

Employed on NASA Johnson Space Center contract for Aircraft Maintenance and Modification Program.

Collective Bargaining Agreement between contractor: CSC Applied Technologies, LLC, and union: International Association of Machinists and Aerospace Workers, Local 727P, effective 4/8/2008 through 4/7/2011.

In accordance with Section 2(a) and 4(c) of the Service Contract Act, as amended, employees employed by the contractor(s) in performing services covered by the Collective Bargaining Agreement(s) are to be paid wage rates and fringe benefits set forth in the current collective bargaining agreement and modified extension agreement(s).

REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor	U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON, D.C. 20210
Shirley F. Ebbesen, Director — Division of Wage Determinations	Wage Determination No.: 2005-2516 Revision No.: 8 Date of Last Revision: 07/23/2008

State: Texas

Area: Texas Counties of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Grimes, Harris, Houston, Jackson, Lavaca, Liberty, Madison, Matagorda, Montgomery, San Jacinto, Trinity, Walker, Waller, Washington, Wharton

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Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	14 .58
01012 - Accounting Clerk II	16 .38
01013 - Accounting Clerk III	18 .32
01020 - Administrative Assistant	23 .55
01040 - Court Reporter	21 .79
01051 - Data Entry Operator I	11 .67
01052 - Data Entry Operator II	14 .32
01060 - Dispatcher, Motor Vehicle	15 .40
01070 - Document Preparation Clerk	13 .41
01090 - Duplicating Machine Operator	13 .41
01111 - General Clerk I	10 .80
01112 - General Clerk II	12 .97
01113 - General Clerk III	14 .88
01120 - Housing Referral Assistant	20 .55
01141 - Messenger Courier	11 .95
01191 - Order Clerk I	13 .52

01192 - Order Clerk II	15 .24
01261 - Personnel Assistant (Employment) I	14 .74
01262 - Personnel Assistant (Employment) II	16 .50
01263 - Personnel Assistant (Employment) III	18 .38
01270 - Production Control Clerk	19 .10
01280 - Receptionist	12 .02
01290 - Rental Clerk	14 .75
01300 - Scheduler, Maintenance	15 .92
01311 - Secretary I	15 .92
01312 - Secretary II	17 .73
01313 - Secretary III	20 .55
01320 - Service Order Dispatcher	14 .63
01410 - Supply Technician	23 .55
01420 - Survey Worker	16 .59
01531 - Travel Clerk I	13 .17
01532 - Travel Clerk II	14 .22
01533 - Travel Clerk III	15 .20
01611 - Word Processor I	12 .27
01612 - Word Processor II	14 .75
01613 - Word Processor III	16 .59
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	24 .80
05010 - Automotive Electrician	22 .66
05040 - Automotive Glass Installer	21 .68
05070 - Automotive Worker	20 .91
05110 - Mobile Equipment Servicer	19 .27
05130 - Motor Equipment Metal Mechanic	24 .53
05160 - Motor Equipment Metal Worker	20 .91
05190 - Motor Vehicle Mechanic	24 .53
05220 - Motor Vehicle Mechanic Helper	18 .48
05250 - Motor Vehicle Upholstery Worker	19 .84
05280 - Motor Vehicle Wrecker	20 .91
05310 - Painter, Automotive	22 .66
05340 - Radiator Repair Specialist	22 .88
05370 - Tire Repairer	14 .40

05400 - Transmission Repair Specialist	25 .17
07000 - Food Preparation And Service Occupations	
07010 - Baker	10 .04
07041 - Cook I	8 .65
07042 - Cook II	9 .89
07070 - Dishwasher	8 .11
07130 - Food Service Worker	8 .87
07210 - Meat Cutter	12 .36
07260 - Waiter/Waitress	7 .97
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	16 .65
09040 - Furniture Handler	11 .74
09080 - Furniture Refinisher	16 .09
09090 - Furniture Refinisher Helper	13 .74
09110 - Furniture Repairer, Minor	15 .29
09130 - Upholsterer	16 .65
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9 .90
11060 - Elevator Operator	8 .17
11090 - Gardener	14 .52
11122 - Housekeeping Aide	8 .17
11150 - Janitor	8 .17
11210 - Laborer, Grounds Maintenance	10 .93
11240 - Maid or Houseman	7 .73
11260 - Pruner	8 .99
11270 - Tractor Operator	12 .82
11330 - Trail Maintenance Worker	10 .93
11360 - Window Cleaner	8 .92
12000 - Health Occupations	
12010 - Ambulance Driver	14 .22
12011 - Breath Alcohol Technician	15 .64
12012 - Certified Occupational Therapist Assistant	19 .58
12015 - Certified Physical Therapist Assistant	20 .48
12020 - Dental Assistant	15 .64
12025 - Dental Hygienist	32 .49
12030 - EKG Technician	23 .56

12035 - Electroneurodiagnostic Technologist	23 .56
12040 - Emergency Medical Technician	14 .22
12071 - Licensed Practical Nurse I	18 .29
12072 - Licensed Practical Nurse II	20 .52
12073 - Licensed Practical Nurse III	22 .09
12100 - Medical Assistant	12 .40
12130 - Medical Laboratory Technician	15 .25
12160 - Medical Record Clerk	13 .21
12190 - Medical Record Technician	16 .02
12195 - Medical Transcriptionist	16 .40
12210 - Nuclear Medicine Technologist	31 .94
12221 - Nursing Assistant I	7 .08
12222 - Nursing Assistant II	9 .82
12223 - Nursing Assistant III	10 .62
12224 - Nursing Assistant IV	12 .40
12235 - Optical Dispenser	15 .26
12236 - Optical Technician	13 .90
12250 - Pharmacy Technician	17 .44
12280 - Phlebotomist	13 .30
12305 - Radiologic Technologist	24 .27
12311 - Registered Nurse I	28 .55
12312 - Registered Nurse II	33 .22
12313 - Registered Nurse II, Specialist	35 .29
12314 - Registered Nurse III	42 .25
12315 - Registered Nurse III, Anesthetist	42 .25
12316 - Registered Nurse IV	50 .64
12317 - Scheduler (Drug and Alcohol Testing)	19 .86
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19 .30
13012 - Exhibits Specialist II	24 .74
13013 - Exhibits Specialist III	28 .94
13041 - Illustrator I	18 .07
13042 - Illustrator II	22 .56
13043 - Illustrator III	27 .38
13047 - Librarian	26 .69

13050 - Library Aide/Clerk	10 .00
13054 - Library Information Technology Systems Administrator	24 .09
13058 - Library Technician	14 .58
13061 - Media Specialist I	17 .39
13062 - Media Specialist II	19 .46
13063 - Media Specialist III	21 .68
13071 - Photographer I	13 .93
13072 - Photographer II	17 .60
13073 - Photographer III	22 .56
13074 - Photographer IV	26 .40
13075 - Photographer V	30 .06
13110 - Video Teleconference Technician	15 .21
14000 - Information Technology Occupations	
14041 - Computer Operator I	16 .26
14042 - Computer Operator II	18 .19
14043 - Computer Operator III	20 .28
14044 - Computer Operator IV	22 .60
14045 - Computer Operator V	24 .95
14071 - Computer Programmer I (1)	23 .23
14072 - Computer Programmer II (1)	
14073 - Computer Programmer III (1)	
14074 - Computer Programmer IV (1)	
14101 - Computer Systems Analyst I (1)	
14102 - Computer Systems Analyst II (1)	
14103 - Computer Systems Analyst III (1)	
14150 - Peripheral Equipment Operator	16 .26
14160 - Personal Computer Support Technician	22 .60
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	30 .06
15020 - Aircrew Training Devices Instructor (Rated)	36 .39
15030 - Air Crew Training Devices Instructor (Pilot)	43 .20
15050 - Computer Based Training Specialist / Instructor	28 .27
15060 - Educational Technologist	29 .02
15070 - Flight Instructor (Pilot)	43 .20

15080 - Graphic Artist	23 .11
15090 - Technical Instructor	20 .99
15095 - Technical Instructor/Course Developer	25 .68
15110 - Test Proctor	18 .43
15120 - Tutor	18 .43

16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations

16010 - Assembler	9 .03
16030 - Counter Attendant	9 .03
16040 - Dry Cleaner	10 .89
16070 - Finisher, Flatwork, Machine	9 .03
16090 - Presser, Hand	9 .03
16110 - Presser, Machine, Drycleaning	9 .03
16130 - Presser, Machine, Shirts	9 .03
16160 - Presser, Machine, Wearing Apparel, Laundry	9 .03
16190 - Sewing Machine Operator	12 .26
16220 - Tailor	13 .20
16250 - Washer, Machine	9 .91

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	18 .32
19040 - Tool And Die Maker	21 .12

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	12 .84
21030 - Material Coordinator	18 .58
21040 - Material Expediter	18 .58
21050 - Material Handling Laborer	12 .26
21071 - Order Filler	11 .46
21080 - Production Line Worker (Food Processing)	12 .84
21110 - Shipping Packer	13 .82
21130 - Shipping/Receiving Clerk	13 .82
21140 - Store Worker I	10 .53
21150 - Stock Clerk	14 .93
21210 - Tools And Parts Attendant	13 .58
21410 - Warehouse Specialist	12 .84

23000 - Mechanics And Maintenance And Repair Occupations

23010 - Aerospace Structural Welder	28 .07
23021 - Aircraft Mechanic I	26 .73
23022 - Aircraft Mechanic II	28 .07
23023 - Aircraft Mechanic III	29 .47
23040 - Aircraft Mechanic Helper	20 .93
23050 - Aircraft, Painter	24 .39
23060 - Aircraft Servicer	23 .28
23080 - Aircraft Worker	24 .53
23110 - Appliance Mechanic	17 .26
23120 - Bicycle Repairer	13 .91
23125 - Cable Splicer	24 .90
23130 - Carpenter, Maintenance	18 .58
23140 - Carpet Layer	16 .21
23160 - Electrician, Maintenance	26 .51
23181 - Electronics Technician Maintenance I	19 .33
23182 - Electronics Technician Maintenance II	23 .28
23183 - Electronics Technician Maintenance III	24 .48
23260 - Fabric Worker	15 .97
23290 - Fire Alarm System Mechanic	18 .14
23310 - Fire Extinguisher Repairer	14 .78
23311 - Fuel Distribution System Mechanic	19 .17
23312 - Fuel Distribution System Operator	16 .33
23370 - General Maintenance Worker	17 .01
23380 - Ground Support Equipment Mechanic	26 .73
23381 - Ground Support Equipment Servicer	23 .28
23382 - Ground Support Equipment Worker	24 .53
23391 - Gunsmith I	14 .78
23392 - Gunsmith II	17 .07
23393 - Gunsmith III	19 .16
23410 - Heating, Ventilation And Air-Conditioning Mechanic	20 .06
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	20 .93
23430 - Heavy Equipment Mechanic	17 .68

23440 - Heavy Equipment Operator	18 .14
23460 - Instrument Mechanic	21 .38
23465 - Laboratory/Shelter Mechanic	18 .23
23470 - Laborer	10 .97
23510 - Locksmith	17 .26
23530 - Machinery Maintenance Mechanic	20 .81
23550 - Machinist, Maintenance	20 .16
23580 - Maintenance Trades Helper	13 .58
23591 - Metrology Technician I	21 .38
23592 - Metrology Technician II	22 .31
23593 - Metrology Technician III	23 .25
23640 - Millwright	20 .48
23710 - Office Appliance Repairer	17 .26
23760 - Painter, Maintenance	17 .26
23790 - Pipefitter, Maintenance	19 .44
23810 - Plumber, Maintenance	18 .98
23820 - Pneudraulic Systems Mechanic	19 .16
23850 - Rigger	19 .47
23870 - Scale Mechanic	17 .07
23890 - Sheet-Metal Worker, Maintenance	18 .14
23910 - Small Engine Mechanic	17 .07
23931 - Telecommunications Mechanic I	23 .20
23932 - Telecommunications Mechanic II	24 .23
23950 - Telephone Lineman	23 .20
23960 - Welder, Combination, Maintenance	19 .16
23965 - Well Driller	19 .16
23970 - Woodcraft Worker	19 .16
23980 - Woodworker	13 .67
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	9 .68
24580 - Child Care Center Clerk	12 .06
24610 - Chore Aide	6 .55
24620 - Family Readiness And Support Services Coordinator	11 .43
24630 - Homemaker	15 .41

25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21 .14
25040 - Sewage Plant Operator	17 .00
25070 - Stationary Engineer	21 .14
25190 - Ventilation Equipment Tender	14 .33
25210 - Water Treatment Plant Operator	16 .65
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14 .82
27007 - Baggage Inspector	10 .14
27008 - Corrections Officer	18 .04
27010 - Court Security Officer	18 .04
27030 - Detection Dog Handler	17 .90
27040 - Detention Officer	18 .04
27070 - Firefighter	17 .90
27101 - Guard I	10 .14
27102 - Guard II	17 .90
27131 - Police Officer I	23 .33
27132 - Police Officer II	25 .99
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	10 .69
28042 - Carnival Equipment Repairer	11 .24
28043 - Carnival Equpment Worker	8 .25
28210 - Gate Attendant/Gate Tender	13 .90
28310 - Lifeguard	12 .38
28350 - Park Attendant (Aide)	15 .55
28510 - Recreation Aide/Health Facility Attendant	11 .35
28515 - Recreation Specialist	17 .83
28630 - Sports Official	12 .38
28690 - Swimming Pool Operator	15 .85
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	17 .78
29020 - Hatch Tender	17 .78
29030 - Line Handler	17 .78
29041 - Stevedore I	16 .63

29042 - Stevedore II	18 .93
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (2)	38 .22
30011 - Air Traffic Control Specialist, Station (HFO) (2)	26 .36
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	29 .02
30021 - Archeological Technician I	19 .34
30022 - Archeological Technician II	23 .15
30023 - Archeological Technician III	28 .91
30030 - Cartographic Technician	28 .67
30040 - Civil Engineering Technician	27 .30
30061 - Drafter/CAD Operator I	19 .18
30062 - Drafter/CAD Operator II	23 .15
30063 - Drafter/CAD Operator III	25 .80
30064 - Drafter/CAD Operator IV	29 .47
30081 - Engineering Technician I	16 .59
30082 - Engineering Technician II	20 .41
30083 - Engineering Technician III	22 .83
30084 - Engineering Technician IV	28 .28
30085 - Engineering Technician V	36 .15
30086 - Engineering Technician VI	41 .85
30090 - Environmental Technician	27 .24
30210 - Laboratory Technician	23 .55
30240 - Mathematical Technician	28 .67
30361 - Paralegal/Legal Assistant I	19 .94
30362 - Paralegal/Legal Assistant II	24 .71
30363 - Paralegal/Legal Assistant III	30 .22
30364 - Paralegal/Legal Assistant IV	35 .81
30390 - Photo-Optics Technician	28 .67
30461 - Technical Writer I	20 .79
30462 - Technical Writer II	25 .43
30463 - Technical Writer III	29 .06
30491 - Unexploded Ordnance (UXO) Technician I	24 .29
30492 - Unexploded Ordnance (UXO) Technician II	29 .39
30493 - Unexploded Ordnance (UXO) Technician III	35 .23
30494 - Unexploded (UXO) Safety Escort	24 .29

30495 - Unexploded (UXO) Sweep Personnel	24 .29
30620 - Weather Observer, Combined Upper Air Or Surface Programs (2)	23 .95
30621 - Weather Observer, Senior (2)	27 .71
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	10 .55
31030 - Bus Driver	15 .48
31043 - Driver Courier	12 .73
31260 - Parking and Lot Attendant	8 .34
31290 - Shuttle Bus Driver	13 .87
31310 - Taxi Driver	10 .49
31361 - Truckdriver, Light	13 .87
31362 - Truckdriver, Medium	17 .23
31363 - Truckdriver, Heavy	18 .99
31364 - Truckdriver, Tractor-Trailer	18 .99
99000 - Miscellaneous Occupations	
99030 - Cashier	9 .10
99050 - Desk Clerk	10 .65
99095 - Embalmer	21 .55
99251 - Laboratory Animal Caretaker I	9 .49
99252 - Laboratory Animal Caretaker II	10 .62
99310 - Mortician	24 .04
99410 - Pest Controller	14 .21
99510 - Photofinishing Worker	10 .43
99710 - Recycling Laborer	13 .60
99711 - Recycling Specialist	16 .58
99730 - Refuse Collector	12 .13
99810 - Sales Clerk	11 .41
99820 - School Crossing Guard	9 .05
99830 - Survey Party Chief	20 .96
99831 - Surveying Aide	14 .35
99832 - Surveying Technician	18 .13
99840 - Vending Machine Attendant	12 .00
99841 - Vending Machine Repairer	14 .41
99842 - Vending Machine Repairer Helper	12 .31

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

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 $3.24 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 5 years, and 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 the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A 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 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than $27.63 (or on a salary or fee basis at a rate not less than $455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds $27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate, then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:
(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;
(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
(3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND 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 employed (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).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** 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 $3.35 per week (or $.67 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.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at http://www.dol.gov/esa/whd/ or through the Wage Determinations On-Line (WDOL) Web site at http://wdol.gov/.

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(s) and computes a proposed rate(s).

2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), 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.

WD 05-2044 (Rev.-8) was first posted on www.wdol.gov on 06/03/2008
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REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT
STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Shirley F. Ebbesen
Director

Division of
Wage Determinations

Wage Determination No.: 2005-2044
Revision No.: 8
Date of Revision: 05/29/2008

State: California

Area: California County of Kern

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	14.60
01012 - Accounting Clerk II	16.38
01013 - Accounting Clerk III	18.50
01020 - Administrative Assistant	21.14
01040 - Court Reporter	24.94
01051 - Data Entry Operator I	12.59
01052 - Data Entry Operator II	14.48
01060 - Dispatcher, Motor Vehicle	16.05
01070 - Document Preparation Clerk	13.41
01090 - Duplicating Machine Operator	13.41
01111 - General Clerk I	11.87
01112 - General Clerk II	14.83
01113 - General Clerk III	16.65
01120 - Housing Referral Assistant	18.94
01141 - Messenger Courier	10.49
01191 - Order Clerk I	12.58
01192 - Order Clerk II	13.12
01261 - Personnel Assistant (Employment) I	14.21
01262 - Personnel Assistant (Employment) II	17.56
01263 - Personnel Assistant (Employment) III	18.77
01270 - Production Control Clerk	20.21
01280 - Receptionist	10.63
01290 - Rental Clerk	12.27
01300 - Scheduler, Maintenance	14.91
01311 - Secretary I	14.91
01312 - Secretary II	17.46

01313 - Secretary III	18.94
01320 - Service Order Dispatcher	15.21
01410 - Supply Technician	21.14
01420 - Survey Worker	16.34
01531 - Travel Clerk I	11.81
01532 - Travel Clerk II	12.43
01533 - Travel Clerk III	13.47
01611 - Word Processor I	13.43
01612 - Word Processor II	15.16
01613 - Word Processor III	17.03

05000 - Automotive Service Occupations

05005 - Automobile Body Repairer, Fiberglass	17.35
05010 - Automotive Electrician	18.21
05040 - Automotive Glass Installer	17.49
05070 - Automotive Worker	17.49
05110 - Mobile Equipment Servicer	15.80
05130 - Motor Equipment Metal Mechanic	18.95
05160 - Motor Equipment Metal Worker	17.49
05190 - Motor Vehicle Mechanic	18.95
05220 - Motor Vehicle Mechanic Helper	14.63
05250 - Motor Vehicle Upholstery Worker	16.96
05280 - Motor Vehicle Wrecker	17.49
05310 - Painter, Automotive	18.19
05340 - Radiator Repair Specialist	17.49
05370 - Tire Repairer	13.87
05400 - Transmission Repair Specialist	18.95

07000 - Food Preparation And Service Occupations

07010 - Baker	13.65
07041 - Cook I	12.27
07042 - Cook II	13.60
07070 - Dishwasher	9.15
07130 - Food Service Worker	9.28
07210 - Meat Cutter	13.45
07260 - Waiter/Waitress	8.77

09000 - Furniture Maintenance And Repair Occupations

09010 - Electrostatic Spray Painter	16.54
09040 - Furniture Handler	12.87
09080 - Furniture Refinisher	16.54
09090 - Furniture Refinisher Helper	13.30
09110 - Furniture Repairer, Minor	15.21
09130 - Upholsterer	16.54

11000 - General Services And Support Occupations

11030 - Cleaner, Vehicles	9.88
11060 - Elevator Operator	10.79
11090 - Gardener	12.33
11122 - Housekeeping Aide	10.44
11150 - Janitor	10.82

11210 - Laborer, Grounds Maintenance	11.82
11240 - Maid or Houseman	8.23
11260 - Pruner	10.79
11270 - Tractor Operator	14.02
11330 - Trail Maintenance Worker	11.82
11360 - Window Cleaner	11.93

12000 - Health Occupations

12010 - Ambulance Driver	18.87
12011 - Breath Alcohol Technician	17.45
12012 - Certified Occupational Therapist Assistant	23.94
12015 - Certified Physical Therapist Assistant	23.94
12020 - Dental Assistant	14.86
12025 - Dental Hygienist	37.74
12030 - EKG Technician	26.51
12035 - Electroneurodiagnostic Technologist	26.51
12040 - Emergency Medical Technician	18.87
12071 - Licensed Practical Nurse I	15.53
12072 - Licensed Practical Nurse II	17.45
12073 - Licensed Practical Nurse III	19.52
12100 - Medical Assistant	14.01
12130 - Medical Laboratory Technician	14.18
12160 - Medical Record Clerk	11.73
12190 - Medical Record Technician	13.12
12195 - Medical Transcriptionist	14.50
12210 - Nuclear Medicine Technologist	38.47
12221 - Nursing Assistant I	8.77
12222 - Nursing Assistant II	9.85
12223 - Nursing Assistant III	10.74
12224 - Nursing Assistant IV	12.08
12235 - Optical Dispenser	14.73
12236 - Optical Technician	15.53
12250 - Pharmacy Technician	16.58
12280 - Phlebotomist	15.00
12305 - Radiologic Technologist	23.57
12311 - Registered Nurse I	21.77
12312 - Registered Nurse II	26.65
12313 - Registered Nurse II, Specialist	26.65
12314 - Registered Nurse III	32.24
12315 - Registered Nurse III, Anesthetist	32.24
12316 - Registered Nurse IV	38.34
12317 - Scheduler (Drug and Alcohol Testing)	20.81

13000 - Information And Arts Occupations

13011 - Exhibits Specialist I	20.02
13012 - Exhibits Specialist II	24.81
13013 - Exhibits Specialist III	30.34
13041 - Illustrator I	20.02
13042 - Illustrator II	24.81
13043 - Illustrator III	30.34
13047 - Librarian	27.51

13050 - Library Aide/Clerk	13.31
13054 - Library Information Technology Systems Administrator	24.81
13058 - Library Technician	17.70
13061 - Media Specialist I	17.91
13062 - Media Specialist II	20.02
13063 - Media Specialist III	22.33
13071 - Photographer I	16.89
13072 - Photographer II	20.14
13073 - Photographer III	24.43
13074 - Photographer IV	28.63
13075 - Photographer V	34.64
13110 - Video Teleconference Technician	15.21

14000 - Information Technology Occupations

14041 - Computer Operator I	16.23
14042 - Computer Operator II	18.74
14043 - Computer Operator III	20.89
14044 - Computer Operator IV	23.23
14045 - Computer Operator V	25.71
14071 - Computer Programmer I (1)	25.17
14072 - Computer Programmer II (1)	
14073 - Computer Programmer III (1)	
14074 - Computer Programmer IV (1)	
14101 - Computer Systems Analyst I (1)	
14102 - Computer Systems Analyst II (1)	
14103 - Computer Systems Analyst III (1)	
14150 - Peripheral Equipment Operator	17.44
14160 - Personal Computer Support Technician	25.27

15000 - Instructional Occupations

15010 - Aircrew Training Devices Instructor (Non-Rated)	27.61
15020 - Aircrew Training Devices Instructor (Rated)	33.42
15030 - Air Crew Training Devices Instructor (Pilot)	36.76
15050 - Computer Based Training Specialist / Instructor	23.96
15060 - Educational Technologist	26.61
15070 - Flight Instructor (Pilot)	36.76
15080 - Graphic Artist	18.25
15090 - Technical Instructor	18.09
15095 - Technical Instructor/Course Developer	20.05
15110 - Test Proctor	16.40
15120 - Tutor	16.40

16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations

16010 - Assembler	8.75
16030 - Counter Attendant	8.75
16040 - Dry Cleaner	10.50
16070 - Finisher, Flatwork, Machine	8.75
16090 - Presser, Hand	8.75
16110 - Presser, Machine, Drycleaning	8.75
16130 - Presser, Machine, Shirts	8.75
16160 - Presser, Machine, Wearing Apparel, Laundry	8.75

16190 - Sewing Machine Operator	11.09
16220 - Tailor	11.70
16250 - Washer, Machine	9.32

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	20.53
19040 - Tool And Die Maker	25.23

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	11.77
21030 - Material Coordinator	20.21
21040 - Material Expediter	20.21
21050 - Material Handling Laborer	10.54
21071 - Order Filler	12.17
21080 - Production Line Worker (Food Processing)	12.32
21110 - Shipping Packer	13.93
21130 - Shipping/Receiving Clerk	13.93
21140 - Store Worker I	10.51
21150 - Stock Clerk	13.79
21210 - Tools And Parts Attendant	12.30
21410 - Warehouse Specialist	12.30

23000 - Mechanics And Maintenance And Repair Occupations

23010 - Aerospace Structural Welder	26.75
23021 - Aircraft Mechanic I	25.40
23022 - Aircraft Mechanic II	26.75
23023 - Aircraft Mechanic III	28.01
23040 - Aircraft Mechanic Helper	19.95
23050 - Aircraft, Painter	21.08
23060 - Aircraft Servicer	22.84
23080 - Aircraft Worker	23.85
23110 - Appliance Mechanic	13.87
23120 - Bicycle Repairer	13.87
23125 - Cable Splicer	25.93
23130 - Carpenter, Maintenance	20.52
23140 - Carpet Layer	16.93
23160 - Electrician, Maintenance	24.09
23181 - Electronics Technician Maintenance I	23.34
23182 - Electronics Technician Maintenance II	25.80
23183 - Electronics Technician Maintenance III	27.85
23260 - Fabric Worker	18.21
23290 - Fire Alarm System Mechanic	20.94
23310 - Fire Extinguisher Repairer	17.04
23311 - Fuel Distribution System Mechanic	22.62
23312 - Fuel Distribution System Operator	21.23
23370 - General Maintenance Worker	17.02
23380 - Ground Support Equipment Mechanic	25.40
23381 - Ground Support Equipment Servicer	22.84
23382 - Ground Support Equipment Worker	23.85
23391 - Gunsmith I	16.90
23392 - Gunsmith II	19.22

23393 - Gunsmith III	21.52
23410 - Heating, Ventilation And Air-Conditioning Mechanic	19.89
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	20.96
23430 - Heavy Equipment Mechanic	19.67
23440 - Heavy Equipment Operator	22.98
23460 - Instrument Mechanic	23.34
23465 - Laboratory/Shelter Mechanic	20.37
23470 - Laborer	11.28
23510 - Locksmith	19.56
23530 - Machinery Maintenance Mechanic	22.36
23550 - Machinist, Maintenance	20.44
23580 - Maintenance Trades Helper	13.30
23591 - Metrology Technician I	23.34
23592 - Metrology Technician II	24.59
23593 - Metrology Technician III	25.84
23640 - Millwright	20.57
23710 - Office Appliance Repairer	19.84
23760 - Painter, Maintenance	17.62
23790 - Pipefitter, Maintenance	19.79
23810 - Plumber, Maintenance	19.00
23820 - Pneudraulic Systems Mechanic	21.73
23850 - Rigger	22.39
23870 - Scale Mechanic	19.38
23890 - Sheet-Metal Worker, Maintenance	21.10
23910 - Small Engine Mechanic	16.93
23931 - Telecommunications Mechanic I	22.00
23932 - Telecommunications Mechanic II	23.96
23950 - Telephone Lineman	22.97
23960 - Welder, Combination, Maintenance	19.66
23965 - Well Driller	23.03
23970 - Woodcraft Worker	21.73
23980 - Woodworker	16.98
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	10.03
24580 - Child Care Center Clerk	9.07
24610 - Chore Aide	13.07
24620 - Family Readiness And Support Services Coordinator	13.33
24630 - Homemaker	16.67
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	26.37
25040 - Sewage Plant Operator	20.85
25070 - Stationary Engineer	26.37
25190 - Ventilation Equipment Tender	17.52
25210 - Water Treatment Plant Operator	20.85
27000 - Protective Service Occupations	
27004 - Alarm Monitor	15.30
27007 - Baggage Inspector	10.53

27008 - Corrections Officer	29.90
27010 - Court Security Officer	26.42
27030 - Detection Dog Handler	11.50
27040 - Detention Officer	29.90
27070 - Firefighter	26.42
27101 - Guard I	10.53
27102 - Guard II	11.50
27131 - Police Officer I	28.89
27132 - Police Officer II	32.11

28000 - Recreation Occupations

28041 - Carnival Equipment Operator	13.24
28042 - Carnival Equipment Repairer	14.27
28043 - Carnival Equpment Worker	8.73
28210 - Gate Attendant/Gate Tender	12.73
28310 - Lifeguard	11.01
28350 - Park Attendant (Aide)	14.24
28510 - Recreation Aide/Health Facility Attendant	10.09
28515 - Recreation Specialist	13.55
28630 - Sports Official	11.34
28690 - Swimming Pool Operator	6.93

29000 - Stevedoring/Longshoremen Occupational Services

29010 - Blocker And Bracer	21.29
29020 - Hatch Tender	21.29
29030 - Line Handler	21.29
29041 - Stevedore I	18.05
29042 - Stevedore II	22.57

30000 - Technical Occupations

30010 - Air Traffic Control Specialist, Center (HFO) (2)	33.96
30011 - Air Traffic Control Specialist, Station (HFO) (2)	23.42
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	25.79
30021 - Archeological Technician I	18.80
30022 - Archeological Technician II	21.03
30023 - Archeological Technician III	26.03
30030 - Cartographic Technician	29.70
30040 - Civil Engineering Technician	26.11
30061 - Drafter/CAD Operator I	19.91
30062 - Drafter/CAD Operator II	26.44
30063 - Drafter/CAD Operator III	26.80
30064 - Drafter/CAD Operator IV	32.98
30081 - Engineering Technician I	16.07
30082 - Engineering Technician II	19.17
30083 - Engineering Technician III	22.27
30084 - Engineering Technician IV	27.24
30085 - Engineering Technician V	33.34
30086 - Engineering Technician VI	38.36
30090 - Environmental Technician	22.13
30210 - Laboratory Technician	21.92
30240 - Mathematical Technician	27.58

30361 - Paralegal/Legal Assistant I	19.27
30362 - Paralegal/Legal Assistant II	24.50
30363 - Paralegal/Legal Assistant III	29.97
30364 - Paralegal/Legal Assistant IV	36.24
30390 - Photo-Optics Technician	27.58
30461 - Technical Writer I	26.28
30462 - Technical Writer II	32.15
30463 - Technical Writer III	38.65
30491 - Unexploded Ordnance (UXO) Technician I	21.58
30492 - Unexploded Ordnance (UXO) Technician II	26.11
30493 - Unexploded Ordnance (UXO) Technician III	31.30
30494 - Unexploded (UXO) Safety Escort	21.58
30495 - Unexploded (UXO) Sweep Personnel	21.58
30620 - Weather Observer, Combined Upper Air or Surface Programs (3)	22.68
30621 - Weather Observer, Senior (3)	25.20

31000 - Transportation/Mobile Equipment Operation Occupations

31020 - Bus Aide	9.39
31030 - Bus Driver	13.77
31043 - Driver Courier	12.24
31260 - Parking and Lot Attendant	9.34
31290 - Shuttle Bus Driver	12.88
31310 - Taxi Driver	10.82
31361 - Truckdriver, Light	12.88
31362 - Truckdriver, Medium	16.20
31363 - Truckdriver, Heavy	17.82
31364 - Truckdriver, Tractor-Trailer	17.82

99000 - Miscellaneous Occupations

99030 - Cashier	10.75
99050 - Desk Clerk	8.83
99095 - Embalmer	21.58
99251 - Laboratory Animal Caretaker I	9.15
99252 - Laboratory Animal Caretaker II	9.70
99310 - Mortician	21.58
99410 - Pest Controller	12.64
99510 - Photofinishing Worker	11.57
99710 - Recycling Laborer	17.65
99711 - Recycling Specialist	20.67
99730 - Refuse Collector	16.10
99810 - Sales Clerk	10.94
99820 - School Crossing Guard	10.62
99830 - Survey Party Chief	23.38
99831 - Surveying Aide	15.51
99832 - Surveying Technician	21.25
99840 - Vending Machine Attendant	12.11
99841 - Vending Machine Repairer	15.17
99842 - Vending Machine Repairer Helper	13.05

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

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 $3.24 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 5 years, and 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 the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A 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 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than $27.63 (or on a salary or fee basis at a rate not less than $455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds $27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate, then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;

(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(3) The design, documentation, testing, creation or modification of computer

programs related to machine operating systems; or

(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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) AIR TRAFFIC CONTROLLERS AND 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 employed (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).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** 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 $3.35 per week (or $.67 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.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at http://www.dol.gov/esa/whd/ or through the Wage Determinations On-Line (WDOL) Web site at http://wdol.gov/.

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.

WD 05-2544 (Rev.-8) was first posted on www.wdol.gov on 06/03/2008
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REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT
STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Shirley F. Ebbesen
Director

Division of
Wage Determinations

Wage Determination No.: 2005-2544
Revision No.: 8
Date of Revision: 05/29/2008

States: North Carolina, Virginia

Area: North Carolina Counties of Camden, Chowan, Currituck, Gates, Pasquotank, Perquimans
Virginia Counties of Chesapeake, Gloucester, Hampton, Isle of Wight, James City, Mathews, Newport News, Norfolk, Poquoson, Portsmouth, Southampton, Suffolk, Surry, Virginia Beach, Williamsburg, York

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Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	12.14
01012 - Accounting Clerk II	14.55
01013 - Accounting Clerk III	16.28
01020 - Administrative Assistant	22.28
01040 - Court Reporter	16.65
01051 - Data Entry Operator I	11.04
01052 - Data Entry Operator II	13.90
01060 - Dispatcher, Motor Vehicle	14.55
01070 - Document Preparation Clerk	12.01
01090 - Duplicating Machine Operator	12.01
01111 - General Clerk I	10.98
01112 - General Clerk II	13.37
01113 - General Clerk III	14.95
01120 - Housing Referral Assistant	19.00
01141 - Messenger Courier	10.41
01191 - Order Clerk I	13.46
01192 - Order Clerk II	17.61
01261 - Personnel Assistant (Employment) I	15.12
01262 - Personnel Assistant (Employment) II	16.92
01263 - Personnel Assistant (Employment) III	18.86
01270 - Production Control Clerk	20.57
01280 - Receptionist	11.47

01290 - Rental Clerk	12.86
01300 - Scheduler, Maintenance	14.59
01311 - Secretary I	14.59
01312 - Secretary II	16.65
01313 - Secretary III	19.00
01320 - Service Order Dispatcher	13.97
01410 - Supply Technician	22.28
01420 - Survey Worker	13.82
01531 - Travel Clerk I	10.83
01532 - Travel Clerk II	11.57
01533 - Travel Clerk III	12.26
01611 - Word Processor I	13.03
01612 - Word Processor II	14.63
01613 - Word Processor III	16.36
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	21.34
05010 - Automotive Electrician	19.12
05040 - Automotive Glass Installer	18.26
05070 - Automotive Worker	18.26
05110 - Mobile Equipment Servicer	16.50
05130 - Motor Equipment Metal Mechanic	20.02
05160 - Motor Equipment Metal Worker	18.26
05190 - Motor Vehicle Mechanic	20.02
05220 - Motor Vehicle Mechanic Helper	15.57
05250 - Motor Vehicle Upholstery Worker	17.36
05280 - Motor Vehicle Wrecker	18.26
05310 - Painter, Automotive	19.12
05340 - Radiator Repair Specialist	17.36
05370 - Tire Repairer	13.37
05400 - Transmission Repair Specialist	20.02
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.91
07041 - Cook I	8.79
07042 - Cook II	9.71
07070 - Dishwasher	7.85
07130 - Food Service Worker	8.45
07210 - Meat Cutter	13.94
07260 - Waiter/Waitress	7.80
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	21.23
09040 - Furniture Handler	13.34
09080 - Furniture Refinisher	16.03
09090 - Furniture Refinisher Helper	13.05
09110 - Furniture Repairer, Minor	14.56
09130 - Upholsterer	16.67
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	10.37

11060 - Elevator Operator	10.37
11090 - Gardener	12.34
11122 - Housekeeping Aide	11.40
11150 - Janitor	11.92
11210 - Laborer, Grounds Maintenance	10.65
11240 - Maid or Houseman	7.90
11260 - Pruner	11.63
11270 - Tractor Operator	12.45
11330 - Trail Maintenance Worker	10.65
11360 - Window Cleaner	12.64

12000 - Health Occupations

12010 - Ambulance Driver	15.31
12011 - Breath Alcohol Technician	15.31
12012 - Certified Occupational Therapist Assistant	20.56
12015 - Certified Physical Therapist Assistant	20.57
12020 - Dental Assistant	12.88
12025 - Dental Hygienist	29.49
12030 - EKG Technician	21.24
12035 - Electroneurodiagnostic Technologist	21.24
12040 - Emergency Medical Technician	15.31
12071 - Licensed Practical Nurse I	13.14
12072 - Licensed Practical Nurse II	14.70
12073 - Licensed Practical Nurse III	16.39
12100 - Medical Assistant	11.14
12130 - Medical Laboratory Technician	15.35
12160 - Medical Record Clerk	12.21
12190 - Medical Record Technician	13.66
12195 - Medical Transcriptionist	13.28
12210 - Nuclear Medicine Technologist	27.05
12221 - Nursing Assistant I	8.86
12222 - Nursing Assistant II	9.95
12223 - Nursing Assistant III	10.86
12224 - Nursing Assistant IV	11.17
12235 - Optical Dispenser	15.88
12236 - Optical Technician	15.08
12250 - Pharmacy Technician	14.32
12280 - Phlebotomist	12.32
12305 - Radiologic Technologist	22.61
12311 - Registered Nurse I	21.69
12312 - Registered Nurse II	26.21
12313 - Registered Nurse II, Specialist	26.21
12314 - Registered Nurse III	31.71
12315 - Registered Nurse III, Anesthetist	31.71
12316 - Registered Nurse IV	38.05
12317 - Scheduler (Drug and Alcohol Testing)	17.64

13000 - Information And Arts Occupations

13011 - Exhibits Specialist I	19.40
13012 - Exhibits Specialist II	23.89
13013 - Exhibits Specialist III	26.54

13041 - Illustrator I	20.00
13042 - Illustrator II	24.56
13043 - Illustrator III	29.67
13047 - Librarian	32.67
13050 - Library Aide/Clerk	10.16
13054 - Library Information Technology Systems Administrator	20.83
13058 - Library Technician	14.81
13061 - Media Specialist I	15.16
13062 - Media Specialist II	16.96
13063 - Media Specialist III	18.91
13071 - Photographer I	12.66
13072 - Photographer II	16.78
13073 - Photographer III	20.39
13074 - Photographer IV	22.64
13075 - Photographer V	27.40
13110 - Video Teleconference Technician	15.57

14000 - Information Technology Occupations

14041 - Computer Operator I	15.19
14042 - Computer Operator II	16.99
14043 - Computer Operator III	18.95
14044 - Computer Operator IV	21.05
14045 - Computer Operator V	23.31
14071 - Computer Programmer I (1)	19.54
14072 - Computer Programmer II (1)	22.11
14073 - Computer Programmer III (1)	26.48
14074 - Computer Programmer IV (1)	
14101 - Computer Systems Analyst I (1)	
14102 - Computer Systems Analyst II (1)	
14103 - Computer Systems Analyst III (1)	
14150 - Peripheral Equipment Operator	15.19
14160 - Personal Computer Support Technician	21.05

15000 - Instructional Occupations

15010 - Aircrew Training Devices Instructor (Non-Rated)	30.14
15020 - Aircrew Training Devices Instructor (Rated)	36.47
15030 - Air Crew Training Devices Instructor (Pilot)	39.70
15050 - Computer Based Training Specialist / Instructor	29.49
15060 - Educational Technologist	27.30
15070 - Flight Instructor (Pilot)	39.70
15080 - Graphic Artist	22.07
15090 - Technical Instructor	20.43
15095 - Technical Instructor/Course Developer	24.99
15110 - Test Proctor	17.61
15120 - Tutor	17.61

16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations

16010 - Assembler	8.00
16030 - Counter Attendant	8.00
16040 - Dry Cleaner	9.98
16070 - Finisher, Flatwork, Machine	8.00

16090 - Presser, Hand	8.00
16110 - Presser, Machine, Drycleaning	8.00
16130 - Presser, Machine, Shirts	8.00
16160 - Presser, Machine, Wearing Apparel, Laundry	8.00
16190 - Sewing Machine Operator	10.71
16220 - Tailor	11.46
16250 - Washer, Machine	8.66

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	21.06
19040 - Tool And Die Maker	23.33

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	14.97
21030 - Material Coordinator	20.57
21040 - Material Expediter	20.57
21050 - Material Handling Laborer	10.63
21071 - Order Filler	10.33
21080 - Production Line Worker (Food Processing)	14.97
21110 - Shipping Packer	12.79
21130 - Shipping/Receiving Clerk	12.79
21140 - Store Worker I	11.63
21150 - Stock Clerk	14.55
21210 - Tools And Parts Attendant	14.97
21410 - Warehouse Specialist	14.97

23000 - Mechanics And Maintenance And Repair Occupations

23010 - Aerospace Structural Welder	22.99
23021 - Aircraft Mechanic I	22.03
23022 - Aircraft Mechanic II	22.99
23023 - Aircraft Mechanic III	23.93
23040 - Aircraft Mechanic Helper	16.24
23050 - Aircraft, Painter	20.06
23060 - Aircraft Servicer	18.10
23080 - Aircraft Worker	19.04
23110 - Appliance Mechanic	18.33
23120 - Bicycle Repairer	14.43
23125 - Cable Splicer	22.35
23130 - Carpenter, Maintenance	18.33
23140 - Carpet Layer	17.61
23160 - Electrician, Maintenance	20.86
23181 - Electronics Technician Maintenance I	20.64
23182 - Electronics Technician Maintenance II	21.71
23183 - Electronics Technician Maintenance III	22.75
23260 - Fabric Worker	16.32
23290 - Fire Alarm System Mechanic	19.21
23310 - Fire Extinguisher Repairer	15.78
23311 - Fuel Distribution System Mechanic	19.84
23312 - Fuel Distribution System Operator	16.35
23370 - General Maintenance Worker	17.43
23380 - Ground Support Equipment Mechanic	22.03

23381 - Ground Support Equipment Servicer	18.10
23382 - Ground Support Equipment Worker	19.04
23391 - Gunsmith I	15.72
23392 - Gunsmith II	18.33
23393 - Gunsmith III	19.21
23410 - Heating, Ventilation And Air-Conditioning Mechanic	19.21
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	20.05
23430 - Heavy Equipment Mechanic	19.39
23440 - Heavy Equipment Operator	19.21
23460 - Instrument Mechanic	19.12
23465 - Laboratory/Shelter Mechanic	18.33
23470 - Laborer	10.30
23510 - Locksmith	18.17
23530 - Machinery Maintenance Mechanic	20.28
23550 - Machinist, Maintenance	19.21
23580 - Maintenance Trades Helper	14.81
23591 - Metrology Technician I	19.12
23592 - Metrology Technician II	20.04
23593 - Metrology Technician III	20.87
23640 - Millwright	25.30
23710 - Office Appliance Repairer	17.36
23760 - Painter, Maintenance	18.33
23790 - Pipefitter, Maintenance	19.54
23810 - Plumber, Maintenance	18.65
23820 - Pneudraulic Systems Mechanic	19.21
23850 - Rigger	18.97
23870 - Scale Mechanic	17.43
23890 - Sheet-Metal Worker, Maintenance	19.21
23910 - Small Engine Mechanic	16.68
23931 - Telecommunications Mechanic I	22.00
23932 - Telecommunications Mechanic II	24.02
23950 - Telephone Lineman	21.20
23960 - Welder, Combination, Maintenance	18.19
23965 - Well Driller	19.22
23970 - Woodcraft Worker	19.21
23980 - Woodworker	15.72

24000 - Personal Needs Occupations

24570 - Child Care Attendant	8.16
24580 - Child Care Center Clerk	12.63
24610 - Chore Aide	7.55
24620 - Family Readiness And Support Services Coordinator	12.72
24630 - Homemaker	13.34

25000 - Plant And System Operations Occupations

25010 - Boiler Tender	20.80
25040 - Sewage Plant Operator	19.08
25070 - Stationary Engineer	20.80
25190 - Ventilation Equipment Tender	15.80
25210 - Water Treatment Plant Operator	19.08

27000 - Protective Service Occupations

27004 - Alarm Monitor	15.48
27007 - Baggage Inspector	10.06
27008 - Corrections Officer	16.30
27010 - Court Security Officer	18.25
27030 - Detection Dog Handler	13.92
27040 - Detention Officer	16.30
27070 - Firefighter	16.24
27101 - Guard I	10.06
27102 - Guard II	13.92
27131 - Police Officer I	20.46
27132 - Police Officer II	22.73

28000 - Recreation Occupations

28041 - Carnival Equipment Operator	10.43
28042 - Carnival Equipment Repairer	10.95
28043 - Carnival Equpment Worker	7.43
28210 - Gate Attendant/Gate Tender	13.31
28310 - Lifeguard	11.90
28350 - Park Attendant (Aide)	14.88
28510 - Recreation Aide/Health Facility Attendant	10.86
28515 - Recreation Specialist	17.97
28630 - Sports Official	11.85
28690 - Swimming Pool Operator	15.57

29000 - Stevedoring/Longshoremen Occupational Services

29010 - Blocker And Bracer	19.07
29020 - Hatch Tender	19.07
29030 - Line Handler	19.07
29041 - Stevedore I	18.13
29042 - Stevedore II	20.05

30000 - Technical Occupations

30010 - Air Traffic Control Specialist, Center (HFO) (2)	33.96
30011 - Air Traffic Control Specialist, Station (HFO) (2)	23.42
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	25.79
30021 - Archeological Technician I	16.62
30022 - Archeological Technician II	17.30
30023 - Archeological Technician III	22.85
30030 - Cartographic Technician	24.93
30040 - Civil Engineering Technician	22.86
30061 - Drafter/CAD Operator I	17.14
30062 - Drafter/CAD Operator II	19.17
30063 - Drafter/CAD Operator III	21.38
30064 - Drafter/CAD Operator IV	26.30
30081 - Engineering Technician I	16.02
30082 - Engineering Technician II	17.99
30083 - Engineering Technician III	20.54
30084 - Engineering Technician IV	24.93
30085 - Engineering Technician V	30.49
30086 - Engineering Technician VI	36.89

30090 - Environmental Technician	19.88
30210 - Laboratory Technician	18.55
30240 - Mathematical Technician	24.93
30361 - Paralegal/Legal Assistant I	14.67
30362 - Paralegal/Legal Assistant II	18.17
30363 - Paralegal/Legal Assistant III	22.23
30364 - Paralegal/Legal Assistant IV	26.89
30390 - Photo-Optics Technician	24.93
30461 - Technical Writer I	21.00
30462 - Technical Writer II	25.67
30463 - Technical Writer III	31.06
30491 - Unexploded Ordnance (UXO) Technician I	21.58
30492 - Unexploded Ordnance (UXO) Technician II	26.11
30493 - Unexploded Ordnance (UXO) Technician III	31.30
30494 - Unexploded (UXO) Safety Escort	21.58
30495 - Unexploded (UXO) Sweep Personnel	21.58
30620 - Weather Observer, Combined Upper Air or Surface Programs (2)	21.38
30621 - Weather Observer, Senior (2)	23.16

31000 - Transportation/Mobile Equipment Operation Occupations

31020 - Bus Aide	11.13
31030 - Bus Driver	14.07
31043 - Driver Courier	13.40
31260 - Parking and Lot Attendant	8.28
31290 - Shuttle Bus Driver	14.22
31310 - Taxi Driver	10.29
31361 - Truckdriver, Light	14.22
31362 - Truckdriver, Medium	15.59
31363 - Truckdriver, Heavy	17.75
31364 - Truckdriver, Tractor-Trailer	17.75

99000 - Miscellaneous Occupations

99030 - Cashier	8.48
99050 - Desk Clerk	8.83
99095 - Embalmer	22.34
99251 - Laboratory Animal Caretaker I	9.61
99252 - Laboratory Animal Caretaker II	10.20
99310 - Mortician	27.96
99410 - Pest Controller	14.23
99510 - Photofinishing Worker	11.34
99710 - Recycling Laborer	14.96
99711 - Recycling Specialist	16.88
99730 - Refuse Collector	13.79
99810 - Sales Clerk	10.13
99820 - School Crossing Guard	10.58
99830 - Survey Party Chief	16.54
99831 - Surveying Aide	10.33
99832 - Surveying Technician	15.04
99840 - Vending Machine Attendant	12.92
99841 - Vending Machine Repairer	15.13

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

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 $3.24 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, and 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 the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A 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 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than $27.63 (or on a salary or fee basis at a rate not less than $455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds $27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate, then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;

(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND 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 employed (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).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** 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 main tenance at a rate of $3.35 per week (or $.67 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.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at http://www.dol.gov/esa/whd/ or through the Wage Determinations On-Line (WDOL) Web site at http://wdol.gov/.

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.

REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor	U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON, D.C. 20210
Shirley F. Ebbesen, Director — Division of Wage Determinations	Wage Determination No.: 2005-2512 Revision No.: 6 Date of Last Revision: 07/23/2008

States: New Mexico, Texas

Area: New Mexico Counties of Chaves, Dona Ana, Eddy, Grant, Hidalgo, Lincoln, Luna, Otero, Sierra
Texas Counties of Culberson, El Paso, Hudspeth

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	11 .59
01012 - Accounting Clerk II	13 .49
01013 - Accounting Clerk III	15 .70
01020 - Administrative Assistant	17 .23
01040 - Court Reporter	12 .97
01051 - Data Entry Operator I	8 .70
01052 - Data Entry Operator II	10 .07
01060 - Dispatcher, Motor Vehicle	13 .09
01070 - Document Preparation Clerk	11 .19
01090 - Duplicating Machine Operator	11 .19
01111 - General Clerk I	9 .22
01112 - General Clerk II	10 .10
01113 - General Clerk III	11 .29
01120 - Housing Referral Assistant	14 .58
01141 - Messenger Courier	7 .85
01191 - Order Clerk I	9 .78
01192 - Order Clerk II	11 .20

01261 - Personnel Assistant (Employment) I	11 .64
01262 - Personnel Assistant (Employment) II	13 .33
01263 - Personnel Assistant (Employment) III	14 .54
01270 - Production Control Clerk	13 .50
01280 - Receptionist	8 .71
01290 - Rental Clerk	9 .31
01300 - Scheduler, Maintenance	10 .66
01311 - Secretary I	10 .66
01312 - Secretary II	12 .97
01313 - Secretary III	14 .58
01320 - Service Order Dispatcher	10 .66
01410 - Supply Technician	17 .23
01420 - Survey Worker	12 .88
01531 - Travel Clerk I	10 .63
01532 - Travel Clerk II	11 .36
01533 - Travel Clerk III	12 .10
01611 - Word Processor I	11 .23
01612 - Word Processor II	12 .61
01613 - Word Processor III	14 .11
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	15 .63
05010 - Automotive Electrician	14 .67
05040 - Automotive Glass Installer	13 .69
05070 - Automotive Worker	13 .69
05110 - Mobile Equipment Servicer	11 .73
05130 - Motor Equipment Metal Mechanic	15 .63
05160 - Motor Equipment Metal Worker	13 .69
05190 - Motor Vehicle Mechanic	16 .49
05220 - Motor Vehicle Mechanic Helper	10 .75
05250 - Motor Vehicle Upholstery Worker	12 .70
05280 - Motor Vehicle Wrecker	13 .69
05310 - Painter, Automotive	14 .67
05340 - Radiator Repair Specialist	13 .69
05370 - Tire Repairer	11 .33
05400 - Transmission Repair Specialist	15 .63

07000 - Food Preparation And Service Occupations

07010 - Baker	10 .41
07041 - Cook I	9 .61
07042 - Cook II	11 .21
07070 - Dishwasher	7 .01
07130 - Food Service Worker	7 .05
07210 - Meat Cutter	10 .41
07260 - Waiter/Waitress	7 .02

09000 - Furniture Maintenance And Repair Occupations

09010 - Electrostatic Spray Painter	14 .67
09040 - Furniture Handler	8 .80
09080 - Furniture Refinisher	14 .67
09090 - Furniture Refinisher Helper	10 .75
09110 - Furniture Repairer, Minor	11 .95
09130 - Upholsterer	14 .67

11000 - General Services And Support Occupations

11030 - Cleaner, Vehicles	7 .40
11060 - Elevator Operator	7 .25
11090 - Gardener	10 .97
11122 - Housekeeping Aide	7 .25
11150 - Janitor	7 .81
11210 - Laborer, Grounds Maintenance	8 .22
11240 - Maid or Houseman	6 .60
11260 - Pruner	7 .43
11270 - Tractor Operator	10 .06
11330 - Trail Maintenance Worker	8 .22
11360 - Window Cleaner	8 .78

12000 - Health Occupations

12010 - Ambulance Driver	12 .30
12011 - Breath Alcohol Technician	13 .58
12012 - Certified Occupational Therapist Assistant	17 .99
12015 - Certified Physical Therapist Assistant	18 .95
12020 - Dental Assistant	12 .22
12025 - Dental Hygienist	24 .36

12030 - EKG Technician	22 .24
12035 - Electroneurodiagnostic Technologist	22 .24
12040 - Emergency Medical Technician	12 .30
12071 - Licensed Practical Nurse I	14 .72
12072 - Licensed Practical Nurse II	16 .48
12073 - Licensed Practical Nurse III	18 .37
12100 - Medical Assistant	10 .35
12130 - Medical Laboratory Technician	12 .62
12160 - Medical Record Clerk	11 .83
12190 - Medical Record Technician	14 .22
12195 - Medical Transcriptionist	13 .04
12210 - Nuclear Medicine Technologist	31 .88
12221 - Nursing Assistant I	8 .17
12222 - Nursing Assistant II	9 .18
12223 - Nursing Assistant III	10 .02
12224 - Nursing Assistant IV	11 .25
12235 - Optical Dispenser	9 .94
12236 - Optical Technician	8 .88
12250 - Pharmacy Technician	12 .19
12280 - Phlebotomist	12 .29
12305 - Radiologic Technologist	23 .81
12311 - Registered Nurse I	21 .71
12312 - Registered Nurse II	25 .92
12313 - Registered Nurse II, Specialist	25 .92
12314 - Registered Nurse III	31 .36
12315 - Registered Nurse III, Anesthetist	31 .36
12316 - Registered Nurse IV	37 .60
12317 - Scheduler (Drug and Alcohol Testing)	18 .51
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19 .15
13012 - Exhibits Specialist II	23 .08
13013 - Exhibits Specialist III	26 .14
13041 - Illustrator I	19 .15
13042 - Illustrator II	23 .08
13043 - Illustrator III	26 .14

13047 - Librarian	22 .50
13050 - Library Aide/Clerk	10 .64
13054 - Library Information Technology Systems Administrator	20 .32
13058 - Library Technician	15 .05
13061 - Media Specialist I	11 .89
13062 - Media Specialist II	15 .05
13063 - Media Specialist III	16 .78
13071 - Photographer I	12 .83
13072 - Photographer II	16 .45
13073 - Photographer III	20 .57
13074 - Photographer IV	24 .45
13075 - Photographer V	27 .88
13110 - Video Teleconference Technician	14 .66
14000 - Information Technology Occupations	
14041 - Computer Operator I	11 .63
14042 - Computer Operator II	14 .05
14043 - Computer Operator III	15 .72
14044 - Computer Operator IV	17 .47
14045 - Computer Operator V	19 .35
14071 - Computer Programmer I (1)	17 .76
14072 - Computer Programmer II (1)	23 .82
14073 - Computer Programmer III (1)	27 .17
14074 - Computer Programmer IV (1)	27 .62
14101 - Computer Systems Analyst I (1)	25 .10
14102 - Computer Systems Analyst II (1)	27 .62
14103 - Computer Systems Analyst III (1)	27 .62
14150 - Peripheral Equipment Operator	11 .63
14160 - Personal Computer Support Technician	22 .41
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	22 .15
15020 - Aircrew Training Devices Instructor (Rated)	29 .22
15030 - Air Crew Training Devices Instructor (Pilot)	32 .14
15050 - Computer Based Training Specialist / Instructor	25 .10
15060 - Educational Technologist	28 .33

15070 - Flight Instructor (Pilot)	32 .14
15080 - Graphic Artist	19 .52
15090 - Technical Instructor	16 .89
15095 - Technical Instructor/Course Developer	20 .66
15110 - Test Proctor	13 .64
15120 - Tutor	13 .64

16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations

16010 - Assembler	7 .03
16030 - Counter Attendant	7 .03
16040 - Dry Cleaner	8 .56
16070 - Finisher, Flatwork, Machine	7 .03
16090 - Presser, Hand	7 .03
16110 - Presser, Machine, Drycleaning	7 .03
16130 - Presser, Machine, Shirts	7 .03
16160 - Presser, Machine, Wearing Apparel, Laundry	7 .03
16190 - Sewing Machine Operator	9 .05
16220 - Tailor	9 .57
16250 - Washer, Machine	7 .54

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	14 .67
19040 - Tool And Die Maker	18 .42

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	10 .39
21030 - Material Coordinator	13 .50
21040 - Material Expediter	13 .50
21050 - Material Handling Laborer	7 .85
21071 - Order Filler	10 .19
21080 - Production Line Worker (Food Processing)	10 .86
21110 - Shipping Packer	10 .02
21130 - Shipping/Receiving Clerk	10 .02
21140 - Store Worker I	8 .93
21150 - Stock Clerk	11 .80
21210 - Tools And Parts Attendant	10 .86

21410 - Warehouse Specialist	10 .86
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	23 .76
23021 - Aircraft Mechanic I	22 .64
23022 - Aircraft Mechanic II	23 .76
23023 - Aircraft Mechanic III	24 .95
23040 - Aircraft Mechanic Helper	15 .58
23050 - Aircraft, Painter	17 .75
23060 - Aircraft Servicer	18 .30
23080 - Aircraft Worker	19 .75
23110 - Appliance Mechanic	14 .67
23120 - Bicycle Repairer	11 .33
23125 - Cable Splicer	17 .19
23130 - Carpenter, Maintenance	14 .67
23140 - Carpet Layer	13 .69
23160 - Electrician, Maintenance	17 .69
23181 - Electronics Technician Maintenance I	17 .47
23182 - Electronics Technician Maintenance II	19 .80
23183 - Electronics Technician Maintenance III	21 .07
23260 - Fabric Worker	12 .70
23290 - Fire Alarm System Mechanic	15 .63
23310 - Fire Extinguisher Repairer	11 .73
23311 - Fuel Distribution System Mechanic	18 .42
23312 - Fuel Distribution System Operator	15 .20
23370 - General Maintenance Worker	13 .69
23380 - Ground Support Equipment Mechanic	22 .64
23381 - Ground Support Equipment Servicer	18 .30
23382 - Ground Support Equipment Worker	19 .75
23391 - Gunsmith I	9 .68
23392 - Gunsmith II	11 .96
23393 - Gunsmith III	13 .34
23410 - Heating, Ventilation And Air-Conditioning Mechanic	15 .63
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	16 .68
23430 - Heavy Equipment Mechanic	17 .19

23440 - Heavy Equipment Operator	15 .63
23460 - Instrument Mechanic	15 .63
23465 - Laboratory/Shelter Mechanic	12 .42
23470 - Laborer	7 .85
23510 - Locksmith	14 .67
23530 - Machinery Maintenance Mechanic	16 .14
23550 - Machinist, Maintenance	15 .98
23580 - Maintenance Trades Helper	10 .75
23591 - Metrology Technician I	15 .63
23592 - Metrology Technician II	16 .66
23593 - Metrology Technician III	17 .65
23640 - Millwright	17 .46
23710 - Office Appliance Repairer	15 .62
23760 - Painter, Maintenance	14 .67
23790 - Pipefitter, Maintenance	17 .02
23810 - Plumber, Maintenance	15 .97
23820 - Pneudraulic Systems Mechanic	15 .63
23850 - Rigger	15 .63
23870 - Scale Mechanic	13 .69
23890 - Sheet-Metal Worker, Maintenance	15 .63
23910 - Small Engine Mechanic	13 .76
23931 - Telecommunications Mechanic I	18 .70
23932 - Telecommunications Mechanic II	19 .89
23950 - Telephone Lineman	18 .05
23960 - Welder, Combination, Maintenance	15 .63
23965 - Well Driller	15 .63
23970 - Woodcraft Worker	15 .63
23980 - Woodworker	11 .73
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	8 .41
24580 - Child Care Center Clerk	10 .49
24610 - Chore Aide	6 .55
24620 - Family Readiness And Support Services Coordinator	8 .27
24630 - Homemaker	12 .70

25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	16 .75
25040 - Sewage Plant Operator	15 .63
25070 - Stationary Engineer	16 .75
25190 - Ventilation Equipment Tender	10 .98
25210 - Water Treatment Plant Operator	15 .63
27000 - Protective Service Occupations	
27004 - Alarm Monitor	13 .56
27007 - Baggage Inspector	8 .77
27008 - Corrections Officer	17 .48
27010 - Court Security Officer	17 .48
27030 - Detection Dog Handler	13 .56
27040 - Detention Officer	17 .48
27070 - Firefighter	19 .83
27101 - Guard I	8 .77
27102 - Guard II	13 .56
27131 - Police Officer I	21 .41
27132 - Police Officer II	23 .78
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	9 .95
28042 - Carnival Equipment Repairer	10 .85
28043 - Carnival Equpment Worker	7 .22
28210 - Gate Attendant/Gate Tender	12 .36
28310 - Lifeguard	10 .82
28350 - Park Attendant (Aide)	13 .83
28510 - Recreation Aide/Health Facility Attendant	10 .09
28515 - Recreation Specialist	12 .82
28630 - Sports Official	11 .01
28690 - Swimming Pool Operator	12 .38
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	15 .20
29020 - Hatch Tender	15 .20
29030 - Line Handler	15 .20
29041 - Stevedore I	14 .81

29042 - Stevedore II	18 .11
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (2)	32 .97
30011 - Air Traffic Control Specialist, Station (HFO) (2)	22 .73
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	25 .03
30021 - Archeological Technician I	17 .29
30022 - Archeological Technician II	19 .33
30023 - Archeological Technician III	23 .95
30030 - Cartographic Technician	25 .12
30040 - Civil Engineering Technician	18 .93
30061 - Drafter/CAD Operator I	13 .84
30062 - Drafter/CAD Operator II	15 .49
30063 - Drafter/CAD Operator III	19 .99
30064 - Drafter/CAD Operator IV	26 .25
30081 - Engineering Technician I	12 .42
30082 - Engineering Technician II	15 .45
30083 - Engineering Technician III	18 .43
30084 - Engineering Technician IV	22 .69
30085 - Engineering Technician V	26 .70
30086 - Engineering Technician VI	31 .68
30090 - Environmental Technician	18 .11
30210 - Laboratory Technician	18 .06
30240 - Mathematical Technician	24 .90
30361 - Paralegal/Legal Assistant I	15 .99
30362 - Paralegal/Legal Assistant II	19 .86
30363 - Paralegal/Legal Assistant III	23 .84
30364 - Paralegal/Legal Assistant IV	29 .39
30390 - Photo-Optics Technician	22 .90
30461 - Technical Writer I	20 .50
30462 - Technical Writer II	25 .07
30463 - Technical Writer III	30 .33
30491 - Unexploded Ordnance (UXO) Technician I	20 .95
30492 - Unexploded Ordnance (UXO) Technician II	25 .35
30493 - Unexploded Ordnance (UXO) Technician III	30 .39
30494 - Unexploded (UXO) Safety Escort	20 .95

30495 - Unexploded (UXO) Sweep Personnel	20 .95
30620 - Weather Observer, Combined Upper Air Or Surface Programs (3)	19 .46
30621 - Weather Observer, Senior (3)	19 .97
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	8 .50
31030 - Bus Driver	13 .23
31043 - Driver Courier	11 .32
31260 - Parking and Lot Attendant	6 .82
31290 - Shuttle Bus Driver	12 .39
31310 - Taxi Driver	9 .55
31361 - Truckdriver, Light	12 .39
31362 - Truckdriver, Medium	14 .19
31363 - Truckdriver, Heavy	14 .73
31364 - Truckdriver, Tractor-Trailer	14 .73
99000 - Miscellaneous Occupations	
99030 - Cashier	7 .05
99050 - Desk Clerk	9 .41
99095 - Embalmer	20 .95
99251 - Laboratory Animal Caretaker I	8 .82
99252 - Laboratory Animal Caretaker II	9 .78
99310 - Mortician	20 .02
99410 - Pest Controller	13 .39
99510 - Photofinishing Worker	10 .36
99710 - Recycling Laborer	8 .87
99711 - Recycling Specialist	11 .32
99730 - Refuse Collector	7 .65
99810 - Sales Clerk	8 .96
99820 - School Crossing Guard	8 .48
99830 - Survey Party Chief	15 .55
99831 - Surveying Aide	10 .77
99832 - Surveying Technician	12 .71
99840 - Vending Machine Attendant	8 .97
99841 - Vending Machine Repairer	11 .40
99842 - Vending Machine Repairer Helper	8 .97

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

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 $3.24 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 5 years, and 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 the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A 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 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

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 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) AIR TRAFFIC CONTROLLERS AND 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 employed (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).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** 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 $3.35 per week (or $.67 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 **

Under the policy and guidance contained in All Agency Memorandum No. 159, the Wage and Hour Division does not recognize, for section 4(c) purposes, prospective wage rates and fringe benefit provisions that are effective only upon such contingencies as "approval of Wage and Hour, issuance of a wage determination, incorporation of the wage determination in the contract, adjusting the contract price, etc." (The relevant CBA section) in the collective bargaining agreement between (the parties) contains contingency language that Wage and Hour does not recognize as reflecting "arm's length negotiation" under section 4(c) of the Act and 29 C.F.R. 5.11(a) of the regulations. This wage determination therefore reflects the actual CBA wage rates and fringe benefits paid under the predecessor contract.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at http://www.dol.gov/esa/whd/ or through the Wage Determinations On-Line (WDOL) Web site at http://wdol.gov/.

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(s) and computes a proposed rate(s).

2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), 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.

WD 05-2048 (Rev.-8) was first posted on www.wdol.gov on 06/03/2008
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REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT
STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Shirley F. Ebbesen
Director

Division of
Wage Determinations

Wage Determination No.: 2005-2048
Revision No.: 8
Date of Revision: 05/29/2008

State: California

Area: California Counties of Los Angeles, Orange
OCCUPATION NOTES:

Heating, Air Conditioning and Refrigeration: Wage rates and fringe benefits can be found on Wage Determinations 1986-0879.

Laundry: Wage rates and fringe benefits can be found on Wage Determination 1977-1297.

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	14.03
01012 - Accounting Clerk II	15.76
01013 - Accounting Clerk III	17.65
01020 - Administrative Assistant	25.10
01040 - Court Reporter	18.23
01051 - Data Entry Operator I	11.28
01052 - Data Entry Operator II	12.98
01060 - Dispatcher, Motor Vehicle	22.41
01070 - Document Preparation Clerk	13.50
01090 - Duplicating Machine Operator	13.30
01111 - General Clerk I	10.69
01112 - General Clerk II	14.92
01113 - General Clerk III	16.67
01120 - Housing Referral Assistant	21.35
01141 - Messenger Courier	10.62
01191 - Order Clerk I	16.98
01192 - Order Clerk II	18.53
01261 - Personnel Assistant (Employment) I	16.85
01262 - Personnel Assistant (Employment) II	18.85
01263 - Personnel Assistant (Employment) III	22.26

01270 - Production Control Clerk	22.65
01280 - Receptionist	14.51
01290 - Rental Clerk	15.10
01300 - Scheduler, Maintenance	16.84
01311 - Secretary I	16.84
01312 - Secretary II	19.15
01313 - Secretary III	21.90
01320 - Service Order Dispatcher	19.54
01410 - Supply Technician	25.10
01420 - Survey Worker	18.23
01531 - Travel Clerk I	13.69
01532 - Travel Clerk II	14.83
01533 - Travel Clerk III	15.91
01611 - Word Processor I	15.03
01612 - Word Processor II	16.87
01613 - Word Processor III	18.76

05000 - Automotive Service Occupations

05005 - Automobile Body Repairer, Fiberglass	22.94
05010 - Automotive Electrician	21.60
05040 - Automotive Glass Installer	20.29
05070 - Automotive Worker	20.29
05110 - Mobile Equipment Servicer	18.66
05130 - Motor Equipment Metal Mechanic	22.94
05160 - Motor Equipment Metal Worker	20.29
05190 - Motor Vehicle Mechanic	22.94
05220 - Motor Vehicle Mechanic Helper	17.90
05250 - Motor Vehicle Upholstery Worker	19.86
05280 - Motor Vehicle Wrecker	20.29
05310 - Painter, Automotive	21.60
05340 - Radiator Repair Specialist	20.29
05370 - Tire Repairer	15.47
05400 - Transmission Repair Specialist	22.94

07000 - Food Preparation And Service Occupations

07010 - Baker	11.95
07041 - Cook I	12.91
07042 - Cook II	14.31
07070 - Dishwasher	9.25
07130 - Food Service Worker	9.87
07210 - Meat Cutter	15.92
07260 - Waiter/Waitress	8.96

09000 - Furniture Maintenance And Repair Occupations

09010 - Electrostatic Spray Painter	18.59
09040 - Furniture Handler	12.42
09080 - Furniture Refinisher	18.59
09090 - Furniture Refinisher Helper	14.82
09110 - Furniture Repairer, Minor	17.04
09130 - Upholsterer	18.59

11000 - General Services And Support Occupations

11030 - Cleaner, Vehicles	11.12
11060 - Elevator Operator	10.40
11090 - Gardener	16.87
11122 - Housekeeping Aide	10.40
11150 - Janitor	12.06
11210 - Laborer, Grounds Maintenance	12.65
11240 - Maid or Houseman	9.09
11260 - Pruner	13.27
11270 - Tractor Operator	15.05
11330 - Trail Maintenance Worker	12.65
11360 - Window Cleaner	13.66

12000 - Health Occupations

12010 - Ambulance Driver	17.74
12011 - Breath Alcohol Technician	17.74
12012 - Certified Occupational Therapist Assistant	23.66
12015 - Certified Physical Therapist Assistant	25.71
12020 - Dental Assistant	14.92
12025 - Dental Hygienist	36.45
12030 - EKG Technician	24.07
12035 - Electroneurodiagnostic Technologist	24.07
12040 - Emergency Medical Technician	17.74
12071 - Licensed Practical Nurse I	16.75
12072 - Licensed Practical Nurse II	18.77
12073 - Licensed Practical Nurse III	21.62
12100 - Medical Assistant	14.82
12130 - Medical Laboratory Technician	19.73
12160 - Medical Record Clerk	15.86
12190 - Medical Record Technician	17.74
12195 - Medical Transcriptionist	15.99
12210 - Nuclear Medicine Technologist	34.19
12221 - Nursing Assistant I	9.61
12222 - Nursing Assistant II	10.81
12223 - Nursing Assistant III	11.79
12224 - Nursing Assistant IV	13.24
12235 - Optical Dispenser	15.93
12236 - Optical Technician	15.71
12250 - Pharmacy Technician	16.72
12280 - Phlebotomist	13.24
12305 - Radiologic Technologist	24.54
12311 - Registered Nurse I	29.32
12312 - Registered Nurse II	35.85
12313 - Registered Nurse II, Specialist	35.85
12314 - Registered Nurse III	41.48
12315 - Registered Nurse III, Anesthetist	41.48
12316 - Registered Nurse IV	49.72
12317 - Scheduler (Drug and Alcohol Testing)	20.93

13000 - Information And Arts Occupations

13011 - Exhibits Specialist I	23.90

13012 - Exhibits Specialist II	29.61
13013 - Exhibits Specialist III	36.21
13041 - Illustrator I	25.31
13042 - Illustrator II	31.37
13043 - Illustrator III	38.35
13047 - Librarian	30.36
13050 - Library Aide/Clerk	16.49
13054 - Library Information Technology Systems Administrator	24.92
13058 - Library Technician	19.44
13061 - Media Specialist I	16.83
13062 - Media Specialist II	18.81
13063 - Media Specialist III	20.97
13071 - Photographer I	17.57
13072 - Photographer II	19.86
13073 - Photographer III	26.61
13074 - Photographer IV	33.56
13075 - Photographer V	40.61
13110 - Video Teleconference Technician	16.59

14000 - Information Technology Occupations

14041 - Computer Operator I	16.30
14042 - Computer Operator II	18.23
14043 - Computer Operator III	21.74
14044 - Computer Operator IV	24.69
14045 - Computer Operator V	27.33
14071 - Computer Programmer I (1)	22.80
14072 - Computer Programmer II (1)	
14073 - Computer Programmer III (1)	
14074 - Computer Programmer IV (1)	
14101 - Computer Systems Analyst I (1)	
14102 - Computer Systems Analyst II (1)	
14103 - Computer Systems Analyst III (1)	
14150 - Peripheral Equipment Operator	16.30
14160 - Personal Computer Support Technician	24.69

15000 - Instructional Occupations

15010 - Aircrew Training Devices Instructor (Non-Rated)	33.42
15020 - Aircrew Training Devices Instructor (Rated)	38.51
15030 - Air Crew Training Devices Instructor (Pilot)	46.16
15050 - Computer Based Training Specialist / Instructor	33.42
15060 - Educational Technologist	29.83
15070 - Flight Instructor (Pilot)	46.16
15080 - Graphic Artist	23.42
15090 - Technical Instructor	22.30
15095 - Technical Instructor/Course Developer	27.28
15110 - Test Proctor	18.40
15120 - Tutor	18.40

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	18.52

19040 - Tool And Die Maker	23.95

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	14.46
21030 - Material Coordinator	21.43
21040 - Material Expediter	21.43
21050 - Material Handling Laborer	13.02
21071 - Order Filler	13.31
21080 - Production Line Worker (Food Processing)	14.46
21110 - Shipping Packer	14.79
21130 - Shipping/Receiving Clerk	14.79
21140 - Store Worker I	10.87
21150 - Stock Clerk	15.52
21210 - Tools And Parts Attendant	14.46
21410 - Warehouse Specialist	14.46

23000 - Mechanics And Maintenance And Repair Occupations

23010 - Aerospace Structural Welder	30.78
23021 - Aircraft Mechanic I	29.10
23022 - Aircraft Mechanic II	30.78
23023 - Aircraft Mechanic III	31.94
23040 - Aircraft Mechanic Helper	20.38
23050 - Aircraft, Painter	24.41
23060 - Aircraft Servicer	23.55
23080 - Aircraft Worker	24.58
23110 - Appliance Mechanic	19.52
23120 - Bicycle Repairer	15.47
23125 - Cable Splicer	27.14
23130 - Carpenter, Maintenance	26.57
23140 - Carpet Layer	19.00
23160 - Electrician, Maintenance	28.35
23181 - Electronics Technician Maintenance I	23.38
23182 - Electronics Technician Maintenance II	24.90
23183 - Electronics Technician Maintenance III	26.53
23260 - Fabric Worker	22.75
23290 - Fire Alarm System Mechanic	20.30
23310 - Fire Extinguisher Repairer	17.18
23311 - Fuel Distribution System Mechanic	23.90
23312 - Fuel Distribution System Operator	18.26
23370 - General Maintenance Worker	22.52
23380 - Ground Support Equipment Mechanic	29.10
23381 - Ground Support Equipment Servicer	23.55
23382 - Ground Support Equipment Worker	24.58
23391 - Gunsmith I	17.18
23392 - Gunsmith II	19.88
23393 - Gunsmith III	22.48
23430 - Heavy Equipment Mechanic	26.97
23440 - Heavy Equipment Operator	29.01
23460 - Instrument Mechanic	25.70
23465 - Laboratory/Shelter Mechanic	21.93
23470 - Laborer	12.49

23510 - Locksmith	18.81
23530 - Machinery Maintenance Mechanic	24.65
23550 - Machinist, Maintenance	23.17
23580 - Maintenance Trades Helper	14.82
23591 - Metrology Technician I	25.70
23592 - Metrology Technician II	27.13
23593 - Metrology Technician III	29.73
23640 - Millwright	25.45
23710 - Office Appliance Repairer	20.86
23760 - Painter, Maintenance	21.05
23790 - Pipefitter, Maintenance	23.40
23810 - Plumber, Maintenance	22.04
23820 - Pneudraulic Systems Mechanic	22.48
23850 - Rigger	25.51
23870 - Scale Mechanic	19.98
23890 - Sheet-Metal Worker, Maintenance	21.17
23910 - Small Engine Mechanic	18.70
23931 - Telecommunications Mechanic I	24.56
23932 - Telecommunications Mechanic II	25.91
23950 - Telephone Lineman	24.18
23960 - Welder, Combination, Maintenance	19.75
23965 - Well Driller	23.18
23970 - Woodcraft Worker	19.75
23980 - Woodworker	16.81
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	13.05
24580 - Child Care Center Clerk	16.03
24610 - Chore Aide	10.57
24620 - Family Readiness And Support Services Coordinator	15.39
24630 - Homemaker	19.21
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	26.22
25040 - Sewage Plant Operator	26.21
25070 - Stationary Engineer	26.22
25190 - Ventilation Equipment Tender	18.34
25210 - Water Treatment Plant Operator	26.21
27000 - Protective Service Occupations	
27004 - Alarm Monitor	23.77
27007 - Baggage Inspector	12.32
27008 - Corrections Officer	29.07
27010 - Court Security Officer	30.28
27030 - Detection Dog Handler	23.77
27040 - Detention Officer	29.07
27070 - Firefighter	29.97
27101 - Guard I	12.32
27102 - Guard II	23.77
27131 - Police Officer I	33.79
27132 - Police Officer II	37.56

28000 - Recreation Occupations

28041 - Carnival Equipment Operator	11.60
28042 - Carnival Equipment Repairer	12.49
28043 - Carnival Equpment Worker	8.79
28210 - Gate Attendant/Gate Tender	14.09
28310 - Lifeguard	12.55
28350 - Park Attendant (Aide)	15.76
28510 - Recreation Aide/Health Facility Attendant	11.11
28515 - Recreation Specialist	17.82
28630 - Sports Official	12.55
28690 - Swimming Pool Operator	15.43

29000 - Stevedoring/Longshoremen Occupational Services

29010 - Blocker And Bracer	21.29
29020 - Hatch Tender	21.29
29030 - Line Handler	21.29
29041 - Stevedore I	20.46
29042 - Stevedore II	21.73

30000 - Technical Occupations

30010 - Air Traffic Control Specialist, Center (HFO) (2)	37.58
30011 - Air Traffic Control Specialist, Station (HFO) (2)	25.91
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	28.54
30021 - Archeological Technician I	20.47
30022 - Archeological Technician II	22.01
30023 - Archeological Technician III	31.33
30030 - Cartographic Technician	31.33
30040 - Civil Engineering Technician	26.42
30061 - Drafter/CAD Operator I	22.60
30062 - Drafter/CAD Operator II	25.28
30063 - Drafter/CAD Operator III	28.18
30064 - Drafter/CAD Operator IV	34.68
30081 - Engineering Technician I	18.14
30082 - Engineering Technician II	20.37
30083 - Engineering Technician III	22.78
30084 - Engineering Technician IV	28.23
30085 - Engineering Technician V	34.88
30086 - Engineering Technician VI	41.77
30090 - Environmental Technician	25.20
30210 - Laboratory Technician	21.03
30240 - Mathematical Technician	29.46
30361 - Paralegal/Legal Assistant I	19.44
30362 - Paralegal/Legal Assistant II	25.20
30363 - Paralegal/Legal Assistant III	30.82
30364 - Paralegal/Legal Assistant IV	37.29
30390 - Photo-Optics Technician	28.23
30461 - Technical Writer I	22.26
30462 - Technical Writer II	27.22
30463 - Technical Writer III	32.94
30491 - Unexploded Ordnance (UXO) Technician I	23.88

30492 - Unexploded Ordnance (UXO) Technician II	28.90
30493 - Unexploded Ordnance (UXO) Technician III	34.61
30494 - Unexploded (UXO) Safety Escort	23.88
30495 - Unexploded (UXO) Sweep Personnel	23.88
30620 - Weather Observer, Combined Upper Air or Surface Programs (2)	25.14
30621 - Weather Observer, Senior (2)	27.93

31000 - Transportation/Mobile Equipment Operation Occupations

31020 - Bus Aide	12.39
31030 - Bus Driver	17.84
31043 - Driver Courier	11.87
31260 - Parking and Lot Attendant	8.56
31290 - Shuttle Bus Driver	12.95
31310 - Taxi Driver	12.03
31361 - Truckdriver, Light	12.95
31362 - Truckdriver, Medium	18.93
31363 - Truckdriver, Heavy	21.24
31364 - Truckdriver, Tractor-Trailer	21.24

99000 - Miscellaneous Occupations

99030 - Cashier	12.13
99050 - Desk Clerk	12.65
99095 - Embalmer	21.08
99251 - Laboratory Animal Caretaker I	10.49
99252 - Laboratory Animal Caretaker II	11.44
99310 - Mortician	31.23
99410 - Pest Controller	15.17
99510 - Photofinishing Worker	14.87
99710 - Recycling Laborer	17.38
99711 - Recycling Specialist	20.39
99730 - Refuse Collector	15.50
99810 - Sales Clerk	14.15
99820 - School Crossing Guard	9.06
99830 - Survey Party Chief	33.54
99831 - Surveying Aide	18.45
99832 - Surveying Technician	25.24
99840 - Vending Machine Attendant	12.48
99841 - Vending Machine Repairer	14.34
99842 - Vending Machine Repairer Helper	12.48

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

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 $3.24 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 5 years, and 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 the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A 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 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than $27.63 (or on a salary or fee basis at a rate not less than $455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds $27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate, then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;

(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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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 $3.35 per week (or $.67 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.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at http://www.dol.gov/esa/whd/ or through the Wage Determinations On-Line (WDOL) Web site at http://wdol.gov/.

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.

ATTACHMENT J-7

SMALL BUSINESS SUBCONTRACTING PLAN

TBD

DEPARTMENT OF DEFENSE
CONTRACT SECURITY CLASSIFICATION SPECIFICATION

(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)

1. CLEARANCE AND SAFEGUARDING

a. FACILITY CLEARANCE REQUIRED: TOP SECRET

b. LEVEL OF SAFEGUARDING REQUIRED: NONE

2. THIS SPECIFICATION IS FOR: *(X and complete as applicable)*

X	a. PRIME CONTRACT NUMBER: NNJ09JE44C	
	b. SUBCONTRACT NUMBER	
	c. SOLICITATION OR OTHER NUMBER	Due Date (YYMMDD)

3. THIS SPECIFICATION IS: *(X and complete as applicable)*

X	a. ORIGINAL *(Complete date in all cases)*		Date (YYMMDD): 09.09.01
	b. REVISED *(Supersedes all previous specs)*	Revision No.	Date (YYMMDD)
	c. FINAL *(Complete Item 5 in all cases)*		Date (YYMMDD)

4. IS THIS A FOLLOW-ON CONTRACT? [X] YES [ ] NO. If Yes, complete the following:

Classified material received or generated under NNJ-04-JA-83-C *(Preceding Contract Number)* are transferred to this follow-on contract.

5. IS THIS A FINAL DD FORM 254? [ ] YES [X] NO. If Yes, complete the following:

In response to the contractor's request dated N/A, retention of the classified material is authorized for the period N/A

6. CONTRACTOR *(Include Commercial and Government Entity (CAGE) Code)*

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
CSC Applied Technologies LLC 6500 West Freeway, Suite 600 Fort Worth, TX 76116	1JGQ2	DIS-Defense Security Service Southwestern Sector 5800 East Compass Circle, Suite 110A Irving, TX 75062-2795

7. SUBCONTRACTOR

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
N/A	N/A	N/A

8. ACTUAL PERFORMANCE

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
Johnson Space Center Dryden Flight Research Center Langley Research Center	N/A	N/A

9. GENERAL IDENTIFICATION OF THIS PROCUREMENT

Aircraft Maintenance and Modification Support Services

10. CONTRACTOR WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		X	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	X	
b. RESTRICTED DATA		X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		X
d. FORMERLY RESTRICTED DATA		X	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		X
e. INTELLIGENCE INFORMATION			e. PERFORM SERVICES ONLY	X	
(1) Sensitive Compartmented Information (SCI)		X	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		X
(2) Non-SCI		X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X
f. SPECIAL ACCESS INFORMATION		X	h. REQUIRE A COMSEC ACCOUNT		X
g. NATO INFORMATION		X	i. HAVE TEMPEST REQUIREMENTS		X
h. FOREIGN GOVERNMENT INFORMATION		X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		X
i. LIMITED DISSEMINATION INFORMATION		X	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		X
j. FOR OFFICIAL USE ONLY INFORMATION		X	l. OTHER *(Specify)*		
k. OTHER *(Specify)*			(See item #13)		

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

[X] Direct [ ] Through *(Specify)*

NASA/Johnson Space Center AP Public Affairs Office Houston, TX 77058-3696
To the Office of Public Affairs, National Aeronautics and Space Administration, Washington, D 20546, for review.

13. SECURITY GUIDANCE. The security classifiection 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.)*

Performance of this contract will not involve the receipt, generation, and storage of classified information at the contractor's facility; therefore, classified material cannot be sent to the contractor under this contract. Access to classified information will occur only at the user agency (NASA/JSC) and at other locations as required by contract obligations. All employees requiring access to classified information/areas must possess "TOP SECRET" and/or "SECRET" level in accordance with the National Industrial Security Program Operating Manual, DOD 5220.22-M, dated February 28, 2006 and other NASA/JSC security procedures and guidelines. Questions regarding security requirements shall be directed to the NASA/JSC Industrial Security Specialist at (281) 483-6700. JSC security and technical personnel will provide security classification guidance if the need arises. The place of performance will be at JSC and other locations where the requirement is covered by the obligations specified in Section C of the basic contract document. The period of performance is from September 1, 2009-February 29, 2012.

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 [X]

(a) National Industrial Security Program Operating Manual, DOD 5220.22-M, dated February 28, 2006; (b) NASA and/or JSC Security Handbooks, Manuals, Regulations, Instructions, and other Directives (current editions as of the date of Contract Award), as well as any other applicable policies and procedures set forth within the Contract and as identified by NASA.

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.)* [X] Yes [ ] No

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	b. TITLE	c. TELEPHONE *(Include Area Code)*
Wayne Sings	Industrial Security Specialist	(281) 483-6700

d. ADDRESS *(Include Zip Code)*
2101 NASA Parkway
Houston, Texas 77058

e. SIGNATURE
Wayne Sings

17. REQUIRED DISTRIBUTION

X	a. CONTRACTOR
	b. SUBCONTRACTOR
	c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
	d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
X	e. ADMINISTRATIVE CONTRACTING OFFICER
	f. OTHERS AS NECESSARY:

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ATTACHMENT J-9

PHASE-IN/PHASE-OUT PLAN

The contract incorporates the Contractor's approved Phase-In/Phase-Out Plan by reference with the same force and effect as if it were in full text.

ATTACHMENT J-10
PIV CARD ISSUANCE PROCEDURES

PIV Card Issuance Procedures in accordance with FAR clause 52.204-9, Personal Identit Verification of Contractor Personnel

FIPS 201 Appendix A graphically displays the following procedure for the issuance of a PIV credential.

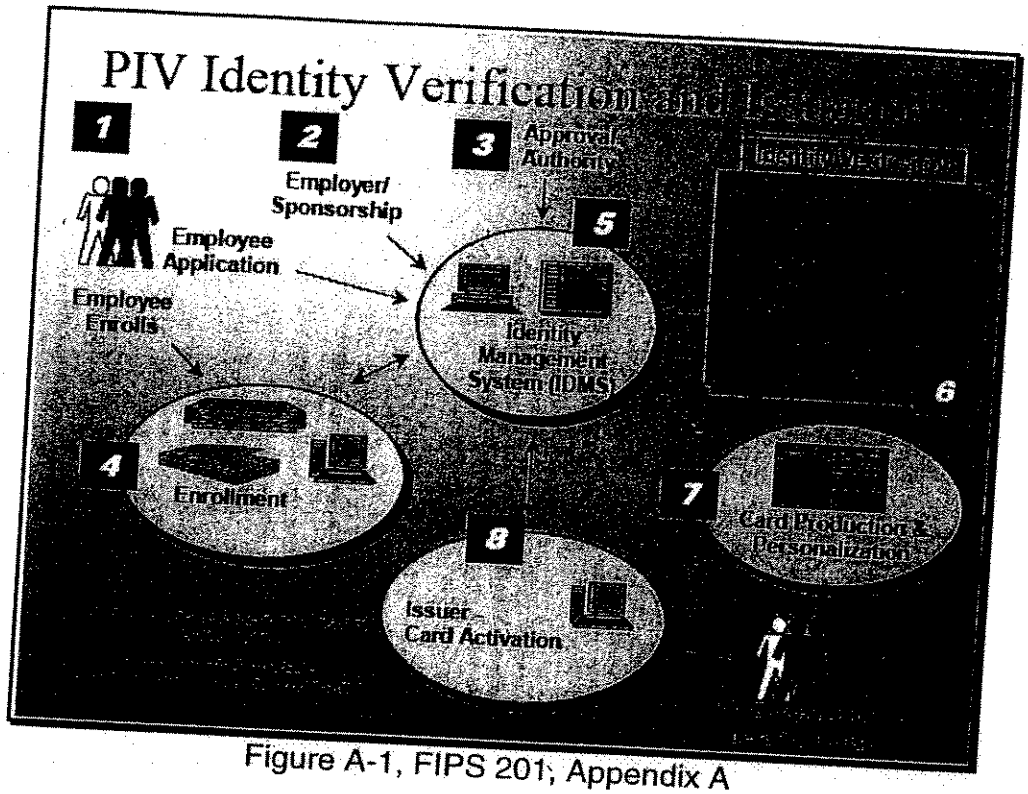

Figure A-1, FIPS 201, Appendix A

The following steps describe the procedures for the NASA Personal Identity Verification Card Issuance (PCI) of a PIV credential:

Step 1:
The Contractor's Corporate Security Officer (CSO), Program Manager (PM), or Facility Security Officer (FSO) submits a formal letter that provides a list of contract employees (applicant) names requesting access to the NASA Contracting Officer's Technical Representative (COTR). In the case of a foreign national applicant, approval through the NASA Foreign National Management System (NFNMS) must be obtained for the visit or assignment before any processing for a PIV credential can take place. Further, if the foreign national is not under a contract where a COTR has been officially designated, the foreign national will provide the information directly to their visit/assignment host, and the host sponsor will fulfill the duties of the COTR mentioned herein. In each case, the letter shall provide notification of the contract or foreign national employee's (hereafter the "applicant") full name (first, middle and last), social security number (SSN) or NASA Foreign National Management System Visitor Number if the foreign national does not have a SSN, and date of birth. If the contract employee has a current satisfactorily completed National Agency Check with Inquiries (NACI) or an equivalent or higher degree of background investigation, the letter shall indicate the type of investigation, the agency completing the investigation, and date the investigation was completed. Also, the letter must specify the risk/sensitivity level associated with the position in which each applicant will be working (NPR 1600.1, §4.5 is germane) Further, the letter shall also acknowledge

'hat contract employees may be denied access to NASA information or information systems based on ı unsatisfactory background investigation/adjudication. .

After reviewing the letter for completeness and concurring with the risk/sensitivity levels, the COTR/host must forward the letter to the Center Chief of Security (CCS). The CCS shall review the OPM databases (e.g, DCII, PIP, et al.), and take appropriate steps to validate the applicant's investigation status. Requirements for a NACI or other investigation shall be initiated only if necessary.

Applicants who do not currently possess the required level of background investigation shall be directed to the e-QIP web site to complete the necessary background investigation forms online. The CCS shall provide to the COTR/host information and instructions on how to access the e-QIP for each contract or foreign national employee requiring access

Step 2

Upon acceptance of the letter/background information, the applicant will be advised that in order to complete the investigative process, he or she must appear in-person before the authorized PIV registrar and submit two forms of identity source documents in original form. The identity source documents must come from the list of acceptable documents included in Form I-9, Employment Eligibility Verification, one which must be a Federal[1] or State issued picture identification. Fingerprints will be taken at this time. The applicant must appear **no later than** the entry on duty date.

'hen the applicant appears, the registrar will electronically scan the submitted documents; any ocument that appears invalid will be rejected by the registrar. The registrar will capture electronically ɔoth a facial image and fingerprints of the applicant. The information submitted by the applicant will be used to create or update the applicant identity record in the Identity Management System (IDMS).

Step 3:

Upon the applicant's completion of the investigative document, the CCS reviews the information, and resolves discrepancies with the applicant as necessary. When the applicant has appeared in person and completed fingerprints, the package is electronically submitted to initiate the NACI. The CCS includes a request for feedback on the NAC portion of the NACI at the time the request is submitted.

Step 4

Prior to authorizing physical access of a contractor employee to a federally-controlled facility or access to a Federal information system, the CCS will a National Crime Information Center (NCIC) with an Interstate Identification Index check is/has been performed. In the case of a foreign national, a national check of the Bureau of Immigration and Customs Enforcement (BICE) database will be performed for each applicant. If this process yields negative information, the CCS will immediately notify the COTR/host of the determination regarding access made by the CCS.

Step 5

Upon receipt of the completed NAC, the CCS will update IDMS from the NAC portion of the NACI and indicate the result of the suitability determination. If an unsatisfactory suitability determination is

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[1] A non-PIV government identification badge, including the NASA Photo Identification Badge, MAY NOT BE USED for the original issuance of a PIV vetted credential

rendered, the COTR will advise the contractor that the employee is being denied physical access to all federally-controlled facilities and Federal information systems.

Based on a favorable NAC and NCIC/III or BICE check, the CCS will authorize the issuance of a PIV federal credential in the Physical Access Control System (PACS) database. The CCS, based on information provided by the COTR/host, will determine what physical access the applicant should be granted once the PIV issues the credential.

Step 6:
Using the information provided by the applicant during his or her in-person appearance, the PIV card production facility creates and instantiates the approved PIV card for the applicant with an activation date commensurate with the applicant's start date.

Step 7:
The applicant proceeds to the credential issuance facility to begin processing for receipt of his/her federal credential.

The applicant provides to the credential issuing operator proof of identity with documentation that meets the requirements of FIPS 201 (DHS Employment Eligibility Verification (Form I-9) documents. These documents **must** be the same documents submitted for registration.

The credential issuing operator will verify that the facial image, and optionally reference finger print, matches the enrollment data used to produce the card. Upon verification of identity, the operator wi' locate the employee's record in the PACS database, and modify the record to indicate the PIV carc has been issued. The applicant will select a PIN for use with his or her new PIV card. Although root data is inaccessible to the operator, certain fields (hair color, eye color, et al.) may be modified to more accurately record the employee's information.

The applicant proceeds to a kiosk or other workstation to complete activation of the PIV card using the initial PIN entered at card issuance.

ALTERNATIVE FOR APPLICANTS WHO DO NOT HAVE A COMPLETED AND ADJUDICATED NAC AT THE TIME OF ENTRANCE ON DUTY

Steps 1 through 4 shall be accomplished for all applicants in accordance with the process described above. If the applicant is unable to appear in person until the time of entry on duty, or does not, for any other reason, have a completed and adjudicated NAC portion of the NACI at the time of entrance on duty, the following interim procedures shall apply.

1. If the documents required to submit the NACI have not been completed prior to EOD, the applicant will be instructed to complete all remaining requirements for submission of the investigation request. This includes presentation of I-9 documents and completion of fingerprints, if not already accomplished. If the applicant fails to complete these activities as prescribed in NPR 1600.1 (Chapters 3 & 4), it may be considered as failure to meet the conditions required for physical access to a federally-controlled facility or access to a Federal information system, and result in denial of such access.

2. Based on favorable results of the NCIC, the applicant shall be issued a temporary NASA identification card for a period not-to-exceed six months. If at the end of the six month period the NAC results have not been returned, the agency will at that time make a determination if an additional extension will be granted for the temporary identification card.

3. Upon return of the completed NAC, the process will continue from Step 5.

(End of Section)