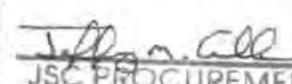


**AWARD/CONTRACT** 1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) RATING **DO-C9** PAGE OF PAGES **1** **302**

2. CONTRACT NO. (Proc. Inst. Ident.) NO. **NNJ06JE86C** 3. EFFECTIVE DATE **See 20C** 4. REQUISITION/PURCHASE REQUEST/PROJECT NO. **4200106317**

5. ISSUED BY: CODE **BJ4**  
 NASA Johnson Space Center  
 Institutional Procurement Office  
 Mail Code: BJ  
 Houston, TX 77058-3696

6. ADMINISTERED BY (If other than item 5) **APPROVED**  
  
**JSC PROCUREMENT OFFICER**  
 FACILITY CODE  
**3-15-06**  
 DATE

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP  
 Science Applications International Corporation, Technology Services Corp.  
 10260 Campus Point Drive, San Diego, CA 92121  
 c/o 2200 Space Park Drive, Suite 200, Houston, TX 77058  
 Attn: James H. Wendling (281-336-3437)

CODE **OT5L1**

8. DELIVERY  FOB ORIGIN  OTHER 9. DISCOUNT FOR PROMPT PAYMENT

10. SUBMIT INVOICES (4 copies unless other-wise specified) TO THE ADDRESS SHOWN IN: ITEM **5**

11. SHIP TO/MARK FOR CODE  
 NASA Johnson Space Center  
 Building 421 - Transportation Officer  
 Houston, TX 77058-3696

12. PAYMENT WILL BE MADE BY: CODE **LF231**  
 NASA Johnson Space Center  
 Accounts Payable Group - Mail Code LF231  
 Houston, TX 77058-3696

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION  
 10 U.S.C. 2304(c)  41 U.S.C. 253(c)

14. ACCOUNTING AND APPROPRIATION DATA

| 15A. ITEM NO. | 15B. SUPPLIES/SERVICES   | 15C. QTY | 15D. UNIT | 15E. UNIT PRICE | 15F. AMOUNT |
|---------------|--|----------|-----------|-----------------|-------------|
| 1             | Safety and Mission Assurance Support Services Contract<br><br>Phase-In<br>Base Period<br>Total |          |           |                 |             |

15G. TOTAL AMOUNT OF CONTRACT ⇒ \$ **148,575,532**

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| (X)                          | SEC. | DESCRIPTION                           | PAGE(S) | (X)   | SEC.   | DESCRIPTION         | PAGE(S) |
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| <b>PART I - THE SCHEDULE</b> |      |                                       |         | <b>PART II - CONTRACT CLAUSES</b>                       |  |                     |         |
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| X                            | E    | INSPECTION AND ACCEPTANCE             | 1       | K   | REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS |                     |         |
| X                            | F    | DELIVERIES OR PERFORMANCE             | 6       | L   | INSTRS., CONDS., AND NOTICES TO OFFERORS                         |                     |         |
| X                            | G    | CONTRACT ADMINISTRATION DATA          | 16      | M   | EVALUATION FACTORS FOR AWARD                                     |                     |         |
| X                            | H    | SPECIAL CONTRACT REQUIREMENTS         | 8       |   |  |                     |         |

**CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE**

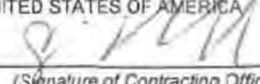
17  CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated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

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

19A. NAME AND TITLE OF SIGNER (Type or print)  
**Parri Y. Engelsen, VP for Administration**

20A. NAME OF CONTRACTING OFFICER  
**Craig Burrige, Contracting Officer**

19B. NAME OF CONTRACTOR  
  
 (Signature of person authorized to sign)

20B. UNITED STATES OF AMERICA  
 BY   
 (Signature of Contracting Officer)

20C. DATE SIGNED  
**15 March 06**

## PART I - THE SCHEDULE

### SECTION A – CONTRACT FORM

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| B.2  | ESTIMATED COST AND AWARD FEE                  | B-1         |
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**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)

**None included by reference**

- II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18) -

**None included by reference**

**B.2 ESTIMATED COST AND AWARD FEE**

The estimated cost of this contract is [REDACTED] The maximum available award fee is [REDACTED] Total estimated cost and maximum award fee is [REDACTED]

The estimated cost and award fee for this contract is broken out as follows:

|                      | <u>Estimated Cost</u> | <u>Available Award Fee</u> | <u>Total</u> |
|----------------------|-----------------------|----------------------------|--------------|
| Completion Form      | [REDACTED]            |                            |              |
| Level-of-Effort      | [REDACTED]            |                            |              |
| NM Gross Receipts    | [REDACTED]            |                            |              |
| Total Contract Value |                       |                            |              |
| FFP Phase-In         | [REDACTED]            |                            |              |

The pricing of LOE task orders for this contract shall be in accordance with the negotiated and fully burdened average labor rates as shown in Table B-1. The rates should be fully burdened composite of the Team's rates by skill excluding the Prime's Maximum Fee. This rate shall tie to the Contract Rates Section of the Summary Cost Template (SCT) Table for LOE. Note that the bottom of Table B-1 allows for indirect rates applied if applicable to non-labor resources. For example, an application of a material handling rate on materials.

TABLE B-1 – LOE RATES

Applies Only to SOW 5.0, 6.0, 7.0, 8.0 and 9.0, through September 30, 2010  
Effective October 1, 2010 Applies Only to SOW 3.3, 3.7, and SOW 5.0,6.0, 7.0, 8.0 and 9.0  
Composite Rates (Based on the Current Contractor Site, customer Site Rates and Subcontractor Allocations). Effective May 1, 2011 Below Rates Apply Only to SOW 3.3, 3.7, and SOW 5.0, 6.0, 7.0, 8.0, 9.0, and 10.0 and are based on SAIC Offsite Rates.

| FULLY BURDENED LABOR RATES (Exclusive of Fee) | CY1 | CY2 | CY3 | CY4 | CY5 | Extension Year 1 | Extension Year 2 Option Period 1 | Extension Year 2 Option Period 2 |
|---|-----|-----|-----|-----|-----|------------------|----------------------------------|----------------------------------|
| Program Manager                               |     |     |     |     |     |                  |                                  |                                  |
| Manager                                       |     |     |     |     |     |                  |                                  |                                  |
| Supervisor                                    |     |     |     |     |     |                  |                                  |                                  |
| Engineer 1                                    |     |     |     |     |     |                  |                                  |                                  |
| Engineer 2                                    |     |     |     |     |     |                  |                                  |                                  |
| Engineer 3                                    |     |     |     |     |     |                  |                                  |                                  |
| Engineer 4                                    |     |     |     |     |     |                  |                                  |                                  |
| Technician 1                                  |     |     |     |     |     |                  |                                  |                                  |
| Technician 2                                  |     |     |     |     |     |                  |                                  |                                  |
| Technician 3                                  |     |     |     |     |     |                  |                                  |                                  |
| Technician 4                                  |     |     |     |     |     |                  |                                  |                                  |
| Analyst 1                                     |     |     |     |     |     |                  |                                  |                                  |
| Analyst 2                                     |     |     |     |     |     |                  |                                  |                                  |
| Analyst 3                                     |     |     |     |     |     |                  |                                  |                                  |
| Information Technology 1                      |     |     |     |     |     |                  |                                  |                                  |
| Information Technology 2                      |     |     |     |     |     |                  |                                  |                                  |
| Information Technology 3                      |     |     |     |     |     |                  |                                  |                                  |
| Training Specialist 1                         |     |     |     |     |     |                  |                                  |                                  |
| Training Specialist 2                         |     |     |     |     |     |                  |                                  |                                  |
| Administration 1                              |     |     |     |     |     |                  |                                  |                                  |
| Administration 2                              |     |     |     |     |     |                  |                                  |                                  |
| Secretarial Clerical                          |     |     |     |     |     |                  |                                  |                                  |
| Business Specialist 1                         |     |     |     |     |     |                  |                                  |                                  |
| Business Specialist 2                         |     |     |     |     |     |                  |                                  |                                  |

|   |  |
|---|--|
| Other 1 – Engineering Aide  |  |
| Other 2 – Junior Intern   |  |
| Other 3 – Engineer 5  |  |
| Other 4 – Senior Intern   |  |
|   |  |
|   |  |
| Indirect cost (Rate) applied to Non-Labor Resources if required by a Task Order |  |
| 1. Other Direct Costs (excluding Equip/Maint)                                   |  |
| 2. Equipment and Maintenance  |  |
|   |  |

| TABLE B-2 – LOE RATES – Customer Site<br>Effective May 1, 2011 Below Rates Apply Only to SOW 3.3, 3.7, and SOW 5.0, 6.0, 7.0, 8.0, 9.0, and 10.0<br>Composite Rates (Based on Customer Onsite Rates and Onsite Subcontractor Allocations) |                  |                                  |                                  |
|---|------------------|----------------------------------|----------------------------------|
| FULLY BURDENED LABOR RATES<br>(Exclusive of Fee)  | Extension Year 1 | Extension Year 2 Option Period 1 | Extension Year 2 Option Period 2 |
| Program Manager   |                  |                                  |                                  |
| Manager   |                  |                                  |                                  |
| Supervisor  |                  |                                  |                                  |
| Engineer 1  |                  |                                  |                                  |
| Engineer 2  |                  |                                  |                                  |
| Engineer 3  |                  |                                  |                                  |
| Engineer 4  |                  |                                  |                                  |
| Technician 1  |                  |                                  |                                  |
| Technician 2  |                  |                                  |                                  |
| Technician 3  |                  |                                  |                                  |
| Technician 4  |                  |                                  |                                  |
| Analyst 1   |                  |                                  |                                  |
| Analyst 2   |                  |                                  |                                  |
| Analyst 3   |                  |                                  |                                  |
| Information Technology 1  |                  |                                  |                                  |
| Information Technology 2  |                  |                                  |                                  |

|   |  |
|---|--|
| Information Technology 3  |  |
| Training Specialist 1   |  |
| Training Specialist 2   |  |
| Administration 1  |  |
| Administration 2  |  |
| Secretarial Clerical  |  |
| Business Specialist 1   |  |
| Business Specialist 2   |  |
| Other 1 – Engineering Aide  |  |
| Other 2 –Junior Intern  |  |
| Other 3 – Engineer 5  |  |
| Other 4 – Senior Intern   |  |
|   |  |
|   |  |
| Indirect cost (Rate) applied to Non-Labor Resources if required by a Task Order |  |
| 1. Other Direct Costs (excluding Equip/Maint)                                   |  |
| 2. Equipment and Maintenance  |  |

The below table is hereby deleted and is marked as “reserved.”

**RESERVED**

| <b>TABLE B-2 - CF RATES</b><br>Applies Only to SOW 3.0, 4.0, and 10.0 |   |                          |                          |                  |
|---|---|--------------------------|--------------------------|------------------|
| <b>FULLY BURDENED LABOR RATES</b>                                     | <b>3.0 Contractor Mgmt Responsibilities (excluding 3.3)</b> | <b>3.3 Panel Support</b> | <b>4.0 Qualification</b> | <b>10.0 RITF</b> |
| Program Manager   |   |                          |                          |                  |
| Manager   |   |                          |                          |                  |
| Supervisor  |   |                          |                          |                  |
| Engineer 1  |   |                          |                          |                  |
| Engineer 2  |   |                          |                          |                  |
| Engineer 3  |   |                          |                          |                  |
| Engineer 4  |   |                          |                          |                  |
| Technician 1  |   |                          |                          |                  |
| Technician 2  |   |                          |                          |                  |

|   |  |  |  |  |
|---|--|--|--|--|
| <b>Technician 3</b>   |  |  |  |  |
| <b>Technician 4</b>   |  |  |  |  |
| <b>Analyst 1</b>  |  |  |  |  |
| <b>Analyst 2</b>  |  |  |  |  |
| <b>Analyst 3</b>  |  |  |  |  |
| <b>Information Technology 1</b>   |  |  |  |  |
| <b>Information Technology 2</b>   |  |  |  |  |
| <b>Information Technology 3</b>   |  |  |  |  |
| <b>Training Specialist 1</b>  |  |  |  |  |
| <b>Training Specialist 2</b>  |  |  |  |  |
| <b>Administration 1</b>   |  |  |  |  |
| <b>Administration 2</b>   |  |  |  |  |
| <b>Secretarial/Clerical</b>   |  |  |  |  |
| <b>Business Specialist 1</b>  |  |  |  |  |
| <b>Business Specialist 2</b>  |  |  |  |  |
| <b>Other</b>  |  |  |  |  |
|   |  |  |  |  |
| <b>Prime Overhead (OH) &amp; Service Centers (SC):</b>                                  |  |  |  |  |
| <b>1.</b>   |  |  |  |  |
| <b>Rate</b>   |  |  |  |  |
| <b>2.</b>   |  |  |  |  |
| <b>Rate</b>   |  |  |  |  |
| <b>3.</b>   |  |  |  |  |
| <b>Rate</b>   |  |  |  |  |
| <b>Total OH &amp; SC</b>  |  |  |  |  |
|   |  |  |  |  |
| <b>Prime Total G&amp;A Cost</b>   |  |  |  |  |
| <b>G&amp;A Base</b>   |  |  |  |  |
| <b>G&amp;A Rate</b>   |  |  |  |  |
|   |  |  |  |  |
| <b>Indirect cost (Rate) applied to Non-Labor Resources if required by a Task Order:</b> |  |  |  |  |
| <b>Rate 1</b>   |  |  |  |  |
| <b>Rate 2</b>   |  |  |  |  |
|   |  |  |  |  |
| <b>Not-to-Exceed Fee Rate</b>   |  |  |  |  |

(End of Clause)

**B.3 CONTRACT FUNDING (NFS 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 [REDACTED]. This allotment is for the safety, reliability, and quality assurance support services and covers the following estimated period of performance: May 1, 2006 through July 3, 2012.
- (b) An additional amount of [REDACTED] is obligated under this contract for payment of fee.

(End of Clause)

**B.4 LEVEL-OF-EFFORT**

- (a) During the term of the contract, the Contractor is obligated to provide not less than 80 percent nor more than 120 percent of 4,166,086 total direct labor hours through April 30, 2013.
- (b) "Direct labor hours" are those productive hours expended by Contractor personnel, including subcontractors, consultants, and contract labor performing work under this contract that are charged as direct labor under the Contractor's established accounting policy and procedures. The term does not include sick leave, vacation leave, or any type of administrative leave but does include direct labor hours provided under level-of-effort subcontracts. Hours used for clerical and secretarial are specifically excluded from the level-of-effort hours specified herein.
- (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 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 under run. Any information provided by the Contractor will be considered by the Contracting Officer in determining the amount of the downward adjustment in fee.

(End of Clause)

[END OF SECTION]

## **SECTION C**

### **DESCRIPTION/SPECIFICATION/WORK STATEMENT**

#### **C.1 STATEMENT OF WORK**

The Contractor shall furnish all resources and facilities necessary for the performance of this Statement of Work (SOW), except for those items specifically identified as Government-furnished or installation-provided. The resources and facilities include personnel, materials, supplies, and equipment.

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## **1.0 INTRODUCTION AND BACKGROUND**

- 1.1 The effort described by this SOW provides for the assurance, engineering, and risk assessment in the disciplines of safety, reliability, maintainability, supportability, availability and quality within the Johnson Space Center (JSC) and outside JSC, both domestic and abroad.
- 1.2 This contract provides for continuity of services to the NASA JSC Safety and Mission Assurance (S&MA) Directorate in the areas of safety, reliability, maintainability, and quality. The Government maintains responsibility for S&MA policies and decisions. The Contractor shall provide services and products that accomplish those policies and decisions as defined in this SOW.
- 1.3 This effort includes the review of work done by other contractors, International Space Station (ISS) Program International Partners (IPs), and other National Aeronautics and Space Administration (NASA) organizations. In addition, this SOW applies to future Programs and Projects as directed by NASA task order.
- 1.4 The major part of this work is located at JSC in Houston, Texas. However, resident support is required at JSC field offices at White Sands Test Facility (WSTF), New Mexico; Kennedy Space Center (KSC), Florida; and Huntington Beach, California. Contractor services shall be required at other locations, NASA contractor, subcontractor, or vendor facilities as requirements warrant.
- 1.5 Functions and tasks described herein shall not be construed as implying that the Contractor has the authority to approve or disapprove Government policies, procedures, specifications, or requirements or those of any other Government contractor. Nor will language herein be construed to mean that the Contractor has the authority to accept or reject on the Government's behalf any products or services. The Contractor's functions shall require presentation of its analysis to the appropriate Government official for further action. The Contractor is not authorized to act as an agent of the Government or to represent itself as such. Specific exceptions to this approval restriction will be directed by the Government in writing on a case-by-case basis.

## 2.0 GENERAL

The fundamental requirements for the work described in this SOW are based on NASA safety, reliability, maintainability, and quality policies, and Program and Project specific requirements. The work performed under this contract shall conform to the JSC processes.

### 2.1 Work Authorization

2.1.1 Work under paragraphs 3.1 PROGRAM MANAGEMENT, 3.2 COST AND SCHEDULE, 3.4 QUALITY MANAGEMENT, 3.5 PROPERTY MANAGEMENT, 3.6 SAFETY AND HEALTH, and 4.0 S&MA PERSONNEL QUALIFICATION PROGRAM, shall be performed as a completion form based effort.

2.1.2 All remaining paragraphs of the SOW shall be performed as Level-of-Effort (LOE). Work to accomplish LOE tasks shall be performed only through the issuance of task orders to the Contractor.

### 2.2 Data Requirements

2.2.1 The Data Requirements List (DRL) and the Data Requirements Descriptions (DRDs), found in Section J, are part of this SOW.

2.2.2 In addition to the data deliverables described in Section J, the Contractor shall manage all documentation and data produced in performance of this contract (e.g., assessments, evaluations, reports, presentations, reviews, and statuses) in accordance with the requirements of SOW Section 3.7 Information Technology (IT).

### 2.3 Reference

See Section J for applicable documents, definition of terms, and acronyms used in this SOW.

### **3.0 CONTRACTOR MANAGEMENT RESPONSIBILITIES (Completion Form and Level of Effort)**

The Contractor shall manage and administer all contract activity. The Contractor shall provide and maintain management interfaces to the S&MA Directorate, Contracting Officer (CO), Contracting Officer Technical Representative (COTR), and Technical Management. The Contractor shall report formally as required in the contract, and shall respond to JSC S&MA Management queries related to contracted activities.

#### **3.1 Program Management**

- 3.1.1 The Contractor shall develop and implement management functions to ensure that all contracted activities are accomplished in accordance with contract terms and conditions. The contractor shall accomplish these management functions through management approach, organization, and controls that are determined by the contractor to be optimum. The contractor shall provide and maintain management systems for the planning, organization, control, and reporting of all activities required by this contract. These systems shall assure accomplishment of program technical and schedule requirements, and cost objectives.
- 3.1.2 The Contractor shall integrate all tasks and elements of the contract to facilitate cross department communications, common processes and tools across appropriate support areas, effective measurement of performance, and identification of initiatives to improve overall safety or mission assurance for human spaceflight.
- 3.1.3 The Contractor shall perform in accordance with the Management Plan (DRD 01). The Contractor shall determine and document lessons learned in the performance of tasks under this SOW in accordance with DRD 02, Lessons Learned.
- 3.1.4 The Contractor shall provide Integrated Technical Management Reports in accordance with DRD 03, Integrated Technical Management Report.

#### **Performance Standards - Program Management:**

- 1. 90% of employees trained to do the job they are working on based on established and approved qualification standards and training plans.
- 2. Customer Satisfaction - Performance of all technical areas (resources, skills, and materials) receive an overall minimum rating of "good."
- 3. 100% of Contract Data Deliverables delivered on time.

### 3.2 Cost and Schedule

The Contractor shall establish a Work Breakdown Structure (WBS) in accordance with DRD 04, Work Breakdown Structure, to serve as the framework for contract planning, budgeting, cost reporting and schedule status reporting. The Contractor shall report accrued costs to NASA in accordance with DRD 05, Contractor Financial Management Report. The Contractor shall present the Integrated Technical Management Reports (DRD 03) and discuss costs, cost variances, technical status, and schedules during status meetings with the CO, COTR, and S&MA management.

#### Performance Standard - Cost and Schedule:

1. Customer Satisfaction –Technical Management Reports provide timely and necessary insight regarding Contractor activities, progress, accomplishments, and any documented contract performance problems with their corresponding resolutions and corrective actions.

### 3.3 JSC Program Safety and Mission Assurance (S&MA) (Level-of-Effort)

- a. The JSC Program S&MA Panels, chaired by civil servants, are responsible for ensuring that all applicable S&MA-related requirements are incorporated into JSC Projects and Programs. The Contractor shall perform tasks that assist the Panel Chairs in the execution of their responsibilities. Contractor participation shall be required prior to and during the S&MA Panels in order to effectively accomplish the tasks identified below. Note that individual S&MA Panels require different suites of tasks in order to sustain their function and scope depending on agreements between the JSC S&MA Directorate and the Programs.
- b. Primary objectives of tasks performed by the Contractor are to assist the Panel Chair to verify that the interpretation and implementation of safety-related requirements are consistent with NASA issuance, and assure that safety-critical subsystems, payloads, and operations are appropriately verified. In order to accomplish these objectives, the Contractor shall recommend requirement implementations, evaluate implementation documents and waiver requests, negotiate resolution of safety issues, assist the Programs and Projects with interpretation, and assist with the integration of safety processes across Programs, Projects, contractors, and International Partners.
- c. The JSC Program S&MA Panels that the JSC S&MA Directorate support, include but are not limited to:
  - ISS Flight Safety Review Panel (SRP)
  - JSC Safety Engineer Review Panel (JSERP)
  - Integration Safety Engineering Review Panel (ISERP)
  - SSP/ISS Payload Safety Review Panel (PSRP)

- Government-Furnished Equipment (GFE) Safety and Mission Assurance Review Team (SMART)
- ISS Quality & Product Assurance Panel (QPAP)
- ISS Reliability and Maintainability (R&M) Panel

### 3.3.1 Administrative Tasks

The Contractor shall perform the following tasks to coordinate and document Panel activities:

- a. Schedule S&MA Panel meetings and reserve meeting facilities.
- b. Develop and post S&MA Panel meeting agendas.
- c. Develop and post S&MA Panel meeting minutes – narrative or dispositional as request by the panel chair.
- d. Develop and maintain S&MA Panel distribution lists.
- e. Develop and maintain processes to track and provide current status of S&MA Panel actions and issues.
- f. Develop and maintain S&MA Panel databases to ensure availability, completeness, accuracy, and security of the data.
- g. Develop and maintain S&MA Panel websites to provide NASA access to meeting documentation.
- h. Develop and maintain data management processes for S&MA data [e.g., Safety Data Packages (SDPs), Hazard Reports (HRs), Failure Modes and Effects Analysis / Critical Items Lists (FMEA/CILs), Non-Conformance Reports (NCRs)] to ensure that the data is received, distributed, filed, archived, and made available to the panel and reviewers.
- i. Develop and maintain a process to ensure that export control regulations (reference NPD 2190.1, NASA Export Control Program Policy) are applied to data handled by the S&MA Panels and that appropriate restrictions are applied to applicable NASA data and/or information distributions.
- j. Upload or input safety data into non-S&MA databases [e.g., Vehicle Master Database (VMDB)] that are maintained by the Programs to provide single data source for related system information required by the Programs.

Performance Standards - S&MA Panel Administrative Tasks:  
See Section J.5 AWARD FEE PLAN.

### 3.3.2 Technical Tasks

The Contractor shall perform the following tasks:

- a. Provide technical interpretation of safety requirements and implementation strategies based on technical merit for acceptability and recommendations on S&MA Panel review and acceptance.
- b. Develop narratives and presentation products for all items and topics submitted to S&MA Panels.
- c. Provide written technical recommendations for safety products (e.g., SDPs, HRs, FMEA/CILs, NCRs) that are submitted to the S&MA Panels for approval or resolution.
- d. Perform launch vehicle manifest assessments to identify unresolved safety and certification issues and provide recommendations on resolution.
- e. Perform integration analyses for HRs, SDPs, and FMEA/CILs to verify that all hazards identified have been analyzed, tested, or controlled.
- f. Perform assessments of verification data [e.g., Verification Closure Notices / Verification Tracking Logs (VCN/VTLs)] for evidence of requirements compliance (e.g., verification mapping to HRs).
- g. Perform and document reassessments of safety requirements/certifications to ensure the validity of the requirements/certifications for the next mission and planned flight.
- h. Evaluate modifications to systems and payloads that affect critical systems or create a potential hazard and provide results to the appropriate panels.
- i. Develop Safety of Flight Certification Letters for S&MA Panel approval.
- j. Maintain cognizance of flight safety status to identify and address safety issues in various technical and safety forums.
- k. Provide technical coordination with other NASA Centers, Contractors, Programs, Projects, and International Partners / Participants (IP/P) S&MA organizations to facilitate a clear and consistent understanding of topics, issues, and actions.
- l. Provide technical expertise to the various S&MA Panel working groups (e.g., Joint American-Russian Safety Working Group (JARSWG), Safety Working Group (SWG), and Quality Working Group (QWG)) for investigation, analysis, and proposed resolutions to issues/actions.

Performance Standard – S&MA Panels Technical Tasks:  
See Section J.5 AWARD FEE PLAN.

### 3.4 Quality Management System

- 3.4.1 The Contractor shall establish and maintain an internal Quality Management System (QMS) for services and tasks performed under this SOW. The Contractor's QMS shall comply with the ANSI/ISO/ASQ Q9001-2000, Quality Management System Requirements, and JPD 5335.1, JSC Policy Directive - Quality Policy. The Contractor's QMS will be audited by NASA or a NASA-provided third party to confirm compliance. The Contractor shall comply with the JSC QMS for the products and services provided to the Government under this contract. The Contractor shall provide a Quality Manual per DRD 06, Quality Manual, and supporting metrics per DRD 07, Contractor Quality Metrics, including the assessment and implementation of internal continuous improvement initiatives in order to provide better products and services to S&MA customers.
- 3.4.2 Should the Contractor be or become International Standards Organization (ISO) Certified, copies of the certification audit report and correspondence confirming certification shall be supplied to the CO.
- 3.4.3 The Contractor shall provide technical and engineering products to S&MA Directorate QMS activities that include:
- a. Conducting assessments and assisting in S&MA QMS continuous improvements efforts.
  - b. Preparing system level procedures and detailed work instructions of S&MA processes for JSC approval.
  - c. Training for S&MA personnel (both Government and Contractor).
  - d. Generation, periodic review, and maintenance of all S&MA work instructions.

#### Performance Standards - Quality Management System:

1. No major findings during Center ISO audits.
2. Effective ongoing demonstration by the Contractor of quality performance and defect prevention.
3. Quality Metrics – Positive trending on metrics that indicate Contractor's QMS is effective.

4. Customer Satisfaction – Contractor support to S&MA Directorate QMS activities receive an overall minimum rating of “good.”

### 3.5 Property Management

The Contractor shall develop and implement a Property Management Plan in accordance with DRD 08, Property Management Plan. The Contractor shall perform on-site property management and administration of all property acquired by or in possession of the Contractor and subcontractors associated with the execution of this contract in accordance with contract terms and conditions.

#### Performance Standards - Property Management:

1. 100% of Property Reports submitted on time.
2. Minimum of 98% of accountable property accounted for.

### 3.6 Safety and Health

The Contractor shall ensure the protection of personnel, property, equipment, and the environment by complying with NASA policies and requirements (see Section J, Applicable Documents, Safety and Environment Health subsection) and federal, state, and local regulations for safety, health, environmental protection, and fire protection. The Contractor shall develop and implement a Safety and Health Plan in accordance with DRD 09, Safety and Health Plan. Health and safety reporting requirements shall include an annual Safety and Health Program Self-Evaluation, and Monthly Safety and Health Metrics Report in accordance with DRD 10, Safety and Health Program Self Evaluation and DRD 11, Monthly Safety and Health Metrics.

#### Performance Standards - Safety and Health:

1. 100% of required reports and metrics delivered on schedule.
2. Injury/illness rates below industry average.
3. Participation in or accomplishment of at least two Safety Leadership / Safety Risk Mitigation activities per Award Fee Period.

### 3.7 Information Technology (IT) (Level of Effort)

- 3.7.1 The Contractor shall provide Information Technology (IT) products and services to the JSC S&MA Directorate in accordance with JPD

2800.1, JSC IT Program, and JPD 2800.4, JSC IT Program Management. These products and services consist of tools, data systems, and web-sites that support S&MA activities.

- 3.7.2 The Contractor shall establish and maintain an IT Plan in accordance with DRD 12, Information Technology Plan.
- 3.7.3 The Contractor shall implement and maintain configuration control of hardware, software, and existing data systems per the approved IT Plan.
- 3.7.4 The Contractor shall establish and implement Data Management Plan per DRD 13, Data Management Plan. The Data Management Plan shall describe the management, preparation, control, and dissemination of data and documentation required and produced under this contract in order to provide NASA with direct, on-going access to all data and documentation required to accomplish S&MA responsibilities. The plan shall include an assessment of existing S&MA data and documents, methods for identifying and acquiring Safety, Reliability, and Quality Assurance (SR&QA) data and documents, requirements for storage, equipment and methods of accessing data and documents, and data management philosophy. All documents and data produced in performance of this contract shall be organized, controlled, and stored on NASA IT equipment.
- 3.7.5 The Contractor shall prepare and provide user instructions and training to S&MA personnel on the use of hardware, software, and data systems used by the organization to accomplish its responsibilities, tasks, and activities.
- 3.7.6 The Contractor shall acquire or develop and maintain analytical tools and databases to augment or accomplish work defined in this SOW and the accomplishment of the S&MA Directorate mission. The Contractor shall maintain existing tools, databases, and websites as well as those developed in performance of this contract utilizing software and applications recognized as JSC standards. Proprietary or non-JSC-standard applications, protocols, or IT systems shall not be utilized without prior NASA contractual authorization.
- 3.7.7 The Contractor shall administer the S&MA laptop computer loan pool and maintain information on the use of the laptops which includes a tracking log (user and due date). The Contractor shall check out current copies of software available for home use as provided by the Information Resources Directorate (IRD). The Contractor shall maintain and assure the accuracy of the Customer Service System (CSS) database. The Contractor shall receive all requirements for new IT or telephone equipment and for moves of existing equipment. The Contractor shall write all Service Requests (SRs) required to obtain or move the IT or telephone equipment.

The Contractor shall also write or assist in writing all SRs within the S&MA Directorate.

- 3.7.8 The Contractor shall participate in the JSC IRD led Information Technology Steering Council (ITSC) and Customer Forum meetings for the purpose of coordinating planned IT activities that affect JSC systems, and sharing information on current IT topics that affect S&MA systems. The ITSC, established under the authority of JPD 2800.4, JSC IT Program Management, acts as the Center IT Program control board. For planning purposes, the ITSC meets twice monthly and the Customer Forum meets approximately monthly. The Contractor shall provide technical expertise at IRD boards and meetings, such as the Network Access Control Board (NACP) which typically meets once each week for one to three hours.

Performance Standards - Information Technology:  
See Section J.5 AWARD FEE PLAN.

#### **4.0 S&MA PERSONNEL QUALIFICATION PROGRAM (Completion Form)**

- 4.1 The S&MA Contractor shall develop, implement, and maintain a comprehensive S&MA Personnel Qualification Program, in accordance with DRD 14, S&MA Personnel Qualification Program Plan, to include management of an existing training database. This Program shall provide training to qualify S&MA personnel for the positions they are assigned. The Contractor shall develop and maintain a plan for the administrative tasks that support this Program.
- 4.2 The specific skills of Certified Welding Inspector (CWI), all levels of Non-Destructive Evaluation (NDE), Pressure Systems, and ISO Quality Systems Auditor require formal certification. The S&MA Contractor shall arrange for the required 3rd party (Accredited Organizations or Educational Institutions) certification training and develop courses and curriculum as needed for the Personnel Qualification Program.

Other skills such as listed below will be exempt from the certification requirement. But, it will be the responsibility of the contractor to provide sufficient information that the individual has the training, education and the background to effectively perform in these skills.

- Mechanical Inspector
- Calibration Technician
- Safety Engineer
- Reliability Engineer
- Quality Auditor

- Quality Technician
- Quality Engineer
- Quality Manager
- Software Quality Engineer

Performance Standards - S&MA Personnel Qualification Program:

1. 100% of periodic reports submitted on schedule.
2. 100% employees with up to date training plans.
3. Customer Satisfaction – Course attendees opinion surveys indicate satisfaction with course content and level of detail.

## 5.0 PROGRAM SUPPORT

- a. The Contractor shall provide services and products for Program S&MA engineering tasks. Services and products consist of assisting in the development of Program requirements, performing analyses, assessments, audits, reviews, and evaluations; preparing and presenting reports and briefings; and participating in meetings and review boards and panels. The Contractor shall verify that Program design and operations meet S&MA requirements and identify issues and non-conformances. The Contractor shall evaluate the design, manufacturing, testing, and refurbishment of spaceflight hardware and software to ensure delivery of products in accordance with functional, performance, and design requirements. The Contractor shall perform S&MA activities throughout the Program life-cycle as described in this section in order to assure systems meet requirements. Life-cycle phases may overlap and tasks may be worked or revisited in more than one phase.
- b. The Contractor shall provide engineering assessments for software intensive ground systems residing at JSC that support the design, development, and test of flight systems. The Contractor shall also provide engineering assessments for JSC facility software.
- c. The Contractor shall identify and assess risks to Programs consistent with Program risk management plans. This includes the identification and evaluation of risks, reporting of risks, tracking the resolution of identified risks, and the development and evaluation of proposed risk mitigation strategies throughout the Program life-cycle.
- d. The Contractor shall develop and review human factors considerations for each phase of the Programs' life-cycle. The Contractor shall assess the effectiveness of mitigations for human factors related hazards.
- e. The Contractor shall integrate and coordinate S&MA products and services across Programs that are relevant to multiple Programs or Projects.

### 5.1 Concepts and Requirements Phase

This phase includes Program feasibility assessments, Program definition and approval, and requirements definition and approval. The Contractor shall develop and review Program requirements documents to ensure that S&MA requirements are included. The task includes assisting in the development of top-level Program policies and requirements, research to define and develop workmanship standards and specifications, the development of software assurance guides and standards, and the development of implementation plans, processes and work instructions. The Contractor shall assess software and hardware assurance plans, quality plans, safety plans, procedures, processes, and reports for compliance with NASA and JSC policies, procedures and standards.

#### 5.1.1 Safety, Reliability, and Maintainability Goals and Requirements

The Contractor shall assist in developing and refining safety goals and requirements such as overall probability of a catastrophic event, probability of a catastrophic event during launch/boost phase requiring separation/abort, probability of a catastrophic event during other mission phases (e.g., on-orbit, Extravehicular Activity (EVA), rendezvous and docking, reentry and landing), or probability of a specific catastrophic event (e.g., fire, loss of a specific system or sub-system). These requirements shall meet or exceed the standards set forth in the NASA-STD-8729.1, Planning, Developing, and Maintaining an Effective Reliability and Maintainability (R&M) Program. The Contractor shall also assist in developing and refining reliability goals and requirements, such as availability, maintainability, and Mean-Time Between Failure (MTBF). Once developed, these goals and requirements will be used to establish Program safety requirements such as redundancy, fault tolerance, Micro-Meteoroid and Orbital Debris (MMOD) protection, and launch abort capabilities.

#### 5.1.2 Quality Assurance Goals and Requirements

The Contractor shall assist in developing and refining quality assurance goals and requirements. The Contractor shall participate in the preparation, review, and assurance of proper implementation of procedures, processes, inspection planning, and quality assurance requirements.

#### 5.1.3 Requirements Reviews

The Contractor shall support formal Program Requirements Reviews to ensure that S&MA principles and practices are incorporated into Program policies and requirements. The Contractor shall coordinate and document all proposed inputs on formal documents such as Review Item Discrepancies (RIDs), and track and ensure proper closure of RIDs that impact S&MA.

#### 5.1.4 Trade Studies

The Contractor shall perform and support trade studies to assist JSC S&MA in assuring that risk-based decision making processes are used to select among competing design and operational concepts, in order to minimize technical and Program risk, and meet S&MA goals and requirements.

#### 5.1.5 Feasibility Assessments

The Contractor shall participate in feasibility assessments to ensure that Program design and operational concepts are achievable and meet S&MA requirements.

### 5.1.6 Technical Assessments

The Contractor shall perform qualitative and quantitative assessments. The technical subjects are determined real-time and require the Contractor to develop or perform analyses such as, reliability, Probabilistic Risk Assessment (PRA), fault-tree analysis, trend analysis, statistical analysis, or engineering analysis.

## 5.2 Design and Development Phase

This phase includes preliminary and detailed design, and system design validation. Design validation is generally accomplished through a combination of test, analysis, and inspection of a flight-like unit to prove the design meets the requirements.

### 5.2.1 Program Design Milestone Reviews

5.2.1.1 The Contractor shall perform S&MA evaluations of proposed designs to ensure compliance with Program S&MA requirements, to identify areas where design modifications could reduce or eliminate risk, and to identify areas of non-compliance. The Contractor shall also ensure that S&MA products (such as safety assessment reports, failure modes and effects analyses, and critical items lists) required to be delivered in support of each milestone have been provided. The Contractor shall document any findings, comments, or recommendations, and shall track the closure of all items that impact S&MA.

5.2.1.2 The Contractor shall develop S&MA design criteria and requirements; tasks and activities to be performed; and verification and assessment methods. The Contractor shall assess these items when developed by other entities. The Contractor shall provide input in establishing the verification method success criteria for each requirement in the verification plans.

### 5.2.2 Integrated Teams

Programs form teams to assure that all relevant organizations (such as Engineering, Mission Operations, Space Life Sciences, and S&MA) are properly represented and have an opportunity to interactively discuss Program concepts and requirements. The Contractor shall participate on such teams to ensure that S&MA requirements are met and that S&MA concerns are properly addressed.

### 5.2.3 Requirements and Design Changes

The Contractor shall assess all change requests for compliance to S&MA requirements and identify areas of risks, non-compliances, and impacts of accepting non-compliances. The Contractor shall continue this support throughout the Program life-cycle.

#### 5.2.4 Safety

5.2.4.1 The Contractor shall ensure the application of a process for the systematic identification and control of hazards during the design phase. The Contractor shall identify the risk inherent in a system's design and operation by quantifying both the likelihood of various possible risk sequences and their consequences, using various tools such as fault trees, event trees, and reliability block diagrams.

5.2.4.2 In performing Safety Analyses, the Contractor shall:

- a. Evaluate Safety Assessment Reports (SARs) and Hazard Reports (HRs) per NSTS 22254, Methodology for Conduct of Space Shuttle Program Hazard Analyses, and SSP 30309, Safety Analysis and Risk Assessment Requirements Document, to ensure the design meets safety requirements.
- b. Evaluate SARs and HRs and all supporting data to identify areas of non-compliance with technical and data submittal requirements.
- c. Perform hazard analyses as required to ensure that the developer has adequately identified hazards and hazard controls.
- d. Assess Hazardous Command Lists (HCLs), Restricted Command Lists (RCLs) and Critical Command Lists (CCLs) to ensure that commands are correctly classified as defined by the ISS Computer Safety Working Group (CSWG).
- e. Ensure that all applicable safety requirements have been identified and met. If requirements have not been met, make recommendations regarding possible corrective actions that should be taken; alternatively, identifying impacts to accepting a noncompliance.
- f. Document and coordinate all comments and recommendations with NASA S&MA personnel, safety panels, the developer, and other NASA technical organizations (e.g., Engineering, Mission Operations, Space Life Sciences).

- g. Track the closure and resolution of all comments and recommendations.

5.2.4.3 As the evaluator of HRs, associated Non-Compliance Reports (NCRs), or Accepted Risk (AR) Hazard Reports, the Contractor shall:

- a. Evaluate all NCR or AR Hazard Report data to ensure completeness. Ensure that all applicable safety requirements have been properly identified.
- b. Determine whether rationale is sufficient to recommend approval of the NCR or AR Hazard Report. Perform risk trades to determine whether more risk is accepted by approving or denying the NCR or AR Hazard Report.
- c. Evaluate associated S&MA data, such as Critical Items Lists (CILs) and problem reports.
- d. Assess that the NCR or AR Hazard Report will not add unacceptable risk to a system or procedure.
- e. Make a formal recommendation to the Program regarding the acceptance of the NCR or AR Hazard Report. Define alternative approaches to risk mitigation.
- f. Verify the appropriate disposition of all NCRs or AR Hazard Reports.

5.2.5 Reliability and Maintainability

- a. The Contractor shall predict system or function reliability, maintainability, and availability characteristics (e.g., failure rates and probabilities or availability rates) based on available design, analysis, or data. The predictions shall be provided to the Programs for logistical planning.
- b. The Contractor shall make use of reliability modeling and simulation tools to evaluate system design. The results of this evaluation along with recommendations associated with the system design shall be provided to NASA.
- c. In evaluating the Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL), the Contractor shall:
  - 1. Evaluate FMEA/CIL and all supporting data per SSP 30234, Instructions for Preparation of Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) for

- Space Station, and NSTS 22206, Instructions for Preparation of Failure Modes and Effects Analysis and Critical Items List, to identify areas of noncompliance with technical and data submittal requirements.
2. Document and coordinate all comments and recommendations with NASA S&MA personnel, Reliability and Maintainability (R&M) panel, the developer, and other NASA technical organizations (e.g., Engineering, Mission Operations, Space Life Sciences). Track the acceptable closure and resolution of all comments and recommendations.
  3. Brief panel chairmen before reviews on the evaluation results. Identify areas of concern and issues raised during the review. Identify FMEA/CILs that may be dispositioned by the chairman before the meeting, and identify FMEA/CILs requiring the support of particular specialists, or that require separate meetings. Identify actions that will be required and propose an agenda for the review.
  4. Support the panel as they conduct their review.
- d. The Contractor shall analyze system and component failure modes identifying 'scheduled' or 'on-condition' tasks, as well as maintenance frequency required at assigned maintenance levels.
  - e. The Contractor shall review maintenance and repair plans to verify:
    1. Proposed procedures meet safety requirements.
    2. Proper priority has been assigned to maintenance activities.
    3. Maintenance intervals support the availability of safety-critical equipment.
    4. Hardware taken out of service for maintenance will not compromise system safety.
    5. Consistency with sound maintenance and repair practices
  - f. The Contractor shall analyze the functions of Mechanical and Electrical, Electronic, and Electromechanical (EEE) Parts for consistency with intended design rules to ensure reliable operation under expected environments. The Contractor shall recommend parts that operate in the most effective, reliable, and cost-efficient manner for the planned application.

- g. The Contractor shall assist in the development of certification plans, including the definition of all usage environments.
- h. The Contractor shall analyze items designated as having a limited useful life. The analysis shall include shelf life, operating life, and life expended during testing.

#### 5.2.6 Quality Assurance

The Contractor shall assist in defining and reviewing quality management systems and quality assurance plans and processes. The Contractor shall verify that designs meet quality requirements.

- a. The Contractor shall perform Procurement Quality Assurance (PQA) by conducting Program supplier evaluations, conducting quality management system audits at Program prime contractor facilities, drafting Letters of Delegation (LODs) for Government approval, and defining quality requirements for Program contractor and subcontractor purchases in accordance with NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts.
- b. The Contractor shall provide facility assessments which include product and process surveillance and software assurance support for ground simulators, mission control centers, development integration laboratories, and integrated training facilities. Current facilities supported are the Shuttle Avionics and Integration Laboratory (SAIL), Sonny Carter Training Facility (SCTF), JSC Avionics Engineering Laboratory (JAEL), Instrumentation Systems Laboratory (ISL). Other facilities shall be included as they are established by new Programs.
- c. The Contractor shall provide JSC with facility integration software safety analysis technologies and methodologies expertise. This includes the development of software tools to aid in software safety analyses. Software safety analysis tools shall be in accordance with NASA-STD-8719.13, NASA Software Safety Standard.

### 5.3 Manufacturing, Test, Acceptance, and Delivery Phase

#### 5.3.1 Quality Assurance

The Contractor shall perform inspection and surveillance activities during production, testing, and operations to reduce the overall risk to cost, schedule, and mission success. The Contractor shall provide inspectors that are trained in quality assurance and engineering methods for assembly, testing, inspection, and surveillance.

### 5.3.2 Non-Conformance Reports (NCRs) and Waivers

The Contractor shall analyze non-conformances and waivers per NSTS 08126, Space Shuttle Problem Reporting and Corrective Action (PRACA) System Requirements, SSP 30223, Problem Reporting and Corrective Action for the Space Station, and SSP 30524, PRACA Data System Requirements Definition Document. The Contractor shall participate in Problem Resolution Teams (PRTs) to analyze non-conformances, determine root cause and recommend corrective actions to prevent recurrence. The Contractor shall communicate across Programs and Projects to assure that S&MA has an integrated and coordinated position.

### 5.3.3 Software Verification and Validation

The Contractor shall support software code walkthroughs, review test plans, procedures, and test results to verify that the software meets safety and quality requirements. The Contractor shall ensure adequate testing coverage based on the changes made to the software code.

### 5.3.4 Certification

The Contractor shall verify the as-built system meets all applicable certification requirements. The Contractor shall verify that the hardware will function properly in all applicable use environments. The Contractor shall document the certification and maintain certification records as required.

### 5.3.5 Test Support

The Contractor shall support Test Readiness Reviews (TRRs) and observe testing conducted on Program flight hardware, software, and equipment to ensure that Program S&MA requirements for the flight items are being appropriately tested and documented. The Contractor shall ensure that test procedures are complete and meet Program system requirements. The Contractor shall ensure that test plans support test objectives. The Contractor shall review test articles and assess readiness to perform testing. The Contractor shall review system test results to ensure that test objectives have been demonstrated and meet system certification requirements.

### 5.3.6 Inspection Requirements

The Contractor shall identify characteristics requiring independent verification, establish sampling plans, identify special process inspection needs [e.g., Non-Destructive Evaluation (NDE)], and verify implementation of FMEA screens and hazard control verifications.

### 5.3.7 Manufacturing and Fabrication Plans and Processes

The Contractor shall ensure work authorizing documents, drawings, and engineering changes have pass/fail criteria and appropriate tolerances. The Contractor shall ensure documentation is complete and accurate.

### 5.3.8 Surveillance and Audits

5.3.8.1 The Contractor shall conduct product and process surveillances. The Contractor shall also conduct technical and quality audits. The Contractor shall support the development of audit plans and maintain the Master Audit Schedule for the Programs. Surveillance and audit activities shall be conducted in accordance with NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts.

5.3.8.2 The Contractor shall perform special process verification audits identifying areas needing corrective or preventive action (examples include quality management systems, contamination control, welding, brazing, soldering, and conformal coating).

### 5.3.9 Procurement Quality Assurance (PQA)

5.3.9.1 The Contractor shall assist the Government in assessing quality plans for production controls and in conducting contract surveillance throughout the procurement process in accordance with NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts. This includes the review of purchase orders and contracts to:

- a. Verify proper inclusion of quality requirements and supplier qualifications.
- b. Determine if Government source inspection is required.
- c. Determine and recommend quality instructions to be included in the LODs.

5.3.9.2 The Contractor shall assist the Government in performing PQA functions at remote site facilities in support of Program development activities in the following areas:

- a. Assessment of and participation in supplier qualification audits for flight hardware.

- b. Inclusion of necessary quality requirements flow down to suppliers through purchase order and contract review.
- c. Development of Defense Contract Management Association (DCMA) LODs, development of DCMA site-specific Risk Assessment Management Plan (RAMPs), and monitoring of subcontractor performance.
- d. Material review disposition and approval requiring NASA participation.
- e. Manufacturing, assembly, and test operations assessments.
- f. Review of quality requirements at Technical Interchange Meetings (TIMs), Preliminary Design Reviews (PDRs), and Critical Design Reviews (CDRs).

#### 5.4 Operations and Maintenance Phase

The Contractor shall review flight products such as flight rules and crew procedures to identify safety issues, to ensure that operational hazard controls are properly implemented, and to ensure the safety of pre-defined responses to contingency situations.

##### 5.4.1 Mission Planning

- 5.4.1.1 The Contractor shall provide technical expertise in operational meetings such as Flight Techniques Working Groups, Mission Integration and Operations Control Boards, Joint Operations Panels, Flight Operations Reviews, Increment Operations Reviews, and Mission Management Team meetings to ensure that flight products meet safety requirements. Participation includes technical evaluation of items to be presented prior to the meetings.
- 5.4.1.2 The Contractor shall participate in PRTs to analyze non-conformances, determine root cause and corrective actions to prevent recurrence. The Contractor shall communicate across Programs and Projects to ensure that S&MA has an integrated and coordinated position.
- 5.4.1.3 The Contractor shall support mission planning activities to ensure that operational planning does not conflict with safety requirements. Activities include the review of flight objectives, plans, manifests, equipment transfer priorities, and crew activity plans for compliance with requirements.

5.4.1.4 The Contractor shall review proposed manifests to ensure the safe continued operation of the on-orbit vehicle, planned maintenance activities, and that transfer priorities support safety requirements. The Contractor shall ensure planned crew activities are properly coordinated and safety related objectives are accomplished in a timely manner.

5.4.1.5 The Contractor shall perform mission readiness assessments and prepare briefings per DRD 15, S&MA Prelaunch Assessment Presentations, to support Prelaunch Assessment Reviews (PARs), S&MA Readiness Reviews (SMARRs), Software Readiness Reviews (SRR), EVA Readiness Reviews, Stage Operations Readiness Reviews (SORRs), and Flight Readiness Reviews (FRRs). The Contractor shall provide pre and post-flight assessments and briefings. Readiness review activities shall include review and reporting of:

- a. Status of S&MA products such as hazard reports, non-compliances, FMEA/CILs, and problem reports.
- b. Open work, including schedules for completion.
- c. S&MA issues and risks, flight constraints, or exceptions to flight readiness.
- d. Status of readiness to provide S&MA operational support, including training and certification of personnel and availability of required supporting data.
- e. Status of the on-orbit vehicle.
- f. Status of previously identified anomalies and their resolution.

#### 5.4.2 Mission Support

5.4.2.1 The Contractor shall provide real-time S&MA support to the Mission Management Team (MMT) and shall staff the Mission Evaluation Room (MER) to:

- a. Review requirements changes and waivers.
- b. Serve as the repository of S&MA data such as hazard reports, noncompliances, FMEA/CILs, Problem Reports, and retrieving such data in support of the evaluation and resolution of in-flight anomalies.
- c. Provide responses to in-flight hardware and software anomalies to identify any changes in risk resulting from

associated hardware changes or software patches or workarounds.

- d. Resolve questions and providing engineering assessments regarding on-orbit S&MA issues.
- e. Evaluate and provide technical expertise in the resolution of In-Flight Anomalies (IFAs), Mission Action Requests, Flight Rules and Crew Procedure changes.
- f. Provide S&MA representation on Flight Investigation Teams (FITs), and Anomaly Resolution Teams (ARTs) to identify risk impacts.
- g. Develop and assess Fault Trees and Root Cause analyses of anomalies.
- h. Ensure integration of International Partners / Participants (IP/P), Government-Furnished Equipment (GFE), Contractor-Furnished Equipment (CFE), Software, Payload and Visiting Vehicle assessments for MER responses.

5.4.2.2 The Contractor shall support MMT meetings by providing problem investigation support consisting of administrative and technical personnel. As scheduled, technical personnel for Shuttle support shall be on duty 24 hours, 7 days a week (24/7) at the MER Safety Console beginning at tanking and continuing through landing. The administrative personnel shall support 24/7 beginning at launch and continuing through landing. As scheduled, , technical personnel for ISS support shall be on duty 24/7 at the MER Safety Console during high activity periods (e.g. launch, docking, EVA, assembly operations). On weekends and periods of low activity technical personnel shall be on call 24/7. All personnel shall support mission simulations and shall demonstrate knowledge of mission, vehicle, and payload hazard controls and an ability to cope with high stress situations prior to supporting a mission.

5.4.2.3 The MMT support shall ensure that:

- a. S&MA MMT representatives are properly briefed on ongoing investigations, issues, anomalies, and operations.
- b. S&MA positions on Mission Action Requests, IFAs and other in-flight issues are clearly defined and communicated to Program management.
- c. S&MA data are provided in support of MMT

discussions and activities.

- 5.4.2.4 The Contractor shall develop and review Contingency Action Plans (CAPs) to assist in the development of predefined responses to accidents, incidents and mishaps. The Contractor shall assist in developing notification trees, obtaining contact information, defining data to be locked down, and defining how investigation boards will be established and operated, in accordance with SSP 50190, ISS Contingency Action Plan, and NSTS 07700 Volume VIII, Operations, Appendix R.
- 5.4.2.5 The Contractor shall support accident, incident, and mishap investigations in accordance with NPR 8621.1, NASA Procedural Requirements for Mishap Reporting, Investigation, and Recordkeeping. The Contractor shall retrieve and supply relevant S&MA data to investigatory boards. Contractor personnel shall perform analyses, such as the development of fault trees in support of accident investigation activities. The Contractor shall review relevant S&MA data to identify contributing and root causes of the accident, and the Contractor shall assist in the development of preventive and corrective actions to prevent recurrence.
- 5.4.2.6 The Contractor shall maintain the Safety Observation and Variance Assessment Report (SOVAR) database to ensure that real-time changes made to vehicle design and operation which conflict with baselined HRs are identified, reviewed by the appropriate safety panel, and resolved.
- 5.4.2.7 The Contractor shall maintain the S&MA Operations Console Handbook.

## 6.0 JOHNSON SPACE CENTER (JSC) PROJECTS SUPPORT

- a. This section describes the requirements for S&MA support to hardware and software development Projects managed by JSC in support of major NASA Programs and initiatives. Projects include new, modifications or redesigns of existing items. The Contractor shall provide technical services related to Government-Furnished Equipment (GFE), Payloads, and other hardware, software, and firmware processed on site. The Contractor shall manage and provide NASA access to information on work being performed, products produced, and documentation tracked for other organizations.
- b. The Contractor shall perform S&MA support throughout the Project life-cycle as described in this section in order to ensure systems meet requirements. Life-cycle phases may overlap and tasks may be worked or revisited in more than one phase. Support includes engineering services and the use of technical experts in the areas of design, development, fabrication, test and integration, and performance and evaluation of S&MA analyses.
- c. Specific requirements for life-cycle support, project management processes and products for the definition, planning and implementation of GFE Flight Development Projects are defined in EA-WI-023, Project Management for GFE Flight Projects.
- d. The Contractor shall develop or assess documentation including but not limited to:
  1. Program plans
  2. system hazard analyses
  3. safety trade studies
  4. design drawings
  5. interface control drawings and documents
  6. failure modes and effects analyses and critical items lists
  7. system qualification and certification plans
  8. EEE parts usage
  9. manufacturing plans and processes
  10. configuration control plans and procedures
  11. software development folders
  12. test plans and procedures

13. inspection requirements
  14. work authorizing documentation
- e. The following outlines the life-cycle roles of personnel. Specific skills and proven capabilities are required for each role.
1. Safety and Reliability personnel assist the Government in determining the S&MA requirements for the project
  2. Quality Engineering personnel assist the Government in establishing the design and workmanship requirements
  3. PQA personnel assist in ensuring that S&MA requirements are included in contracts
  4. Quality Assurance personnel witness and verify inspections and tests
  5. Safety and Quality personnel provide products to aid in the certification of the equipment for flight.
  6. Safety and Reliability personnel verify controls are in place for operations
  7. Safety, Quality, and Test Engineers investigate anomalies, quality escapes, and perform failure analysis
  8. Data Management personnel provide proper configuration management of records
- f. The Contractor shall document activities and rationales for decisions to provide traceability, and shall prepare and present status of actions and activities in periodic meetings such as weekly staff and monthly status per DRD 16, Activity Reports and quarterly technical reviews with the Programs.
- g. The Contractor shall provide engineering and technical expertise to process improvement, incident review, mishap investigation teams, and boards where S&MA related topics are addressed. Activities include evaluation of flight readiness, certification record generation and management, and participation in forums including design reviews and Program Boards and Panels.

#### 6.1 Software Assurance

The Contractor shall provide quality engineering services for software intensive ground systems residing at JSC that support the design, development, and test of flight systems. The Contractor shall provide quality engineering services for JSC facility software. This effort requires expertise in both hardware and software engineering as well as expertise in

the assurance disciplines of safety, reliability, maintainability and quality. The Contractor shall:

- a. Provide software assurance support for the SAIL, SCTF, JAEL, ISL, ground simulators, mission control centers, and integrated training facilities.
- b. Assess software assurance plans, quality plans, safety plans, procedures, processes, and reports for compliance to NASA and JSC policies and standards (Section J, Applicable Documents, Software Requirements and Policies subsection).
- c. Support the preparation, review, and assurance of proper implementation of procedures, processes, inspection planning, and quality assurance requirements for JSC ground software.
- d. Provide JSC with facility software safety analysis technologies and methodologies expertise.
- e. Develop software tools, methodologies and techniques to support facility software safety analyses.

## 6.2 Concept and Requirements

This phase includes Project feasibility assessment, Project requirements definition and approval.

### 6.2.1 Feasibility Assessments

The Contractor shall assist with feasibility assessments by providing input in areas such as constraints, technical validity, facility capability, schedule and other associated risks.

### 6.2.2 Procurement Quality Assurance (PQA)

6.2.2.1 The Contractor shall assist in the review of proposed quality provisions and clauses to ensure project procurements are consistent with the Federal Acquisition Regulation (FAR), NASA FAR Supplements (NFS), and JSC Procurement Instruction. The Contractor shall recommend Government Source Inspection (GSI) in accordance with the requirements of FAR 46.402, applicable NASA and the JSC Procurement Instruction, draft Letters of Delegation (LOD), and NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts. The Contractor shall submit the GSI recommendations and draft LODs to NASA S&MA for concurrence prior to obtaining Contracting Officer approval.

- 6.2.2.2 The Contractor shall perform safety, reliability, and quality assurance surveillance on selected JSC and contractors' processes to monitor contractor performance to safety, product, and technical requirements. The Contractor shall assist in defining surveillance programs that assure method, manpower, material, equipment, and environment satisfy contract requirements.
- 6.2.2.3 The Contractor shall perform quality assessment audits on vendors and suppliers to determine their manufacturing and testing capability. Audits include process audits to verify specified levels of control by the vendor or supplier on their internal processes, determination of problems or potential problems, identification of corrective and preventive actions, and verification of corrective and preventive action implementation and effectiveness. The Contractor shall perform inspections and monitor clean room laboratory services on-site at JSC and at other local or remote locations to ensure compliance with JPR 5322.1, Contamination Control Requirements Manual. Audits and inspections shall be performed during the development and manufacturing phases.
- 6.2.2.4 In order to ensure that safety, reliability, and quality assurance surveillances, audits, and inspection activities are performed in accordance with safety, product and technical requirements, the Contractor shall provide qualified Quality Assurance Specialists (QAS). The QAS shall be pre-qualified with a minimum of 2 years of experience in the quality assurance disciplines with skills encompassing problem solving, analyzing, facilitating, researching, coordinating, articulating, negotiating, communicating, and evaluating issues, concerns and actions relative to meeting S&MA requirements.
- 6.2.2.5 On-The-Job Training of Contractor personnel shall be restricted to acquiring the necessary experience of working within the JSC and S&MA systems and processes and shall not be used to qualify a QAS in the quality assurance disciplines.
- 6.2.3 S&MA Requirements
  - 6.2.3.1 The Contractor shall assist in defining hardware and software S&MA requirements for NASA Projects.
  - 6.2.3.2 The Contractor shall support project requirements reviews and ensure appropriate requirements for intended use, planned environments, and established criticality based on operational use are included in the project requirements documents and Project Management Plans. The

Contractor shall ensure traceability between the system level requirements and the project requirements.

### 6.3 Design and Development

- a. This phase includes preliminary and detailed design, and system design, verification, and validation. Design validation is generally accomplished through a combination of test, analysis and inspection of a flight-like unit to prove the design meets the requirements. For JSC Projects, primary design reviews during this phase are the Preliminary Design Review (PDR) and the Critical Design Review (CDR) though other reviews may be identified that are specific to the needs of the Project. For payload reliability and maintainability, development phase reviews are held by responsible JSC organizations.
- b. The Contractor shall provide support to all Project design activities, development activities, verification, and validation activities, and technical working groups. This includes the development of milestone schedules, milestone reviews and a list of hardware and software deliverables. The Contractor shall perform in-depth analysis of data and documentation to identify and document problems. Quality engineering and technical services includes preparation of documentation, review of prepared documentation, recommendations for approval of design documentation, EEE parts analysis, approval of drawings for release, verification that software development folders are maintained, attendance and participation in formal reviews, and follow-up activities including responding to actions and review of changes to documentation resulting from review discussions and actions.
- c. The Contractor shall ensure appropriate closure criteria of all issues are identified and verify that action closures have been accomplished. The Contractor shall verify that documentation is maintained under Project established configuration control processes. For software development support activities, the Contractor shall use applicable quality assurance tools such as requirements traceability tools, code map coverage and software complexity studies as part of their evaluations.

#### 6.3.1 Projects

6.3.1.1 The Contractor shall perform and evaluate assessments of the design and identify areas of risk. Examples of products utilized for assessment and analysis are:

1. FMEAs and CILs developed to the requirements of NSTS 22206, Instructions for Preparation of Failure Modes and Effects Analysis and Critical Items Lists, and SSP 30234, Instructions for Preparation of Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) for Space Station.

2. HRs developed and processed to the requirements of NSTS 22254, Methodology for Conduct of Space Shuttle Program Hazard Analyses, SSP 50021, Safety Requirements Document, SSP 30309, Safety Analysis and Risk Assessment Requirements Document, SSP 50146 (Attachment D), NASA/RSA Bilateral S&MA Processes, JSC 17773, Instruction for Preparation of Hazard Analysis for JSC Ground Operations, KHB 1700.7, Space Shuttle Payload Ground Safety Handbook, and KHB 1710.2, KSC Safety Practices Handbook, to identify hazards associated with the ground processing and operational use of the hardware and software, define controls for those hazards, and verify implementation of the hazard controls.
  3. Fault Tree Analyses to identify critical hardware, software, and procedural failure paths.
  4. Statistical or probabilistic analyses to support reliability assessments.
  5. Sneak circuit analyses to identify latent circuit conditions, design concerns, and drawing errors.
  6. Test and analysis of high risk candidate EEE and mechanical parts.
- 6.3.1.2 Other products or analysis techniques shall be utilized or developed by the Contractor as necessary to meet specific requirements and to assess functions/complexity of the hardware and software items.
- 6.3.1.3 The Contractor shall review technical documents, changes to technical documents, and deviations and waivers to ensure inclusion of quality assurance requirements and adequacy of design criteria necessary for procurement, fabrication, inspection, and test operations. The Contractor shall identify areas of noncompliance with technical and data submittal requirements. The Contractor shall ensure hazards are identified and controlled, and verify implementation of the hazard controls. Hazards may be associated with ground processing and operational use of the hardware and software during all phases of flight (installation, launch, on-orbit usage, stowing and destowing, landing, post-landing removal and post-mission processing). The Contractor shall ensure the development of inspection and test processes and techniques in accordance with JSC policies and procedures.
- 6.3.1.4 Milestone design reviews such as PDR and CDR are conducted to review and approve documentation

associated with the design phase and provide formal control of the design and development process.

6.3.1.5 For PDR, the Contractor shall evaluate the design based on the following considerations:

- a. Compliance with statement of work, end item specifications, specific design criteria, and other applicable documents.
- b. Compatibility with interface and operational requirements.
- c. Feasibility of proposed schedule.
- d. Consideration of induced and natural environmental criteria.
- e. Requirements for transporting, storing, handling.
- f. Requirements for support equipment.
- g. Inclusion of S&MA requirements.
- h. Adequacy of design to satisfy S&MA-related requirements in the areas of thermal, electrical, materials, mechanical, stress, software, performance, and interface.
- i. Inspectability and testability including traceability to requirements.
- j. Completeness of verification matrix, adequacy of verification methods selected, and appropriateness of success criteria.

6.3.1.6 For CDR the Contractor shall evaluate the design and documentation for:

- a. Detailed environmental, thermal, electrical, and mechanical analyses.
- b. Development test data.
- c. Design decisions and trade-offs.
- d. Requirements which have been added or changed since the PDR.
- e. Parts and materials selections including participation in establishment of parts reliability requirements, parts

specifications and applications, as well as requirements for selection, screening, qualification, derating, handling, destructive physical analysis, failure trending and potential NASA Advisories and Government-Industry Data Exchange Program (GIDEP) / Acute Launch Emergency Reliability Tip (ALERT) impacts, and review of non-standard parts approval requests.

- f. Hardware manufacturing and software development test plans and procedures, which shall include provisions for inspections and tests.
- g. Traceability in accordance with Program/Project requirements.
- h. Completeness of verification matrix, adequacy of verification methods selected, and appropriateness of success criteria.
- i. Closure of actions generated at the PDR.

6.3.1.7 For design validation the Contractor shall verify that the hardware and software design and implementation meets the Project requirement for life, environments, interfaces, and performance and that the method of verification (test, analysis, or inspection) is appropriate, adequate and documented in applicable Work Authorization Documents. The Contractor shall review all design validation documentation and participate in organizational and formal certification reviews.

#### 6.3.2 Payloads

The Contractor shall provide evaluation of the implementation of JSC and NASA payload reliability and maintainability requirements. The Contractor shall participate in working group meetings and formal and informational reviews of payload documentation and data as described in NSTS 13830, Payload Safety Review and Data Submittal Requirements, NSTS 1700.7, Safety Policy and Requirements for Payloads Using the Space Transportation System (STS), and NSTS 1700.7, ISS Addendum, Safety Policy and Requirements for Payloads Using the International Space Station, to assess payload hardware and software compliance with applicable payload requirements. The Contractor shall identify problems, deficiencies, or concerns and present their findings along with recommendations for corrective and preventive actions to the responsible organization.

#### 6.4 Manufacturing, Test, Acceptance, and Delivery

This phase includes materials procurements and receiving, fabrication and manufacturing, subassembly testing and assembly acceptance testing, formal acceptance by NASA, software code development, software verification testing, shipment, and physical delivery of the finished products and requires engineering, inspection, and recordkeeping functions. The Contractor shall audit manufacturing processes, inspect manufactured items, support testing, and provide inspection and processing services for storage, handling, shipping, and receiving. The manufacturing processes include metallurgical, chemical, metal-joining, bonding, plating and coating, surface-treating, EEE, welding, machining, and plastics-working processes, and designing and implementing manufacturing inspection attribute sampling plans.

#### 6.4.1 Readiness Reviews

The Contractor shall conduct documentation and drawing reviews, coordinate work requests, and participate in formal reviews such as Manufacturing Readiness Reviews (MRRs) and Test Readiness Reviews (TRRs). The Contractor shall participate in Acceptance Reviews (ARs) to assess the readiness of hardware and software for acceptance by NASA.

#### 6.4.2 Manufacturing and Test Assurance

6.4.2.1 The Contractor shall provide in-line technical assessments by use of inspection, verification, and the witnessing of work and processes used in the development and manufacturing of space flight hardware, software, and associated ground support equipment. Technical assessments are performed to verify work is accomplished according to applicable requirements. Inspection and verification tasks are associated with receiving, handling, storage, packaging, preservation, fabrication, assembly, test, processing, and shipping of hardware and software. The Contractor shall maintain all the Contractor-provided and Government-provided precision measurement mechanical and electronic tools and equipment required for performance of manufacturing and test assessment responsibilities contained in this SOW. The Contractor shall provide surveillance of hardware and software processes and hardware fabrication where in-line inspection is being accomplished by other than this Contractor's provided inspectors.

6.4.2.2 The Contractor shall support simulation or integrated ground system testing both pre- and post-acceptance to assess compliance of planned simulations or integrated system testing with NASA approved plans, procedures and applicable standards for the simulator or facility involved.

6.4.2.3 The Contractor shall provide engineering and technical services for the development, testing, acceptance, and delivery of software and associated tools. The Contractor shall perform software code walkthroughs to evaluate testability. The Contractor shall analyze test plans, procedures and results to ensure that the software meets S&MA requirements.

#### 6.4.3 Non-Conformances

6.4.3.1 The Contractor shall document problems and anomalies by using a Non-Conformance Report (NCR) or Discrepancy Report (DR). The Contractor shall be responsible for trend coding of all NCRs and DRs and the preparation of trend reports and analyses based on trend coding data. This task includes conducting investigation and corrective action activities, documenting problems and anomalies, tagging and segregating discrepant hardware or software during investigation. The Contractor shall ensure that acceptable problem resolutions or explanations are documented and implemented.

6.4.3.2 The Contractor shall review failures and discrepancies that occur in JSC facilities supported by S&MA. The Contractor shall analyze the failure and discrepancy information and provide trend reports per DRD 17, Trend Analysis (JSC Systems) Report.

6.4.3.3 The Contractor shall maintain a system for reporting and tracking of Problem Reporting and Corrective Action (PRACA) items. The Contractor shall input problem data received from other contractors into the system, use and analyze the data for reporting and supporting other problem discussion activities, and output data from the system into Program systems that collect both Program and Project problem data. The Contractor shall participate in PRTs and similar investigation teams to ensure proper classification and disposition of problems, and support Project and Program level boards to provide status, closure, and disposition information. The PRACA process tracks problems that occur during manufacturing, assembly, test, maintenance, and operations. The PRACA process is described in NSTS 08126, Space Shuttle Problem Reporting and Corrective Action (PRACA) System Requirements, for the Shuttle Program, and in JSC 28035, JSC Government Furnished Equipment (GFE) Problem Reporting and Corrective Action (PRACA) Requirements, for GFE Projects, and SSP 30524, PRACA Data System Requirements Definition Document, and SSP 30223, Problem Reporting and Corrective Action for the

International Space Station, for the Space Station Program.

6.4.4 Documentation Tracking and Retention

The Contractor shall provide tracking, control, maintenance and indices of documents and the actual or controlled electronic versions of documentation produced during this phase. Documentation includes but is not limited to Task Performance Sheets (TPSs), Virtual Work Authorization Records (VWARs), Work Order Packages, Interim DRs, DRs, MRRs, shipping documents, Acceptance Data Packages (ADPs), documentation on inactive hardware and equipment, and vendor data submittals.

6.4.5 Acceptance

The Contractor shall verify system requirements and specifications for safety, reliability and performance are met. The Contractor shall participate in Software Acceptance Reviews, System Acceptance Reviews, Functional Configuration Audits (FCAs), and Physical Configuration Audits (PCAs) to present and discuss their findings and recommendations. The Contractor shall ensure the completeness and accuracy of ADPs per SSP 30695, Acceptance Data Package Requirements Specification, and SN-D-0007, Acceptance Data Package Requirements.

6.5 Operations

This phase includes system certification or recertification to new or revised operational usage requirements, assessment of readiness for shipment, evaluation of readiness for operational use, and support to operations that include ground handling and flight.

6.5.1 Certification

The Contractor shall establish and maintain a process for the certification or recertification of hardware and software for flight that includes obtaining, producing, and reviewing objective evidence that design, production, safety and acceptance processes provide products that meet or exceed the minimum requirements identified for the hardware or software. The certification process for hardware includes tracking manifested items and assessing certification status, assembling, summarizing, and presenting certification data packages to a NASA Certifying Official, and logging, storing and controlling the signed certification documentation. The certification process includes the processing of the Government Certification Acceptance Record (GCAR).

6.5.2 Shipment of Flight Equipment

The Contractor shall ensure flight equipment being shipped for flight is ready for shipment and follow-on flight processing and integration. The Contractor shall verify that the equipment is certified for the mission, open issues have been resolved, pre and post flight ground processing open work has been scheduled, and there is sufficient life usage remaining to support the identified mission. The Contractor shall present their assessment of readiness for shipment to NASA.

### 6.5.3 Prelaunch Assessments

6.5.3.1 The Contractor shall perform evaluations of flight worthiness and readiness, and generate flight assessment documentation to support discussions and Flight Readiness Reviews (FRRs).

6.5.3.2 The Contractor shall prepare and present S&MA prelaunch assessment presentations for each flight per DRD 15, S&MA Prelaunch Assessment Presentations. The overall Program-level requirements for this activity are contained in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness.

6.5.3.3 The Contractor shall support EVA mission crew training and verify EVA Assessment Team (EVAAT) crew training. EVA payloads and hardware reviews shall be supported by the Contractor to verify compliance with S&MA and EVA requirements. EVA related Integrated hazard reports shall also be reviewed to verify compliance to EVA requirements. The Contractor shall perform, document, baseline and maintain EVA operations risk assessments for Space Shuttle and ISS EVAs. The Space Shuttle Program-level requirement for this task is identified in NSTS 22254, Methodology for Conduct of Space Shuttle Program Hazard Analyses, and more specific requirements for operational and hazard assessments are contained in JSC 17481, Safety Requirements Document for JSC Space Shuttle Flight Equipment. The ISS Program-level requirement for this task is in SSP 30309, Safety Analysis and Risk Assessment Requirements Document.

6.5.3.4 The Contractor shall prepare S&MA Certification of Flight Readiness (CoFR) and Certification of EVA Readiness presentations for both S&MA internal and Program flight readiness reviews for each flight in accordance with the requirements of SSP 50108, Certification of Flight Readiness Process Document, ISS Program, Space Shuttle Program Directive 52, for the ISS Program, NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, for the Shuttle Program, and JSC 28222, EVA Project Certification of Flight Readiness

Requirements and Implementation Plan, for EVA-related items.

#### 6.5.4 Flight Planning and Real-Time Flight Support

- 6.5.4.1 The Contractor shall provide real-time flight support to monitor system use and performance and serve as the flight support data resource for S&MA data as well as Project specific data and documentation.
- 6.5.4.2 The Contractor shall participate in flight planning, mission simulation training and operations to identify potential safety issues to ground support systems, payloads, or mission operations and provide an independent assessment including recommendations for resolution, for discussion, or presentation to the responsible JSC forums or organizations.
- 6.5.4.3 In addition, the Contractor shall participate in investigations of in-flight anomalies and failures, and in the implementation of resolutions and preventive or corrective actions.

#### 6.6 Sustaining Engineering and Maintenance

This phase includes engineering activities supporting the continuing usage of Project hardware and software. The Contractor shall support flight operations planning and assessments, performance and problem trending, hardware life assessments and maintenance requirements tracking, and engineering and inspection support to required maintenance and repair activities.

## 7.0 INDEPENDENT ASSESSMENT AND ASSURANCE ACTIVITIES

### 7.1 Independent Assessment (IA)

7.1.1 The Contractor shall provide Programmatic, technical, and process expertise within each S&MA discipline for conducting Independent Assessments (IAs) to enhance the success of Programs and Projects and the effectiveness of S&MA processes implemented in Programs and Projects. Assessments and evaluations shall be proposed by the Contractor. The Contractor shall report the results of assessments and evaluations per DRD 18, Evaluation Reports and DRD 19, Assessment Plans and Reports.

7.1.2 The Contractor shall:

- a. Identify status, issues, and concerns regarding safety and mission assurance and communicate this information to the JSC Independent Assessment Office (IAO) via informational reports (verbal or written) regarding meetings attended, Program and Project activities, and internal IA planning activities.
- b. Provide technical and administrative services to the JSC IAO to facilitate the Prelaunch Assessment Review (PAR) process of the JSC S&MA Directorate for unmanned International Partner (IP) launches to the ISS.
- c. Provide technical and administrative support to the NASA Headquarters Office of Safety and Mission Assurance (OSMA) SMARR process for Shuttle and Russian Soyuz launches.
- d. Provide expertise on audit teams to:
  1. Research and compile documentation needed in the audit
  2. Verify requirements traceability
  3. Identify requirements gaps
  4. Assess areas such as processes, staffing, skill mix, software tools, and funding
  5. Document findings and supporting objective evidence
- e. Maintain and administer the JSC IA website for use by IA personnel.
- f. Provide the JSC IAO Quarterly Activity Report in a mutually agreed format for redistribution to other IA locations and NASA management per DRD 16, Activity Reports.

## 7.2 Integrated Supplier Assurance Management Program (ISAMP)

- 7.2.1 NASA has implemented a program for evaluating, gathering, and disseminating information on Government suppliers' performance under the authority of the NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts.
- 7.2.2 The Contractor shall participate in the implementation of NASA quality assurance of Government suppliers. The assurance activities include consideration of hardware complexity, supplier experience, state of hardware development, unit cost, and hardware use. The Contractor shall also participate in Supplier Assurance Studies, Working Groups, and Headquarters Support. This support includes the preparation of meeting minutes and assistance in the development of Agency quality related procedures.
- 7.2.3 The Contractor shall provide project administration of the Integrated Supplier Assurance Management Program (ISAMP), which includes cost tracking and cost and Project reporting. The services shall also include services to and coordination with Headquarters and NASA Centers, Projects, and Programs.
- 7.2.4 In support of the Supplier Assessment System (SAS), the Contractor shall:
- a. Maintain, enhance and train personnel in the use of the SAS data repository for the agency. The SAS provides the user with:
    1. a complete listing with supporting information of suppliers used by NASA with emphasis on performance and risk;
    2. Agency-wide supplier metrics, providing performance insight and targets of opportunity for supplier base improvements;
    3. detailed schedule information of audits;
    4. detailed repository of audit history information;
    5. provision of standardized tools (e.g. audit checklists, flow down audit formats for incorporation into DCMA LOD);
    6. resource links throughout the Agency for access to product data and best practices.
  - b. Coordinate activities with the Naval Sea Systems Command (NAVSEA), and the Missile Defense Agency, and Army Material Command as directed.

### 7.3 Software Continuous Process Improvement

- 7.3.1 The Contractor shall manage and provide services to the development and implementation of all NASA software continuous improvement initiatives in accordance with NPR 7150.2, Software Engineering Requirements. The primary goal is the release of safe and high quality software products and processes. Specifically, the Contractor shall perform the following:
- a. Establish comprehensive company goals for continuous improvement in the area of software development and assurance.
  - b. Provide metrics which quantify the effectiveness of continuous improvement goals.
  - c. Maintain a record of continuous improvement activities and associated results.
- 7.3.2 The Contractor shall provide technical and engineering services to the S&MA Software Assurance Technology Team (SWATT) in developing and maintaining continuous process improvement in the area of software development and assurance. This includes the periodic review and recommended revision to Agency and Center software policies, procedures and standards.
- 7.3.3 The Contractor shall maintain and ensure uniformity in the implementation of software quality and safety requirements for JSC Programs and Projects. This includes developing and implementing JSC approved procedures and controls that are consistent with software process and product continuous improvement models. The Contractor shall assist S&MA to ensure that JSC procedures and controls are compliant with the Capability Maturity Model Integrated (CMMI).

## **8.0 ADVANCED PROGRAMS, ASSURANCE METHODOLOGIES, AND SPECIAL PROCESSES**

The Contractor shall ensure that S&MA disciplines are included in advanced programs and projects. Emphasis shall be placed on early involvement, responsiveness, and providing added value. This includes new, modified, and exploration-related programs and projects. Services shall also be provided to advance the state of the art in assurance practices and to maintaining cognizance of advanced technologies and their implications to the assurance function.

### **8.1 Advanced Programs and Projects**

The Contractor shall provide early involvement to assigned advanced programs and projects to increase the likelihood of mission success, reduce the risk of injury to personnel, and improve the overall system safety, reliability, and mission assurance.

#### **8.1.1 Risk Analyses**

8.1.1.1 The Contractor shall perform qualitative and quantitative assessments of risk. The Contractor shall assist in the identification, assessment, reporting, tracking, and mitigation of risks throughout the program life-cycle. Examples of risk assessments include hazards analyses, FMEA, PRAs, reliability, maintainability, supportability and availability analyses.

8.1.1.2 The Contractor shall participate in requirements development and design trade studies to determine the most effective means of achieving safe and reliable space systems. The Contractor shall also utilize lessons learned, as well as research and analyze other data and methodologies to provide and defend recommendations.

#### **8.1.2 Requirements Development**

8.1.2.1 The Contractor shall assist the Government with the development and assessment of top-level S&MA requirements for proposed space flight programs and their associated support systems. This includes the development and evaluation of rationale and traceability for recommended requirements.

8.1.2.2 The Contractor shall assist with the development and assessment of Project- and subsystem-level S&MA requirements derived from higher level requirements. This includes the development and evaluation of rationale and traceability for recommended requirements.

### 8.1.3 Vehicle S&MA Engineering

8.1.3.1 The Contractor shall evaluate design concepts proposed by NASA and contractors against S&MA requirements and provide feedback to design processes with supporting data for recommendations.

8.1.3.2 The Contractor shall perform integrated system-level S&MA assessments of designs, specifications, and other Program documentation such as hazards analyses, safety plans, and reliability analyses and provide inputs to milestone reviews with supporting data for any findings.

8.1.3.3 The Contractor shall perform detailed evaluations of spacecraft subsystems through the review of subsystems specifications, design documents, operations plans, and the use of safety and reliability analysis tools. The Contractor shall also develop or evaluate subsystem safety and reliability analyses such as preliminary hazard analyses, hazard analyses, FMEAs, fault trees, and reliability block diagrams. The Contractor shall provide inputs to subsystem design specifications and operations documents at milestone reviews or as needed and present and defend these inputs. The Contractor shall assess planned flight operations concepts to ensure S&MA requirements are met and provide input to NASA.

8.1.3.4 The Contractor shall determine applicability of human rating requirements to space flight systems and incorporate such requirements in appropriate Program documents. The Contractor shall also generate and evaluate human rating plans and requirements and evaluate Program and Project compliance to human rating requirements and provide recommendations to correct deficiencies.

### 8.1.4 Procurement Quality Assurance (PQA)

8.1.4.1 The Contractor shall assist the Government in the development of procurement documentation in order to describe S&MA processes and products delivered by the spaceflight systems contractors.

8.1.4.2 The Contractor shall assist the Government in determining quality requirements to be incorporated into spaceflight systems contracts and assist in instituting processes to ensure that delivered products meet NASA requirements. The Contractor shall assist the Government in drafting LODs for government approval, to authorize DCMA or other Government agencies to accept spaceflight hardware and software deliverables.

## 8.2 Assurance Methodologies and Technologies

### 8.2.1 Assurance Methodologies

The Contractor shall participate in activities to advance state of the art assurance methodologies in support of NASA initiatives such as Research Technology Objectives and Plans (RTOPs) NASA Electronic Parts Packaging (NEPP) Program. The Contractor shall conduct or participate in research efforts in new technologies for the purpose of identifying assurance techniques required upon deployment of advanced technologies. The Contractor shall also propose RTOPs and plans for innovative methodologies and technologies for conducting risk assessments and providing product assurance. The Contractor shall support the NEPP by identifying and suggesting approaches for EEE parts database management, identifying and collecting data sources for EEE parts obsolescence, and identifying and comparing tools and techniques for predicting obsolescence.

### 8.2.2 Assurance Technologies

The Contractor shall carry out activities to advance S&MA capabilities in performing assurance functions. These activities include evolving or improving existing assurance and analysis techniques, and proposing and developing new assurance concepts.

The Contractor shall:

- a. Research and develop techniques to quantitatively assess the risks of software failures.
- b. Assess and develop new assurance tools in multiple areas such as: reliability, maintainability, and supportability analyses; probabilistic risk assessment; nondestructive evaluation and other inspection techniques; and risk management.
- c. Research advanced technologies with emphasis on assurance. Examples of such technologies are Micro-Electromechanical Systems (MEMS), nano-technology, advanced materials, and advanced computing and processing systems.
- d. Facilitate technology transfer through demonstrations to JSC Programs and Projects.

## 8.3 Special Processes

8.3.1 The Contractor shall provide expertise to assess new and emerging technologies and apply to programs and projects. Current designated areas are metals, welding, soldering, brazing, nonmetallic materials (composites and adhesives), Surface Mount Technology (SMT), lubrication, seals, contamination, fasteners, contamination-related environmental technology, fluids, NDE, and Statistical Process Control (SPC).

8.3.2 The Contractor shall:

- a. Evaluate data provided by hardware contractors and subcontractors on equipment to verify compliance with contract requirements and appropriate specifications.
- b. Provide materials and process engineering expertise for review of flight and flight-related system problems and recommend corrective actions to prevent problem reoccurrence.
- c. Support special problem investigations as required, review process-oriented hardware failure analyses and investigations, and provide findings and recommendations.
- d. Review Government and contractor drawings and specifications as directed. Present findings on adequacy and compliance, with emphasis on process technology.
- e. Review process specifications and procedures for fabrication, assembly, and testing; and prepare comments and findings.
- f. Review nondestructive test procedures and NDE of pressure vessels and fracture control of structural components. Provide findings on adequacy and compliance.
- g. Provide expertise in the development and maintenance of workmanship standards for manufacturing and process technologies at the Center and Agency levels.
- h. Recommend requirements for the JSC procurement of clean rooms, tools, related equipment, and services. The Contractor shall review JSC clean room facilities and operations and provide comments and findings.
- i. Provide expertise for the preparation and maintenance of cleanliness specifications and procedures for Program hardware testing, preflight checkout, and functional operations.
- j. Review JSC contamination control activities and provide recommendations concerning compliance to requirements.
- k. Establish and evaluate process technologies for ground-based and on-orbit applications.

#### 8.4 Electrical, Electronic, Electromechanical (EEE) Parts

8.4.1 The Contractor shall provide services to JSC organizations that are responsible for internal or contracted efforts involving EEE parts in space flight hardware and mission-essential or critical ground support equipment for new designs, Programs, and Projects.

8.4.2 The Contractor shall:

- a. Provide verification during requirements definition phase to ensure that the parts screening, qualification and vendor selection process is compliant with requirements.
- b. Participate in audits of existing and proposed suppliers to verify compliance to NASA standards.
- c. Perform verification of the data submittal during hardware development for parts qualification, screening, EEE parts problem resolution and corrective action, risk assessment, and recurrence control.
- d. Assist in preparation, analysis and distribution of NASA Advisories and GIDEP ALERTS. Verify as-built configuration parts are not included in the GIDEP database and coordinate with JSC Engineering to resolve any nonconformances.
- e. Provide technical expertise to the Receiving Inspection and Test Facility (RITF) for EEE part failure analysis and screening.
- f. Evaluate electrical stress derating analysis and MTBF reliability analysis for flight hardware in conjunction with S&MA flight hardware certification process.
- g. Provide reliability analysis tools and manpower to perform MTBF analyses. The analysis shall be performed in two phases. In the early design phase, the analysis shall ensure the design is consistent with the hardware failure rate goal. The final design phase shall use the appropriate stress analysis model to verify the MTBF for the delivered hardware.
- h. Compare “as-built” configuration to the “as-designed” EEE parts lists and identify risk implications for any non-compliances to the Program and Project managers.
- i. Support JSC Engineering by verifying the test facilities meet Program requirements.

8.5 NASA Advisories and Government-Industry Data Exchange Program (GIDEP)/Acute Launch Emergency Reliability Tip (ALERT) System

- 8.5.1 The Contractor shall use the GIDEP/ALERT system to exchange information both internal and external to NASA.
- 8.5.2 The Contractor shall maintain the GIDEP/ALERT files and related information, and the ALERT distribution list. The Contractor shall review ALERTs for applicability to JSC contracts, distribute ALERTs, and determine adequacy of responses.
- 8.5.3 The Contractor shall provide a controlled method to evaluate, initiate, investigate, distribute and respond to ALERTs which apply to JSC and other NASA Centers per the process and requirements of NPR 8735.1, Procedure for Exchanging Parts, Materials, and Safety Problem Data Utilizing the Government Industry Data Exchange.

## 9.0 INSTITUTIONAL SAFETY AND QUALITY

### 9.1 Pressure Systems

9.1.1 The Contractor shall provide engineering and technical expertise for the JSC pressure systems certification Program as outlined in JPR 1710.13, Design, Inspection, and Certification of Pressure Vessels and Pressurized Systems. The Contractor shall:

- a. Review and certify compliance of Pressure Vessel System (PV/S) designs.
- b. Review and certify compliance of PV/S certification inspection and testing procedures.
- c. Perform pressure vessel inspections per JPR 1710.13.
- d. Track and record inspections and assessments per DRD 20, Facilities System Certification Report.
- e. Monitor PV/S tests for conformance to test requirements.
- f. Maintain a computerized inventory and recall system to document, track, and schedule all PV/S tests and inspections.

9.1.2 Inspection personnel shall possess a commission from the National Board of Boiler and Pressure Vessels. Inspectors shall be certified by the American Welding Society to perform weld inspections. The Contractor shall maintain copies of certifications and commissions and shall provide copies to the COTR.

### 9.2 White Sands Test Facility (WSTF)

9.2.1 The Contractor shall provide the White Sands Test Facility (WSTF) S&MA offices with support in the establishing and implementing policies and Program requirements, engineering and technical expertise in materials and process engineering, system safety, engineering and technical expertise for the JSC pressure systems certification program, inspection support to flight and flight-related systems to ensure that quality assurance requirements are satisfied, and performance of activities related to institutional safety and health.

9.2.2 The Contractor shall provide products and services to the WSTF S&MA in the following areas:

- a. Process submitted Corrective/Preventive Action Requests (CPAR), including tracking CPAR resolution and maintaining the WSTF CPAR database.

- b. Work with WSTF design groups, technical offices, and S&MA to make and implement quality improvements and changes.
- c. Provide field quality assessments and surveillance of WSTF test activities.
- d. Provide acceptance test verification.
- e. Support cross-functional management system and system safety audits.
- f. Generate discrepancy records for observed non-conformances and perform trend analysis.
- g. Support the processes required to perform re-certification and modification of existing ground-based pressure systems and certification of new ground-based pressure systems in accordance with facility policies and procedures, applicable industry codes and specifications, and governing NASA standards.
- h. Provide expertise to the processes required for the qualification of welding and brazing personnel and review and authorize welding and brazing processes and documentation in accordance with facility policies and procedures, applicable industry codes and specifications, and governing NASA standards.
- i. Review WSTF management system documents for sufficiency in addressing and conformity to meeting requirements.
- j. Perform vendor surveys and maintain Survey Vendor List (SVL).
- k. Develop training Programs for S&MA disciplines for use at WSTF.
- l. Train WSTF S&MA personnel and integrate with the JSC S&MA Personnel Qualification Program.
- m. Provide record maintenance, data entry, and management system documentation maintenance.
- n. Implement and maintain WSTF Hazard Management System. Assess applicable agency requirements implementation. Coordinate NASA customer inputs and communicate system needs to NASA.
- o. Plan and execute annual Performance Evaluation Profile (PEP) surveys and coordinate improvement activities performed by NASA and WSTF team contractor personnel.

- p. Facilitate contribution to and application of the Lessons Learned Information System (LLIS) per DRD 02, Lessons Learned, for WSTF personnel. Provide monthly assessment of WSTF information for candidate LLIS contributions. Coordinate application of LLIS with WSTF Management Representatives.
- q. Assess GIDEP/ALERTS and coordinate applicable information with affected WSTF representatives.

## 10.0 RECEIVING INSPECTION TEST FACILITY (RITF) (Level-of-Effort)

- a. The effort described by this SOW Section provides the JSC S&MA Directorate with the expertise and ability to provide mechanical and electrical part testing, failure analysis and evaluations, and specialized training in NASA workmanship standards in support of the NASA International Space Station. The RITF is located at JSC and provides services to contractors and subcontractors, JSC and other NASA Centers, as well as other Government agencies in support of the ISS Program.
- b. The Contractor shall provide the engineering and technical services necessary to operate the RITF facility and accomplish the testing, evaluation, and training services.
- c. The Contractor shall ensure the existing American Association for Laboratory Accreditation (A2LA) and ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories, accreditation is maintained for all lab disciplines. The Contractor shall obtain AS9100 registration through the National Quality Assurance (NQA) accreditation agency for all lab disciplines.

### 10.1 Mechanical and Electrical Testing and Analysis

10.1.1 The Contractor shall perform the following mechanical and electrical testing and analyses within the RITF:

- a. Destructive and nondestructive physical, chemical, and metallurgical testing and analyses of raw materials, fasteners, and mechanical hardware and components. Testing includes ultimate load, hardness, and quantitative chemical analysis of fasteners (e.g., bolts and rivets). Fastener testing shall be conducted in accordance with the requirements of JSC 23642, JSC Fastener Integrity Testing Program.
- b. Failure analysis of electronic and mechanical components.
- c. Burn-in of electronics components.
- d. Application research and testing on electronic parts proposed for use in environments not specified by the manufacturer (e.g., vacuum, extremely high or low temperatures, plasma inducing pressure levels).
- e. Incoming inspection of electrical assemblies used in critical and life-support hardware.
- f. Incoming screening of wire and cable to be used for flight Projects at JSC per the requirements of JSCM 8080 E-24, Manned Spacecraft Criteria and Standards.

10.1.2 In performing RITF services, the Contractor shall establish test and analysis requirements, perform inspections, screen and test, evaluate test and screening results, and prepare documentation to

be returned to the customer. In the case of a failure analysis, the Contractor shall also include determination of failure cause, and process or manufacturing corrective action recommendations.

10.1.3 The Contractor shall perform testing and analyses of manufacturing techniques, processes, and procedures pertaining to welding, soldering, electrical wire certification, surface mount technology and printed wiring boards/circuits, heat treating, EEE and mechanical parts, interconnecting wiring, fiber optics, electrostatic discharge control, conformal coating and encapsulation, staking, bonding, and contamination control.

Performance Standards – RITF Mechanical and Electrical Testing and Analysis:

1. Minimum of 90% of lab services completed on schedule.
2. Customer Satisfaction – Services including testing, analysis, and documentation, receive an overall minimum rating of “good.”

10.2 Training

10.2.1 The Contractor shall maintain training courses for the following processes: through hole soldering and inspection; surface mount soldering and inspection, cable and harness crimping and inspection; wire-wrap; lithium battery handling; conformal coating fabrication and inspection; fiber optic termination; electrostatic discharge (ESD) control; and other related courses as identified in the future to support changing and new NASA program and project workmanship standards. This training ensures compliance to NASA and industry standards and demonstrates proficiency to perform the necessary tasks.

10.2.2 The Contractor shall provide a comprehensive training and cross-training program for all RITF personnel that includes both formal and on-the-job training and RITF equipment proficiency training. Training requirements and fulfillment are to be documented in the S&MA Training data system in accordance with DRD 14, S&MA Personal Qualification Program Plan.

10.2.3 The Contractor shall record all training conducted and employees trained. The Contractor shall track certifications resulting from process certification courses conducted and notify the training coordinator or designee when certifications require renewal.

Performance Standards – RITF Training:

1. 100% of periodic reports submitted on schedule
2. 100% employees with up to date training plans.

3. Customer Satisfaction – Course attendees opinion surveys indicate satisfaction with course content and level of detail.

### 10.3 Quality

- 10.3.1 The Contractor shall maintain a Quality Management System (QMS) in the RITF and RITF Quality Manual compliant with AS9100, Quality Management Systems Requirements.
- 10.3.2 The Contractor shall maintain the RITF's procedures, equipment, management, and personnel in compliance with ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
- 10.3.3 Upon receipt, the Contractor shall submit a copy of audit reports generated by internal or external auditors of the RITF to NASA RITF management. The Contractor shall provide written statuses per DRD 16, Activity Reports, of any open work remaining after an audit (such as auditor findings and observations) until the open work is completed and approved by the auditing organization.

#### Performance Standards – RITF Quality:

1. Maintained compliance to ANSI ASQ Q9001-2000 as verified by NASA-authorized audits and inspections.
2. Maintained certification to ISO/IEC 17025 as verified by NASA-authorized audits and inspections.

### 10.4 Laboratory Equipment and Facilities

The equipment provided by the Government for performance of RITF activities is listed in Section J. Property shall be managed by the Contractor per the approved Property Management Plan (DRD 08).

#### Performance Standards – RITF Laboratory Equipment and Facilities:

1. 100% of Property Reports submitted on time.
2. Minimum of 98% of accountable property accounted for.

### 10.5 Maintenance

The Contractor shall be responsible for the maintenance of RITF equipment. The Contractor shall plan, coordinate, and manage the resources to perform RITF services. The Contractor shall maintain a prioritized life-cycle replacement and acquisition list of equipment needs

that ensures continuity of RITF services and expansion of capacity to accommodate approved Program and Project requirements.

Performance Standards – RITF Maintenance:

1. 100% of equipment maintenance (scheduled maintenance and calibration) completed on schedule.
2. Life-cycle replacement and acquisition list updated and NASA-approved for input to NASA yearly budget planning activity on schedule.

10.6 Shipping and Receiving

The Contractor shall ship and receive all equipment and materials leaving or entering the RITF through the shipping and receiving area. The Contractor shall record and maintain information necessary for tracking incoming and outgoing shipments. For items being shipped or received by commercial package delivery or by the U.S. Postal Service, the Contractor shall coordinate with the JSC shipping and receiving departments.

Performance Standard – RITF Shipping and Receiving:

1. Less than one working day processing time for shipping and receiving processing.

10.7 Laboratory Information Management System (LIMS)

The Contractor shall maintain a Laboratory Information Management System (LIMS) provided by NASA. This system shall be used by the Contractor to track information and costs for all jobs performed by the RITF. The LIMS system shall be accessible by both Contractor and NASA personnel. Maintenance of the LIMS system hardware and software shall be in accordance with DRD 12, Information Technology Plan.

Performance Standards – RITF LIMS:

1. 100% data and system availability during weekdays from 8 a.m. to 6 p.m. and 24/7 during Shuttle flights (launch to landing).
2. Customer Satisfaction – Data system development and modification receive an overall minimum rating of “good.”

RITF Workload Estimates:

- Jobs per year – 1411
  - Test samples per year\* – 2683
  - Failure analysis or application analysis - 60
- Number of student seats per year – 1120

- Certifications being tracked – 1221

\*Multiple test samples maybe combined to be considered as one job

**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)

**None included by reference.**

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

**None included by reference.**

**D.2 PACKAGING, HANDLING, AND TRANSPORTATION (NFS 1852.211-70)  
(SEPT 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)

| CLAUSE NUMBER | DATE     | TITLE  |
|---------------|----------|--|
| 52.246-5      | APR 1984 | INSPECTION OF SERVICES -<br>COST-REIMBURSEMENT |

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

**None included by reference**

**E.2 INSPECTION AND ACCEPTANCE (JSC 52.246-90) (JUN 1991)**

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 covered by the Statement of Work.

(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)

| CLAUSE NUMBER | DATE     | TITLE                                       |
|---------------|----------|---|
| 52.242-15     | AUG 1989 | STOP-WORK ORDER<br>(ALTERNATE I) (APR 1984) |

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

**None included by reference.**

### **F.2 COMPLETION OF WORK AND PERIOD OF PERFORMANCE (Effective May 1, 2011)**

- (a) All work required under Sections 3.1, 3.2, 3.4, 3.5, and 3.6, and Section 4.0 of the Statement of Work of this contract, including submission of all reports, shall be completed on or before April 30, 2013.
- (b) The period of performance for Sections 3.3, 3.7; and Sections 5.0 through 10.0 of the Statement of Work of this contract shall be from May 1, 2006 through April 30, 2013.

(End of Clause)

### **F.3 ADVANCE NOTICE OF SHIPMENT (NFS 1852.247-72) (OCT 1988)**

Ten work days prior to shipping item(s), for all items other than items listed in Attachment J.1, Data Requirements List (DRL) and Data Requirements Description (DRD), the Contractor shall furnish the anticipated shipment date, bill of lading number (if applicable), and carrier identity to Contracting Officer Technical Representative and to the Contracting Officer.

(End of Clause)

### **F.4 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: \_\_\_\_\_**

**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: Cindy Fuller, Contract Transportation, 2101 NASA Parkway, 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.5 OPTION TO EXTEND COMPLETION DATE (JSC 52.217-90) (OCT 1996)**

The Government may require the contractor to continue to perform services under this contract. The contracting officer may exercise this option by issuance of a unilateral contract modification 20 days or more before the completion date set forth in Section F.2. Should the option(s) 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:**

1. B.2, entitled "ESTIMATED COST AND AWARD FEE" will be modified to reflect the addition of [REDACTED] to the estimated cost and [REDACTED] to the maximum available award fee.

The additional estimated cost and award fee for Option 1 is broken out as follows:

|  | <u>Estimated Cost</u> | <u>Available Award Fee</u> | <u>Total Cost</u> |
|--|-----------------------|----------------------------|-------------------|
| Option 1 Core Completion Form          | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| Option 1 Level-of-Effort               | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| Option 1 New Mexico Gross Receipts Tax | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| <b>OPTION 1 TOTAL</b>                  | [REDACTED]            | [REDACTED]                 | [REDACTED]        |

2. F.2 (a), entitled "COMPLETION OF WORK AND PERIOD OF PERFORMANCE" will be modified to state:  
  
"(a)All work required under Sections 3.0, 4.0, and 10 of the Statement of Work of this contract, including submission of all reports, shall be completed on or before April 30, 2010.  
  
(b) The period of performance for Sections 5.0 through 9.0 of the Statement of Work of this contract shall be from May 1, 2006 through April 30, 2010."
3. F.6, entitled "FLEX OPTIONS – LEVEL OF EFFORT (LOE)" will be modified to add the following:
  - (ii) The Government may increase the number of direct labor hours required to be furnished during the option period by an amount ranging from 1 to 174,940.
    - (a) For options exercised during contract year 4 (Option 1), the estimated cost and maximum award fee will be increased by



██████████ and ██████████ respectively, for every direct labor hour ordered by the exercise of an option.

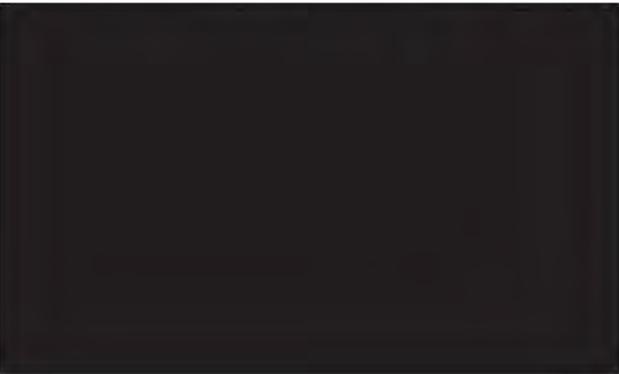
- 4. B.4 (a), entitled "LEVEL-OF-EFFORT" shall be modified by increasing the total direct labor hours by ██████████ hours.
- 5. I.3, entitled "PAYMENT FOR OVERTIME PREMIUMS" shall be modified to ██████████

The total duration of this contract, including the exercise of any option under this clause shall not exceed 5 years.

**Extension Option 1:**

- 1. B.2, entitled "ESTIMATED COST AND AWARD FEE" will be modified to reflect the addition of ██████████ to the estimated cost and ██████████ to the maximum available award fee.

The additional estimated cost and award fee for Extension Option 1 is broken out as follows:

|   | <u>Estimated Cost</u>   | <u>Available Award Fee</u> | <u>Total Cost</u> |
|---|---|----------------------------|-------------------|
| Extension Option 1<br>Core Completion Form          |  |                            |                   |
| Extension Opt. 1<br>Level-of-Effort                 |   |                            |                   |
| Extension Option 1<br>New Mexico Gross Receipts Tax |   |                            |                   |
| <b>EXTENSION OPTION 1 TOTAL</b>                     |   |                            |                   |

- 2. F.2 (a), entitled "COMPLETION OF WORK AND PERIOD OF PERFORMANCE" will be modified to state:
  - "(a) All work required under Sections 3.1, 3.2, 3.4, 3.5, and 3.6, and Section 4.0 of the Statement of Work of this contract, including submission of all reports, shall be completed on or before October 31, 2012.
  - (b) The period of performance for Sections 3.3, 3.7; and Sections 5.0 through 10.0 of the Statement of Work of this contract shall be from May 1, 2006 through October 31, 2012."
- 3. F.6, entitled "FLEX OPTIONS – LEVEL OF EFFORT (LOE)" will be modified to add the following:

(iv) The Government may increase the number of direct labor hours required to be furnished during the May 1, 2012 to October 31, 2012 period by an amount ranging from 1 to 48,761.

(a) For options exercised during contract year 7 (Extension Option 1), the estimated cost and maximum award fee will be increased by [REDACTED] and [REDACTED] respectively, for every direct labor hour ordered by the exercise of an option.

- 4. B.4 (a), entitled "LEVEL-OF-EFFORT" shall be modified by increasing the total direct labor hours by [REDACTED] hours.
- 5. I.7, entitled "PAYMENT FOR OVERTIME PREMIUMS" shall remain unchanged.

**Extension Option 2:**

- 1. B.2, entitled "ESTIMATED COST AND AWARD FEE" will be modified to reflect the addition of [REDACTED] to the estimated cost and [REDACTED] to the maximum available award fee.

The additional estimated cost and award fee for Extension Option 2 is broken out as follows:

|   | <u>Estimated Cost</u> | <u>Available Award Fee</u> | <u>Total Cost</u> |
|---|-----------------------|----------------------------|-------------------|
| Extension Option 2<br>Core Completion Form          | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| Extension Option 2<br>Level-of-Effort               | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| Extension Option 2<br>New Mexico Gross Receipts Tax | [REDACTED]            | [REDACTED]                 | [REDACTED]        |
| <b>EXTENSION OPTION 2 TOTAL</b>                     | [REDACTED]            | [REDACTED]                 | [REDACTED]        |

- 2. F.2 (a), entitled "COMPLETION OF WORK AND PERIOD OF PERFORMANCE" will be modified to state:

"(a) All work required under Sections 3.1, 3.2, 3.4, 3.5, and 3.6, and Section 4.0 of the Statement of Work of this contract, including submission of all reports, shall be completed on or before April 30, 2013.

(b) The period of performance for Sections 3.3, 3.7; and Sections 5.0 through 10.0 of the Statement of Work of this contract shall be from May 1, 2006 through April 30, 2013.

3. F.6, entitled "FLEX OPTIONS – LEVEL OF EFFORT (LOE)" will be modified to add the following:
  - (v) The Government may increase the number of direct labor hours required to be furnished during the November 1, 2012 – April 30, 2013 period by an amount ranging from 1 to 48,517.
    - (a) For options exercised during contract year 7 (Extension Option 2), the estimated cost and maximum award fee will be increased by [REDACTED] and [REDACTED] respectively, for every direct labor hour ordered by the exercise of an option.
4. B.4 (a), entitled "LEVEL-OF-EFFORT" shall be modified by increasing the total direct labor hours by [REDACTED] hours.
5. I.7, entitled "PAYMENT FOR OVERTIME PREMIUMS" shall be remain unchanged.

(End of Clause)

#### **F.6 FLEX OPTIONS – LEVEL OF EFFORT (LOE)**

The Government may increase the number of LOE direct labor hours required to be furnished during the period of performance by an amount ranging from 1 to (see b below) hours. If the Government elects to exercise its option, referred throughout this clause as a flex option, to increase the number of direct labor hours to be furnished, the Contractor will be so notified with a unilateral modification to the contract executed by the Contracting Officer. The terms and conditions relating to the Government's rights as provided herein are as follows:

- (a) The Government may increase the amount of LOE direct labor hours to be furnished (as listed in B.4 (a), entitled "LEVEL-OF-EFFORT") up to the amounts specified below by the exercise of one flex option, or by the exercise of multiple flex options, during the period of performance.
- (b) If the Government exercises one or more flex options pursuant to this clause, the administration of such action(s) shall be as follows:
  - (i) The Government may increase the number of direct labor hours listed in clause B.4 (a), entitled "LEVEL-OF-EFFORT," during the base period by an amount ranging from [REDACTED] hours.
    - (a) For options exercised during contract year 1, the estimated cost and maximum award fee will be increased by [REDACTED] and [REDACTED] respectively, for every direct labor hour ordered by the exercise of an option.
    - (b) For options exercised during contract year 2, the estimated cost and maximum award fee will be increased by [REDACTED] and [REDACTED] respectively, for every direct labor hour ordered by the exercise of an option.

- ██████ respectively, for every direct labor hour ordered by the exercise of an option.
- (c) For options exercised during contract year 3, the estimated cost and maximum award fee will be increased by ██████ and ██████ respectively, for every direct labor hour ordered by the exercise of an option.
- (ii) The Government may increase the number of direct labor hours required to be furnished during the May 1, 2009 to April 30, 2011, by an amount ranging from ██████.
- (a) For options exercised during contract year 4, the estimated cost and maximum award fee will be increased by ██████ and ██████ respectively, for every direct labor hour ordered by the exercise of an option.
- (iii) The Government may increase the number of direct labor hours required to be furnished during the May 1, 2011 to April 30, 2012 period, by an amount ranging from ██████.
- (a) For options exercised during contract year 6, the estimated cost and maximum award fee will be increased by ██████ and ██████ respectively, for every direct labor hour ordered by the exercise of an option.
- (iv) The Government may increase the number of direct labor hours required to be furnished during the May 1, 2012 to October 31, 2012 period by an amount ranging from ██████.
- (a) For options exercised during contract year 7 (Extension Option 1), the estimated cost and maximum award fee will be increased by ██████ and ██████ respectively, for every direct labor hour ordered by the exercise of an option.
- (v) The Government may increase the number of direct labor hours required to be furnished during the November 1, 2012 – April 30, 2013 period by an amount ranging from ██████.
- (a) For options exercised during contract year 7 (Extension Option 2), the estimated cost and maximum award fee will be increased by ██████ and ██████ respectively, for every direct labor hour ordered by the exercise of an option.

(End of Clause)

#### **F.7 SHIPPING INSTRUCTIONS (JSC 52.247-94) (APR 1997)**

All documentation shall be shipped to the addresses cited in Attachment J.1, DRL and DRD. Shipment of all other items shall be as follows:

Parcel Post Shipments and Freight Shipments

Ship to: Transportation Officer, Building 421  
NASA Johnson Space Center  
2101 NASA Parkway  
Houston, TX 77058-3696

Mark for: Accountable Property Officer  
Mark with: Purchase Request No. TBD  
Contract Number: TBD

For reissue to: Contracting Officer's Technical Representative (COTR)  
Mail Code: NA

(End of Clause)

**F.8 FLIGHT ITEM (JSC 52.247-95) (SEPT 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)

**None included by reference.**

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

| CLAUSE NUMBER | DATE      | TITLE  |
|---------------|-----------|--|
| 1852.216-89   | JULY 1997 | ASSIGNMENT AND RELEASE FORMS                       |
| 1852.227-70   | MAY 2002  | NEW TECHNOLOGY                                     |
| 1852.227-86   | DEC 1987  | COMMERCIAL COMPUTER SOFTWARE - LICENSING           |
| 1852.242-71   | DEC 1988  | TRAVEL OUTSIDE OF THE UNITED STATES                |
| 1852.242-73   | NOV 2004  | NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING     |
| 1852.245-70   | JULY 1997 | CONTRACTOR REQUESTS FOR GOVERNMENT-OWNED EQUIPMENT |

**G.2 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (FAR 52.204-9) (JAN 2006)**

- (a) The Contractor shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24, and Federal Information Processing Standards Publication (FIPS PUB) Number 201.
- (b) The Contractor shall insert this clause in all subcontracts when the subcontractor is required to have physical access to a federally-controlled facility or access to a Federal information system.

(End of clause)

**G.3 AWARD FEE FOR SERVICE CONTRACTS (NFS 1852.216-76) (JUN 2000)**

- (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 the Award Fee Plan (Section J, Attachment J-1). 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 Financial Management Office will make payment based on the issuance of a unilateral modification by the 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 Section J, Attachment J.5. 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 75 percent of 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 office for cost vouchers for purposes of the Prompt Payment clause of this contract is 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:  
  
LF231/Accounts Payable Group  
NASA Johnson Space Center  
2101 NASA Parkway  
Houston, TX 77058-3696
  - (2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.
  - (3) Copies of vouchers should be submitted as directed by the Contracting Officer.
- (c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:
- (1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment to:  
  
Defense Contract Audit Agency  
Houston Branch Office  
8876 Gulf Freeway, Suite 500  
Houston, Texas 77017
  - (2) Five copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:
    - (i) Copy 1 NASA Contracting Officer
    - (ii) Copy 2 Auditor
    - (iii) Copy 3 Contractor

- (iv) Copy 4 Contract administration office; and
- (v) Copy 5 Project management office.

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

(d) Public vouchers 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 the same address as b(1) above.

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 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:

| <b>Title</b>                  | <b>Office Code</b> | <b>Address (including zip code)</b>   |
|-------------------------------|--------------------|---|
| New Technology Representative | AT NASA/JSC        | Johnson Space Center<br>AT/Technology Transfer and<br>Commercialization Office<br>Houston, TX 77058 |
| Patent Representative         | AL NASA/JSC        | Johnson Space Center<br>AL/Legal Office<br>Houston, TX 77058  |

(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.6 TECHNICAL DIRECTION (NFS 1852.242-70) (SEPT 1993) (Applicable to LOE Sections of the SOW)**

- (a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 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.
- (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) of this clause, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 days that the instruction or direction is—
- (1) Rescinded in its entirety; or

- (2) Within the requirements of the contract and does not constitute a change under the changes clause of the contract, and that the Contractor should proceed promptly 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.7 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (NFS 1852.245-73) (OCT 2003)**

- (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: LF631/Property Accounting and to JB3/Property Administrator, 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)

**G.8 LIST OF GOVERNMENT-FURNISHED PROPERTY (NFS 1852.245-76) (OCT 1988)**

For performance of work under this contract, the Government will make available Government property identified below or in Attachment J.7A, of this contract on a no-charge-for-use basis. The Contractor shall use this property in the performance of this contract at JSC, Sonny Carter and Ellington Field and at other location(s) as may be approved by the Contracting Officer. Under the FAR 52.245-5 Government property clause of this contract, the Contractor is accountable for the identified property.

(End of clause)

**G.9 SECURITY/BADGING REQUIREMENTS FOR FOREIGN NATIONAL VISITORS AND EMPLOYEES/REPRESENTATIVES OF FOREIGN CONTRACTORS (JSC 52.204-91) (MAR 2002)**

- (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.
- (b) All visit/badge requests for persons described in (a) above must be entered in the NASA Request for Request (RFR) and 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 a completed RFR has been 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.
- (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.10 USE OF JSC CALIBRATION LABORATORY (JSC 52.204-92) (OCT 1997)**

The contractor shall utilize the services of the JSC Calibration Laboratory to the maximum extent practicable for calibration of all instruments (Government property or contractor property) utilized under this contract, the total cost for maintenance of which would otherwise be a direct charge to the Government. The procedures for obtaining calibration of instruments are described in JSC Procedures and Guidelines 5151.2 – "JSC Support Contractor Procedures and Guidelines."

(End of clause)

**G.11 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 F 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.12 UNDERSTANDING WITH RESPECT TO COST VARIATIONS (JSC 52.232-93)  
(MAR 1989)**

The estimated cost of this contract is based on cost estimates for a number of cost elements (e.g., direct labor, overhead, materials, 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.

\*These Government estimates include Travel and Material with "Materials/Subcontracts" excluded from the Material cost element. These Government estimates are given below for the base period of performance and both options periods:

|          | BASE        | OPTION 1   | OPTION 2    |
|----------|-------------|------------|-------------|
| Travel   | \$2,776,000 | \$ 978,000 | \$1,005,000 |
| Material | \$ 571,000  | \$ 201,000 | \$ 207,000  |

(End of clause)

**G.13 IDENTIFICATION OF EMPLOYEES (JSC 52.242-92) (MAR 2002)**

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 badges will be issued only between the hours of 7:30 a.m. to 4 p.m., Monday through Thursday, and 7:30 am to 12:00 pm on Friday. JSC visitor badges will be issued between the hours of 6 a.m. to 10 p.m., 7 days a week. 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 declare citizenship and personally sign 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.14 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (NFS 1852.245-71) (NOV 2004) (JSC Version NOV 2004)**

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

**Property Custodian Responsibilities: Reference NPR 4200.2**

**Chapter 2: Responsibilities**

Section 2.3. Property Custodians

Section 2.4 Full Time Property Custodians

Paragraphs 2.4.1 and 2.4.2

**Chapter 4: Operational Procedures**

Section 4.2 Identification of Equipment

Paragraphs 4.2.8, 4.2.9, 4.2.10,

Section 4.3. Standard NEMS Reports for Property Custodians.

Paragraphs 4.3.1 through 4.3.4.5

Section 4.4. Inventory Procedures.

Paragraphs 4.4.1 through 4.4.5

**Chapter 5. (Entire Content)**

**User Responsibilities: Reference Document (NPR 4200.2)**

**Chapter 2.**

2.7. Responsibility of the Individual. The contractor shall ensure that each of its employees are responsible for Government property as follows: An employee has a duty to protect and conserve Government property and shall not use such property, or allow its use, for other than authorized purposes. Additional responsibilities include the following:

2.7.1. Reporting any missing or un-tagged (meeting the criteria for control) equipment, transfer, location change, or user change of equipment to the property custodian immediately.

2.7.2. Notifying the property custodian, supervisor, and the Center security officer immediately if theft of Government property is suspected.

2.7.3. Ensuring that equipment is used only in pursuit of approved NASA programs and projects.

2.7.4. Notifying the property custodian of equipment not actively being used for determination of proper disposition.

2.7.5. Ensuring that equipment is returned through the property custodian when no longer needed. Under no circumstances will an employee throw away Government equipment.

2.7.6. Assigned users retain all responsibilities including notifying property custodians of all activity associated with the user's assigned equipment.

2.8. The contractor must ensure that all on-site contractor employees notify the contracting officer, property custodian, and SEMO upon termination of employment.

#### **Chapter 4.**

4.2.11. The user will assist the custodian in completing NF 1618 and sign in the designated block.

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

- (b)
- (1) The official accountable record keeping, physical inventory, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:
    - (i) The contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area;
    - (ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area;
    - (iii) The contractor shall establish a record of the property as required by FAR 45.5 and 1845.5 and furnish to the Industrial Property Officer a DD Form 1149 Requisition and Invoice/Shipping Document (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.
    - (iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the contracting officer and notification of the SEMO. The contractor shall assume accountability and financial reporting responsibility for such property. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR Part 45.5 until its return to the installation.
  - (2) After transfer of accountability to the Government, the contractor shall continue to maintain such internal records as are necessary to

execute the user responsibilities identified in paragraph (a) and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the contracting officer.

(End of clause)

**G.15 LIST OF INSTALLATION-ACCOUNTABLE PROPERTY AND SERVICES (NFS 1852.245-77) (JUL 1997) (JSC Version APR 2003)**

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

- (a) Office space, work area space, and utilities. Government telephones are available for official purposes only; pay telephones are available for contractor employees for unofficial calls.
- (b) General - and special-purpose equipment, including office furniture.
  - (1) Equipment to be made available is listed in Attachment J.7B. The Government retains accountability for this property under the clause at 1852.245-71, Installation-Accountable Government Property, regardless of its authorized location.
  - (2) 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 as required by the clause at 1852.245-71, Installation-Accountable Government Property.
  - (3) 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.
- (c) Publications and blank forms stocked by the installation.
- (d) Safety and fire protection for Contractor personnel and facilities.
- (e) Installation service facilities:
  - 1. Audiovisual: Presentation services, sound services, Release Print Film Library, Film Repository, and loan of audiovisual equipment.

2. Automatic Data Processing (ADP) Services (onsite only): Generally, this includes access to large general-purpose computer systems, workstations, and the accessing media; i.e., terminals, printers, data communications, and consultation and training in the use of said systems. Unless otherwise specified in the contract, this does not include providing computer systems or ADP services for the Contractor business management, accounting, and administrative functions.
  3. Transportation: Shuttle bus service for Contractor employees within the parameters provided for Government employees.
  4. Disposal Services: Disposal services for excess onsite and offsite Contractor-held/Government-owned property.
  5. Fabrication Services: Fabrication services such as machining, sheet metal and welding, electronics, metal finishing, model and plastics, and precision cleaning.
  6. Photography, Processing, and Closed-Circuit Television: For technical and scientific photography, photographic processing, photographic sciences, and closed-circuit television.
  7. Pickup and Delivery of Official Mail: Within the Center and to and from the Albert Thomas Post Office, provided the mail is properly sealed and stamped. Such mail will be picked up or dropped from only one point as designated by JSC or, if preferred, JSC will provide a box in the central mailroom for the Contractor to pick up and deposit its mail.
- (f) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.
- (g) Cafeteria privileges for Contractor employees during normal operating hours.
- (h) Building maintenance for facilities occupied by Contractor personnel.
- (i) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.
- (j) The user responsibilities of the Contractor are defined in paragraph (a) of the clause at 1852.245-71, Installation-Accountable Government Property.

(End of Clause)

#### **G.16 REPAIR OF GOVERNMENT PROPERTY (JSC 52.245-91) (JUN 1986)**

When removal of Government-owned property from its place of use for repair is necessary, the Contractor must prepare a JSC Form 1318 prior to removing the

equipment. The form and instructions regarding its use are available from the Property and Equipment branch, Building 419, Room 162, phone number 483-6524. The repaired Government property is to be returned to the location from which it was removed unless otherwise directed by the Government

(End of Clause)

[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)

**None included by reference.**

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

| CLAUSE NUMBER | DATE      | TITLE  |
|---------------|-----------|--|
| 1852.208-81   | NOV 2004  | RESTRICTIONS ON PRINTING AND DUPLICATING               |
| 1852.223-70   | APR 2002  | SAFETY AND HEALTH                                      |
| 1852.223-75   | FEB 2002  | MAJOR BREACH OF SAFETY OR SECURITY                     |
| 1852.225-70   | FEB 2000  | EXPORT LICENSES (ALT I)                                |
| 1852.228-72   | SEPT 1993 | CROSS-WAIVER OF LIABILITY FOR SPACE SHUTTLE SERVICES   |
| 1852.228-76   | DEC 1994  | CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES |
| 1852.242-72   | AUG 1992  | OBSERVANCE OF LEGAL HOLIDAYS                           |

### **H.2 TASK ORDERING PROCEDURE**

(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 may 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, as applicable, 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) Description of Work.
  - (4) Performance standards, acceptance criteria and quality assurance standards where appropriate.
  - (5) Maximum dollar amount and maximum number of contract labor authorized.
  - (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 Contracting Officer may amend tasks in the same manner in which they were issued.
- (f) 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.
- (g) Each task order shall require the Contractor to acknowledge receipt and acceptance of the task order within **2 working days** after receipt. If the Contractor cannot comply with a task order requirement, the Contractor shall indicate in his acknowledgment, the changes required prior to his acceptance. Any differences must be resolved between the parties and the order modified to reflect the agreement.

(End of Clause)

**H.3 FEDERAL AUTOMOTIVE STATISTICAL TOOL REPORTING (NFS 1852.223-76) (JUL 2003)**

If authorized to operate Government-owned or –leased vehicles, including interagency fleet management system (IFMS) vehicles or related services in performance of this contract, the Contractor shall report the data describing vehicle usage required by the Federal Automotive Statistical Tool (FAST) by October 15 of each year. FAST is accessed through <http://fastweb.inel.gov/>.

(End of Clause)

**H.4 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.

The personnel and/or facilities considered essential to this contract include:

Personnel

Position

| <u>Personnel</u> | <u>Position</u> |
|------------------|-----------------|
|                  |                 |

(End of Clause)

**H.5 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS (JSC 52.209-90) (SEPT 1988)**

This contract incorporates Section K, Representations, Certifications, and Other Statements of Offerors, as set forth in the contractor's proposal in response to **RFP NNJ05106317R** dated \_\_\_\_\_ by reference, with the same force and effect as if it were given in full text.

(End of Clause)

**H.6 SMALL BUSINESS SUBCONTRACTING GOALS (JSC 52.219-90) (JAN 2003)**

For purposes of this clause, the terms, "HUBZone Small Business Concern," "Small Disadvantaged Business Concern," "Veteran-Owned Small Business Concern," "Service-Disabled, 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, is 25 percent, including options. The small business percentage goal, (25 percent), includes the following goals expressed as a percent of total contract value:

|  |              |
|--|--------------|
| Small Disadvantaged Business (SDB) Concerns                    | <b>15.0%</b> |
| Women Owned Small Business (WOSB) Concerns                     | 5.0%         |
| HUBZone Business Small Business Concerns                       | 2.0%         |
| Veteran-Owned Small Business (VOSB) Concerns                   | <b>3.0%</b>  |
| Service-Disabled, Veteran-Owned Small Business Concerns        | <b>2.0%</b>  |
| Historically Black College or University/Minority Institutions | <b>0.5%</b>  |

(End of Clause)

**H.7 (LIMITED) RELEASE OF CONTRACTOR CONFIDENTIAL BUSINESS INFORMATION (CBI) (JSC 52.227-91) (MAY 2002)**

(a) NASA may find it necessary to release information submitted by the contractor pursuant to the provisions of this contract, to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by signature on this contract, the contractor hereby consents to a limited release of its confidential business information (CBI).

(b) Possible circumstances where the Agency may release the contractor's CBI include the following:

- (1) To other Agency contractors and subcontractors, and their employees tasked with assisting the Agency in handling and processing information and documents in the administration of Agency contracts,

such as providing post-award audit support and specialized technical support to NASA.

- (2) To NASA contractors and subcontractors, and their employees engaged in information systems analysis, development, operation, and maintenance, including performing data processing and management functions for the Agency.
- (c) NASA recognizes its obligation to protect the contractor from competitive harm that could result from the release of such information to a competitor. Except where otherwise provided by law, NASA will permit the limited release of CBI under subparagraphs (1) or (2) only pursuant to non-disclosure agreements signed by the assisting contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract.
- (d) NASA's responsibilities under the Freedom of Information Act are not affected by this clause.
- (e) The contractor agrees to include this clause, including this paragraph (e), in all subcontracts at all levels awarded pursuant to this contract that require the furnishing of CBI by the subcontractor.

(End of Clause)

#### **H.8 PROVIDING FACILITY ITEMS (JSC 52.245-97) (FEB 2003)**

The purpose of this clause is to set forth the parties' intent regarding their respective responsibilities for providing facility items under this contract. The parties accordingly agree as follows:

- (a) "Provide," as used in this clause, has the same meaning as set forth in NASA FAR Supplement 1845.301. "Facilities," as used in this clause, has the same meaning as set forth in FAR 45.301.
- (b) The Government shall provide to the contractor the facilities identified in Attachment J.7B to his contract for use in performance of this contract.
- (c) The contractor shall replace any of the existing facilities identified in (b) above that reach the end of their useful life during the contract period or which are beyond economical maintenance or repair, if the facilities are still needed for contract performance. Such replacements shall be made with contractor-owned facilities and shall not be a direct charge to the contract.
- (d) The contractor shall not acquire facility items for the Government, unless specifically authorized by the contract or consent has been obtained in writing from the contracting officer pursuant to FAR 45.302-1(a). The contractor agrees to provide all facilities necessary for performance of this contract except as provided in (b) above.

(End of Clause)

#### **H.9 CONTRACT ADJUSTMENT (Applicable to Completion Form Sections of the SOW as indicated)**

- (a) The parties agree that, notwithstanding the provisions of the “Changes” clause, no change made pursuant to such clause shall give rise to an equitable adjustment in the estimated cost or fee when said changes cause an increase or decrease of \$100,000 or less in the estimated cost of this contract. Each change shall be controlling making this determination, and such change shall not, for purposes of determining the applicability of this clause, be added to any other change(s). The parties recognize that several changes may be grouped together in a bilateral contract modification for definitization; however, the dollar value of each individual change will be controlling in determining whether or not an equitable adjustment is in order.
- (b) The elements of the completion form work described in Sections 3.0 and 10.0 of the SOW are in some instances accompanied by workload estimates (e.g., numbers of meetings per year, numbers of test samples per year). These data represent the Government’s estimates of the level of services required, and are only intended to reflect the amount of activity anticipated for those elements of work. Workload estimates do not constitute a limitation on the contractor’s obligation to perform work in the areas to which they relate. The fact that the contractor has performed work that equals the workload estimate(s) shall not relieve the contractor of its obligation to continue to perform such work to the extent it is required by the Government.

(End of Clause)

#### **H.10 POTENTIAL CONFLICT OF INTEREST**

- (a) In performing work under this contract, the Contractor may be required to inspect, evaluate, assess, critique, review or perform other similar services with respect to products or services provided by the Contractor under other NASA contracts. The occurrence of situations of this kind could possibly cause the Contractor’s judgment to be influenced favorably toward such products or services in performing S&MA tasks under this contract. In addition, the Contractor may be required to perform tasks, which will affect the quantum or nature of work to be performed by the Contractor under other Government contracts. In order to eliminate or adequately mitigate any conflict of interest which may arise from either of these situations, the prime contractor agrees that it will: (a) provide the Contracting Officer immediate notice in any case where the Contractor learns that it or its subcontractors will either be (i) performing inspection, evaluation, or similar work concerning products and services which Contractor provides to NASA under other NASA contracts, or (ii) developing requirements for the products or services which Contractor may provide under another contract; (b) within 7 calendar days after providing such notice to the Government, submit to the Contracting Officer for approval a proposed plan of action for eliminating or adequately

mitigating the conflict identified (and subsequently submit any modifications to such plan as may be requested by the Contracting Officer); and (c) implement the plan of action as approved by the Contracting Officer. The Contractor shall not undertake the performance of work for which notice has been given until the prime Contractor's plan has been approved, unless the Contracting Officer authorized the prime Contractor to proceed with the work pending approval. Where the term "Contractor" is used in this clause, it shall be deemed to mean the prime contractor, and any subcontractor, except in the instance where the term "prime contractor" is specifically used.

- (b) Notwithstanding any other provision of this clause, if the Contractor develops complete specifications or statements of work under this contract for nondevelopmental items, and such specifications or statements of work are incorporated into a subsequent NASA solicitation, the Contractor shall be ineligible to furnish the items described in such solicitation. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the prime Contractor (or determined by the Contracting Officer in the event the parties are unable to agree), sufficient to avoid unfair competitive advantage or potential bias. The Contractor shall not be eligible in any case to compete for the initial contract, including any options, for nondevelopmental items for which Contractor has prepared complete specifications or statements of work. NASA shall not unilaterally require the prime Contractor to prepare such specifications or statements or work under this contract.
- (c) In addition to any data which the Contractor may be given or have access to that is marked and subject to subparagraph (d)(2) of the "Rights in Data—General" clause of this contract, it is also anticipated that in the performance of this contract, the Contractor may generate, have access to, or be provided for review for the performance of the contract tasks, data which is intended to be used, or may reasonably be expected to be used, in a future NASA procurement. Such data may include, by way of illustration but not limitation, statement of requirements, draft statements of work, draft specifications or data relating to breadboards or engineering models. The Contractor agrees that it will not use, copy or disclose such data, or any other data of the same general kind, except to the extent necessary to perform the work under this contract, and will not make any other use or disclosure of such data without specific written permission of the Contracting Officer.
- (d) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data or other companies, and as long as these data remain proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with other companies.
- (e) The Contractor agrees to include the substantive provisions of this clause in any subcontracts, appropriately modified to reflect a prime-subcontract relationship.

(End of Clause)

### H.11 NO COST DELIVERABLES

The contractor shall deliver, at no cost to this contract or any other Government contract, the items listed below as part of the contract deliverables.

| Best Value<br>No Cost Item | Description | Delivery Schedule | Documentation |
|----------------------------|-------------|-------------------|---------------|
|----------------------------|-------------|-------------------|---------------|



(End of Clause)

### H.12 ADMINISTRATIVE LEAVE (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 situation (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.

**H.13 Extension Reopener Clause (Effective May 1, 2011 – April 30, 2013)**



(End of Clause)

## PART II – CONTRACT CLAUSES

### SECTION I - CONTRACT CLAUSES

#### I.1 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (FEB 1998)

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

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

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

JSC PI: [http://officeofprocurement.jsc.nasa.gov/jpiprod/jpi\\_doc.htm](http://officeofprocurement.jsc.nasa.gov/jpiprod/jpi_doc.htm)

(End of Clause)

#### I.2 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)

| CLAUSE NUMBER | DATE      | TITLE  |
|---------------|-----------|--|
| 52.202-1      | JUL 2004  | DEFINITIONS  |
| 52.203-3      | APR 1984  | GRATUITIES   |
| 52.203-5      | APR 1984  | COVENANT AGAINST CONTINGENT FEES   |
| 52.203-6      | JUL 1995  | RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT                            |
| 52.203-7      | JUL 1995  | ANTI-KICKBACK PROCEDURES   |
| 52.203-8      | JAN 1997  | CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY |
| 52.203-10     | JAN 1997  | PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY                         |
| 52.203-12     | SEPT 2005 | LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS                 |
| 52.204-2      | AUG 1996  | SECURITY REQUIREMENTS  |
| 52.204-4      | AUG 2000  | PRINTED OR COPIED DOUBLED-SIDED ON RECYCLED PAPER                                |

|           |           |   |
|-----------|-----------|---|
| 52.204-7  | OCT 2003  | CENTRAL CONTRACTOR<br>REGISTRATION  |
| 52.209-6  | JAN 2005  | PROTECTING THE GOVERNMENT'S<br>INTEREST WHEN SUBCONTRACTING<br>WITH CONTRACTORS DEBARRED,<br>SUSPENDED, OR PROPOSED FOR<br>DEBARMENT      |
| 52.211-15 | SEP 1990  | DEFENSE PRIORITY AND ALLOCATION<br>REQUIREMENTS   |
| 52.215-2  | JUN 1999  | AUDIT AND RECORDS – NEGOTIATION   |
| 52.215-8  | OCT 1997  | ORDER OF PRECEDENCE – UNIFORM<br>CONTRACT FORMAT  |
| 52.215-11 | OCT 1997  | PRICE REDUCTION FOR DEFECTIVE<br>COST OR PRICING DATA -<br>MODIFICATIONS  |
| 52.215-13 | OCT 1997  | SUBCONTRACTOR COST OR PRICING<br>DATA - MODIFICATIONS   |
| 52.215-15 | OCT 2004  | PENSION ADJUSTMENTS AND ASSET<br>REVERSIONS   |
| 52.215-17 | OCT 1997  | WAIVER OF FACILITIES COST OF<br>MONEY   |
| 52.215-18 | JUL 2005  | REVERSION OR ADJUSTMENT OF<br>PLANS FOR POSTRETIREMENT<br>BENEFITS (PRB) OTHER THAN<br>PENSIONS   |
| 52.215-19 | OCT 1997  | NOTIFICATION OF OWNERSHIP<br>CHANGES  |
| 52.215-21 | OCT 1997  | REQUIREMENTS FOR COST OR<br>PRICING DATA OR INFORMATION<br>OTHER THAN COST OR PRICING DATA-<br>MODIFICATIONS (ALTERNATE II) (OCT<br>1997) |
| 52.216-7  | DEC 2002  | ALLOWABLE COST AND PAYMENT  |
| 52.217-8  | NOV 1999  | OPTION TO EXTEND SERVICES<br>(NOTICE TO EXTEND MUST BE AT<br>LEAST 30 DAYS PRIOR CONTRACT<br>COMPLETION).                                 |
| 52.219-4  | JUL 2005  | NOTICE OF PRICE EVALUATION<br>PREFERENCE FOR HUBZONE SMALL<br>BUSINESS CONCERNS   |
| 52.219-8  | MAY 2004  | UTILIZATION OF SMALL BUSINESS<br>CONCERNS   |
| 52.219-9  | JUL 2005  | SMALL BUSINESS SUBCONTRACTING<br>PLAN (ALT II) (OCT 2001)   |
| 52.219-16 | JAN 1999  | LIQUIDATED DAMAGES –<br>SUBCONTRACTING PLAN   |
| 52.219-23 | SEPT 2005 | NOTICE OF PRICE EVALUATION<br>ADJUSTMENT FOR SMALL<br>DISADVANTAGED BUSINESS  |

CONCERNS (10%)

|           |          |   |
|-----------|----------|---|
| 52.219-25 | OCT 1999 | SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM – DISADVANTAGED STATUS AND REPORTING                   |
| 52.222-1  | FEB 1997 | NOTICE TO THE GOVERNMENT OF LABOR DISPUTES  |
| 52.222-3  | JUN 2003 | CONVICT LABOR   |
| 52.222-4  | JUL 2005 | CONTRACT WORK HOURS AND SAFETY STANDARDS ACT —OVERTIME COMPENSATION                                       |
| 52.222-21 | FEB 1999 | PROHIBITION OF SEGREGATED FACILITIES  |
| 52.222-26 | APR 2002 | EQUAL OPPORTUNITY   |
| 52.222-35 | DEC 2001 | EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS |
| 52.222-36 | JUN 1998 | AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES  |
| 52.222-37 | DEC 2001 | EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS |
| 52.222-39 | DEC 2004 | NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES                                  |
| 52.222-41 | JUL 2005 | SERVICE CONTRACT ACT OF 1965, AS AMENDED  |
| 52.223-5  | AUG 2003 | POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (ALTERNATE I) (AUG 2003) (ALTERNATE II) (AUG 2003)     |
| 52.223-10 | AUG 2000 | WASTE REDUCTION PROGRAM   |
| 52.223-14 | AUG 2003 | TOXIC CHEMICAL RELEASE REPORTING  |
| 52.224-1  | APR 1984 | PRIVACY ACT NOTIFICATION  |
| 52.224-2  | APR 1984 | PRIVACY ACT   |
| 52.225-13 | MAR 2005 | RESTRICTIONS ON CERTAIN FOREIGN PURCHASES   |
| 52.227-1  | JUL 1995 | AUTHORIZATION AND CONSENT   |
| 52.227-2  | AUG 1996 | NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT   |
| 52.227-16 | JUN 1987 | ADDITIONAL DATA REQUIREMENTS  |

|           |          |   |
|-----------|----------|---|
| 52.228-7  | MAR 1996 | INSURANCE – LIABILITY TO THIRD PERSONS  |
| 52.229-10 | APR 2003 | STATE OF NEW MEXICO GROSS RECEIPTS AND COMPENSATING TAX COST ACCOUNTING STANDARDS |
| 52.230-2  | APR 1998 | COST ACCOUNTING STANDARDS   |
| 52.230-6  | APR 2005 | ADMINISTRATION OF COST ACCOUNTING STANDARDS                                       |
| 52.232-9  | APR 1984 | LIMITATION ON WITHHOLDING OF PAYMENTS   |
| 52.232-17 | JUN 1996 | INTEREST  |
| 52.232-18 | APR 1984 | AVAILABILITY OF FUNDS   |
| 52.232-20 | APR 1984 | LIMITATION OF COST  |
| 52.232-22 | APR 1984 | LIMITATION OF FUNDS   |
| 52.232-23 | JAN 1986 | ASSIGNMENT OF CLAIMS  |
| 52.232-25 | OCT 2003 | PROMPT PAYMENT (ALTERNATE I) (FEB 02)   |
| 52.232-34 | MAY 1999 | PAYMENT BY ELECTRONIC FUNDS TRANSFER – OTHER THAN CENTRAL CONTRACTOR REGISTRATION |
| 52.233-1  | JUL 2002 | DISPUTES (ALTERNATE I) (DEC 1991)   |
| 52.233-3  | AUG 1996 | PROTEST AFTER AWARD (ALTERNATE I) (JUN 1985)                                      |
| 52.233-4  | OCT 2004 | APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM                                       |
| 52.237-2  | APR 1984 | PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION                     |
| 52.237-3  | JAN 1991 | CONTINUITY OF SERVICES  |
| 52.239-1  | AUG 1996 | PRIVACY OR SECURITY SAFEGUARDS  |
| 52.242-1  | APR 1984 | NOTICE OF INTENT TO DISALLOW COSTS  |
| 52.242-3  | MAY 2001 | PENALTIES FOR UNALLOWABLE COSTS   |
| 52.242-4  | JAN 1997 | CERTIFICATION OF FINAL INDIRECT COSTS   |
| 52.242-13 | JUL 1995 | BANKRUPTCY  |
| 52.243-2  | AUG 1987 | CHANGES – COST-REIMBURSEMENT (ALTERNATE II) (APR 1984)                            |
| 52.244-2  | AUG 1998 | SUBCONTRACTS (ALTERNATE I) (MAR 2005)   |
| 52.244-5  | DEC 1996 | COMPETITION IN SUBCONTRACTING   |
| 52.244-6  | DEC 2004 | SUBCONTRACTS FOR COMMERCIAL ITEMS   |

|           |          |  |
|-----------|----------|--|
| 52.245-5  | MAY 2004 | GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (DEVIATION) (AS MODIFIED BY NASA PIC 99-15) |
| 52.245-19 | APR 1984 | GOVERNMENT PROPERTY FURNISHED "AS IS"  |
| 52.246-25 | FEB 1997 | LIMITATION OF LIABILITY – SERVICES   |
| 52.247-1  | APR 1984 | COMMERCIAL BILL OF LADING NOTATIONS  |
| 52.247-63 | JUN 2003 | PREFERENCE FOR U.S. –FLAG AIR CARRIERS   |
| 52.248-1  | FEB 2000 | VALUE ENGINEERING  |
| 52.249-6  | MAY 2004 | TERMINATION (COST-REIMBURSEMENT)   |
| 52.249-14 | APR 1984 | EXCUSABLE DELAYS   |
| 52.251-1  | APR 1984 | GOVERNMENT SUPPLY SOURCES  |
| 52.251-2  | JAN 1991 | INTERAGENCY FLEET MANAGEMENT SYSTEMS VEHICLES AND RELATED SERVICES   |
| 52.253-1  | JAN 1991 | COMPUTER GENERATED FORMS   |

II. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 18)

| CLAUSE NUMBER | DATE      | TITLE  |
|---------------|-----------|--|
| 1852.216-89   | JUL 1997  | ASSIGNMENT AND RELEASE FORMS                       |
| 1852.219-74   | SEPT 1990 | USE OF RURAL AREA SMALL BUSINESSES                 |
| 1852.219-75   | MAY 1999  | SMALL BUSINESS SUBCONTRACTING REPORTING            |
| 1852.219-76   | JUL 1997  | NASA 8 PERCENT GOAL                                |
| 1852.223-74   | MAR 1996  | DRUG-AND ALCOHOL-FREE WORKFORCE                    |
| 1852.228-75   | OCT 1988  | MINIMUM INSURANCE COVERAGE                         |
| 1852.237-70   | DEC 1988  | EMERGENCY EVACUATION PROCEDURES                    |
| 1852.242-78   | APR 2001  | EMERGENCY MEDICAL SERVICES AND EVACUATION          |
| 1852.243-71   | MAR 1997  | SHARED SAVINGS                                     |
| 1852.245-70   | JUL 1997  | CONTRACTOR REQUESTS FOR GOVERNMENT-OWNED EQUIPMENT |

(End of Clause)

**I.3 WHISTLEBLOWER PROTECTIONS UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009. (FAR 52.203-15) (MAR 2009)**

- (a) The Contractor shall post notice of employees rights and remedies for whistleblower protections provided under section 1553 of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5).
- (b) The Contractor shall include the substance of this clause including this paragraph (b) in all subcontracts.

(End of clause)

**I.4 APPROVAL OF CONTRACT (FAR 52.204-1) (DEC 1989)**

This contract is subject to the written approval of the Johnson Space Center Procurement Officer and shall not be binding until so approved.

(End of Clause)

**I.5 AMERICAN RECOVERY AND REINVESTMENT ACT – REPORTING REQUIREMENTS (FAR 52.204-11) (MAR 2009)**

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

“Contract”, as defined in FAR [2.101](#), means a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. It includes all types of commitments that obligate the Government to an expenditure of appropriated funds and that, except as otherwise authorized, are in writing. In addition to bilateral instruments, contracts include (but are not limited to) awards and notices of awards; job orders or task letters issued under basic ordering agreements; letter contracts; orders, such as purchase orders, under which the contract becomes effective by written acceptance or performance; and bilateral contract modifications. Contracts do not include grants and cooperative agreements covered by [31 U.S.C. 6301](#), et seq. For discussion of various types of contracts, see FAR [Part 16](#).

“First-tier subcontract” means a subcontract awarded directly by a Federal Government prime contractor whose contract is funded by the Recovery Act.

“Jobs created” means an estimate of those new positions created and filled, or previously existing unfilled positions that are filled, as a result of funding by the American Recovery and Reinvestment Act of 2009 (Recovery Act). This definition covers only prime contractor positions established in the United States and outlying areas (see definition in FAR [2.101](#)). The number shall be expressed as “full-time equivalent” (FTE), calculated cumulatively as all hours worked divided by the total number of hours in a full-time schedule, as defined by the contractor. For instance,

two full-time employees and one part-time employee working half days would be reported as 2.5 FTE in each calendar quarter.

“Jobs retained” means an estimate of those previously existing filled positions that are retained as a result of funding by the American Recovery and Reinvestment Act of 2009 (Recovery Act). This definition covers only prime contractor positions established in the United States and outlying areas (see definition in FAR [2.101](#)). The number shall be expressed as “full-time equivalent” (FTE), calculated cumulatively as all hours worked divided by the total number of hours in a full-time schedule, as defined by the contractor. For instance, two full-time employees and one part-time employee working half days would be reported as 2.5 FTE in each calendar quarter.

“Total compensation” means the cash and noncash dollar value earned by the executive during the contractor’s past fiscal year of the following (for more information see 17 CFR 229.402(c)(2)):

- (1) Salary and bonus.
  - (2) Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
  - (3) Earnings for services under non-equity incentive plans. Does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
  - (4) Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
  - (5) Above-market earnings on deferred compensation which is not tax-qualified.
  - (6) Other compensation. For example, severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property if the value for the executive exceeds \$10,000.
- (b) This contract requires the contractor to provide products and/or services that are funded under the American Recovery and Reinvestment Act of 2009 (Recovery Act). Section 1512(c) of the Recovery Act requires each contractor to report on its use of Recovery Act funds under this contract. These reports will be made available to the public.
- (c) Reports from contractors for all work funded, in whole or in part, by the Recovery Act, and for which an invoice is submitted prior to June 30, 2009, are due no later than July 10, 2009. Thereafter, reports shall be submitted no later than the 10th day after the end of each calendar quarter.
- (d) The Contractor shall report the following information, using the online reporting tool available at [www.FederalReporting.gov](http://www.FederalReporting.gov).

- (1) The Government contract and order number, as applicable.
- (2) The amount of Recovery Act funds invoiced by the contractor for the reporting period. A cumulative amount from all the reports submitted for this action will be maintained by the government's on-line reporting tool.
- (3) A list of all significant services performed or supplies delivered, including construction, for which the contractor invoiced in this calendar quarter.
- (4) Program or project title, if any.
- (5) A description of the overall purpose and expected outcomes or results of the contract, including significant deliverables and, if appropriate, associated units of measure.
- (6) An assessment of the contractor's progress towards the completion of the overall purpose and expected outcomes or results of the contract (i.e., not started, less than 50 percent completed, completed 50 percent or more, or fully completed). This covers the contract (or portion thereof) funded by the Recovery Act.
- (7) A narrative description of the employment impact of work funded by the Recovery Act. This narrative should be cumulative for each calendar quarter and only address the impact on the contractor's workforce. At a minimum, the contractor shall provide—
  - (i) A brief description of the types of jobs created and jobs retained in the United States and outlying areas (see definition in FAR [2.101](#)). This description may rely on job titles, broader labor categories, or the contractor's existing practice for describing jobs as long as the terms used are widely understood and describe the general nature of the work; and
  - (ii) An estimate of the number of jobs created and jobs retained by the prime contractor, in the United States and outlying areas. A job cannot be reported as both created and retained.
- (8) Names and total compensation of each of the five most highly compensated officers of the Contractor for the calendar year in which the contract is awarded if—
  - (i) In the Contractor's preceding fiscal year, the Contractor received—
    - (A) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and

(B) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and

(ii) The public does not have access to information about the compensation of the senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.

(9) For subcontracts valued at less than \$25,000 or any subcontracts awarded to an individual, or subcontracts awarded to a subcontractor that in the previous tax year had gross income under \$300,000, the Contractor shall only report the aggregate number of such first tier subcontracts awarded in the quarter and their aggregate total dollar amount.

(10) For any first-tier subcontract funded in whole or in part under the Recovery Act, that is over \$25,000 and not subject to reporting under paragraph 9, the contractor shall require the subcontractor to provide the information described in (i), (ix), (x), and (xi) below to the contractor for the purposes of the quarterly report. The contractor shall advise the subcontractor that the information will be made available to the public as required by section 1512 of the Recovery Act. The contractor shall provide detailed information on these first-tier subcontracts as follows:

(i) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has a parent company.

(ii) Name of the subcontractor.

(iii) Amount of the subcontract award.

(iv) Date of the subcontract award.

(v) The applicable North American Industry Classification System (NAICS) code.

(vi) Funding agency.

(vii) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or results of the subcontract.

(viii) Subcontract number (the contract number assigned by the prime contractor).

- (ix) Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district if applicable.
- (x) Subcontract primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district if applicable.
- (xi) Names and total compensation of each of the subcontractor's five most highly compensated officers, for the calendar year in which the subcontract is awarded if—
  - (A) In the subcontractor's preceding fiscal year, the subcontractor received—
    - (1) 80 percent or more of its annual gross revenues in Federal contracts (and subcontracts), loans, grants (and subgrants), and cooperative agreements; and
    - (2) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), and cooperative agreements; and
  - (B) The public does not have access to information about the compensation of the senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.

(End of clause)

**I.6 AUDIT AND RECORD – NEGOTIATION (FAR 52.215-2 (MAR 2009)  
ALTERNATE 1 (MAR 2009)**

- (a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- (b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to—

- (1) The proposal for the contract, subcontract, or modification;
- (2) The discussions conducted on the proposal(s), including those related to negotiating;
- (3) Pricing of the contract, subcontract, or modification; or
- (4) Performance of the contract, subcontract or modification.

(d) Comptroller General.—

- (1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder and to interview any current employee regarding such transactions.
- (2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating—

- (1) The effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports; and
- (2) The data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition—

- (1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and
  - (2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.
- (g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and—
- (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
  - (2) For which cost or pricing data are required; or
  - (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

**Alternate I (Mar 2009).** Substitute the following paragraphs (d)(1) and (g) for paragraphs (d)(1) and (g) of the basic clause:

(d) Comptroller General or Inspector General

- (1) The Comptroller General of the United States, an appropriate Inspector General appointed under section 3 or 8G of the Inspector General Act of 1978 (5 U.S.C. App.), or an authorized representative of either of the foregoing officials, shall have access to and the right to—
    - (i) Examine any of the Contractor's or any subcontractor's records that pertain to and involve transactions relating to this contract or a subcontract hereunder; and
    - (ii) Interview any officer or employee regarding such transactions.
- (g) (1) Except as provided in paragraph (g)(2) of this clause, the Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract. The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

- (2) The authority of the Inspector General under paragraph (d)(1)(ii) of this clause does not flow down to subcontracts.

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

- (a) The use of overtime is authorized under this contract if the overtime premium does not exceed **\$425,000.00** 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 subparagraph (a)(1) through (a)(4) of the clause.

(End of Clause)

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

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

*This Statement is for Information Only: It is not a Wage Determination*

Employee Class

Monetary Wage-Fringe Benefits

SEE ATTACHMENT J.6, WAGE DETERMINATION

(End of Clause)

**I.9 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 subparagraph (b)(1) of this clause;
  - (4) Notify such employees in writing in the statement required by subparagraph (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 subparagraphs (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.10 Rights in Data -- General (FAR 52.227-14) (Jun 1987) (ALT V) (Jun 1987) (as modified by NFS 1852.227-14)**

(a) *Definitions.*

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

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

"Form, fit, and function data," as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

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

"Limited rights data," as used in this clause, means data (other than computer software) that embody trade secrets or are commercial or

financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications thereof.

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

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

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

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

(b) *Allocation of rights.*

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

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

(2) The Contractor shall have the right to --

- (i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) of this clause;

- (ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause;
- (iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and
- (iv) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in subparagraph (c)(1) of this clause.

(c) *Copyright* --

- (1) *Data first produced in the performance of this contract.* Unless provided otherwise in paragraph (d) of this clause, the Contractor may establish, without prior approval of the Contracting Officer, claim to copyright subsisting in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings or similar works. The prior, express written permission of the Contracting Officer is required to establish claim to copyright subsisting in all other data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Contractor grants to the Government and others acting in its behalf, a paid-up nonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government.
- (2) *Data not first produced in the performance of this contract.* The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause; *provided*, however, that if such data are computer software the Government shall acquire a copyright license as set forth in subparagraph (g)(3) of this clause if included in

this contract or as otherwise may be provided in a collateral agreement incorporated in or made part of this contract.

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

(d) *Release, publication and use of data.*

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

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

(3)

- (i) The Contractor agrees not to establish claim to copyright, publish or release to others any computer software first produced in the performance of this contract without the Contracting Officer's prior written permission.
- (ii) If the Government desires to obtain copyright in computer software first produced in the performance of this contract and permission has not been granted as set forth in paragraph (d)(3)(i) of this clause, the Contracting Officer may direct the contractor to assert, or authorize the assertion of, claim to copyright in such data and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.
- (iii) Whenever the word "establish" is used in this clause, with reference to a claim to copyright, it shall be construed to mean "assert".

(e) *Unauthorized marking of data.*

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

following procedures shall apply prior to canceling or ignoring the markings.

- (i) The Contracting Officer shall make written inquiry to the Contractor affording the Contractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;
  - (ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.
  - (iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be canceled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Contractor a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.
- (2) The time limits in the procedures set forth in subparagraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.
  - (3) This paragraph (e) does not apply if this contract is for a major system or for support of a major system by a civilian agency other than NASA and the U.S. Coast Guard agency subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.
  - (4) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the

Contractor is not precluded by this paragraph (e) from bringing a claim under the Contract Disputes Act, including pursuant to the Disputes clause of this contract, as applicable, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) *Omitted or incorrect markings.*

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

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

(2) The Contracting Officer may also

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

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

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

as a computer data base for delivery to the Government are to be treated as limited rights data and not restricted computer software.

(2) -- (3) [Reserved]

- (h) *Subcontracting.* The Contractor has the responsibility to obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government such rights, the Contractor shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subcontract award without further authorization.
- (i) *Relationship to patents.* Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.
- (j) The Contractor agrees, except as may be otherwise specified in this contract for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to three years after acceptance of all items to be delivered under this contract, inspect at the Contractor's facility any data withheld pursuant to paragraph (g)(1) of this clause, for purposes of verifying the Contractor's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Contractor whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

(End of Clause)

#### **I.11 52.232-19 AVAILABILITY OF FUNDS FOR THE NEXT FISCAL YEAR.**

The following contract clause (52.232-19) applies to Task Orders 1, 2, 23, 30, 41, 46, and 47 of this contract.

Funds are not presently available for performance under this contract beyond March 9, 2011 for Task Orders 2, 23, 30, 41, 45, 46, 47, and 57. The Government's obligation for performance of Task Orders 22, 23, 30, 41, 45, 46, 47, and 57 beyond that date is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment of Task Orders 22, 23, 30, 41, 45, 46, 47, and 57 may arise for performance under this contract beyond September 30, 2011, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

(End of clause)

**I.12 SUBCONTRACTS FOR COMMERCIAL ITEMS (FAR 52.244-6) (Dec 2004)**

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

"Commercial item" has the meaning contained in Federal Acquisition Regulation 2.101, Definitions.

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

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

(c)

(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201). Flow down as required in accordance with paragraph (g) of FAR clause 52.222-39).

(vi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Apr 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

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

(End of clause)

**I.13 SUBMISSION OF COMMERCIAL TRANSPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDIT (FAR 52.247-67) (JUN 1997)**

- (a)
- (1) In accordance with paragraph (a)(2) of this clause, the Contractor shall submit to the General Services Administration (GSA) for audit, legible copies of all paid freight bills/invoices, commercial bills of lading (CBL's), passenger coupons, and other supporting documents for transportation services on which the United States will assume freight charges that were paid --
- (i) By the Contractor under a cost-reimbursement contract; and
- (ii) By a first-tier subcontractor under a cost-reimbursement subcontract thereunder.
- (2) Cost-reimbursement Contractors shall only submit for audit those CBL's with freight shipment charges exceeding \$50.00. Bills under \$50.00 shall be retained on-site by the Contractor and made available for GSA 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.
- (b) The Contractor shall forward copies of paid freight bills/invoices, CBL's, passenger coupons, and supporting documents as soon as possible following the end of the month, in one package to the:

General Services Administration  
Attn: FWA  
1800 F Street, NW  
Washington, DC 20405.

The Contractor shall include the paid freight bills/invoices, CBL's, passenger coupons, and supporting documents for first-tier subcontractors under a cost-reimbursement contract. If the inclusion of the paid freight bills/invoices, CBL's, passenger coupons, and supporting documents for any subcontractor in the shipment is not practicable, the documents may be forwarded to GSA in a separate package.

- (c) Any original transportation bills or other documents requested by GSA shall be forwarded promptly by the Contractor to GSA. The Contractor shall ensure that the name of the contracting agency is stamped or written on the face of the bill before sending it to GSA.

(d) A statement prepared in duplicate by the Contractor shall accompany each shipment of transportation documents. GSA will acknowledge receipt of the shipment by signing and returning the copy of the statement. The statement shall show --

- (1) The name and address of the Contractor;
- (2) The contract number including any alpha-numeric prefix identifying the contracting office;
- (3) The name and address of the contracting office;
- (4) The total number of bills submitted with the statement; and
- (5) A listing of the respective amounts paid or, in lieu of such listing, an adding machine tape of the amounts paid showing the Contractor's voucher or check numbers.

(End of Clause)

**I.14 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (NFS 1852.204-76) (MAY 2007)**

- (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.15 PRICE ADJUSTMENT FOR "MAKE-OR-BUY" CHANGES (NFS 1852.215-79) (DEC 1988)**

The following make-or-buy items are subject to the provisions of paragraph (d) of the clause at FAR 52.215-21, Change or Additions to Make-or-Buy Program, of this contract:

| ITEM DESCRIPTION | MAKE-OR-BUY DETERMINATION |
|------------------|---------------------------|
|                  |                           |
|                  |                           |

(End of Clause)

**I.16 OMBUDSMAN (NFS 1852.215-84) (OCT 2003) (ALTERNATE I) (JUN 2000)**

- (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:

Diane S. Thompson  
LP011/Contract Management Division  
NASA Headquarters  
Washington DC 20546-0001  
Phone: 202-358-0514  
E-mail: [diane.thompson@nasa.gov](mailto:diane.thompson@nasa.gov)

Concerns, issues, disagreements, and recommendations that 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](mailto: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)

**ALTERNATE I**

- (c) If this is a task or delivery order contract, the ombudsman shall review complaints from contractors and ensure they are afforded a fair opportunity to be considered, consistent with the procedures of the contract.

(End of clause)

**I.17 ACCESS TO SENSITIVE INFORMATION (1852.237-72) (JUNE 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)

[END OF SECTION]

**PART III – LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**

**SECTION J – LIST OF ATTACHMENTS**

| <b><u>TITLE</u></b>  | <b><u>PAGE</u></b> |
|--|--------------------|
| J.1 DATA REQUIREMENTS LIST AND DATA REQUIREMENTS DESCRIPTION | J-2                |
| J.2 APPLICABLE DOCUMENTS LIST                                | J-78               |
| J.3 DEFINITION OF TERMS                                      | J-83               |
| J.4 ACRONYMS   | J-84               |
| J.5 AWARD FEE PLAN   | J-89               |
| J.6 WAGE DETERMINATION                                       | J-99               |
| J.7 LISTS OF GOVERNMENT-FURNISHED PROPERTY                   | J-122              |
| J.7A LIST OF GOVERNMENT FURNISHED EQUIPMENT                  | J-123              |
| J.7B LIST OF INSTALLATION PROVIDED PROPERTY                  | J-147              |
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| J.11 CONTRACTOR MANAGED WEBSITES                             | J-302              |

**J.1 DATA REQUIREMENTS LIST AND DATA REQUIREMENTS DESCRIPTION**

## JSC DATA REQUIREMENTS LIST (DRL)

(See reverse for instructions)  
Based on JSC-STD-123

| a. Title of Contract, Project, SOW, etc.<br>Safety and Mission Assurance Support Contract |  | b. Contract/RFP No.  |   | c. DRL Date/Mod Date       |   |  |
|---|--|--|---|----------------------------|---|--|
| 1. Line item no.<br>01  | 2. DRD Title<br>Management Plan  | 3. Data type:<br><input type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request            | 4. Frequency<br>RT  | 5. As-of-date              | 6. 1 <sup>st</sup> subm. Date<br>w/Proposal | 7. Copies<br>a. Type    b. Number<br>Other |
|   | 8. Distribution <i>(Continue on a blank sheet if needed)</i><br>1 <sup>st</sup> submission with Proposal.<br>The following Distribution List becomes effective after contract start.<br>BJ4/C. Burridge<br>LI/C. Unger<br>NA/COTR<br>NA/Business Manager |  | 9. Remarks<br>Initial submission with Proposal.<br><br>Copies: Electronic file (.doc or .pdf)   |                            |   |  |
| 1. Line item no.<br>02  | 2. DRD Title<br>Lessons Learned  | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AR  | 5. As-of-date              | 6. 1 <sup>st</sup> subm. Date               | 7. Copies<br>a. Type    b. Number<br>Other |
|   | 8. Distribution <i>(Continue on a blank sheet if needed)</i><br>BJ4/C. Burridge<br>NA/COTR<br>NS/S. Nakamura   |  | 9. Remarks<br>Copies: Electronic file (web-ready format such as .html or .jpg)  |                            |   |  |
| 1. Line item no.<br>03  | 2. DRD Title<br>Integrated Technical Management Report   | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>MO  | 5. As-of-date<br>(Remarks) | 6. 1 <sup>st</sup> subm. Date               | 7. Copies<br>a. Type    b. Number<br>Other |
|   | 8. Distribution <i>(Continue on a blank sheet if needed)</i><br>BJ4/C. Burridge<br>LI/C. Unger<br>NA/COTR<br>NA/Business Manager   | NC/D. Thelen<br>NE/M. Fodroci<br>NS/S. Nakamura<br>NT/D. Petri<br>NX/J. Williams   | 9. Remarks<br>As-of-date: Reports shall cover contractor accounting calendar months. Submission shall be within 15 working days of end of accounting month.<br>Copies: Electronic file (.doc or .pdf) |                            |   |  |

|                        |   |   |   |                            |   |   |
|------------------------|---|---|---|----------------------------|---|---|
| 1. Line item no.<br>04 | 2. DRD Title<br>Work Breakdown Structure  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT  | 5. As-of-date              | 6. 1 <sup>st</sup> subm. date<br>w/Proposal | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>1 <sup>st</sup> submission with Proposal.<br>The following Distribution List becomes effective after contract start.<br>BJ4/C. BurrIDGE<br>LI/C. Unger<br>NA/COTR<br>NA/Business Manager<br>NX/J. Williams |   | 9. Remarks<br>Copies: May be printed copies or electronic file (.doc or .pdf)     |                            |   |   |
| 1. Line item no.<br>05 | 2. DRD Title<br>Contractor Financial Management Report<br>(NASA Form 533M)  | 3. Data type: <input type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>MO  | 5. As-of-date<br>(See DRD) | 6. 1 <sup>st</sup> subm. date<br>(See DRD)  | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>BJ4/C. BurrIDGE<br>LI/C Unger (Printed copy plus Electronic)<br>NA/COTR<br>NA/Business Manager   |   | 9. Remarks<br>Copies: Printed Copies plus Electronic (.xls) to LI/C. Unger        |                            |   |   |
| 1. Line item no.<br>06 | 2. DRD Title<br>Quality Manual  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT  | 5. As-of-date              | 6. 1 <sup>st</sup> subm. date<br>w/Proposal | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>1 <sup>st</sup> submission with Proposal.<br>The following Distribution List becomes effective after contract start.<br>BJ4/C. BurrIDGE<br>NA/COTR<br>NT/R. Hill   |   | 9. Remarks<br>Copies: May be printed copies or electronic file (.doc or .pdf)     |                            |   |   |
| 1. Line item no.<br>07 | 2. DRD Title<br>Contractor Quality Metrics  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>QU  | 5. As-of-date              | 6. 1 <sup>st</sup> subm. date<br>(Remarks)  | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>BJ4/C. BurrIDGE<br>NA/COTR<br>NT/R. Hill   |   | 9. Remarks<br>1st Submission: 15 days after first 3 months period of performance. |                            |   |   |

|  |   |   |                    |                            |   |   |
|--|---|---|--------------------|----------------------------|---|---|
| 1. Line item no.<br>08   | 2. DRD Title<br>Property Management Plan                  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT | 5. As-of-date              | 6. 1 <sup>st</sup> subm. date<br>(Remarks)  | 7. Copies<br>a. Type b. Number<br>Other |
| <p>8. Distribution (<i>Continue on a blank sheet if needed</i>)<br/>BJ4/C. Burrige<br/>NA/COTR<br/>JB3/J. Guy</p>  |   |   |                    |                            |   |   |
| 1. Line item no.<br>09   | 2. DRD Title<br>Safety and Health Plan                    | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT | 5. As-of-date<br>(See DRD) | 6. 1 <sup>st</sup> subm. date<br>w/Proposal | 7. Copies<br>a. Type b. Number<br>Other |
| <p>8. Distribution (<i>Continue on a blank sheet if needed</i>)<br/>1<sup>st</sup> submission with Proposal.<br/>The following Distribution List becomes effective after contract start.<br/>BJ4/C. Burrige<br/>JA131/Environmental Services<br/>NA/COTR<br/>NA/S. Nakamura<br/>SD13/Occupational Health Officer</p> |   |   |                    |                            |   |   |
| 1. Line item no.<br>10   | 2. DRD Title<br>Safety and Health Program Self-Evaluation | 3. Data type: <input type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AN | 5. As-of-date<br>(See DRD) | 6. 1 <sup>st</sup> subm. date<br>9/30/06    | 7. Copies<br>a. Type b. Number<br>Other |
| <p>8. Distribution (<i>Continue on a blank sheet if needed</i>)<br/>BJ4/C. Burrige<br/>JA131/Environmental Services<br/>NA/COTR<br/>NA/S. Nakamura<br/>SD13/Occupational Health Officer</p>  |   |   |                    |                            |   |   |
| 1. Line item no.<br>11   | 2. DRD Title<br>Monthly Safety and Health Metrics         | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>MO | 5. As-of-date<br>(Remarks) | 6. 1 <sup>st</sup> subm. date               | 7. Copies<br>a. Type b. Number<br>Other |
| <p>8. Distribution (<i>Continue on a blank sheet if needed</i>)<br/>BJ4/C. Burrige<br/>NA/COTR<br/>NA/S. Nakamura<br/>SD13/Occupational Health Officer</p>   |   |   |                    |                            |   |   |

|  |  |  |                    |                     |  |   |
|--|--|--|--------------------|---------------------|--|---|
| 1. Line item no.<br>12   | 2. DRD Title<br>Information Technology (IT) Plan   | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date<br>(Remarks) | 7. Copies<br>a. Type b. Number<br>Other |
| 8. Distribution (Continue on a blank sheet if needed)<br>BJ4/C. Burridge<br>NA/COTR<br>NA/Business Manager | 9. Remarks<br>IT Plan, Part 3, IT Security – First draft of Part 3. Submission shall be within 30 days of contract start.<br>IT Plan, Parts 1, 2, & 3 – Final draft of integrated IT Plan (Parts 1, 2, & 3) shall be submitted within 90 days of contract start.<br>Copies: Electronic file (.doc or .pdf) |  |                    |                     |  |   |
| 1. Line item no.<br>13   | 2. DRD Title<br>Data Management Plan   | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date<br>11/01/06  | 7. Copies<br>a. Type b. Number<br>Other |
| 8. Distribution (Continue on a blank sheet if needed)<br>BJ4/C. Burridge<br>NA/COTR<br>NA/Business Manager | 9. Remarks<br>Copies: Electronic file (.doc or .pdf)   |  |                    |                     |  |   |
| 1. Line item no.<br>14   | 2. DRD Title<br>S&MA Personnel Qualification Program Plan  | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>RT | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date<br>(Remarks) | 7. Copies<br>a. Type b. Number<br>Other |
| 8. Distribution (Continue on a blank sheet if needed)<br>BJ4/C. Burridge<br>NA/COTR<br>NA/Business Manager | 9. Remarks<br>1st submission date: 6 months after contract start<br>Copies: Electronic file (.doc or .pdf)   |  |                    |                     |  |   |
| 1. Line item no.<br>15   | 2. DRD Title<br>S&MA Prelaunch Assessment Presentations  | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AD | 5. As-of-date<br>AD | 6. 1 <sup>st</sup> subm. date<br>AD        | 7. Copies<br>a. Type b. Number<br>Other |
| 8. Distribution (Continue on a blank sheet if needed)<br>As directed                                       | 9. Remarks<br>Frequency, as-of-date, and submission dates will be determined based on review type.   |  |                    |                     |  |   |

|                        |   |   |                    |                     |                                     |   |
|------------------------|---|---|--------------------|---------------------|-------------------------------------|---|
| 1. Line item no.<br>16 | 2. DRD Title<br>Activity Reports  | 3. Data type: <input type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AD | 5. As-of-date<br>AD | 6. 1 <sup>st</sup> subm. date<br>AD | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>As directed                |   |                    |                     |                                     |   |
| 1. Line item no.<br>17 | 2. DRD Title<br>Trend Analysis (JSC Systems) Report                                 | 3. Data type: <input type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>MO | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date       | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>NA/COTR<br>NT/D. Petri     |   |                    |                     |                                     |   |
| 1. Line item no.<br>18 | 2. DRD Title<br>Evaluation Reports  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AD | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date       | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>NA121/M. HimeI             |   |                    |                     |                                     |   |
| 1. Line item no.<br>19 | 2. DRD Title<br>Assessment Plans and Reports  | 3. Data type: <input checked="" type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>AR | 5. As-of-date       | 6. 1 <sup>st</sup> subm. date       | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution (Continue on a blank sheet if needed)<br>NA121/M. HimeI             |   |                    |                     |                                     |   |
|                        | 9. Remarks<br>Copies: Electronic submission as directed (e-mail or electronic file) |   |                    |                     |                                     |   |
|                        | 9. Remarks<br>Copies: Direct Contractor input to the established IA web-site        |   |                    |                     |                                     |   |

|                        |  |   |  |               |   |   |
|------------------------|--|---|--|---------------|---|---|
| 1. Line item no.<br>20 | 2. DRD Title<br>Facilities System Certification Report   | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>WK   | 5. As-of-date | 6. 1 <sup>st</sup> subm. date               | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution ( <i>Continue on a blank sheet if needed</i> )<br>NS/S. Nakamura<br>NT/D. Petri  |   | 9. Remarks<br>Copies: Electronic file (.doc or .pdf)   |               |   |   |
| 1. Line item no.<br>21 | 2. DRD Title<br>Wage/Salary and Fringe Benefit Data  | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>(Remarks)  | 5. As-of-date | 6. 1 <sup>st</sup> subm. date<br>(Remarks)  | 7. Copies<br>a. Type b. Number<br>Print |
|                        | 8. Distribution ( <i>Continue on a blank sheet if needed</i> )<br>BJ4/C. Burrigde<br>BA2/Contract Labor Relations Officer  |   | 9. Remarks<br>Submit annually, 90 days prior to the anniversary date of the contract.<br><br>Changes shall be incorporated as required by change page or complete reissue. |               |   |   |
| 1. Line item no.<br>22 | 2. DRD Title<br>Reprocurement Data Package   | 3. Data type:<br><input checked="" type="checkbox"/> (1) Written approval<br><input checked="" type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request | 4. Frequency<br>UR   | 5. As-of-date | 6. 1 <sup>st</sup> subm. date<br>UR         | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution ( <i>Continue on a blank sheet if needed</i> )<br>BJ4/C. Burrigde<br>NA/COTR   |   | 9. Remarks<br>Copies: Electronic file (.doc or .pdf)   |               |   |   |
| 1. Line item no.<br>23 | 2. DRD Title<br>Contract Phase-In Plan   | 3. Data type:<br><input type="checkbox"/> (1) Written approval<br><input type="checkbox"/> (2) Mandatory Submittal<br><input type="checkbox"/> (3) Submitted upon request                       | 4. Frequency<br>RT   | 5. As-of-date | 6. 1 <sup>st</sup> subm. date<br>w/Proposal | 7. Copies<br>a. Type b. Number<br>Other |
|                        | 8. Distribution ( <i>Continue on a blank sheet if needed</i> )<br>1 <sup>st</sup> submission with Proposal.<br>The following Distribution List becomes effective after contract start.<br>BJ4/C. Burrigde<br>NA/COTR |   | 9. Remarks<br>Copies: Electronic file (.doc or .pdf)   |               |   |   |

## 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. Additional 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 management control.
  - (3) Submittal upon Request - Data prepared and retained by respondent to be made available to requiring organization upon request.
4. Frequency - Enter frequency of submittal code as follows:

| <u>Code</u> | <u>Description</u>           | <u>Code</u> | <u>Description</u> | <u>Code</u> | <u>Description</u>     |
|-------------|------------------------------|-------------|--------------------|-------------|------------------------|
| 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          | Biennially (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:

| <u>Code</u> | <u>Definition</u> | <u>Code</u> | <u>Definition</u>        |
|-------------|-------------------|-------------|--------------------------|
| 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 on a 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 DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                        |                            |                         |   |
|------------------------|----------------------------|-------------------------|---|
| 1. DRD Title           | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement completes) |
| <b>Management Plan</b> | <b>05/03/05</b>            | <b>01</b>               |   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**This document describes the Contractor’s overall management systems for the implementation and accomplishment of the contract Statement of Work (SOW).**

5. DRD Category: (check one)     Technical     Administrative     SR&QA

6. References (Optional)  
 Section C-3.1.3, Program Management  
 NPD 2190.1, NASA Export Control  
 Program Policy  
 NPR 8000.4, Risk Management  
 Clause H.10, Potential Conflict of Interest  
 Clause H.1, NFS 1852.225-70, Alternate 1,  
 Export Licenses

7. Interrelationships (e.g., with other DRDs) (Optional)  
 DRD 02 Lessons Learned  
 DRD 03 Integrated Technical Management Report  
 DRD 06 Quality Manual  
 DRD 07 Contractor Quality Metrics  
 DRD 08 Property Management Plan  
 DRD 09 Safety and Health Plan  
 DRD 12 Information Technology Plan

8. Preparation Information (Include complete instructions for document preparation)

This document shall be the master plan which describes the overall Contractor approach for the conduct and implementation of the SOW. Plan contents can be summary in nature but shall provide sufficient information to define the concepts and techniques to be employed in the Contractor’s approach to program management of this contract.

1. The Plan shall consist of an index of the Contractor’s internal operation plans, directives, and procedures for each of the following areas with a brief discussion as to how they will be utilized in managing the effort and fulfilling the requirements:

- Program and Performance Management (e.g. cost, resources, customer satisfaction)
- Risk Management and Mitigation
- Export Control
- Configuration Management
- Information and Data Management
- Quality Assurance, Reliability, and Safety Management
- Engineering Management
- Organizational Conflict of Interest (OCI) Mitigation

When completing the above listed sections, include the following elements for the designated section.

The Program and Performance Management section shall include:

- a. A description of how the overall approach creates an efficient and effective interface to the Government in the management and communication of SOW tasks and priorities.
- b. A description of the processes for communicating and obtaining Government concurrence with changing priorities and workforce adjustments.
- c. A description of the policies, processes, procedures, and techniques proposed to measure the effectiveness of products and services provided.
- d. Your proposed approach to measuring, reporting and continuously improving how well customer expectations are met.
- e. Your proposed approach to developing and maintaining customer relationships. Describe the steps you will take to ensure that customer interactions are effective.

The Risk Management and Mitigation section shall include:

- a. A description of your proposed risk management approach and how it relates to potential areas of risk to performance including the probability of the risk occurring, the impact and severity of the risk.
- b. An overview of your proposed risk management process, including identification, analysis, planning, tracking, control, communication, and documentation of risk.

The Export Control section shall include:

- a. Description of Contractor's export control program, including details of its licensing and personnel training.
- b. Discussion of the overall approach to ensure compliance with export control laws, regulations, and contract requirements.
- c. Identification of Export Control licenses, including Technical Assistance Agreements (TAAs), that the Contractor will pursue to satisfy its responsibilities under NFS 1852.225-70. Include the schedule for submitting license applications for processing and approval to the Department of State (DoS).

Potential Conflict of Interest:

OCI is discussed in Contract Clause H.10, Potential Conflict of Interest. The Contractor shall provide detailed information in this Management Plan on how they will avoid or mitigate any conflicts of interest which currently exist and potential conflicts of interest that may arise during contract performance. In performing work under the S&MA SSC, the Contractor may be required to inspect, evaluate, assess, critique, review, or perform other similar services with respect to products and services furnished by the Contractor under another NASA contract. The OCI portion of the Plan shall address all areas of Clause H.10.

In addition, the OCI section shall also include:

- a. A description of potential conflicts of “team” members if a “team” arrangement is being proposed.
- b. A description of the approach that will be implemented to manage the resources of the vendor or team for conflict situations that may arise during the period covered by the contract.

In addition to the subjects listed above, the Contractor may add subjects as deemed appropriate and necessary in order to convey the total program plan.

2. The Plan shall include a current organization chart for the organization responsible for conducting the effort. The chart shall show lines of authority and how this contract fits within the corporate organization structure. Supporting documentation shall be furnished to document the roles and responsibilities, task assignments, products, amount of effort, and management relationships for each organizational unit responsible for this effort. The Contractor shall identify by name the key personnel in all functional areas. The Contractor shall provide anticipated/projected hiring dates for vacant positions. The Plan shall provide notification of any significant changes to the Contractor’s organization, method of operation, or to the management network. In addition, the Plan shall:

- a. Discuss how your proposed organizational structure is flexible and can adapt to multiple and changing Program and Project needs.
- b. Describe the communication channels, lines of authority (including the line of succession if Program Manager is unavailable), reporting relationships, and responsibilities of all organizational elements.
- c. Discuss how these channels will be effective in managing communication and how they will be used to enhance the safety culture within the S&MA organization and extend into communication with Programs and Projects.
- d. Describe the relationship and the reporting responsibilities of the Contractor’s Program Manager to corporate management as well as the management of any proposed subcontractors, team members, or joint venture partners.
- e. Describe the proposed organizational elements within the overall organization you believe are most critical to satisfactory accomplishment of all performance requirements and provide rationale as to why these are judged most critical within the framework of the overall organization.
- f. Provide supporting rationale that demonstrates the proposed organizational approach will ensure success in each of the critical areas identified.

3. The Plan shall identify key subcontractors and describe the Contractor’s system for control over all subcontractors and vendors. Subcontractors shall provide notification of any significant changes to their organizations (e.g., personnel changes, accounting system) or method of operation. In addition, the Plan shall:

- a. Discuss the details of formal arrangements with any proposed subcontractors, team

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- members, or joint venture partners.
  - b. Discuss the rationale for selection of proposed subcontractors, team members, or joint venture partners, both large and small businesses.
  - c. Discuss the level of expertise and the necessary capabilities of the proposed subcontractors, team members, or joint venture partners.
4. All employees must maintain the education and experience levels for the respective Standard Labor Categories as accepted by the Government in the proposal.

Upon NASA approval, the Plan shall form the basis for the Contractor's overall program management system and shall be updated and submitted to NASA for approval as revisions are required.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                        |                         |                      |                                |
|------------------------|-------------------------|----------------------|--------------------------------|
| 1. DRD Title           | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>Lessons Learned</b> | <b>02/14/05</b>         | <b>02</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Obtains Lessons learned from Contractor for possible publication in NASA Lessons Learned Information System (LLIS).**

|  |  |
|--|--|
| 5. DRD Category: (check one) <input checked="" type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA |  |
| 6. References (Optional)<br>Section C-3.1.3 Program Management<br>Section C-9.2.2.p White Sands Test Facility  | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 01 Management Plan |

8. Preparation Information (Include complete instructions for document preparation)

**Criteria for Selecting Lessons Learned:** 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.

**Frequency of submission:** 30 days after triggering event or 30 days after mishap investigation or hazard analysis and evaluation is completed.

**Distribution:**

NS/Safety and Test Operations Division (1 electronic copy including photographs, drawings, etc., in web-ready format such as .html or .JPG)  
NA/Contracting Officer's Technical Representative (COTR) (1 copy)

**Content:**

1. Subject - one line subject of the lesson.
2. Lesson Learned - usually one sentence that describes insight gained
3. Description of Event - narrative of what happened.
4. Recommendations - may be an action plan, suggestion, etc., that was adopted at event source.
5. Supporting documentation - as needed to give clear picture of lesson (photographs, illustrations, drawings, etc.)
6. Contact name and e-mail address (for follow up by Government prior to publication of lesson)
7. Definitions. Refer to NASA LLIS at <http://llis.gsfc.nasa.gov/> for definitions of terms used.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|   |                         |                      |                                |
|---|-------------------------|----------------------|--------------------------------|
| 1. DRD Title                                  | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>Integrated Technical Management Report</b> | <b>02/14/05</b>         | <b>03</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To provide timely, integrated performance visibility to enhance effective cost, schedule, and technical management, and to provide consolidated documentation on contract activities. Used by the Contractor and NASA for monitoring activity, progress, and accomplishments, and documenting problems, solutions, and corrective actions associated with contract performance.**

|                                     |   |  |                                |
|-------------------------------------|---|--|--------------------------------|
| 5. DRD Category: <i>(check one)</i> | <input checked="" type="checkbox"/> Technical | <input checked="" type="checkbox"/> Administrative | <input type="checkbox"/> SR&QA |
|-------------------------------------|---|--|--------------------------------|

|  |  |
|--|--|
| <p>6. References <i>(Optional)</i><br/>                 NPD 7120.4C, Program/Project Management<br/>                 NPD 9501.3A, Earned Value Management<br/>                 Section C-3.1.4 Program Management<br/>                 Section C-3.2 Cost and Schedule</p> | <p>7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br/>                 DRD 01 Management Plan<br/>                 DRD 04 Work Breakdown Structure (WBS)<br/>                 DRD 05 Contractor Financial Management Report (NF533)<br/>                 DRD 16 Activity Reports<br/>                 DRD 18 Evaluation Reports<br/>                 DRD 19 Assessment Plan and Reports</p> |
|--|--|

8. Preparation Information (Include complete instructions for document preparation)

The Contractor shall submit monthly performance reports of all work planned and accomplished during each month of contract performance. The report shall include NASA Form 533M along with a combination of quantitative, metric, narrative, cost, earned value, and schedule information that relates costs to work performed and explains variances between the baselined plan and the actuals submitted on the NF533s.

Reporting shall be by the levels detailed in DRD 04 line items and below as necessary to:

- track activity and progress.
- communicate to NASA where and why variances are occurring.
- analyze variances.
- assess impacts to technical and schedule performance and discuss recovery plans.
- establish the value of work performed against the originally estimated/planned end value of tasks.

The report shall include issues or problems (contractual, funding, cost, technical, schedule, prioritization, skills, workload, etc.) along with recommended solutions.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                                       |                         |                      |                                |
|---------------------------------------|-------------------------|----------------------|--------------------------------|
| 1. DRD Title                          | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>Work Breakdown Structure (WBS)</b> | <b>02/24/05</b>         | <b>04</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To establish a framework for reporting cost, schedule, and technical performance. To provide a basis for uniform planning, reporting status, program visibility, and assignment of responsibilities.**

|   |   |
|---|---|
| 5. DRD Category: (check one) <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA                             |   |
| 6. References (Optional)<br>NPD 7120.4B, Program/Project Management<br>NPR 7120.5C, Program and Project Management Processes and Requirements Section C-3.2 Cost and Schedule | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 03 Integrated Technical Management Report<br>DRD 05 Contractor Financial Management Reporting (NF533) |

8. Preparation Information (Include complete instructions for document preparation)

The WBS shall be used as a framework to define requirements, plan effort, assign responsibilities, allocate and control costs and resources, and report progress, expenditures, technical, and schedule performance.

The WBS shall consist of an indentured list of element titles, scope/summary of each element (WBS Dictionary), and a diagram to clearly indicate element relationships. The following represents the current basic structure based on organizational fund sources.

| Level I          | Level II             | Level III | Level IV  | WBS Dictionary   |
|------------------|----------------------|-----------|---|--|
| Contract Summary |                      |           |   | Roll-up of all WBS Level II elements   |
|                  | Program Service Pool |           | <ul style="list-style-type: none"> <li>- RITF/RITF Materials</li> <li>- Precision Materials (PM)</li> <li>- PM Calibration</li> <li>- PQA/PQA Admin</li> <li>- Pressure Systems</li> <li>- Facility Software Engineering</li> <li>- NASA Advisories and Alerts</li> <li>- EEE Parts Assurance</li> <li>- Special Processes</li> </ul> | Service pools are infrastructure capabilities that support multiple projects at a center. These costs are allocated based on usage/consumption. Here, the Service Pool provides S&MA oversight to Program activities |

|  |                       |                           |  |   |
|--|-----------------------|---------------------------|--|---|
|  |                       |                           | - Risk Management and Analysis<br>- ISO Custodian                                  |   |
|  |                       | Program Support           |  | Tasks not specific to any program within S&MA but benefit all programs  |
|  |                       | Station S&MA              |  | Tasks that directly support ISS   |
|  |                       | Shuttle S&MA              | - Government-Furnished Equipment (GFE)<br>- Non-GFE (Shuttle Support S&MA)         | Tasks that directly support SSP   |
|  |                       | Station S&MA Safety Panel | - Station Review Panel (SRP)<br>- Reliability and Maintainability (R&M) Panel      | Direct Administrative and Technical support to ISS Safety Panels  |
|  |                       | Shuttle S&MA Safety Panel | - Space Shuttle Review Panel (SSRP)<br>- Payload Safety Review Panel (PSRP)        | Direct Administrative and Technical support to ISS Safety Panels  |
|  | Facility Service Pool |                           |  | Service Pool that provides for S&MA support to WSTF test facilities   |
|  | Shuttle (Direct)      |                           |  | Activities directly funded by the Shuttle Program that are outside of services provided under the Program Service Pool                              |
|  | Station (Direct)      |                           |  | Activities directly funded by the Station Program that are outside of services provided under the Program Service Pool                              |
|  | EVA (XA-Station)      |                           |  | Activities directly funded by the Station Program through the EVA office for specific EVA S&MA services not provided under the Program Service Pool |
|  | Center G&A            |                           |  | Center functions that benefit all projects. Content is standard across the Agency.  |
|  | Corporate G&A         |                           | - Independent Assessment (IA)<br>- Research Technology Operations Programs (RTOPs) | Operations of NASA Headquarters; also includes Agency-level functions benefiting all projects but managed at a Center or performed at a Center.     |
|  | Exploration           |                           |  | Activities directly funded by   |

|  |          |  |  |   |
|--|----------|--|--|---|
|  | (Direct) |  |  | the Office of Space Exploration for specific advanced program S&MA services not provided under the Program Service Pool |
|--|----------|--|--|---|

Level II elements may be added or phased out based on NASA financial reporting requirements, changes to fund sources, and the addition or deletion of Programs and Projects.

Level III elements may be added or phased out based on issuance of Task/Delivery Orders that require separate cost tracking or based on tracking requirements changes from the fund sources.

Level IV elements have been identified by NASA as definable areas for management of performance and cost.

The Contractor may utilize additional levels to further subdivide activities in order to permit adequate control and visibility. It is not necessary to extend the WBS to the same level for each activity.

Cost accounting at the lowest WBS levels implemented by the Contractor, shall accrue costs by the elements required for NF533 reporting (i.e., Hours, Direct Labor Cost, Fringe/Overhead, Facilities, Subcontractor Costs, Materials, Travel, Training, Overtime Premium, Overhead, etc.) in order to roll-up costs to the NF533s and to provide detail backup information, if requested by NASA, to support review of NF533s.

**Interrelationship with NF533s:**

Level I and II require submission of NF533s. Level III elements require detail cost report sheets that list WBS Level III elements, with element-associated costs, and roll-up to Level II NF533s. WBS Level IV elements require detail cost report sheets that list WBS Level IV elements, with element-associated costs, and roll-up to Level III detail sheets.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|  |                            |   |                                   |
|--|----------------------------|---|-----------------------------------|
| 1. DRD Title   | 2. Current Version<br>Date | 3. DRL Line<br>Item No.   | RFP/Contract No.<br>(Procurement) |
| <b>Contractor Financial Management Report (NASA Form 533M)</b>   | <b>03/30/05</b>            | <b>05</b>   |                                   |
| 4. Use (Define need for, intended use of, and/or anticipated results of data)<br><b>To be used for NASA cost accounting and program control activities. Provides a basis for evaluating cost and expenditures on the contract.</b> |                            |   |                                   |
| 5. DRD Category: (check one) <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA  |                            |   |                                   |
| 6. References (Optional)<br>Section C-3.2 Cost and Schedule<br>NPR 9501.2D (or current issue), NASA<br>Contractor Financial Management<br>Reporting  |                            | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 03 Integrated Technical Management<br>Report<br>DRD 04 Work Breakdown Structure |                                   |
| 8. Preparation Information (Include complete instructions for document preparation)  |                            |   |                                   |

**Scope:**

The Contractor shall submit financial data in accordance with NPR 9501.2 as amended or revised.

The Data contained in the reports must be auditable using Generally Accepted Accounting Principles (GAAP). Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533. As part of the NF533, the Contractor shall submit a summary report of the NF533 to the NASA Resource Analyst assigned to the contract. The Contractor is required to coordinate with the NASA Resource Analyst to establish and maintain the Reporting Categories the Contractor shall use for both the NF533 and the summary report, and also to determine the format for the summary report.

**Monthly Financial Reporting:**

Individual NF533Ms shall be prepared and submitted for each reportable Work Breakdown Structure (WBS) level and element (see DRD 03) within the NASA WBS structure. Minimum requirements for the monthly reports are:

1. Contract Summary Level NF533 (WBS Level I) – roll-up of all WBS Level II elements
2. Fund Source Top-Level NF533 (WBS Level II) – roll-up of all WBS Level III elements
3. Detail sheets that list WBS Level III elements, with element-associated costs, that roll-up to Level II NF533s
4. Detail sheets that list WBS Level IV elements, with element-associated costs, that roll-up to Level III detail sheets

WBS elements may change year-to-year based on changes to fund sources or needs of NASA management to gain cost insight into specific task areas.

**Variance:**

Variance explanations between baselined plan and actual costs submitted on the NF533 shall be included in the Integrated Technical Management Report (DRD 03).

**Reporting Categories:**

Reporting categories shall be established and costs accrued against them so that actuals can be compared to negotiated costs at the cost element level. Reporting categories and elements will be agreed-to by the Contractor and the Government during contract negotiation and shall maximize the Contractor’s accounting system and capabilities to the extent possible and maintain NASA reporting and accounting requirements. Anticipated reporting categories include the following:

| <b>Reporting Categories</b> |      | <b>Description</b>   |
|-----------------------------|------|--|
| Contractor Labor            |      |  |
| Direct Labor Hours          | Hrs  | Direct labor can be directly identified to a particular subdivision of work (project, system, or task). It is reported as hours are incurred, with accruals for direct labor to the end of the contractors’ accounting period.   |
| Indirect Labor Hours        | Hrs  | Indirect labor hours are hours incurred for common objectives, such as payroll, maintenance, or computer support which cannot be charged to any single direct effort.  |
| Contractor Labor \$’s       | \$’s |  |
| Subcontractor Labor         |      | Actual and estimated costs reported by prime contractors shall include subcontractors’ incurred cost for the same accounting period.   |
| Labor Hours                 | Hrs  |  |
| Subcontractor Labor \$’s    | \$’s |  |
| Total Labor Dollars         | \$’s | Sum of all labor dollars reported on NF533.  |
| OT Premium                  | \$’s |  |
| Travel                      | \$’s | Travel is reported as costs are incurred, generally using the dates of travel to determine the period in which the cost will be reported.  |
| Training                    | \$’s |  |
| Materials                   | \$’s | Commercial, off-the-shelf items that are purchased for contract work are to be reported to NASA when accepted by the contractor. Material will not be reported as an element of cost under a subdivision of work until it is used on, consumed by, or applied to that subdivision of work. |
| Equipment                   | \$’s | Costs for manufactured equipment, <i>i.e.</i> , equipment produced to specific requirements that make it useless to anyone else without rework shall be reported as the equipment is manufactured. The straight-line method for estimating accrued costs                                   |

|                  |      |  |
|------------------|------|--|
|                  |      | or the use of supplemental information obtained from the vendor are acceptable to calculate the incurred cost.   |
| Facilities       | \$'s | Leases.  |
| Overhead         | \$'s | Overhead is an accumulation of costs into various "pools", normally subdivided further by functional or departmental associations, such as engineering overhead, manufacturing overhead, and materials handling overhead. These costs are normally distributed on the basis of direct labor dollars (or hours) or material dollars.  |
| G&A              | \$'s | G&A is an accumulation of indirect costs applicable to the direction and control of the contractors' activities as a whole. This category would not include costs classified as overhead. Commonly included under G&A are costs for officers' salaries, general and corporate offices, legal and auditing staffs, office supplies, insurance, and taxes. Total cost incurred, exclusive of G&A expenses, is usually used as the basis of distribution to the various cost objectives.                                |
| Subtotal Dollars | \$'s |  |
| Fees             | \$'s | Award fee is an amount that a contractor may earn in whole or in part based upon evaluations of performance during the contract period. The amount of award fee is negotiated and included in the contract. There are six award fee categories which may be used for NF533 reporting: Base Fee, Fee Earned, Interim Fee, Provisional Fee, Potential Additional Fee, and Total Fee. Award fee should be reported in the appropriate categories under the general heading "Award Fee" following the "Total Cost" line. |
| Total Dollars    | \$'s |  |

**GENERAL GUIDANCE:**

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 Contractor's 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. NASA Procedural Requirements (NPR) 9501.2D, NASA Contractor Financial Management Reporting, 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 NF533 follow:

| <b>Cost Element</b>                                 | <b>Definitions</b>   |
|---|--|
| Labor   | Reported to NASA as hours are incurred.  |
| Equipment & Materials<br>(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 subcontractor's incurred costs for the same accounting period. Where subcontract costs are material, they should be separately identified on NF533 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 subdivisions of work. Data submitted by the subcontractor should be structured similar to the Prime Contractor's NF533 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 subcontractor 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 NF533 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 NF533.   |
| Prompt Payment Discounts | Cumulative cost reported to NASA should be full incurred cost. The prompt payment discount amount taken should be reported as a separate line item on the NF533 below the cumulative cost amounts for the contract. |

The NF533 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 (GAAP). Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533.

The due dates for the NF533M report is outlined in Chapter 3 of NPR 9501.2D. The following is a summary of the NF533 due date requirements.

| NF533 Report | Due Date   |
|--------------|--|
| NF533M       | Due not later than 10 working days following the close of the Contractor’s monthly accounting period or no later than the 15 <sup>th</sup> calendar day of each calendar month. Proposed monthly delivery dates for NF533Ms shall be coordinated with the NASA Program Analyst and shall be delivered with sufficient time for NASA review and input into the NASA accounting system to support NASA financial reporting requirements. |

The due dates reflect the date the NF533 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 NF533 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 NF533 reports as a separate line item or in the footnotes.

An initial NF533 report is required in the NF533Q format to be used as a baseline for the life of the contract. The initial (baseline) NF533Q report shall be submitted by the Contractor within 30 days after authorization to proceed has been granted. 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 NF533 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/hours worked) of the NF533M represent the negotiated baseline plan for the contract. There may not be a relationship between the estimates provided in columns 8 of the NF533M 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 ND533M and NF533Q 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 NF533M with a footnote discussing the reasons for and amounts of the adjustments.

Monthly NF533 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 NF533 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 NF533 report in the month the cost change is recognized.

Electronic NF533 Requirement

In addition to submitting the NF533M in hardcopy format, the Contractor, upon request, shall submit the NF533 electronically by the same due date as the hardcopy. The data shall be submitted via email using the Government prescribed flat file format (see attached Agency Defined File Format for specific layout details) and shall include the following header information from the hardcopy.

| <b>Data Element</b>                              | <b>Description</b>  |
|--|---|
| Contract Number                                  | NASA-assigned contract number   |
| Modification Number                              | Latest definitive Modification Number   |
| Accrual Date                                     | Date the data was generated for   |
| Report Period End Date                           | Period ending date of the NF533   |
| Operating Days                                   | Number of operating days for the current NF533  |
| Date Received/Submitted                          | Date the report is submitted  |
| CCR Format                                       | Monthly (NF533M)  |
| Cost Unit of Measure                             | Unit of measure used to report cost on the NF533 report                               |
| HR/WYE Unit of Measure                           | Unit of measure used to report Hours/Work Year Equivalents (WYEs) on the NF533 Report |
| Authorized Contractor Representative             | Name of Contractor Approving Officer  |
| Authorized Contractor Representative Date Signed | Date the NF533 is approved and signed by the authorized Contractor Representative     |
| Monthly Grand Total Cost Incurred (7a)           | Grand Total Actual monthly cost for the prior month (Column 7a on the NF533)          |
| Monthly Grand Total HR/WYE (7a)                  | Grand Total Actual monthly hours/WYEs for the prior month (Column 7a on the NF533)    |
| Monthly Grand Total Cost Planned (7b)            | Prior month planned cost (column 7b on the NF533)                                     |
| Grand Total Cost Incurred ITD (7c)               | Grand total contract cost from Inception to Date (ITD) (Column 7c on the NF533)       |

|  |  |
|--|--|
| Grand Total Estimated Cost (8a)              | Grand total current month cost estimate (Column 8a on the NF533)                               |
| Grand Total Planned Cost (7d)                | Grand total planned contract cost (column 7d on the NF533)                                     |
| Grand Total Estimated HR/WYE (8a)            | Grand total current month estimate (Column 8a on the NF533)                                    |
| Grand Total Estimated HR/WYE (8a)            | Grand total current month HR/WYE estimate (column 8a on the NF533)                             |
| Grand Total Next Month Estimated Cost (8b)   | Grand total next month cost estimate (column 8b on the NF533)                                  |
| Grand Total Balance of Contract (8c)         | Contract Balance for the remaining estimate to complete (column 8c on the NF533)               |
| Grand Total Contractor Estimate (9a)         | Contractor estimate to complete entire scope of contract (column 9a on the NF533)              |
| Grand Total Contract Value (9b)              | Contractor distribution of contract value by the reporting categories (column 9b on the NF533) |
| Grand Total Unfilled Orders Outstanding (10) | Unfilled order outstanding at the end of the reporting period (column 10 on the NF533)         |

The flat file will also contain detailed information for each Reporting Category (RC). A Reporting Category correlates to a task order, delivery order, or Work Breakdown Structure (WBS) and is the level at which cost is reported. Each RC can have Sub-Reporting Category line items (detailed cost elements) that add up to an RC. The Contractor is required to coordinate with the NASA Resource Analyst assigned to the contract in order to establish and maintain the Reporting Categories the Contractor shall use to comply with this data requirement. The chart below describes the data elements to be included in this section of the flat file (see attached Agency Defined File Format for specific layout details).

| <b>Data Element</b>                    | <b>Description</b>   |
|--|--|
| Reporting Category (RC)                | Task, Delivery Order, WBS  |
| Cost Incurred for the Month (7a)       | Prior month actual cost incurred for each RC (Column 7a on the NF533)      |
| HR/WYE Incurred for the Month (7a)     | Prior month actual HR/WYE incurred for each RC (Column 7a on the NF533)    |
| Contract prior month planned cost (7b) | Planned cost for prior month for each RC (column 8b on NF533)              |
| Contract ITD Cost (7c)                 | Contract ITD cost for each RC (Column 7c on the NF533)                     |
| Contract Planned ITD Cost (7d)         | Contract planned ITD cost for each RC (column 7d on NF533)                 |
| Current Month Estimated Cost (8a)      | Cost estimate for the current month for each RC (Column 8a on the NF533)   |
| Current Month Estimated HR/WYE (8a)    | HR/WYE estimate for the current month for each RC (Column 8a on the NF533) |
| Next month estimated cost (8b)         | Estimated cost for next month for each RC (column 8b on NF533)             |

|                                  |  |
|----------------------------------|--|
| Balance of Contract (8c)         | Balance of contract for the remaining estimate to complete for each RC (column 8c on NF533)                      |
| Contractor Estimate (9a)         | Contractor estimate for the total estimate to complete entire scope of contract for each RC (column 9a on NF533) |
| Contract Value (9b)              | Contract value based upon contract modifications for each RC (column 9b of NF533)                                |
| Unfilled Orders Outstanding (10) | Unfilled orders outstanding at the end of the reporting period for each RC (column 10 on NF533)                  |
| Reporting Category Level         | Used by NASA's accounting system to determine the RC level   |
| Reporting Category Identifier    | Identifies if the RC is an actual Reporting Category or a Sub-Reporting Category                                 |

The flat file shall be saved as a text file with no extension (do not include .txt after the file name) and named in strict accordance with the specific formate described in the attached Agency Defined File Format document.

File names must be provided in a specific format. Each file name will begin with the SAP 2 Character center abbreviation listed below. The contract number and date will be included in the file name as well. Below is a sample file name.

**MACFPS001\_NAS00-0001\_yyyy\_mm\_dd**

| <b>SAP 2 Charter Center Abbreviations</b> |    |
|---|----|
| Headquarters                              | HQ |
| Marshall                                  | MA |
| Ames                                      | AM |
| Glenn                                     | GL |
| Langley                                   | LA |
| Dryden                                    | DR |
| Goddard                                   | GO |
| Stennis                                   | ST |
| Johnson                                   | JO |
| Kennedy                                   | KE |

### Example File Format

#### Header (Non-Repeating Segment)

| CCR Extension Data Element | Description  | Contractor Initial Data Mapping  | NF 533 Required/Optional | OTHER CCR Required/Optional          | Field Name      | St Pos | EndPos | Len | Formt            |
|----------------------------|--|--|--------------------------|--------------------------------------|-----------------|--------|--------|-----|------------------|
| <b>HEADER:</b>             |  |  |                          |                                      |                 |        |        |     |                  |
| Record Type                | Used by eGate to determine record type                                   | 'HD' for Header  | Required                 | Required                             | RECORD_TYPE     | 1      | 2      | 2   | CHAR             |
| Contract Number            | Contract Number (1b)   | Header field—submitted with CONTRACTOR data or defaulted by interface or extension | Required                 | Required                             | CONTRACT_NUMBER | 3      | 12     | 10  | CHAR             |
|                            | Latest definitive Modification Number(CR8197)                            |  |                          |                                      | MOD_NUMBER      | 13     | 18     | 6   | CHAR             |
| Accrual Date               | Date the data was generated for. Used by SAP as part of Oracle table key | Accrual Date. MM01YYYY, where MM is the Accrual Month and YYYY is the fiscal year  | Required                 | Required                             | ACCRUAL_DATE    | 19     | 26     | 8   | DATE<br>MM01YYYY |
| Report Period End Date     | Report Period End Date is a date(2)                                      | Header field—submitted with CONTRACTOR data or defaulted by interface or extension | Required                 | Required                             | REP_END_DATE    | 27     | 34     | 8   | DATE             |
| Operating Days             | Operating days(2).   | Header field—submitted with CONTRACTOR data  | Required                 | Optional unless Required by contract | OPER_DAYS       | 35     | 40     | 6   | NUMERIC          |
| Date Received              | Date Received (1d)   | System Date upon which the cost data is loaded into the CCR Extension              | Required                 | Required                             | DATE_REC        | 41     | 48     | 8   | DATE             |
| CCR Format                 | 'M' for Monthly and 'Q' for Quarterly (SIR2047)                          | Submitted with CONTRACTOR data   | Required                 | Required                             | CCR_FORMAT      | 49     | 49     | 1   | CHAR             |
| Cost Unit of Measure       | Cost Unit of Measure   | Submitted with CONTRACTOR  | Required                 | Required                             | COST_UOM        | 50     | 51     | 2   | CHAR             |

| CCR Extension Data Element           | Description  | Contractor Initial Data Mapping        | NF 533 Required/Optional  | OTHER CCR Required/Optional  | Field Name            | St Pos | EndPos | Len | Formt         |
|--------------------------------------|--|--|---|--|-----------------------|--------|--------|-----|---------------|
| HR/WYE Unit of Measure               | (SIR2047)<br>Hour/Work-Year-Equivalent Unit of Measure (SIR2047)   | data<br>Submitted with CONTRACTOR data | Required  | Required   | HR_WYE_UOM            | 52     | 53     | 2   | CHAR          |
|                                      | Authorized Contractor Representative -- Name of Contractor Approving Officer (CR 8197)   |  |   |  | AUTH_SIGNATURE        | 54     | 78     | 25  | CHAR          |
|                                      | Authorized Contractor Representative Date Signed -- Date CCR is approved/signed by authorized contractor representative(CR 8197) |  |   |  | AUTH_SIGNATURE_DATE   | 79     | 86     | 8   | DATE MMDDYYYY |
| Grand Total Cost Incurred Month (7a) | The Grand Total Contract Prior Month Actual Dollars Column 7a reports actual costs for the prior month.                          | Submitted with CONTRACTOR data         | Required.   | Optional. Only required if lower detailed line item data is submitted in monthly batch file. | GT_COST_INCUR_MONTH   | 87     | 99     | 13  | CURRENCY(2)   |
| Grand Total HR/WYE (7a)              | The Grand Total Contract Prior Month Actual Hours Column 7a reports actual HR or WYE for the prior month.                        | Submitted with CONTRACTOR data         | Required if detailed line item data is submitted in monthly batch file. | Required if detailed line item data is submitted in monthly batch file.                      | GT_HRWYE_PRIOR_MONTH  | 100    | 109    | 10  | NUMERIC(1)    |
|                                      | The Grand Total Contract Prior Month Planned   |  |   |  | GT_COST_PLANNED_MONTH | 110    | 122    | 13  | CURRENCY (2)  |

| CCR Extension Data Element                 | Description   | Contractor Initial Data Mapping | NF 533 Required/Optional   | OTHER CCR Required/Optional                                     | Field Name           | St Pos | EndPos | Len | Formt        |
|--|---|---------------------------------|--|---|----------------------|--------|--------|-----|--------------|
|  | Dollars Column (7b) reports planned costs for the prior month. (CR8197)   |                                 |  |   |                      |        |        |     |              |
| Grand Total Cost Incurred ITD (7c)         | The Grand Total Contract Cost Dollars Column 7c which represents Contract Cost Inception to Date                        | Submitted with CONTRACTOR data  | Required. Does not require detailed line item data if provided from Cost Incurred Month (7a) | Required if detailed line item data is provided for this column | GT_ITD_COST          | 123    | 135    | 13  | CURRENCY (2) |
|  | Grand Total Contract Planned Cost Dollars Column (7d) which represents Planned Contract Cost Inception to Date(CR 8197) |                                 |  |   | GT_COST_PLANNED_ITD  | 136    | 148    | 13  | CURRENCY (2) |
| Grand Total Estimated Cost (8a)            | The Grand Total Contract Estimated Cost for first upcoming month, or Current Month Estimate for cost.                   | Submitted with CONTRACTOR data  | Required   | Required if detailed line item data is provided for this column | GT_EST_COST          | 149    | 161    | 13  | CURRENCY (2) |
| Grand Total HR/WYE (8a)                    | The Grand Total Contract Estimated Hours for first upcoming month, or Current Month Estimate for HR/WYE.                | Submitted with CONTRACTOR data  | Required if detailed line item data is provided for this column                              | Required if detailed line item data is provided for this column | GT_HRWYE_FIRST_MONTH | 162    | 171    | 10  | NUMERIC (1)  |
| Grand Total Next Month Estimated Cost (8b) | The Grand Total Contract Estimated Cost for second upcoming month or Next Month Estimate for cost.                      | Submitted with CONTRACTOR data  | Required if detailed line item data is provided for this column                              | Required if detailed line item data is provided for this column | GT_NEXT_MONTH_EST    | 172    | 184    | 13  | CURRENCY (2) |

| CCR Extension Data Element | Description   | Contractor Initial Data Mapping | NF 533 Required/Optional | OTHER CCR Required/Optional | Field Name                     | St Pos | EndPos | Len | Formt        |
|----------------------------|---|---------------------------------|--------------------------|-----------------------------|--------------------------------|--------|--------|-----|--------------|
|                            | Grand Total Balance of Contract for the remaining estimate to complete (CR 8197)                      |                                 |                          |                             | GT_BALANCE_CONTRACT            | 185    | 197    | 13  | CURRENCY (2) |
|                            | Grand Total Contractor Estimate for the total estimate to complete entire scope of contract (CR 8197) |                                 |                          |                             | GT_BALANCE_CONTRACTOR_ESTIMATE | 198    | 210    | 13  | CURRENCY (2) |
|                            | Grand Total Contract Value based upon Contract Modifications (CR 8197)                                |                                 |                          |                             | GT_CONTRACT_VALUE              | 211    | 223    | 13  | CURRENCY (2) |
|                            | Grand Total Unfilled Orders Outstanding at end of reporting period (CR 8197)                          |                                 |                          |                             | ST_UNFILLED_ORDERS             | 224    | 236    | 13  | CURRENCY (2) |

## Example File Format

### Detail (Repeating Segment)

| CCR Extension Data Element        | Description  | Contractor Initial Data Mapping                          | NF 533 Required/Optional  | OTHER CCR Required/Optional                                       | Field Name         | St Pos | End Pos | Len | Format       |
|-----------------------------------|--|--|---|---|--------------------|--------|---------|-----|--------------|
| CCR<br>DETAIL<br>LINE<br>ITEMS:   |  |  |   |   |                    |        |         |     |              |
| Record Type                       | 'DM' for Monthly column 7a<br>Detail; 'DQ' for ITD Column 7c<br>Detail                                       | "RD" for Detail  | Required  | Required  | RECORD_TYPE        | 1      | 2       | 2   | CHAR         |
| Reporting Category                | Reporting Category (6)   | Line item field—<br>submitted with<br>CONTRACTOR<br>data | Required  | Required  | SERV_ORD_CAT       | 3      | 26      | 24  | CHAR         |
| Cost Incurred Month (7a)          | Prior Month incurred costs (ACTUALS) for given category.   | Line item field—<br>submitted with<br>CONTRACTOR<br>data | Required if detailed line item data is not provided from Cost Incurred Month (7c) | Determined by contract requirement- data from Column 7a, 7c or 8a | COST_INCUR_MONTH   | 27     | 39      | 13  | CURRENCY (2) |
| HRWYE Incurred Month (7a)         | Prior month incurred hours worked [Actuals] for given category..   | Line item field—<br>submitted with<br>CONTRACTOR<br>data | Optional unless Required by contract for WYE calculation                          | Optional unless Required by contract for WYE calculation          | HRWYE_INCUR_MONTH  | 40     | 49      | 10  | NUMERIC (1)  |
|                                   | Contract Prior Month Planned Dollars Column (7b) reports planned costs for the prior month (CR 8197)         |  |   |   | COST_PLANNED_MONTH | 50     | 62      | 13  | CURRENCY (2) |
|                                   | Contract Cost Dollars Column (7c) which represents Contract Cost Inception to Date (CR 8197)                 |  |   |   | CUR_COST_INCUR_ITD | 63     | 75      | 13  | CURRENCY (2) |
|                                   | Contract Planned Cost Dollars Column (7d) which represents Planned Contract Cost Inception to Date (CR 8197) |  |   |   | COST_PLANNED_ITD   | 76     | 88      | 13  | CURRENCY (2) |
| Current Month Estimated Cost (8a) | Estimated costs for first upcoming month for given category.   | Line item field—<br>submitted with<br>CONTRACTOR<br>data | Required.   | Determined by contract requirement- data from Column 7a, 7c or    | CUR_MONTH_EC       | 89     | 101     | 13  | CURRENCY (2) |

| CCR Extension Data Element         | Description  | Contractor Initial Data Mapping                 | NF 533 Required/Optional                                 | OTHER CCR Required/Optional                                    | Field Name              | St Pos | End Pos | Len | Format       |
|------------------------------------|--|---|--|--|-------------------------|--------|---------|-----|--------------|
| HR/WYE Current Month Estimate (8a) | Estimated hours for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract.  | Line item field— submitted with CONTRACTOR data | Optional unless Required by contract for WYE calculation | 8a<br>Optional unless Required by contract for WYE calculation | HRWYE_CUR_MONTH_EST     | 102    | 111     | 10  | NUMERIC (1)  |
| Next Month Estimated Cost (8b)     | Estimated costs for second upcoming month for given category.  | Line item field— submitted with CONTRACTOR data | Required unless not part of Contract scope               | Required unless not part of Contract scope                     | NEXT_MONTH_EC           | 112    | 124     | 13  | CURRENCY (2) |
|                                    | Balance of Contract for the remaining estimate to complete (8c) (CR 8197)  |   |  |  | BALANCE_CONTRACT        | 125    | 137     | 13  | CURRENCY (2) |
|                                    | Contractor Estimate for the total estimate to complete entire scope of contract (9a) (CR 8197)   |   |  |  | CONTRACTOR_ESTIMATE     | 138    | 150     | 13  | CURRENCY (2) |
|                                    | Contract Value based upon Contract Modifications (CR 8197)   |   |  |  | CONTRACT_VALUE          | 151    | 163     | 13  | CURRENCY (2) |
|                                    | Unfilled Orders Outstanding at end of reporting period (CR 8197)   |   |  |  | UNFILLED_ORDERS         | 164    | 176     | 13  | CURRENCY (2) |
|                                    | Used by SAP to determine Reporting Category Level (1.1.2.2.1) (CR 8197)  |   |  |  | REPORTING_LEVEL         | 177    | 206     | 30  | CHAR         |
|                                    | Fill in an "X" if record is a Reporting Category. Otherwise, leave blank for Sub-Reporting Category Line Items and Element of Cost detail records. This field is used by SAP to determine if the record is a Reporting Category. (CR 8197) |   |  |  | REPORTING_CAT_INDICATOR | 207    | 207     | 1   | CHAR         |

### Example File Format

#### Sub-Reporting Category Line Items – Repeating Segment

| Field Name              | Start Pos | End Pos | Length | Format       | Variable Repetition (? , + , n-n) | Description  |
|-------------------------|-----------|---------|--------|--------------|-----------------------------------|--|
| SUB_RECORD_TYPE         | 1         | 2       | 2      | CHAR         |                                   | 'SM' for Monthly column 7a Detail; 'SQ' for ITD column Detail  |
| SUB_REP_CAT             | 3         | 26      | 24     | CHAR         |                                   | Reporting Category   |
| SUB_COST_INCUR_MONTH    | 27        | 39      | 13     | CURRENCY (2) |                                   | Prior month incurred costs (Actuals) for given category.   |
| SUB_HRWYE_INCUR_MONTH   | 40        | 49      | 10     | NUMERIC (1)  |                                   | Prior month incurred hours worked (Actuals) for given category.  |
| SUB_COST_PLANNED_MONTH  | 50        | 62      | 13     | CURRENCY (2) |                                   | Contract Prior Month Planned Dollars Column <b>(7b)</b> reports planned costs for the prior month.   |
| SUB_CUR_COST_INCUR_ITD  | 63        | 75      | 13     | CURRENCY (2) |                                   | Contract Cost Dollars Column <b>(7c)</b> which represents Contract Cost Inception to Date.   |
| SUB_COST_PLANNED_ITD    | 76        | 88      | 13     | CURRENCY (2) |                                   | Contract Planned Cost Dollars Column <b>(7d)</b> which represents Planned Contract Cost Inception to Date.   |
| SUB_CUR_MONTH_EC        | 89        | 101     | 13     | CURRENCY (2) |                                   | Estimated costs for first upcoming month for given category <b>(8a)</b> .  |
| SUB_HRWYE_CUR_MONTH_EST | 102       | 111     | 10     | NUMERIC (1)  |                                   | Estimated hours for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract <b>(8a)</b> .   |
| SUB_NEXT_MONTH_EC       | 112       | 124     | 13     | CURRENCY (2) |                                   | Estimated costs for second upcoming month for given category <b>(8b)</b> .   |
| SUB_BALANCE_CONTRACT    | 125       | 137     | 13     | CURRENCY (2) |                                   | Balance of Contract for the remaining estimate to complete <b>(8c)</b> .   |
| SUB_CONTRACTOR_ESTIMATE | 138       | 150     | 13     | CURRENCY (2) |                                   | Contractor Estimate for the total estimate to complete entire scope of contract <b>(9a)</b> .  |
| SUB_CONTRACT_VALUE      | 151       | 163     | 13     | CURRENCY (2) |                                   | Contract Value based upon Contract Modifications <b>(9b)</b> .   |
| SUB_UNFILLED_ORDERS     | 164       | 176     | 13     | CURRENCY (2) |                                   | Unfilled Orders Outstanding at end of reporting period.  |
| REPORTING_LEVEL         | 177       | 206     | 30     | CHAR         |                                   | Used by SAP to determine Reporting Category Level (1.1.2.2.1) <b>(CR 8197)</b> .   |
| REPORTING_CAT_INDICATOR | 207       | 207     | 1      | CHAR         |                                   | Fill in an "X" if record is a Reporting Category. Otherwise, leave Blank for Sub-Reporting Category Line Items and Element of Cost detail records.<br><br>This field is used by SAP to determine if the record is a Reporting Category. <b>(CR 8197)</b> |

Example File Format

**533 Agency FILE RECORD LAYOUT (Element of Cost Detail – Repeating Segment (CR8197))**

| Field Name              | Start Pos | End Pos | Length | Format       | Variable Repetition (r, +, n-n) | Description   |
|-------------------------|-----------|---------|--------|--------------|---------------------------------|---|
| RECORD_TYPE             | 1         | 2       | 2      | CHAR         |                                 | 'EM' for Monthly column 7a Detail; 'EQ' for ITD column Detail   |
| EOC_REP_CAT             | 3         | 26      | 24     | CHAR         |                                 | Reporting Category  |
| EOC_COST_INCUR_MONTH    | 27        | 39      | 13     | CURRENCY (2) |                                 | Prior month incurred costs (Actuals) for given category.  |
| EOC_HRWYE_INCUR_MONTH   | 40        | 49      | 10     | NUMERIC (1)  |                                 | Prior month incurred hours worked (Actuals) for given category.   |
| EOC_COST_PLANNED_MONTH  | 50        | 62      | 13     | CURRENCY (2) |                                 | Contract Prior Month Planned Dollars Column (7b) reports planned costs for the prior month.   |
| EOC_CUR_COST_INCUR_ITD  | 63        | 75      | 13     | CURRENCY (2) |                                 | Contract Cost Dollars Column (7c) which represents Contract Cost Inception to Date.   |
| EOC_COST_PLANNED_ITD    | 76        | 88      | 13     | CURRENCY (2) |                                 | Contract Planned Cost Dollars Column (7d) which represents Planned Contract Cost Inception to Date.   |
| EOC_CUR_MONTH_EC        | 89        | 101     | 13     | CURRENCY (2) |                                 | Estimated costs for first upcoming month for given category (8a).   |
| EOC_HRWYE_CUR_MONTH_EST | 102       | 111     | 10     | NUMERIC (1)  |                                 | Estimated hours for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract (8a).  |
| EOC_NEXT_MONTH_EC       | 112       | 124     | 13     | CURRENCY (2) |                                 | Estimated costs for second upcoming month for given category (8b).  |
| EOC_BALANCE_CONTRACT    | 125       | 137     | 13     | CURRENCY (2) |                                 | Balance of Contract for the remaining estimate to complete (8c).  |
| EOC_CONTRACTOR_ESTIMATE | 138       | 150     | 13     | CURRENCY (2) |                                 | Contractor Estimate for the total estimate to complete entire scope of contract (9a).   |
| EOC_CONTRACT_VALUE      | 151       | 163     | 13     | CURRENCY (2) |                                 | Contract Value based upon Contract Modifications (9b).  |
| EOC_UNFILLED_ORDERS     | 164       | 176     | 13     | CURRENCY (2) |                                 | Unfilled Orders Outstanding at end of reporting period.   |
| REPORTING_LEVEL         | 177       | 206     | 30     | CHAR         |                                 | Used by SAP to determine Reporting Category Level (1.1.2.2.1) (CR 8197).  |
| REPORTING_CAT_INDICATOR | 207       | 207     | 1      | CHAR         |                                 | Fill in an "X" if record is a Reporting Category. Otherwise, leave Blank for Sub-Reporting Category Line Items and Element of Cost detail records.<br>This field is used by SAP to determine if the record is a Reporting Category. (CR 8197) |

**Example File Format**

**Trailer (provides the number of header & detail records sent from the contractor/vendor/center in order to verify the receipt of complete data after transmission)**

| CCR Extension Data Element<br>TRAILER: | Description   | Contractor Initial Data Mapping              | NF 533 Required/Optional | OTHER CCR Required/Optional | Field Name   | Start Pos | End Pos | Length | Format  |
|--|---|--|--------------------------|-----------------------------|--------------|-----------|---------|--------|---------|
| Record Type                            | Used by eGate to determine record type                              | "TL" for Trailer                             | Required                 | Required                    | RECORD_TYPE  | 1         | 2       | 2      | CHAR    |
| Record Count                           | Count of the number of Detail records sent to process (Detail Only) | Trailer field submitted with CONTRACTOR data | Required                 | Required                    | RECORD_COUNT | 3         | 9       | 7      | NUMERIC |
|  | Value of spaces   |  |                          |                             | FILLER       | 10        | 207     | 198    | CHAR    |

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                       |                            |                         |   |
|-----------------------|----------------------------|-------------------------|---|
| 2. DRD Title          | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement completes) |
| <b>Quality Manual</b> | <b>04/05/05</b>            | <b>06</b>               |   |

4. Use (Define need for, intended use of, and/or anticipated results of data)  
**The Quality Manual is used to document the specific details of the Contractor's Quality Management System (QMS) including management commitment to quality, system elements, policy, and practice. The Manual is used to assess the proposed QMS for compliance with ANSI/ISO/ASQ Q9001-2000.**

5. DRD Category: (check one)  Technical  Administrative  SR&QA

6. References (Optional)  
 JPD 5335.1, Quality Policy  
 ANSI/ISO/ASQ Q9001-2000, Quality Management Systems Requirements  
 Section C-3.4.1 Quality Management System

7. Interrelationships (e.g., with other DRDs) (Optional)  
 DRD 01 Management Plan  
 DRD 07 Contractor Quality Metrics

8. Preparation Information (Include complete instructions for document preparation)

Scope:

The Quality Manual shall be in accordance with the requirements of ANSI/ISO/ASQ Q9001-2000, Quality Management System Requirements, and JPD 5335.1, Quality Policy. The Contractor's QMS shall describe the Contractor's approach to accomplishing tasks in accordance with JPD 5335.1 rather than the actual performance of specific work elements/tasks.

Contents:

Each element of the contractually imposed QMS requirements shall be addressed in narrative form, and in sufficient detail to describe the philosophy and approach for implementation.

1. List policies and procedures that will be used to meet each QMS requirement. Existing policies and procedures may be utilized where these can meet contractual requirements. The Manual shall include traceability from the quality elements of ANSI/ISO/ASQ Q9001-2000 to the specific Contractor processes which support those elements.
2. Explain your process for determining appropriate quality indices and measurements and reporting those in accordance with DRD 07, Contractor Quality Metrics.
3. Explain your methods for measuring the achievement of your quality objectives.
4. Explain how you verify that all personnel performing work affecting product quality are competent as a result of appropriate education, training, skills, and experience. In addition explain the system you will use to monitor and maintain this level of personnel competency required during the duration of the contract.

5. Explain how you will monitor, measure, and control the quality of products you produce as well as those produced by subcontractors. Explain how you will ensure that products, which do not conform to product requirements, are identified and controlled to prevent their unintended use or delivery.
6. Describe your responsibilities and requirements for planning and conducting audits (internal and external), and for reporting results and maintaining records.
7. Explain the processes you will implement to report problems, corrective actions, and resolution verification to the designated NASA Quality Organization.

Format:

Contractor's format in native format and compatible with standard JSC office software loads.

Maintenance:

Update as required to be consistent and up-to-date with process changes. All changes and updates to the Quality Manual shall be approved by NASA.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|                                   |                            |                         |                                   |
|-----------------------------------|----------------------------|-------------------------|-----------------------------------|
| 3. DRD Title                      | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Contractor Quality Metrics</b> | <b>02/14/05</b>            | <b>07</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)  
**To provide NASA management with a summary of Contractor's quality performance based on strategic goals and objectives.**

|  |   |  |  |
|--|---|--|--|
| 5. DRD Category: <i>(check one)</i> <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA |   |  |  |
| 6. References <i>(Optional)</i><br>Section C-3.4.1 Quality Management System   | 7. Interrelationships <i>(e.g., with other DRDs)</i> <i>(Optional)</i><br>DRD 01 Management Plan<br>DRD 06 Quality Manual |  |  |

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

The report shall provide a summary and analysis of quality performance data showing the Contractor's progress toward meeting predefined goals and objectives.

The reports shall include a measure of the extent to which planned activities are realized and planned results are achieved and a relationship between results achieved and resources used.

**Maintenance:**

Contractor quality performance metrics data shall be submitted as specified in the Data Requirements List (Quarterly).

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                                 |                         |                      |                                |
|---------------------------------|-------------------------|----------------------|--------------------------------|
| 1. DRD Title                    | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>Property Management Plan</b> | <b>02/14/05</b>         | <b>08</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To describe the Contractor’s method of managing, tracking, and administering Government personal property.**

|   |  |
|---|--|
| 5. DRD Category: (check one) <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA   |  |
| 6. References (Optional)<br>Section C-3.5 Property Management<br>Section C-10.4 Laboratory Equipment and Facilities<br>Section G.13 Installation-Accountable Government Property<br>NPR 4200.2, Equipment Management Manual for Property Management | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 01 Management Plan |

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

The Property Management Plan defines the Contractor’s use, maintenance, repair, protection, and preservation of Government-furnished property. It shall describe the Contractor’s approach to receiving, handing, stocking, maintaining, protecting, and issuing Government property. The plan should include interaction and Department/Office responsibilities.

**Contents:**

This Plan shall reference those procedures, which constitute the Contractor’s Property Management Manual and shall include at a minimum the following categories:

- |   |  |
|---|--|
| Property Management<br>Acquisition<br>Receiving<br>Identification<br>Records<br>Movement<br>Storage<br>Physical Inventories | Reports<br>Consumption<br>Utilization<br>Maintenance<br>Subcontractor Responsibilities<br>Control Disposition<br>Contractor Closeout |
|---|--|

The Plan shall also include information on how the Contractor will reconcile Contractor records with financial records and Center-unique considerations.

**Property Reporting:**

The Contractor shall provide property reporting per Clause 52.245-5.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                               |                            |                         |                                   |
|-------------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                  | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Safety and Health Plan</b> | <b>02/14/05</b>            | <b>09</b>               |                                   |

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 JSC organizations.**

5. DRD Category: (check one)     Technical     Administrative     SR&QA

6. References (Optional)

OSHA TED 8.4, Voluntary Protection Plan (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  
Section C-3.6, Safety and Environmental Health

7. Interrelationships (e.g., with other DRDs) (Optional)

DRD 01 Management Plan  
DRD 10 Safety and Health Program Self-Evaluation  
DRD 11 Monthly Safety and Health Metrics

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:** One time only (with the proposal).

**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:

NS/Safety and Test Operations Division (2 copies)

SD13/Occupational Health Officer (1 copy)

JA131 / Environmental Services (1 copy)

Contracting Officer's Technical Representative (1 copy)

**Subsequent revisions to the plan:** The Contractor may revise the plan at any time or at the direction of the Government. Revisions are subject to Government review and approval. Distributions of approved revisions will be as described above.

**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 the signatures of Contractor's project manager and designated safety official (if different); NASA COTR; JSC Occupational Safety Branch; and the NASA Contracting Officer. Other signatures may be required at the discretion of the Government.
2. Table of Contents. See content below.
3. Body of plan - as required. Contractor's format is acceptable but should be traceable to 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. Certain requirements set forth in this DRD may be specific for contractor operations performed at JSC, Ellington Field, Sonny Carter Training Facility, or White Sands Test Facility (WSTF); tailoring of the plan to the requirements of specific establishments is acceptable. The plan will clearly identify those resources to be provided by the contractor and 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.

Authority: FAR 52.223-1 through -5, -10; NFS 18-23.70, 18-52.223-70, 18-52.223-73.

**Content:****1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION.**

- 1.1. Policy. Provide the contractor's safety, health, and environmental 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.
  - 1.2.1 Describe specific safety and health goals and objectives to be met. Discuss status of safety program using the "Performance Evaluation Profile" as safety performance criteria. Describe the contractor's approach to continuous improvement (including milestone schedule) using level 5 of the Performance Evaluation Profile as a guideline.
  - 1.2.2 Describe Environmental Goals & Objectives to be met for the following:
    - a. Pollution Prevention and Source Reduction of:
      - (1) Hazardous and Industrial Solid Wastes
      - (2) Solid Wastes (trash, refuse)
      - (3) Wastewater Discharges (sanitary sewerage)
      - (4) Air Emissions
      - (5) Medical & Radiological Discharges
    - b. Affirmative Procurement (Purchase of Environmentally Preferable Materials IAW Executive Order)
    - c. Hazardous Materials Handling/Purchasing/Reduction/Replacement

d. Elimination from Specifications and Standards requirements for the use of Hazardous/Toxic Substances & Materials

e. Use of an Environmental Planning Checklist to review & document Impacts of New and Modified Programs, Projects, Activities and Operations.

f. Life cycle analysis and costing

g. Incorporating Environmental Requirements in Subcontracts

h. Participation in JSC Recycling

i. Outreach programs

1.3. Management Leadership. Describe management's procedures for implementing its commitment to safety, health, and environmental 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 and implement employee (e.g., non-supervisory) involvement in safety, health, and environmental 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.

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 special 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, environmental, 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 Clinic, mail code SD22. This will facilitate communication of medical data to contractor management. Prompt notification to the JSC Occupational Health/ Clinic shall be given of any changes that occur in the identity of the point of contact. A letter to the JSC Occupational Health Office can accomplish initial identification of point of contact and subsequent updates with a copy sent to the Contracting Officer. The initial letter is to be received by the Government prior to contract start.

1.5.3. Building Fire Wardens - provide a roster of fire wardens (their names, phone 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 JSC Occupational Safety, mail code NS2, with copies to the

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Contracting Officer and Contracting Officer's 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 and 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. The program evaluation consists of:

1.8.1. Participation in a Performance Evaluation Profile (PEP) survey at the request of the Government. The PEP survey normally will be scheduled and administered at the discretion of the Government. If the Government chooses not to do the PEP in a given year, the contractor may at its option initiate its own PEP by contacting JSC Occupational Safety, code NS2, for assistance. The contractor will not be required to take two or more PEP surveys in any contract year.

1.8.2. [Reserved.]

1.8.3. A written self-evaluation report to be delivered by Sept 30 of each year. The self-evaluation shall follow the VPP program evaluation report format found in OSHA TED 8.4, Voluntary Protection Programs (VPP) Policies and Procedures Manual, Appendix D, "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.

1.8.4. Miscellaneous Reports. The contractor will acknowledge the following as standing requests of the Government and to be handled as described below.

a. Roster of Terminated Employees. Identify personnel terminated by contractor. Send to the JSC Occupational Health Officer, mail code SD13, no later than 30 days after the end of each contract year or at the end of the contract, whichever is applicable. At the contractor's discretion, the report may be submitted for personnel changes during the previous year or cumulated for all years. Information required:

- (1) Date of report, contractor identity and contract number.
- (2) For each person listed, provide name, social security number, and date of termination.
- (3) Name, address, and telephone number of contractor representative to be contacted for questions or other information.

b. Material Safety Data. The contractor shall prepare and/or deliver Material Safety Data 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. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central Repository, Occupational Health and Test Support, Mail Code SD13, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrives with the material and is needed for immediate use, the MSDS shall be delivered to the Central Repository by close of business of the next working day after it enters the site.

c. Hazardous Materials Inventory. The contractor shall compile an inventory report of all hazardous materials it has located on Government property not less than annually, 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. The call for this annual inventory and instructions for delivery will be issued by the JSC Occupational Health and Test Support Office, mail code SD13. This information shall use the format used by JSC for chemical inventory compilation to provide the following:

- (1) the identity of the material;
- (2) the location of the material by building and room;
- (3) the quantity of each material normally kept at each location
- (4) peak quantity stored
- (5) actual or estimated rate of annual usage of each chemical

1.9. Government Access to Safety and Health Program Documentation. The contractor shall recognize in its plan that it will be expected to make all safety, health, and environmental documentation (including relevant personnel records) 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 it will make available to the Government in accordance with the Voluntary Protection Program criteria of OSHA as implemented in JPR 1700.1, “JSC Safety and Health Handbook”, as revised. For the purpose of this plan, safety, health, and environmental compliance 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, environmental protection, or emergency preparedness.

1.10. 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 in accordance with established NASA directives and procedures.

1.11. Procurement. Identify procedures used to assure that procurements are reviewed for safety, health and environmental 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.

1.12. Certified Professional Resources. Discuss your access to certified professional resources for safety, health, and environmental protection. Discuss their roles in motivation/awareness, worksite analysis, hazard prevention and control, and training.

**2. WORKSITE ANALYSIS.** Hazards shall be systematically identified through a combination of surveys, 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; reports on hazardous substance spills and inadvertent releases to the environment; facilities related incidents related to partial or full loss of systems functions; etc. Hazards identified by any of the techniques identified below shall be ranked and processed 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 Occupational Safety Office. All safety engineering products that address operations, equipment, etc., on NASA property will be subject to JSC S&MA review and concurrence unless otherwise waived by the JSC Occupational Safety Office.

2.1. 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 Health within 15 days of receipt of results.

2.2. Hazard Identification. Describe the procedures and techniques to be taken 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:

2.2.1. Comprehensive Survey – A “wall to wall” engineering assessment of the work site including facilities, equipment, processes, and materials (including wastes – (TNRCC/EPA solid & hazardous, radioactive, explosives, medical-infectious-biological)). The comprehensive survey will establish a baseline of hazards that may put contract assets at risk as early as is feasible, preferably at contract start.

2.2.2. 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.

2.2.3. 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, "Instructions for Preparation of Hazard Analyses for JSC Ground Operations."

2.3. Inspections.

2.3.1. Routine 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 and 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.

2.3.2. Protective Equipment. Set forth procedures for obtaining, inspecting, and maintaining all appropriate protective equipment, as required, or reference written procedure pertaining to this subject. Set forth methods for keeping records of such inspections and maintenance programs.

2.4. 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.

2.5. Accident and Record Analysis.

2.5.1. 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 use of NASA forms as specified in JPR 1700.1 and alternate forms used by contractor with emphasis on timely notification of NASA; investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; 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 use of NASA Form 1627, “Mishap Report” (or equivalent), including 24-hour and ten-day mishap reports to JSC Occupational Safety, mail code NS2. Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form can be obtained from JSC’s Printing Services.

2.5.2. 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” (attached), 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 10<sup>th</sup> day 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 mishaps@ems.jsc.nasa.gov.

b. Log of Occupational Injuries and Illnesses. 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 (or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5. Copy of all summaries as required above under Contractor’s cover letter. If 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. 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.** 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.

3.1. 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, discharges, waste, energies, etc.). Discuss proposed method for coordination with safety, health, environmental services, and emergency authorities at NASA.

3.2. 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. 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 and Test Support Office who will provide additional instructions for further NASA management review and approval.

3.3. 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.

3.4. 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 NASA JSC procedures. Clearly state the role of the safety group or function to control such permits.

3.5. 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.

3.6. 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 Health Office must be notified prior to initiation of any new or modified operation potentially hazardous to health.

3.7. Environmental Operations & Activities

3.7.1. Operations Involving Hazardous Waste. Identify procedures used to manage hazardous waste from point of generation through disposal. Clearly identify divisions of responsibility between contractor and NASA for hazardous waste generated throughout the life of the contract. Operations that occur on site at JSC, WSTF, SCTF, or Ellington Field must be evaluated by the JSC Environmental Services Office and must be properly controlled as advised by same. JSC Environmental Services Office must be

notified prior to initiation of any new or modified operations, equipment, systems, or activities generating new hazardous wastes or where the chemicals change or there are volume increases of 25% or more on site at JSC, SCTF, or Ellington Field.

3.7.2. Operations Involving New or Modified Emissions/Discharges to the Environment. Set forth methods for identifying new or modified emissions/discharges and coordinating results with the Environmental Services Office, mail code JA131. Set forth a plan of procedures to conduct pollution prevention, waste minimization or source reduction/elimination of environmental pollution. Address management and continuous improvement for the reduction of hazardous materials; substitution of non-hazardous or less hazardous materials for hazardous materials; proper segregation of hazardous wastes from non-hazardous wastes; and other methods described by NASA, EPA, GSA, and Executive Order for recycled content / affirmative procurement purchases. The JA131/Environmental Office is the single point of contact for coordinating all JSC environmental permits. Emphasis shall be placed on providing for sufficient lead time for processing permits through the appropriate state agency and/or the Environmental Protection Agency.

3.8. Discuss your 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.

3.9. 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).

3.10. Medical (Occupational Healthcare) Program. Discuss your 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.

3.11. 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 online at <http://wwwsrqa.jsc.nasa.gov/HATS/>). (The scope is restricted to establishments at JSC, Sonny Carter Training Facility, and Ellington Field.) This includes the following:

3.11.1. Personnel 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.

3.11.2. 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 Hazard Abatement Tracking System for all hazards 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 Hazard and Action Plan", or equivalent. Discuss compatibility of your system with JSC's system and the role of facility managers in abatement planning, implementation, and verification.

3.12. **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.

3.13. **Emergency Preparedness.** Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, environmental spill /releases, 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.** 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. In doing so, the contractor will factor parallel requirements found in other mandates such as environmental protection [example: 29 CFR 1910.38 for emergency action plans and fire prevention plans versus EPA Resource Conservation & Recovery Act (RCRA) for Emergency Planning and Community Right-to-know (EPCRA).] 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. Describe approach to training personnel in the proper use and care of protective equipment (PPE). 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). 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). 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. All training materials and training records will be provided to NASA, and other federal, State, and local agencies for their review upon request. 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 Support office prior to beginning training. The agreement will ensure that safety and health training resources available from NASA are utilized where appropriate and to ensure that contractor-supplied training is in agreement with JSC safety and health processes.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|  |                            |                         |                                   |
|--|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title   | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Safety and Health Program Self -<br/>Evaluation</b> | <b>02/14/05</b>            | <b>10</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To provide timely, integrated performance visibility to enhance effective cost, schedule, and technical management, and to provide consolidated documentation on contract activities.**

|  |  |
|--|--|
| 5. DRD Category: <i>(check one)</i> <input checked="" type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA |  |
| 6. References <i>(Optional)</i><br>Federal Register Notice 65:45649-45663<br>Section C-3.6 Safety and Environmental<br>Health  | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 01 Management Plan<br>DRD 09 Safety and Health Plan<br>DRD 11 Monthly Safety and Health Metrics |

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:

- 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.
- b. Safety and health concerns and resolutions relating to JSC operations which may have been identified during the report period.
- c. Unresolved safety and health concerns relating to JSC operations which the Contractor feels merit attention of JSC safety and health management.
- d. The goals and objectives of the Contractor safety and health program for the next report period.
- e. An analysis of the Contractor's performance at JSC-administered establishments in each of the 32 VPP sub-elements found in the Federal Register Notice 65:45649-45663, July 24, 2000.
- f. 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.

1. 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.

Report due September 30 of each year of contract period of performance.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|  |                            |                         |                                   |
|--|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                             | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Monthly Safety and Health Metrics</b> | <b>02/14/05</b>            | <b>11</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

### Tracks effectiveness of Contractor Safety and Health Program activities.

|  |  |
|--|--|
| 5. DRD Category: <i>(check one)</i> <input checked="" type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA |  |
| 6. References <i>(Optional)</i><br>JPR 1700.1, JSC Safety and Health Handbook<br>Section C-3.6 Safety and Environmental Health   | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 01 Management Plan<br>DRD 09 Safety and Health Plan<br>DRD 10 Safety and Health Program Self-Evaluation |

8. Preparation Information (Include complete instructions for document preparation)

**Frequency of submission:** Monthly by 10<sup>th</sup> of month following month being reported.

**Distribution:**

NS2/Occupational Safety Branch (2 copies)

SD13/Occupational Health Officer (1 copy)

NA/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 JPR 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 Parkway; Sonny Carter Training Facility; Ellington Field; and White Sands Test Facility.

**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

**II. Worksite Analysis. Refer to JPG 1700.1 for definitions of terms.**

| 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 |
|              |                        |              |            |              |                            |              |            |              |                            |              |            |              |
|              |                        |              |            |              |                            |              |            |              |                            |              |            |              |
| <b>Total</b> |                        |              |            |              |                            |              |            |              |                            |              |            |              |

**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)*

|   |                            |                         |                                   |
|---|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                            | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Information Technology (IT) Plan</b> | <b>02/14/05</b>            | <b>12</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To document the Contractor’s approaches for IT implementation and management.**

|                                     |                                    |  |                                |
|-------------------------------------|------------------------------------|--|--------------------------------|
| 5. DRD Category: <i>(check one)</i> | <input type="checkbox"/> Technical | <input checked="" type="checkbox"/> Administrative | <input type="checkbox"/> SR&QA |
|-------------------------------------|------------------------------------|--|--------------------------------|

|  |  |
|--|--|
| 6. References <i>(Optional)</i><br>JPD 2800.1, JSC IT Program<br>JPD 2800.4, JSC IT Program Management<br>JPR 2810.1C, JSC IT Security Handbook<br>NPD 2810.1C, NASA Information Security Policy<br>NPR 2810.1, Security of IT<br>Section C-3.7.3, Information Technology<br>Section C-10.7, LIMS<br>Contract Clause I.10, NFS 1852.204-76,<br>Security Requirements for Unclassified Information Technology Resources | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 01 Management Plan<br>DRD 13 Data Management Plan |
|--|--|

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

The Plan shall define the policies, processes, requirements, and standards that the Contractor will use to govern the planning, acquisition, development, management, security, and utilization of IT resources. The Plan shall detail the Contractor’s approaches, policies, and procedures to be applied to the following areas. Details shall be in compliance with the requirements of JPD 2800.4.

**Content:**

**1. Standard Operating Procedures**

- a. Configuration Management
- b. Data System and Website Development and Maintenance
- c. IT planning processes for determining and providing to NASA for approval, annual IT purchasing plans that support continuing S&MA IT requirements
- d. Methods for establishing goals for continuing IT process and system improvements, and the identification and incorporation of efficiencies

**2. IT Strategic Planning**

- a. Methods of identifying and prioritizing IT activities.
- b. Identification of current and planned IT development activities that includes scope, justification, completion dates, and impacts to current systems, data handling procedures, identification of JSC IT Standards used or requests for approval of non-JSC Standard IT, compliance with applicable NASA and Federal requirements for system operation and function (such as compliance with Section 508 of the Rehabilitation Act), and analysis of impacts or risks to IT security.
- c. Hardware and software acquisitions necessary to support SOW requirements. Acquisitions shall be prioritized and submitted to NASA for approval as part of the yearly budget cycle planning and review process.
- d. Identification of IT personnel who perform system administration and status of IRD required System Administrator Security Certification (Reference PIC 04-03).
- e. Details of ODIN-supplied seat and seat augmentation requirements with justifications.

### **3. IT Security Plan**

The IT Security Plan shall describe the Contractor's approach for meeting and maintaining security integrity of data, systems, and facilities, and shall be in accordance with contract clause NFS 1852.204-76. Contents of the Plan include

- a. Processes and procedures that will be followed to ensure appropriate security of IT resources that are acquired, developed, or used under this contract.
- b. Government/Contractor relationships and responsibilities for all physical, personnel, and IT security required for the activity specified in the SOW.
- c. Processes and procedures that will be used to ensure security of data and data systems.
- d. Methodology used to ensure separation of duties of IT security and operational elements.
- e. Approach for integrating security requirements into functions as described in the SOW, including interfacing with subcontractors.
- f. Facility security capabilities, processes, and procedures used to maintain the security integrity for the facility.
- g. Description of type of facility and information processed in the facility as defined in JPR 2801.1C.

### **4. Emergency Preparedness and Disaster Recover Plan**

- a. Processes and procedures that will be followed in the case of an emergency or disaster in order to secure and recover IT equipment, data, and data systems.
- b. Contact information for personnel (and back-ups) responsible for emergency preparedness and disaster recovery.

# JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                             |                            |                         |                                   |
|-----------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Data Management Plan</b> | <b>02/14/05</b>            | <b>13</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To document the Contractor’s approaches for data acquisition, control, storage, and dissemination.**

|                              |                                    |  |                                |
|------------------------------|------------------------------------|--|--------------------------------|
| 5. DRD Category: (check one) | <input type="checkbox"/> Technical | <input checked="" type="checkbox"/> Administrative | <input type="checkbox"/> SR&QA |
|------------------------------|------------------------------------|--|--------------------------------|

|  |  |
|--|--|
| 6. References (Optional)<br>JPD 2800.1, JSC IT Program<br>JPD 2800.4, JSC IT Program Management<br>Section C-3.7.4, Information Technology | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 01 Management Plan<br>DRD 12 Information Technology Plan |
|--|--|

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

The Plan shall describe the management, preparation, control, and dissemination of data and documentation required and produced under this contract in order to provide NASA with direct, on-going access to all data and documentation required to accomplish S&MA responsibilities. The plan shall include methods for identifying and acquiring SR&QA data and documents, requirements for storage, equipment and or methods of accessing data and documents, and data management philosophy.

**Content:**

**1. Methods and controls for the management of all data and documentation generated by S&MA**

- a. Identification of data and document types including specifications, procedures, reports, presentations, and correspondence
- b. Methods for control of data and documentation (storage, security, access, export control)
- c. Methods for assuring data integrity

**2. Consolidation of existing and required data and document resources:**

- a. Assessment of data and documents required for the accomplishment of S&MA responsibilities.
- b. Assessment of data types and documents currently available within S&MA on web-sites, in databases, and in hardcopy.
- c. Comparison of requirements versus available data and identification of gaps.
- d. Plan and schedule to consolidate existing data and document repositories and addition of data identified in “c” that will support S&MA personnel in the accomplishment of day-to-day activities.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|  |                            |                         |                                   |
|--|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title   | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>S&amp;MA Personnel Qualification<br/>Program Plan</b> | <b>02/14/05</b>            | <b>14</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To establish a plan for the development and implementation of an S&MA Personnel Qualification Program.**

|  |  |
|--|--|
| 5. DRD Category: (check one) <input checked="" type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA |  |
| 6. References (Optional)<br>Section C-4.1 S&MA Personnel Qualification Program<br>Section 10.2.2 Training  | 7. Interrelationships (e.g., with other DRDs) (Optional)<br>DRD 01 Management Plan |

8. Preparation Information (Include complete instructions for document preparation)

The Contractor shall prepare an S&MA Personnel Qualification Program Plan that describes the following aspects of the Qualification Program development and implementation:

1. The Contractor shall produce and maintain a 5 year Training Program Plan. The plan shall consist of the following:
  - Details for developing Training Guides (scope and sequence documents for training core competencies, products and services, and processes.)
  - Needs and gap assessments based on projected program requirements. The needs and gap assessments will also include:
    - A Breakdown of core competencies, products and services, and processes into trainable units (essential skills).
    - Evaluation of the efficacy of training.
    - Training acquisition plan.
    - Schedule for providing various training deliverables (e.g. Training Acquisition Plan, Needs and Gap assessments).
    - Plan for measuring workforce proficiency levels.
    - Schedules for achieving workforce proficiency levels.
    - Address training of management/supervision in utilizing training as a tool to develop human capital.
    - Approach for benchmarking relevant processes to continuously improve the training program.
  
2. The contractor shall produce and maintain a plan for the administrative tasks that support the Training Program. The plan shall consist of the following:
  - A feedback mechanism for training metrics and an evaluation reporting system for training coordinated and facilitated by S&MA.

- Plan to ensure individual training plans are kept current and are tied to the strategic training program plan.
- A process to provide the S&MA Directorate an annual assessment of skill/training gaps. The process shall ensure the success of S&MA Strategic Training Program plan. (To include administrative, leadership and technical job categories).
- Details for the development and maintenance of the S&MA training web site.
- It will include ensuring clear mapping of the training, a path for each job category and level, and shall define courses and mechanisms for delivering the training.
- Details to maintain an electronic training management system that includes courses and records of training accomplished by the employee.

3. The Contractor shall deliver an implementation plan as a logical outgrowth of the Training Program Plan. The implementation plan shall address:

- All elements in the Training Plan.
- Development, coordination, and delivery of technical S&MA discipline training.
- Notification when new courses are added.
- Find course(s), if not currently available through JSC and S&MA resources, from other NASA or external resources.
- Coordinate communication of the contents of JSC Training department's quarterly training offerings packages with S&MA training coordinators (call notices to employees, managers and responses to JSC Human Resources).
- Provide support to S&MA contractor management to ensure certification requirements are maintained if and when they are identified. Work with Civil Servant Division Management to identify certification requirements that may need to be tracked if and when they are identified. Track training requirements and training accomplished/completed as identified in employee training plans for S&MA employees (Contractor and Civil Service) in a single electronic system.
- The S&MA functional training (and certification if required) provided by the contractor shall be for civil servant and contractor S&MA personnel.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|  |                         |                      |                                |
|--|-------------------------|----------------------|--------------------------------|
| 1. DRD Title                                       | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>S&amp;MA Prelaunch Assessment Presentations</b> | <b><u>TBD</u></b>       | <b>15</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To provide NASA S&MA management with insight into status and issues associated with flight readiness.**

|                              |   |   |   |
|------------------------------|---|---|---|
| 5. DRD Category: (check one) | <input checked="" type="checkbox"/> Technical | <input type="checkbox"/> Administrative | <input checked="" type="checkbox"/> SR&QA |
|------------------------------|---|---|---|

|   |   |
|---|---|
| 6. References (Optional)<br>NSTS 08117<br>SSP 50108<br>SSP 50231<br>Sections C-5.4.1.5 Mission Planning<br>Section C-6.5.3.2 Prelaunch Assessments<br>NFS 1852.225-70 EXPORT LICENSES (ALT I) | 7. Interrelationships (e.g., with other DRDs) |
|---|---|

8. Preparation Information (Include complete instructions for document preparation)

The Contractor shall prepare and present S&MA Prelaunch Assessment presentations for each flight covering both IVA and EVA activities that include:

- Mission summary
- Noncompliance Report (NCR) summary and status for items associated with the flight
- Open problems, planned resolutions, and resolution completion dates
- Risk summary that includes hazards and controls
- Issues associated with planned flight operations
- An S&MA Contractor recommendation regarding readiness to support the flight and any exceptions
- Special topics addressing individual mission goals and objects (as necessary for each flight)
- Back-up charts with more detail as needed to provide additional information on risk and issue areas

Emphasis shall be placed on the safety assessment of the flight and flight activities. The assessment shall include those risks that could cause injury or loss of vehicle or crew.

The presentations will be presented at the following reviews:

- S&MA Requirements Review (SMARR) – A NASA Headquarters managed S&MA review held for manned launches prior to the ISS Program SORR. The SMARR is chaired by the Headquarters S&MA officer.
- Prelaunch Assessment Review (PAR) – A JSC managed S&MA review held for unmanned launches prior to the ISS Program SORR. The PAR is chaired by the JSC S&MA Director.
- Stage Operations Readiness Review (SORR) – The SORR is the single ISS Program CoFR review, for both manned and unmanned launches, and precedes the FRR for manned

launches. The SORR provides certification of ISS Program readiness for launch, flight, and on-orbit activities. The requirements for the ISS Program CoFR process are documented in SSP 50108. In addition, each organization with requirements that support the ISS CoFR process has an organizational CoFR Implementation Plan. SSP 50231 is the Safety and Mission Assurance / Program Risk CoFR Implementation Plan.

- Center Director's Flight Readiness Review (CD FRR) – A JSC review prepared by each of the involved JSC Directorates (including JSC S&MA) for the JSC Center Director prior to participation in the FRR.
- Flight Readiness Review (FRR) – A NASA Headquarters review held approximately 2 weeks prior to launch. The FRR is chaired by the Associate Administrator, Office of Space Flight, and has a broad membership including the Center Directors from JSC, MSFC, KSC, and Stennis Space Center (SSC).
- Software Readiness Review (SRR) – A review conducted approximately 4 weeks prior to flight and is presented to the Manager, Avionics and Software Office. A status of all flight software products applicable to the flight is presented. This information is provided to NASA Headquarters at the FRR.

Flights operated by NASA may involve payloads developed by a NASA International Partner/Participant (IP/P), or include IP/P Crew Member(s). Pursuant to the terms of an international agreement NASA and its contractors are obligated to provide sufficient technical interchange with the IP/Ps to ensure safety and mission success during the performance of prelaunch assessment. The Contractor is required to transfer certain unclassified technical data to foreign person representatives from the following institutions:

- Japan Aerospace Exploration Agency (JAXA)
- European Space Agency (ESA)
- Brazilian Space Agency (AEB)
- Canadian Space Agency (CSA)

Technologies used in orbital transfer vehicles are classified as defense articles under the International Traffic in Arms Regulations (ITAR). In accordance with NFS 1852.225-70 EXPORT LICENSES (ALT I) the Contractor may request, in writing, that the Contracting Officer authorize it to export ITAR-controlled technical data pursuant to the exemption at 22 CFR 125.4(b)(3). All technical data relating to the above-described activities must be at the interface and operations level, and must not exceed that level of detail or information.

This requirement expressly does not extend to any defense services or technical assistance, nor to any technical data or know-how required for the detailed design, development, production, or manufacture of equipment or its related software, or for any defense article identified on the United States Munitions List (USML), 22 CFR Part 121, and is limited to data considered necessary to address safety and risk as part of prelaunch assessment. Additionally, non-public source code is not to be released or transferred.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|                         |                         |                      |                                |
|-------------------------|-------------------------|----------------------|--------------------------------|
| 1. DRD Title            | 2. Current Version Date | 3. DRL Line Item No. | RFP/Contract No. (Procurement) |
| <b>Activity Reports</b> | <b>02/14/05</b>         | <b>16</b>            |                                |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**To provide insight into status of all activities under contract with special emphasis on significant issues and items on the critical path for flight support.**

|   |  |
|---|--|
| 5. DRD Category: <i>(check one)</i> <input checked="" type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA |  |
| 6. References <i>(Optional)</i><br>Section C-6.0.f JSC Projects Support<br>Section C-7.1.2.f Independent Assessment<br>Section C-10.3.3 Quality                     | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 03 Integrated Technical Management Report<br>DRD 18 Evaluation Reports<br>DRD 19 Assessment Plan and Report |

8. Preparation Information (Include complete instructions for document preparation)

**Minimum Data Requirements:**

The Offeror's status reports shall be in a brief, informal, narrative format, which describes the progress of activities against planned work with reasons for differences and includes significant activities planned for the next reporting period.

Report items that are proceeding without issue and on schedule are to be provided for information. Report items, which include significant issues (technical, cost, or schedule) or are on the critical path for flight support will be discussed during weekly status reviews with NASA. Responsible Contractor personnel shall be available to present their statuses, respond to questions, and provide additional detail if requested.

Monthly summaries prepared from these reports will be used as technical inputs to the monthly Integrated Technical Management Reports.

Activity Reports prepared for specific Offices, Divisions, Customers, etc, shall include information specific to those organizations and be prepared to the specific requirements and frequency of that entity.

**Format:**

Format will vary but shall be prepared in MSWord, MSPowerPoint, or approved equal with a mutually agreed-to format for the audience or to the requirements of the entity receiving the report.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|  |                            |                         |                                   |
|--|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                                   | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Trend Analysis (JSC Systems)<br/>Report</b> | <b>02/14/05</b>            | <b>17</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Provide monthly report of failure and discrepancy trends in JSC facilities supported by S&MA.**

|                                     |   |   |   |
|-------------------------------------|---|---|---|
| 5. DRD Category: <i>(check one)</i> | <input checked="" type="checkbox"/> Technical | <input type="checkbox"/> Administrative | <input checked="" type="checkbox"/> SR&QA |
|-------------------------------------|---|---|---|

|   |   |
|---|---|
| 6. References <i>(Optional)</i><br>Section C-6.4.3.2 Non-Conformances | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i> |
|---|---|

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

Utilize existing JSC failure/discrepancy report data to develop trend data for each facility supported by S&MA. Provide trend charts which can be used to isolate problem areas, locate equipments with poor reliability, etc.

**Content:**

- a. Present trend data (failures/discrepancies) normalized to a common standard.
- b. Where possible, trend data shall cover a 12-month period.
- c. Data should be presented by facility and system (i.e., electrical, mechanical, fluid, test, test systems, etc.)

**Submittal Requirements:**

Monthly

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|                           |                            |                         |                                   |
|---------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title              | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Evaluation Reports</b> | <b>02/14/05</b>            | <b>18</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Reports the results of an Independent Assessment Office (IAO) Action to perform a high level evaluation of the need for a more in depth assessment of an issue or concern discovered during Contractor Program/Project awareness activities.**

|                                     |   |   |                                |
|-------------------------------------|---|---|--------------------------------|
| 5. DRD Category: <i>(check one)</i> | <input checked="" type="checkbox"/> Technical | <input type="checkbox"/> Administrative | <input type="checkbox"/> SR&QA |
|-------------------------------------|---|---|--------------------------------|

|  |   |
|--|---|
| 6. References <i>(Optional)</i><br>Section C-7.1 Independent Assessment<br>NPD 8700.1B NASA Policy for Safety and<br>Mission Success | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 03 Integrated Technical Management<br>Report<br>DRD 16 Activity Reports<br>DRD 19 Assessment Plans and Reports |
|--|---|

8. Preparation Information (Include complete instructions for document preparation)

**Format:**

The contractor shall report results from assigned actions for evaluation to the IAO, and others when directed. The response shall be in Word document format, unless an alternate format (e.g., PowerPoint slide) is directed in the assigned action.

**Content:**

The report shall include the Purpose, Background, Observations, Findings, Recommendations, and Conclusions, as appropriate.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|                                    |                            |                         |                                   |
|------------------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                       | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Assessment Plan and Reports</b> | <b>02/14/05</b>            | <b>19</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Document the plan for conducting an assessment and, upon completion, report the results of the assessment work.**

|                                     |   |   |                                |
|-------------------------------------|---|---|--------------------------------|
| 5. DRD Category: <i>(check one)</i> | <input checked="" type="checkbox"/> Technical | <input type="checkbox"/> Administrative | <input type="checkbox"/> SR&QA |
|-------------------------------------|---|---|--------------------------------|

|  |   |
|--|---|
| 6. References <i>(Optional)</i><br>Section C-7.1.1 Independent Assessment<br>NPD 8700.1B NASA Policy for Safety and<br>Mission Success | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i><br>DRD 03 Integrated Technical Management<br>Report<br>DRD 16 Activity Reports<br>DRD 18 Evaluation Reports |
|--|---|

8. Preparation Information (Include complete instructions for document preparation)

**Format:**

The IA website database shall be utilized for inputting plans and posting final assessment reports (plus interim reports when required).

Planning and reporting represents an integrated process. Assessment plans shall be prepared and submitted by the Contractor for approval by the NASA Independent Assessment Office (IAO) Manager.

Final assessment reports (plus interim when required) shall be posted in the IA website database in conjunction with the associated assessment plan after approval by the IAO Manager.

**Content:**

Plan content shall be as follows: (a) assessment number and title; (b) Program or Project, including point-of-contact; (c) purpose; (d) scope; (e) ground rules and assumptions; (f) other criteria; (g) approach, including required resources and schedule. Plan content shall be coordinated with the IAO and Program Point of Contract prior to approval by the IAO.

Report content shall include discussion of the Plan content cited above. In addition, Observations, Findings, Recommendations, and Conclusions shall be included as appropriate.

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|   |                            |                         |                                   |
|---|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                                  | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Facilities System Certification Report</b> | <b>02/14/05</b>            | <b>20</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Provides a record of inspections and periodic assessments of inspected systems.**

|                                     |   |  |   |
|-------------------------------------|---|--|---|
| 5. DRD Category: <i>(check one)</i> | <input checked="" type="checkbox"/> Technical | <input checked="" type="checkbox"/> Administrative | <input checked="" type="checkbox"/> SR&QA |
|-------------------------------------|---|--|---|

|   |   |
|---|---|
| 6. References <i>(Optional)</i><br>Section C-9.1.1.d Pressure Systems<br>JPR 1710.13 Design, Inspection and Certification of Pressure Vessels and Pressurized Systems | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i> |
|---|---|

8. Preparation Information (Include complete instructions for document preparation)

**Scope:**

The Pressure Systems Engineer(s) will perform the duties necessary to support a program of inspection, testing, and certification of those fired and unfired steam, cryogenic, and unfired liquid and gaseous ground-based pressure systems under the responsibility of the NASA Johnson Space Center, Houston, Texas.

**Content:**

A weekly report will be prepared identifying the number of pressure systems inspections which have been performed during this time period at the direction of the JSC Pressure Systems Manager. The report shall include the following data as applicable:

- a. Number of facility and laboratory pressure system inspections
- b. Types of pressure system inspections
- c. Deficiencies noted
- d. Corrective action taken/recommended

**Submittal Requirements:**

Weekly

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

*(Based on JSC-STD-123)*

|  |   |                                      |                                   |
|--|---|--------------------------------------|-----------------------------------|
| 1. DRD Title<br><br><b>Wage/Salary and Fringe Benefit Data</b> | 2. Current Version<br>Date<br><b>02/24/05</b> | 3. DRL Line<br>Item No.<br><b>21</b> | RFP/Contract No.<br>(Procurement) |
|--|---|--------------------------------------|-----------------------------------|

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     Administrative     SR&QA

|  |   |
|--|---|
| 6. References <i>(Optional)</i><br>Clause I.2, FAR 52.222-41, Service Contract Act of 1965 | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i> |
|--|---|

8. Preparation Information (Include complete instructions for document preparation)

**Distribution:**

BJ4/Contracting Officer  
BA2/Contract Labor Relations Officer

**Initial Submission:**

30 days after contract start

**Submission Frequency:**

Annually, 90 days prior to the anniversary of the contract

**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. In accordance with FAR regulations 22.1007 and 22.1008, the Contracting Officer is required to submit an SF 98 to the Department of Labor, Wage and Hour Division.

**Contents:**

The Wage/Salary and Fringe Benefit Data should contain the data included in the enclosed DRD forms:

- Wage/Salary Rate Information
- Fringe Benefit for Service Employees
- 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 for represented classes. Annotate exempt or nonexempt and union or nonunion. 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 hardcopies and one electronic copy of each CBA 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 the DRD (Forms 2, 3, and 3A).

Form 2

WORK SHEET FOR SF-98 DATA  
WAGE RATE INFORMATION

| <u>CONTRACTORS LABOR CLASSIFICATION</u> | <u>WAGE DETERMINATION CLASSIFICATION</u> | <u>EXEMPT OF NONEXEMPT</u> | <u>UNION OR NONUNION</u> | <u>CURRENT HOURLY RATE</u> | <u>MYE NO OF EMPLOYEES</u> |
|---|--|----------------------------|--------------------------|----------------------------|----------------------------|
| 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                        | \$14.00 - 17.00            | 12                         |
| Electrical Technician                   | Electronics Tech Maint II                | N                          | U                        | \$19.02 - \$21.50          | 4                          |
| Secretary                               | Secretary I                              | N                          | N                        | \$14.52 - \$15.50          | 2                          |
| File Clerk                              | General Clerk II                         | N                          | N                        | \$9.86                     | 1                          |
| Clerical Data Entry                     | Word Processor I                         | N                          | N                        | \$11.45 - \$12.90          | 3                          |

Illustration of required data:

Submit data in the above illustrated format for all labor classifications used, or planned to be used, on this contract. All contractor labor classifications must be matched to wage determination classes listed in CBA's represented classes or classes shown in WD 94-2516 for nonrepresented classes.

| <u>CONTRACTORS LABOR CLASSIFICATION</u> | <u>WAGE DETERMINATION CLASSIFICATION</u> | <u>EXEMPT OF NONEXEMPT</u> | <u>UNION OR NONUNION</u> | <u>CURRENT HOURLY RATE</u> | <u>MYE NO OF EMPLOYEES</u> |
|---|--|----------------------------|--------------------------|----------------------------|----------------------------|
|---|--|----------------------------|--------------------------|----------------------------|----------------------------|

FORM 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.)

| <b>Item</b>             | <b>Coverage<br/>Provided<br/>(Yes or No)</b> | <b>Average<br/>Hourly Cost</b> |
|-------------------------|--|--------------------------------|
| 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)     |  |                                |

FORM 3 (continued)

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

FORM 3A

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.)

| <u>Item</u>              | <u>Coverage Provided</u> | <u>Average Hourly Cost</u> |
|--------------------------|--------------------------|----------------------------|
| 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

|                     | <u>Service Requirement</u> | <u>Days per Year</u> |
|---------------------|----------------------------|----------------------|
| 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)*

|                                   |                            |                         |                                   |
|-----------------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                      | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Reprocurement Data Package</b> | <b>05/02/05</b>            | <b>22</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**Provides requirements for delivery to NASA of information on specific items and supporting documentation related to analytical models, tools, data systems, web-sites, equipment, and data items acquired, produced, or maintained during the performance of this contract, and resource/cost information to be used for reprocurement activities.**

|  |  |
|--|--|
| 5. DRD Category: <i>(check one)</i> <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA |  |
| 6. References <i>(Optional)</i><br>Section I.7 Rights to Data  | 7. Interrelationships <i>(e.g., with other DRDs)</i> <i>(Optional)</i> |

8. Preparation Information (Include complete instructions for document preparation)

### CONTENTS:

#### Catalog of Items

1. A catalog of all models, tools, data systems, web-sites, equipment, and data items acquired, produced, or maintained during the performance of this contract shall be developed which contains the following information:

- Unique name of item
- Version number, revision number, or release date as appropriate
- Brief description and purpose or use of item
- Location of electronic or physical item

2. Supporting documentation shall be submitted for the use of each item. The documentation shall include, at a minimum, the following information:

- Inputs required
- Governing assumptions or constraints, including definition of the configuration if pertinent to the model definition or its use
- Acceptance or certification history, including description of validation methods used
- Association or interrelationship with other items listed
- Application or operating system requirements
- Hardware/platform requirements

### **Resource/Cost Information**

A data package shall be submitted containing the following resource/cost information:

#### 1. Labor Resources

- List of all direct labor skills by labor category, segregated by current work breakdown structure (WBS)
- 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
- Current annual average straight time labor rates for all skills by labor category mapped by standard labor categories of the original RFP or the standard labor categories defined in the follow-on RFP if they differ from the original RFP and when these wages were last adjusted for escalation. Also indicate whether any adjustments are projected to be made prior to contract expiration
- Number of Full Time Equivalent (FTEs) and the estimated number of productive hours for each labor category currently on contract mapped by standard labor category of the original RFP or the standard labor categories defined in the follow-on RFP if they differ from the original RFP, segregated by current WBS.
- Seniority level of all skills on the current contract

#### 2. Non-Labor Resources

- List of all materials, equipment, travel, supplies, etc., and the incurred annual cost by WBS.
- 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. Liability Cost

- 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. Contractor-Owned Equipment

- List of all Contractor-owned equipment (at the time of delivery of this DRD) being used in the performance of the contract.
- The list of equipment shall include:
  - Description of the equipment (include make and model #)
  - Location of the equipment (address, building, and room #)
  - Date purchased
  - Purchase price of the equipment

- Current depreciated value of the equipment

**FORMAT:**

Electronic format of all submissions shall be compatible with JSC desktop standard applications. Organizational format of the supporting documentation shall be the Contractor's format.

**OFFICE OF PRIMARY RESPONSIBILITY:**

COTR

**SUBMISSION REQUIREMENTS:**

**First Submission Date:** At the CO's direction.

**Frequency of Submission:** No periodic submissions required per this DRD (this does not relieve the requirement for periodic or incremental deliveries per other DRDs).

**Additional Submissions:** End of period of performance – submission of current version of catalog, supporting documentation, and resource/cost information which have been updated since first submission.

**MAINTENANCE:**

All items, documentation, and data shall be maintained electronically. All documentation developed to support the use of each item shall also be maintained electronically. Both the items and supporting documentation shall be updated as necessary to perform the functions for which they were developed.

**COPIES/DISTRIBUTION:**

Per the DRL

## JSC DATA REQUIREMENTS DESCRIPTION (DRD)

(Based on JSC-STD-123)

|                               |                            |                         |                                   |
|-------------------------------|----------------------------|-------------------------|-----------------------------------|
| 1. DRD Title                  | 2. Current Version<br>Date | 3. DRL Line<br>Item No. | RFP/Contract No.<br>(Procurement) |
| <b>Contract Phase-In Plan</b> | <b>04/19/05</b>            | <b>23</b>               |                                   |

4. Use (Define need for, intended use of, and/or anticipated results of data)

**This document establishes how the Offeror proposes to assume responsibilities 45 days prior to contract start date.**

|  |   |
|--|---|
| 5. DRD Category: <i>(check one)</i> <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA |   |
| 6. References <i>(Optional)</i><br>Section L.2.3.1(f)  | 7. Interrelationships <i>(e.g., with other DRDs) (Optional)</i> |

8. Preparation Information (Include complete instructions for document preparation)

Each offeror shall provide the information requested in the following paragraphs plus any other items it considers relevant to its proposed phase-in plan.

The Offeror shall develop and submit a Phase-In Plan that describes in detail the plans for affecting a smooth phase-in in order to maintain efficient operations and ensure no break in support.

Phase-In will cover the period of March 16, 2006 through April 30, 2006. The start of the contract period of performance is May 1, 2006.

In the plan, the Offeror shall:

1. Describe in detail the plan for effecting a smooth phase-in without compromising effective and efficient safety and quality operations/activities of the current JSC Projects and Programs. Provide the management milestones, and all associated schedules that you believe are required from start of phase-in to the full assumption of contract responsibilities.
  
2. Describe the steps you will take, including any you have taken to date, to assure that the contract will be fully staffed at the effective date of the contract. Include a time-phased staffing plan and table of personnel sources sorted by the third level SOW functional areas, noting the percentage of the total workforce you intend to recruit from the following sources:
  - a. Offeror's own resources
  - b. Other divisions of the company
  - c. Incumbent contractor's workforce

## d. Outside recruitment

3. Describe in detail your plans for certifying and training your personnel for assuming operational responsibility, including key and critical personnel functions.

4. Discuss in detail your specific plans for successfully completing each phase-in performance milestone described below in paragraphs a. through f. For each milestone, offerors are requested to: (1) provide a detailed plan inclusive of responsible personnel, (2) provide all relevant interim and final schedule dates to be met, and (3) propose objective criteria that can be used to determine if the milestone has been achieved.

a. **Milestone 1 – Key Personnel:** The successful offeror has hired all personnel it proposed as key personnel and all of these personnel are performing phase-in work at the level proposed. This milestone shall be fully achieved no later than April 7, 2006.

b. **Milestone 2 – Staffing:** At least 90% of all personnel proposed to perform all contract requirements have provided written acceptance of firm job offers. This milestone shall be fully achieved no later than April 20, 2006.

c. **Milestone 3 – Property Management:** The successful offeror has implemented an appropriate system to account for all Government Furnished Property. Furthermore, the successful offeror is prepared to perform an inventory of that property and is prepared to sign for accountability of the property upon completion of the inventory. This milestone shall be accomplished no later than April 22, 2006.

d. **Milestone 4 – Staffing:** The successful offeror has completed JSC's clearance and badging as well as training requirements for all personnel necessary to perform the full scope of contract requirements. This milestone shall be fully achieved no later than May 1, 2006.

e. **Milestone 5 – Accounting System:** The successful offeror has implemented an accounting system fully capable of accurately accounting for actual completion of SOW tasks down to the 4<sup>th</sup> level of the Work Breakdown Structure (WBS). This milestone shall be fully achieved no later than April 22, 2006.

f. **Milestone 6 – Union Negotiations:** The successful offeror has successfully completed all negotiations with any unions representing workers to be used in performance of this contract and has provided the Government with signed copies of all collective bargaining agreements (CBA's). This milestone shall be fully achieved no later than April 20, 2006.

g. **Milestone 7 – Subcontracts:** The successful offeror has all subcontracts in place and ready to perform contract requirements. This milestone shall be fully achieved no later than April 18, 2006.

**J.2 APPLICABLE DOCUMENTS LIST**

| <b>Document Number</b>                       | <b>Revision Level</b>  | <b>Date</b>       | <b>Title</b>  | <b>SOW Reference</b>      |
|--|------------------------|-------------------|---|---------------------------|
| <b><u>Agency Policy and Requirements</u></b> |                        |                   |   |                           |
| NASA-STD-8729.1                              | Baseline               | December 1, 1998  | Planning, Developing, and Maintaining an Effective Reliability and Maintainability (R&M) Program                              | C-5.1.1                   |
| NPD 2190.1                                   | Baseline               | May 24, 2001      | NASA Export Control Program Policy  | C-3.3.1.j                 |
| NPD 2810.1C                                  | Revision C             | April 7, 2004     | NASA Information Technology Security Policy   | DRD 12                    |
| NPD 7120.4C                                  | Revision C             | December 6, 2004  | Program/Project Management  | DRD 03<br>DRD 04          |
| NPD 9501.3A                                  | Revision A             | August 3, 2002    | Earned Value Management   | DRD 03                    |
| NPR 2810.1                                   | Baseline               | August 12, 2004   | Security of Information Technology  | I.10,<br>DRD-01<br>DRD 12 |
| NPR 4200.2B                                  | Revision B             | July 11, 1998     | Equipment Management Manual for Property Custodians   | G.13,<br>DRD 08           |
| NPR 6000.1G                                  | Revision G             | March 28, 2005    | Requirements for Packaging, Handling, and Transportation for Aeronautical Space Systems, Equipment, and Associated Components | D.2(a)                    |
| NPR 7120.5C                                  | Revision C             | March 22, 2005    | NASA Program and Project Management Processes and Requirements  | DRD 04                    |
| NPR 8621.1A                                  | Revision A             | February 11, 2004 | NASA Procedural Requirements for Mishap Reporting, Investigation, and Recordkeeping   | C-5.4.2.5                 |
| NPR 9501.2D                                  | Current Issue          | (Rev D, 4/23/01)  | NASA Contractor Financial Management Reporting  | DRD 05                    |
| NPR 8000.4                                   | Baseline with Change 1 | 13-Apr-04         | Risk Management   | DRD 01                    |

**Agency and Program S&MA Requirements**

RFP NNJ05106317R

|                            |            |                  |  |   |
|----------------------------|------------|------------------|--|---|
| NPD 8700.1B                | Revision B | October 18, 2002 | NASA Policy for Safety and Mission Success   | DRD 18,<br>DRD 19   |
| NPR 8735.1A                | Revision A | August 22, 2002  | Procedure for Exchanging Parts, Materials, and Safety Problem Data Utilizing the Government Industry Data Exchange | C-8.5.3   |
| NPR 8735.2<br>(w/Change 1) | Basic      | March 30, 2004   | Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts                    | C-5.2.6.a,<br>C-5.3.8.1,<br>C-5.3.9.1,<br>C-6.2.2.1,<br>C-7.2.1 |

**Safety and Environmental Health**

|                            |            |                |   |       |
|----------------------------|------------|----------------|---|-------|
| NPD 8710.2D                | Revision D | April 24, 2002 | NASA Safety and Health Program Policy                                   | C-3.6 |
| NPR 8715.1<br>(w/Change 2) | Basic      | March 30, 2004 | NASA Safety and Health Handbook Occupational Safety and Health Programs | C-3.6 |
| NPR 8715.3<br>(w/Change 2) | Basic      | March 29, 2004 | NASA Safety Manual  | C-3.6 |
| JPR 8550.1                 | Basic      | November 2004  | Environmental Compliance Procedural Requirements                        | C-3.6 |

**Software Requirements and Policies**

|                   |                 |                    |                                   |                       |
|-------------------|-----------------|--------------------|-----------------------------------|-----------------------|
| NASA-STD-8719.13B | B with Change 1 | July 8, 2004       | NASA Software Safety Standard     | C-5.2.6.c,<br>C-6.1.b |
| NASA-STD-8739.8   | Initial         | July 28, 2004      | NASA Software Assurance Standard  | C-6.1.b               |
| NPD 2820.1A       | Revision A      | May 29, 1998       | NASA Software Policies            | C-6.1.b               |
| NPR 7150.2        | Initial         | September 27, 2004 | Software Engineering Requirements | C-6.1.b,<br>C-7.3.1   |

**JSC Policy and Directives**

|             |            |              |                |                     |
|-------------|------------|--------------|----------------|---------------------|
| JPD 2800.1A | Revision A | May 18, 2001 | JSC IT Program | C-3.7.1,<br>DRD 12, |
|-------------|------------|--------------|----------------|---------------------|

DRD 13

|             |            |                  |   |  |
|-------------|------------|------------------|---|--|
| JPD 2800.4  | Basic      | March 15, 2001   | JSC IT Program Management                 | C-3.7.1,<br>C-3.7.8<br>DRD 12,<br>DRD 13 |
| JPD 5335.1E | Revision E | January 23, 2003 | JSC Policy Directive - Quality Policy     | C-3.4.1,<br>DRD 06                       |
| JPR 1700.1I | Revision I | July 2002        | JSC Safety and Health Handbook            | DRD 09,<br>DRD 11                        |
| JPR 2810.1C | Revision C | October 2004     | JSC Information Technology Handbook       | DRD 12                                   |
| JPR 5322.1F | Revision F | February 2005    | Contamination Control Requirements Manual | C-6.2.2.3                                |

**Program and Center Requirements Documents**

|                  |             |                  |   |                                  |
|------------------|-------------|------------------|---|----------------------------------|
| EA-WI-023        | Revision C  | January 2002     | Project Management of GFE Flight Projects   | C-6.0.c                          |
| JPG 1710.13C     | Revision C  | August 2002      | Design, Inspection, and Certification of Pressure Vessels and Pressurized Systems                     | C-9.1.1,<br>C-9.1.1.c,<br>DRD 20 |
| JSC 17481        | Revision B  | February 2003    | Safety Requirements Document for JSC Space Shuttle Flight Equipment                                   | C-6.5.3.3                        |
| JSC 17773        | Revision C  | December 2001    | Instruction for Preparation of Hazard Analysis for JSC Ground Operations                              | C-6.3.1.1.2,<br>DRD 09           |
| JSC 23642        | Revision E  | October 22, 2001 | JSC Fastener Integrity Testing Program  | C-10.1.1.a                       |
| JSC 28035        | Revision A  | May 19, 2001     | JSC Government Furnished Equipment (GFE) Problem Reporting and Corrective Action (PRACA) Requirements | C-6.4.3.3                        |
| JSC 28222        | Revision E  | February 6, 2004 | EVA Project Certification of Flight Readiness Requirements and Implementation Plan                    | C-6.5.3.4                        |
| JSCM 8080.5 E-24 | Revision .5 | April 1, 1991    | JSC Design and Procedural Standards Manual  | C-10.1.1.f                       |

RFP NNJ05106317R

|                                     |                      |                   |  |   |
|-------------------------------------|----------------------|-------------------|--|---|
| KHB 1700.7                          | Revision C           | August 19, 1999   | Space Shuttle Payload Ground Safety Handbook   | C-6.3.1.1.2                               |
| KHB 1710.2                          | Revision E           | April 2002        | KSC Safety Practices Handbook  | C-6.3.1.1.2                               |
| NSTS 07700, Volume VIII, Appendix R | Revision D           | February 24, 1999 | Operations   | C-5.4.2.4                                 |
| NSTS 08117                          | Revision M           | February 23, 2004 | Requirements and Procedures for Certification of Flight Readiness  | C-6.5.3.2,<br>C-6.5.3.4,<br>DRD 15        |
| NSTS 08126                          | Revision J           | August 27, 2004   | Space Shuttle Problem Reporting and Corrective Action (PRACA) System Requirements                                  | C-5.3.2,<br>C-6.4.3.3                     |
| NSTS 1700.7                         | Revision B           | January 1989      | Safety Policy and Requirements for Payloads Using the STS  | C-6.3.2                                   |
| NSTS 1700.7, ISS Addendum           | Revision B           | December 1995     | Safety Policy and Requirements for Payloads Using the International Space Station                                  | C-6.3.2                                   |
| NSTS 13830                          | Revision C           | July 1998         | Payload Safety Review and Data Submittal Requirements  | C-6.3.2                                   |
| NSTS 22206                          | Revision D           | December 10, 1993 | Instructions for Preparation of Failure Modes and Effects Analysis and Critical Items Lists                        | C-5.2.5.c.1,<br>C-6.3.1.1.1               |
| NSTS 22254                          | Revision B           | December 30, 1993 | Methodology for Conduct of Space Shuttle Program Hazard Analyses   | C-5.2.4.2.a,<br>C-6.3.1.1.2,<br>C-6.5.3.3 |
| SN-D-0007                           | Revision B           | April 9, 1998     | Acceptance Data Package Requirements   | C-6.4.5                                   |
| SSP 30223                           | Revision K (Draft B) | May 2004          | Problem Reporting and Corrective Action for the Space Station Program  | C-5.3.2,<br>C-6.4.3.3                     |
| SSP 30234                           | Revision F           | July 2002         | Instructions for Preparation of Failure Modes and Effects Analysis and Critical Items List (CIL) for Space Station | C-5.2.5.c.1,<br>C-6.3.1.1.1               |
| SSP 30309                           | Revision E           | October 28, 1994  | Safety Analysis and Risk Assessment Requirements Document  | C-5.2.4.2.a,<br>C-6.3.1.1.2,<br>C-6.5.3.3 |
| SSP 30524                           | Revision E           | July 6, 1998      | PRACA Data System Requirements Definition  | C-5.3.2,<br>C-6.4.3.3                     |

|                                  |                       |                      | Document   |   |
|----------------------------------|-----------------------|----------------------|--|---|
| SSP 30695                        | Revision A            | October 26,<br>1994  | Acceptance Data Package<br>Requirements Specification  | C-6.4.5                                       |
| SSP 50021                        | Basic                 | December 12,<br>1995 | Safety Requirements Document   | C-6.3.1.1.2                                   |
| SSP 50108                        | Revision B<br>(Draft) | April 2003           | Certification of Flight Readiness<br>Process Document, ISS Program,<br>Space Shuttle Program Directive<br>52 | C-6.5.3.4,<br>DRD 15                          |
| SSP 50146<br>(Attachment D)      | Revision A            | October 1,<br>1998   | NASA/RSA Bilateral S&MA<br>Processes   | C-6.3.1.1.2                                   |
| SSP 50190                        | Revision A            | May 12, 1999         | ISS Contingency Action Plan  | C-5.4.2.4                                     |
| SSP 50231                        | Revision A            | October 1,<br>2002   | Safety and Mission Assurance<br>Certificate of Flight Readiness<br>Implementation Plan                       | DRD 15  |
| <b><u>Industry Standards</u></b> |                       |                      |  |   |
| ANSI ASQ Q9001-<br>2000          | N/A                   | N/A                  | Quality Management System<br>Requirements  | C-3.4.1,<br>C-10.3.1<br>C-10.3.PS1,<br>DRD 06 |
| ISO/IEC-17025                    | Base                  | December 15,<br>1999 | General Requirements for the<br>Competence of Testing and<br>Calibration Laboratories                        | C-10.0.c,<br>C-10.3.2,<br>C-10.3.PS2          |

**J.3 DEFINITION OF TERMS**

| <b>Term</b>                                     | <b>Description</b>   |
|---|--|
| Acceptance Data Package (ADP)                   | Provides a complete and verified status of hardware or software at the point of delivery and enables the continuation of required activities by the using organization. The ADP is prepared as part of the hardware or software acceptance / delivery criteria and is maintained throughout the hardware or software life-cycle after Government acceptance, including integrated testing, ground processing, launch site processing, on-orbit, post-landing, and maintenance/modification/refurbishment activities.                                   |
| Certification Data Package (CDP)                | The CDP contains, by inclusion or reference, all information needed to provide objective evidence that the design meets the requirements. The CDP contains information pertaining to the acceptance and qualification activity for the qualification unit.   |
| Critical Items List (CIL)                       | Documentation of failure modes derived from the FMEA that are deemed critical by the Programs. CIL's are used to identify high-risk items and the associated rationale for managerial decision-making purposes.  |
| Failure Modes Effects Analysis (FMEA)           | A "what if" analysis that addresses the potential effects resulting from postulating a possible failure mode for a given hardware item. FMEA's are used as a tool to analyze a design for compliance with Program fail-operational and fail-safe reliability requirements.   |
| Government Mandatory Inspection Points (GMIP's) | Specific points during a process when an inspection by a Government Representative (i.e., S&MA support contractor, Defense Contract Management Agency) is required before the process can proceed. GMIP's are identified by the Government representatives to mitigate safety, mission, cost, or schedule risk to the Government by assuring contractor compliance to requirements or verifying that specific actions have occurred. They are not a substitute for contractor inspections and should not be used in place of needed corrective action. |
| Safety & Mission Assurance (S&MA)               | Includes the disciplines/functions of safety, reliability, quality, availability, maintainability, supportability, assurance, software engineering, quality engineering, software quality assurance, and procurement quality assurance.  |
| S&MA Personnel                                  | Applies to all Directorate supporting personnel (both Government and Contractor).  |

**J.4 ACRONYMS**

|        |   |
|--------|---|
| A2LA   | American Association for Laboratory Accreditation |
| ADP    | Acceptance Data Package                           |
| ALERT  | Acute Launch Emergency Reliability Tip            |
| ANSI   | American National Standards Institute             |
| AR     | Acceptance Review                                 |
| ART    | Anomaly Resolution Team                           |
| ASQ    | American Quality Standard                         |
| CAP    | Contingency Action Plan                           |
| CCL    | Critical Command List                             |
| CD FRR | Center Director's Flight Readiness Review         |
| CDR    | Critical Design Review                            |
| CFE    | Contractor Furnished Equipment                    |
| CFR    | Code of Federal Regulations                       |
| CIL    | Critical Items List                               |
| CMMI   | Capability Maturity Model Integrated              |
| CO     | Contracting Officer                               |
| CoFR   | Certification of Flight Readiness                 |
| COTR   | Contracting Officer's Technical Representative    |
| CPAR   | Corrective/Preventive Action Requests             |
| CPR    | Cardiopulmonary Resuscitation                     |
| CSS    | Customer Service System                           |
| CSWG   | Computer Safety Working Group                     |
| CWI    | Certified Welding Inspector                       |
| DCMA   | Defense Contract Management Association           |
| DR     | Discrepancy Report                                |
| DRD    | Data Requirements Description                     |
| DRL    | Data Requirements List                            |
| EEE    | Electrical, Electronic, and Electromechanical     |
| EPCRA  | Emergency Planning and Community Right-to-Know    |

|          |   |
|----------|---|
| ESD      | Electrostatic Discharge                           |
| EVA      | Extravehicular Activity                           |
| EVAAT    | EVA Assessment Team                               |
| FAR      | Federal Acquisition Regulations                   |
| FCA      | Functional Configuration Audit                    |
| FIT      | Flight Investigation Team                         |
| FMEA     | Failure Modes and Effects Analysis                |
| FRR      | Flight Readiness Review                           |
| GAAP     | Generally Accepted Accounting Principles          |
| GCAR     | Government Certification Acceptance Record        |
| GFE      | Government Furnished Equipment                    |
| GIDEP    | Government-Industry Data Exchange Program         |
| GMIP     | Government Mandatory Inspection Point             |
| GSA      | General Services Administration                   |
| GSI      | Government Source Inspection                      |
| HATS     | Hazard Abatement Tracking System                  |
| HAZWOPER | Hazardous Waste Operations and Emergency Response |
| HCL      | Hazardous Command List                            |
| HR       | Hazard Report                                     |
| IA       | Independent Assessment                            |
| IAO      | Independent Assessment Office                     |
| IFA      | In-Flight Anomaly                                 |
| IP       | International Partner                             |
| IP/P     | International Partners/Participants               |
| IRD      | Information Resources Directorate                 |
| ISAMP    | Integrated Supplier Assurance Management Program  |
| ISERP    | Integration Safety Engineering Review Panel       |
| ISL      | Instrumentation Systems Laboratory                |
| ISO      | International Standards Organization              |
| ISS      | International Space Station                       |

|        |   |
|--------|---|
| IT     | Information Technology                        |
| ITSC   | Information Technology Steering Council       |
| JAEL   | JSC Avionics Engineering Laboratory           |
| JARSWG | Joint American Russian Safety Working Group   |
| JSC    | Johnson Space Center                          |
| JSERP  | JSC Safety Engineer Review Panel              |
| KSC    | Kennedy Space Center                          |
| LIMS   | Laboratory Information Management System      |
| LLIS   | Lessons Learned Information System            |
| LOD    | Letter of Delegation                          |
| LOE    | Level of Effort                               |
| MEMS   | Micro-Electromechanical Systems               |
| MER    | Mission Evaluation Room                       |
| MMOD   | Micro-Meteoroid and Orbital Debris            |
| MMT    | Mission Management Team                       |
| MRR    | Manufacturing Readiness Review                |
| MRR    | Material Review Record                        |
| MSDS   | Material Safety Data Sheet                    |
| MTBF   | Mean-Time Between Failure                     |
| NACP   | Network Access Control Board                  |
| NASA   | National Aeronautics and Space Administration |
| NAVSEA | Naval Sea Systems Command                     |
| NCR    | Non-Compliance Report                         |
| NCR    | Non-Conformance Report                        |
| NDE    | Non-Destructive Evaluation                    |
| NEPP   | NASA Electronic Parts Packaging Program       |
| NFS    | NASA FAR Supplement                           |
| NSTS   | National Space Transportation System          |
| OSHA   | Occupational Safety and Health Association    |
| OSMA   | Office of Safety and Mission Assurance        |

|       |  |
|-------|--|
| PAR   | Prelaunch Assessment Review              |
| PCA   | Physical Configuration Audit             |
| PDR   | Preliminary Design Review                |
| PEP   | Performance Evaluation Profile           |
| PPE   | Personal Protective Equipment            |
| PQA   | Procurement Quality Assurance            |
| PRA   | Probabilistic Risk Assessment            |
| PRACA | Problem Reporting and Corrective Action  |
| PRT   | Problem Resolution Team                  |
| PSRP  | Payload Safety Review Panel              |
| PV/S  | Pressure Vessel Systems                  |
| QAS   | Quality Assurance Specialist             |
| QMS   | Quality Management System                |
| QPAP  | Quality & Product Assurance Panel        |
| QWG   | Quality Working Group                    |
| R&M   | Reliability and Maintainability          |
| RAMP  | Risk Assessment Management Plan          |
| RCL   | Restricted Command List                  |
| RCRA  | Resource Conservation and Recovery Act   |
| RID   | Review Item Discrepancy                  |
| RITF  | Receiving Inspection and Test Facility   |
| RSA   | Russian Space Agency                     |
| RTOP  | Research Technology Objectives and Plans |
| S&MA  | Safety and Mission Assurance             |
| SAIL  | Shuttle Avionics Integration Laboratory  |
| SAR   | Safety Assessment Report                 |
| SAR   | System Acceptance Review                 |
| SAS   | Supplier Assessment System               |
| SCTF  | Sonny Carter Training Facility           |
| SDP   | Safety Data Package                      |

|       |   |
|-------|---|
| SMARR | S&MA Readiness Review                             |
| SMART | Safety and Mission Assurance Review Team          |
| SMT   | Surface Mount Technology                          |
| SORR  | Stage Operations Readiness Review                 |
| SOVAR | Safety Observation and Variance Assessment Report |
| SOW   | Statement of Work                                 |
| SPC   | Statistical Process Control                       |
| SR    | Service Request                                   |
| SR&QA | Safety, Reliability and Quality Assurance         |
| SRP   | Safety Review Panel                               |
| SRR   | Software Readiness Review                         |
| SSP   | Space Shuttle Program                             |
| SSRP  | System Safety Review Panel                        |
| STS   | Space Transportation System                       |
| SVL   | Survey Vendor List                                |
| SWATT | Software Assurance Technology Team                |
| SWG   | Safety Working Group                              |
| TDH   | Texas Department of Health                        |
| TED   | Technical Education Document                      |
| TIM   | Technical Interchange Meeting                     |
| TNRCC | Texas National Resource Conservation Commission   |
| TPS   | Task Performance Sheet                            |
| TRR   | Test Readiness Review                             |
| VBDB  | Vehicle Master Database                           |
| VCN   | Verification Closure Notice                       |
| VPP   | Voluntary Protection Program                      |
| VTL   | Verification Tracking Log                         |
| VWAR  | Virtual Work Authorization Record                 |
| WBS   | Work Breakdown Structure                          |
| WSTF  | White Sands Test Facility                         |

**J.5 AWARD FEE PLAN**

**Contract Number** \_\_\_\_\_

**Contractor** \_\_\_\_\_

**Table of Contents:**

- I. Introduction**
- II. Organizational Structure for Award Fee Administration**
- III. Evaluation Requirements**
- IV. Method for Determining Award Fee**
- V. Performance Evaluation and Criteria**

**Attachments:**

- A Grading Table**
- B Evaluation Periods and Maximum Available Award Fee for Each Award Fee Period (AFP)**
- C Performance Evaluation Factors and Evaluation Criteria**
- D Performance Score Conversion Chart**

APPROVED BY:

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|      |       |      |
|------|-------|------|
| Name | Title | Date |
|------|-------|------|

## **I. Introduction**

In accordance with the provisions of Federal Acquisition Regulation 16.405-2 and NASA FAR Supplement (NFS) 1816.405-2, an award fee evaluation procedure is hereby established for determination of award fee(s) payable under this contract. The fee arrangement outlined in this plan has been established to motivate the Contractor to strive for excellence in the quality and timeliness of technical, management, and cost performance. The payment of any award fee is contingent upon compliance with contract requirements and performance to the degree specified in Attachment A.

The Contractor's performance will be evaluated by the Government, in accordance with the procedures set forth below, at the expiration of each evaluation period specified in Attachment B. 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, and other provisions set forth below.

This plan may be revised unilaterally by the Government at the beginning of an evaluation period by timely notice to the Contractor in writing.

## **II. Organizational Structure for Award Fee Administration**

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 Contractor's performance score in accordance with the procedures set forth below. After considering available and pertinent information and recommendations, the FDO will make a performance determination for each period. The FDO will appoint the PEB Chairperson and members.

### **B. Performance Evaluation Board (PEB)**

A PEB, comprised of selected NASA technical and administrative personnel, will evaluate the Contractor's performance after each evaluation period to determine whether and to what extent the Contractor's performance during the evaluation period is deserving of the payment of award fee. The PEB chair will be an S&MA Directorate Manager. The PEB, at the end of each evaluation period, will prepare a summary of the evaluations for review by the Fee Determination Official (FDO). This summary will include a recommendation to the FDO for the adjectival rating and numerical score to be assigned for the Contractor's performance in the preceding evaluation period.

### **C. Performance Monitors**

NASA Performance Monitors shall monitor, evaluate, and assess the Contractor's performance in assigned areas and discuss the evaluation results with Contractor counterparts as appropriate. They will periodically prepare reports for the PEB. The monitor assignments may

change at any time without advance notice to the Contractor. The Contracting Officer (CO) will notify the Contractor of all Performance Monitor assignments and changes.

**III. Evaluation Requirements**

The applicable evaluation requirements are attached as indicated below.

| <u>Requirement</u>   | <u>Attachment</u> |
|--|-------------------|
| Grading Table  | A                 |
| Evaluation Periods and Maximum Award Fee for Each Award Fee Period (AFP) | B                 |
| Performance Evaluation Factors and Evaluation Criteria                   | C                 |
| Performance Score Conversion Chart                                       | D                 |

**IV. Method for Determining Award Fee**

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, evaluating, and assessing Contractor performance during the period, as well as for determining the award fee earned or paid, is described below.

A. Areas of Emphasis will be established by the Government for each performance period. No later than 45 days prior to the start of each evaluation period, the Contractor may submit to the CO, recommended areas of emphasis for the ensuing evaluation period. Consideration will be given to the Contractor’s recommendations; however, it is the Government’s responsibility to establish the specific areas of emphasis for each evaluation period.

B. The Contractor will be notified by the CO of the selected areas of emphasis no later than 10 days prior to the start of each new 6-month evaluation period. Emphasis will be directed at particular areas under the contract which appear to the Government to be deserving of special attention. Contractor’s performance in these areas will be used in judging the Contractor’s performance. These areas of emphasis will not necessarily cover the entire spectrum of performance that will be evaluated in determining award fee dollars earned. Other pertinent factors included under the contract and general factors bearing upon overall performance will be considered as the facts and circumstances of each period may require.

C. The Contractor will be apprised of a general assessment of performance at the mid-point of each evaluation period at the weekly COTR meetings. The purpose of these meetings will be to discuss any specific areas where the Contractor has excelled, and where future Contractor emphasis may be necessary. If during the performance assessment, a Corrective Action Plan is determined to be required, the Performance Monitor will provide written notice to the Contractor. The Contractor will submit the plan to the Technical Monitor within 15 calendar days of the notice.

D. Promptly after the end of each evaluation period, the PEB will meet to consider all the performance information it has obtained from the performance monitors and others involved in observing Contractor performance. At the meeting, the PEB will summarize its preliminary findings and recommendations in the Performance Evaluation Board Report (PEBR).

E. After the preliminary PEBR is completed, the PEB, or designated representative, may meet with the Contractor to discuss the Board's preliminary findings and recommendations. As requested by the PEB Chair, Monitors and other personnel involved in performance evaluation will attend the meeting and participate in discussions. At this meeting, the Contractor may provide a self-evaluation presentation (a copy of which is provided to the PEB) not to exceed 30 minutes in length. After meeting with the Contractor, the PEB will consider matters presented by the Contractor and finalize its findings and recommendations for the PEBR.

F. The Contractor may furnish a separate self-evaluation report within 5 calendar days following the end of each evaluation period. These self-evaluation reports shall not exceed 20 pages in length per each evaluation period. The PEB will not submit its recommendation to the Fee Determination Official (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 deadline for its submission has expired.

G. The PEB Chair will prepare the final PEBR for the period and submit it to the FDO for use in determining the award fee earned. The report will include an adjectival rating and a recommended performance score with supporting documentation. The Contractor will be notified of the PEB evaluation and recommended rating and score. The Contractor may provide additional information for consideration by the FDO. Such information will be delivered in writing to the Contracting Officer within 5 calendar days of notification to the Contractor of the recommended rating and score. When submitting the report, the Chair will inform the FDO of any additional information from the Contractor.

H. The FDO will consider the recommendations of the PEB, the PEBR, any information provided by the Contractor, and any other pertinent information in determining performance scores. The FDO's determination of the performance scores and the basis for this determination will be stated in the Award Fee Determination Report (AFDR).

I. The Award Fee Determination will be provided to the Contractor by the Contracting Officer.

## **V. Performance Evaluation and Criteria**

Contractor performance will be evaluated at the contract level, not at the individual task or order level.

A. In evaluating the performance of the Contractor, the Government will evaluate major elements of Contractor performance including Technical, Management, and Cost Performance. The major performance areas will be considered independently to determine the degree of success the Contractor has demonstrated in arriving at a well-balanced contract performance.

B. The factors, criteria, and weighting for evaluation of Contractor performance for determination of award fee is defined in Attachment C.

C. Notwithstanding any of the above, a major breach of safety or security, as defined by clause 1852.223-75 of this contract, may result in an award fee score of zero for the affected evaluation period.

D. In order to earn any award fee, the Contractor must receive a numerical score of 61 or greater. Attachment A provides the performance level definition adjectival ratings and corresponding numerical scores that will be used in evaluating performance. The numerical grade ranges corresponding to these adjectival ratings and their conversion to total award fee earned are set forth in Attachment D. Attachment B provides the distribution of the available maximum award fee for each evaluation period.

**Attachment – A Grading Table**

| <b>Adjectival Rating</b> | <b>Performance Points Range</b> | <b>Description</b>   |
|--------------------------|---------------------------------|--|
| 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/<br>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 – B Evaluation Periods and Maximum Available Award Fee for Each Award Fee Period (AFP)**

| Period Number | Start Date       | End Date         | Max Available Award Fee |
|---------------|------------------|------------------|-------------------------|
| AFP-01        | May 1, 2006      | October 31, 2006 |                         |
| AFP-02        | November 1, 2006 | April 30, 2007   |                         |
| AFP-03        | May 1, 2007      | October 31, 2007 |                         |
| AFP-04        | November 1, 2007 | April 30, 2008   |                         |
| AFP-05        | May 1, 2008      | October 31, 2008 |                         |
| AFP-06        | November 1, 2008 | April 30, 2009   |                         |
| AFP-07        | May 1, 2009      | October 31, 2009 |                         |
| AFP-08        | November 1, 2009 | April 30, 2010   |                         |
| AFP-09        | May 1, 2010      | October 31, 2010 |                         |
| AFP-10        | November 1, 2010 | April 30, 2011   |                         |
| AFP-11        | May 1, 2011      | October 31, 2011 |                         |
| AFP-12        | November 1, 2011 | April 30, 2012   |                         |
| AFP-13        | May 1, 2012      | October 31, 2012 |                         |
| AFP-14        | November 1, 2012 | April 30, 2013   |                         |

Award fee dollars available for each evaluation period not earned will not roll forward to subsequent award fee periods. Unearned fee will be removed from the maximum award fee available on the contract by unilateral contract modification.

In calculating AFP-01 through AFP-06, the Total Available Award Fee under clause B.2, ESTIMATED COST AND AWARD FEE, will be annualized divided by two to determine the amount for these periods. In calculating AFP-07 and AFP-08, the Total Available Award Fee under clause F.5, OPTION TO EXTEND COMPLETION DATE (Option 1), will be divided by two in determining the amount for each of these periods. In calculating AFP-09 and AFP-10, the Total Available Award Fee under clause F.5, OPTION TO EXTEND COMPLETION DATE (Option 2), will be divided by two in determining the amount for each of these periods. The Total Available Award Fee negotiated for the extension base year (5/1/2011 through 4/30/2012) was [REDACTED]. In order to calculate AFP-11 and APF-12 this amount of [REDACTED] is divided by two.

**Attachment – C Performance Evaluation Factors and Evaluation Criteria**

| Factor       | Identification  | Weight      |
|--------------|---|-------------|
| 1.0          | <b>Technical</b>  | <b>40%</b>  |
|              | <b>Safety and Health</b>                                  | <b>10%</b>  |
| 2.0          | <b>Management (includes small business participation)</b> | <b>10%</b>  |
|              | <b>Small Business Goal achievement</b>                    | <b>15%</b>  |
| 3.0          | <b>Cost</b>   | <b>25%</b>  |
| <b>TOTAL</b> |   | <b>100%</b> |

**Evaluation Criteria**

**1. Technical Performance and Compliance with Safety and Health Requirements**

The Technical Evaluation Factor covers the performance of the Contractor in accomplishing the tasks within the Statement of Work. Performance criterion includes all aspects of quality and schedule for both technical, and safety and health performance.

The evaluation criteria include:

- Timeliness and effectiveness of performance in any technical areas of emphasis identified for an evaluation period.
- Initiatives proposed or implemented by the Contractor that improves products or support, consolidates activities, or improves efficiencies.
- Management and employee involvement in safety and health leadership and preventative activities.
- Providing a safe work environment; conducting annual inspections of all worksites and facilities managed; maintaining accident/incident files; timely reporting of mishaps; providing safety training for all personnel.
- Effectiveness in meeting or surpassing completion form standards as detailed in the SOW.

**2. Management and Small Business Performance**

The Management Evaluation Factor covers those activities performed by the Contractor for overall management and administration of all contract activity. This also includes the evaluation of the Contractor’s success in achieving or surpassing the small business goals specified in the contract.

The evaluation criteria include:

- Timeliness and effectiveness of performance in any management areas of emphasis identified for an evaluation period

- Initiatives proposed or implemented by the Contractor that improves overall contract management.
- Effective use of resources; planning, organizing, and managing all contract activity; response to emergencies and other unexpected situations.
- Timely and accurate reporting in accordance with DRL/DRD requirements.
- Effectiveness in meeting all small business goals specified in the contract.
- Effectiveness in meeting or surpassing completion form standards as detailed in the SOW.

### **3. Cost Performance**

The Cost Evaluation Factor covers the Contractor's actual cost performance relative to the negotiated contract cost, including variance analyses.

**Attachment D – Performance Score Conversion Chart**

| <b>Weighed<br/>Performance Score</b> |              | <b>Percentage of<br/>Available Award Fee</b> |
|--------------------------------------|--------------|--|
| 100                                  |              | 100%   |
| 99                                   |              | 99   |
| 98                                   |              | 98   |
| 97                                   |              | 97   |
| 96                                   | Excellent    | 96   |
| 95                                   |              | 95   |
| 94                                   |              | 94   |
| 93                                   |              | 93   |
| 92                                   |              | 92   |
| 91                                   |              | 91   |
|                                      |              |  |
| 90                                   |              | 90   |
| 89                                   |              | 89   |
| 88                                   |              | 88   |
| 87                                   |              | 87   |
| 86                                   | Very Good    | 86   |
| 85                                   |              | 85   |
| 84                                   |              | 84   |
| 83                                   |              | 83   |
| 82                                   |              | 82   |
| 81                                   |              | 81   |
|                                      |              |  |
| 80                                   |              | 80   |
| 79                                   |              | 79   |
| 78                                   |              | 78   |
| 77                                   |              | 77   |
| 76                                   | Good         | 76   |
| 75                                   |              | 75   |
| 74                                   |              | 74   |
| 73                                   |              | 73   |
| 72                                   |              | 72   |
| 71                                   |              | 71   |
|                                      |              |  |
| 70                                   |              | 70   |
| 69                                   |              | 69   |
| 68                                   |              | 68   |
| 67                                   |              | 67   |
| 66                                   | Satisfactory | 66   |
| 65                                   |              | 65   |
| 64                                   |              | 64   |
| 63                                   |              | 63   |
| 62                                   |              | 62   |
| 61                                   |              | 61   |
|                                      |              |  |
| 60 and below                         |              | 0  |

## **J.6 WAGE DETERMINATION**

Standard Form 98E  
Notice of Intention to Make a Service Contract and Response to Notice

Standard Form 98A  
Notice of Intention to Make a Service Contract and Response to Notice (Attachment A)

Register of Wage Determinations Under the Service Contract Act  
Wage Determination No: 2005-2516  
Revision No.: 13  
Date of Revision: 06/15/2010  
State: Texas

Register of Wage Determinations Under the Service Contract Act  
Wage Determination No: 2005-2512  
Revision No.: 13  
Date of Revision: 06/21/2010  
State: New Mexico

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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                      Division of  
Director                                      Wage Determinations

Wage Determination No.: 2005-2516  
Revision No.: 13  
Date Of Revision: 06/15/2010

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

\*\*Fringe Benefits Required Follow the Occupational Listing\*\*

| OCCUPATION CODE - TITLE                                 | FOOTNOTE | RATE  |
|---|----------|-------|
| 01000 - Administrative Support And Clerical Occupations |          |       |
| 01011 - Accounting Clerk I                              |          | 14.98 |
| 01012 - Accounting Clerk II                             |          | 16.82 |
| 01013 - Accounting Clerk III                            |          | 18.82 |
| 01020 - Administrative Assistant                        |          | 25.91 |
| 01040 - Court Reporter                                  |          | 21.79 |
| 01051 - Data Entry Operator I                           |          | 13.24 |
| 01052 - Data Entry Operator II                          |          | 14.45 |
| 01060 - Dispatcher, Motor Vehicle                       |          | 15.96 |
| 01070 - Document Preparation Clerk                      |          | 13.41 |
| 01090 - Duplicating Machine Operator                    |          | 13.41 |
| 01111 - General Clerk I                                 |          | 11.88 |
| 01112 - General Clerk II                                |          | 13.27 |
| 01113 - General Clerk III                               |          | 14.90 |
| 01120 - Housing Referral Assistant                      |          | 20.69 |
| 01141 - Messenger Courier                               |          | 12.55 |
| 01191 - Order Clerk I                                   |          | 13.52 |
| 01192 - Order Clerk II                                  |          | 15.24 |
| 01261 - Personnel Assistant (Employment) I              |          | 15.43 |
| 01262 - Personnel Assistant (Employment) II             |          | 17.27 |
| 01263 - Personnel Assistant (Employment) III            |          | 19.25 |
| 01270 - Production Control Clerk                        |          | 19.10 |
| 01280 - Receptionist                                    |          | 12.02 |
| 01290 - Rental Clerk                                    |          | 14.75 |
| 01300 - Scheduler, Maintenance                          |          | 16.59 |
| 01311 - Secretary I                                     |          | 16.59 |
| 01312 - Secretary II                                    |          | 18.57 |
| 01313 - Secretary III                                   |          | 20.69 |
| 01320 - Service Order Dispatcher                        |          | 15.16 |
| 01410 - Supply Technician                               |          | 25.91 |
| 01420 - Survey Worker                                   |          | 17.79 |
| 01531 - Travel Clerk I                                  |          | 13.71 |
| 01532 - Travel Clerk II                                 |          | 14.81 |
| 01533 - Travel Clerk III                                |          | 15.83 |
| 01611 - Word Processor I                                |          | 14.29 |
| 01612 - Word Processor II                               |          | 16.04 |
| 01613 - Word Processor III                              |          | 17.95 |
| 05000 - Automotive Service Occupations                  |          |       |
| 05005 - Automobile Body Repairer, Fiberglass            |          | 25.76 |
| 05010 - Automotive Electrician                          |          | 23.79 |
| 05040 - Automotive Glass Installer                      |          | 21.96 |

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|  |       |
|--|-------|
| 05070 - Automotive Worker                            | 21.96 |
| 05110 - Mobile Equipment Servicer                    | 20.23 |
| 05130 - Motor Equipment Metal Mechanic               | 25.76 |
| 05160 - Motor Equipment Metal Worker                 | 21.96 |
| 05190 - Motor Vehicle Mechanic                       | 25.76 |
| 05220 - Motor Vehicle Mechanic Helper                | 19.40 |
| 05250 - Motor Vehicle Upholstery Worker              | 20.83 |
| 05280 - Motor Vehicle wrecker                        | 21.96 |
| 05310 - Painter, Automotive                          | 23.79 |
| 05340 - Radiator Repair Specialist                   | 22.88 |
| 05370 - Tire Repairer                                | 14.40 |
| 05400 - Transmission Repair Specialist               | 25.76 |
| 07000 - Food Preparation And Service Occupations     |       |
| 07010 - Baker  | 10.06 |
| 07041 - Cook I                                       | 9.52  |
| 07042 - Cook II                                      | 10.88 |
| 07070 - Dishwasher                                   | 8.11  |
| 07130 - Food Service Worker                          | 9.12  |
| 07210 - Meat Cutter                                  | 12.91 |
| 07260 - Waiter/waitress                              | 8.19  |
| 09000 - Furniture Maintenance And Repair Occupations |       |
| 09010 - Electrostatic Spray Painter                  | 18.32 |
| 09040 - Furniture Handler                            | 11.95 |
| 09080 - Furniture Refinisher                         | 17.70 |
| 09090 - Furniture Refinisher Helper                  | 14.58 |
| 09110 - Furniture Repairer, Minor                    | 16.82 |
| 09130 - Upholsterer                                  | 18.32 |
| 11000 - General Services And Support Occupations     |       |
| 11030 - Cleaner, Vehicles                            | 9.90  |
| 11060 - Elevator Operator                            | 8.82  |
| 11090 - Gardener                                     | 14.52 |
| 11122 - Housekeeping Aide                            | 8.84  |
| 11150 - Janitor                                      | 8.84  |
| 11210 - Laborer, Grounds Maintenance                 | 10.93 |
| 11240 - Maid or Houseman                             | 7.96  |
| 11260 - Pruner                                       | 9.25  |
| 11270 - Tractor Operator                             | 12.82 |
| 11330 - Trail Maintenance Worker                     | 10.93 |
| 11360 - Window Cleaner                               | 9.81  |
| 12000 - Health Occupations                           |       |
| 12010 - Ambulance Driver                             | 15.00 |
| 12011 - Breath Alcohol Technician                    | 15.64 |
| 12012 - Certified Occupational Therapist Assistant   | 23.69 |
| 12015 - Certified Physical Therapist Assistant       | 24.52 |
| 12020 - Dental Assistant                             | 15.64 |
| 12025 - Dental Hygienist                             | 32.93 |
| 12030 - EKG Technician                               | 25.92 |
| 12035 - Electroneurodiagnostic Technologist          | 25.92 |
| 12040 - Emergency Medical Technician                 | 15.00 |
| 12071 - Licensed Practical Nurse I                   | 19.05 |
| 12072 - Licensed Practical Nurse II                  | 21.32 |
| 12073 - Licensed Practical Nurse III                 | 23.76 |
| 12100 - Medical Assistant                            | 12.50 |
| 12130 - Medical Laboratory Technician                | 16.63 |
| 12160 - Medical Record Clerk                         | 14.53 |
| 12190 - Medical Record Technician                    | 16.57 |
| 12195 - Medical Transcriptionist                     | 16.81 |
| 12210 - Nuclear Medicine Technologist                | 35.13 |
| 12221 - Nursing Assistant I                          | 8.57  |
| 12222 - Nursing Assistant II                         | 10.36 |
| 12223 - Nursing Assistant III                        | 11.31 |
| 12224 - Nursing Assistant IV                         | 12.69 |
| 12235 - Optical Dispenser                            | 16.79 |

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| 12236 - Optical Technician                                      |         | 15.29 |
| 12250 - Pharmacy Technician                                     |         | 19.18 |
| 12280 - Phlebotomist  |         | 13.30 |
| 12305 - Radiologic Technologist                                 |         | 26.70 |
| 12311 - Registered Nurse I                                      |         | 30.36 |
| 12312 - Registered Nurse II                                     |         | 38.37 |
| 12313 - Registered Nurse II, Specialist                         |         | 38.37 |
| 12314 - Registered Nurse III                                    |         | 44.91 |
| 12315 - Registered Nurse III, Anesthetist                       |         | 44.91 |
| 12316 - Registered Nurse IV                                     |         | 53.84 |
| 12317 - Scheduler (Drug and Alcohol Testing)                    |         | 21.85 |
| 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   |         | 19.30 |
| 13042 - Illustrator II  |         | 23.91 |
| 13043 - Illustrator III   |         | 30.12 |
| 13047 - Librarian   |         | 26.69 |
| 13050 - Library Aide/Clerk                                      |         | 10.84 |
| 13054 - Library Information Technology Systems Administrator    |         | 24.09 |
| 13058 - Library Technician                                      |         | 16.04 |
| 13061 - Media Specialist I                                      |         | 17.39 |
| 13062 - Media Specialist II                                     |         | 19.46 |
| 13063 - Media Specialist III                                    |         | 21.68 |
| 13071 - Photographer I  |         | 15.32 |
| 13072 - Photographer II   |         | 18.15 |
| 13073 - Photographer III  |         | 22.56 |
| 13074 - Photographer IV   |         | 27.49 |
| 13075 - Photographer V  |         | 33.07 |
| 13110 - Video Teleconference Technician                         |         | 16.73 |
| 14000 - Information Technology Occupations                      |         |       |
| 14041 - Computer Operator I                                     |         | 17.31 |
| 14042 - Computer Operator II                                    |         | 19.37 |
| 14043 - Computer Operator III                                   |         | 21.59 |
| 14044 - Computer Operator IV                                    |         | 24.00 |
| 14045 - Computer Operator V                                     |         | 26.57 |
| 14071 - Computer Programmer I                                   | (see 1) | 26.04 |
| 14072 - Computer Programmer II                                  | (see 1) |       |
| 14073 - Computer Programmer III                                 | (see 1) |       |
| 14074 - Computer Programmer IV                                  | (see 1) |       |
| 14101 - Computer Systems Analyst I                              | (see 1) |       |
| 14102 - Computer Systems Analyst II                             | (see 1) |       |
| 14103 - Computer Systems Analyst III                            | (see 1) |       |
| 14150 - Peripheral Equipment Operator                           |         | 17.31 |
| 14160 - Personal Computer Support Technician                    |         | 24.00 |
| 15000 - Instructional Occupations                               |         |       |
| 15010 - Aircrew Training Devices Instructor (Non-Rated)         |         | 33.08 |
| 15020 - Aircrew Training Devices Instructor (Rated)             |         | 40.02 |
| 15030 - Air Crew Training Devices Instructor (Pilot)            |         | 47.98 |
| 15050 - Computer Based Training Specialist / Instructor         |         | 33.08 |
| 15060 - Educational Technologist                                |         | 29.23 |
| 15070 - Flight Instructor (Pilot)                               |         | 47.98 |
| 15080 - Graphic Artist  |         | 26.72 |
| 15090 - Technical Instructor                                    |         | 22.43 |
| 15095 - Technical Instructor/Course Developer                   |         | 27.43 |
| 15110 - Test Proctor  |         | 18.43 |
| 15120 - Tutor   |         | 18.43 |
| 16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations |         |       |
| 16010 - Assembler   |         | 9.40  |
| 16030 - Counter Attendant                                       |         | 9.40  |
| 16040 - Dry Cleaner   |         | 12.06 |

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| 16070 | - Finisher, Flatwork, Machine   | 9.40           |
| 16090 | - Presser, Hand   | 9.40           |
| 16110 | - Presser, Machine, Drycleaning   | 9.40           |
| 16130 | - Presser, Machine, Shirts  | 9.40           |
| 16160 | - Presser, Machine, Wearing Apparel, Laundry                              | 9.40           |
| 16190 | - Sewing Machine Operator   | 12.79          |
| 16220 | - Tailor  | 13.75          |
| 16250 | - Washer, Machine   | 10.32          |
| 19000 | - Machine Tool Operation And Repair Occupations                           |                |
| 19010 | - Machine-Tool Operator (Tool Room)                                       | 19.71          |
| 19040 | - Tool And Die Maker  | 23.23          |
| 21000 | - Materials Handling And Packing Occupations                              |                |
| 21020 | - Forklift Operator   | 13.25          |
| 21030 | - Material Coordinator  | 19.46          |
| 21040 | - Material Expediter  | 19.46          |
| 21050 | - Material Handling Laborer   | 12.26          |
| 21071 | - Order Filler  | 11.47          |
| 21080 | - Production Line worker (Food Processing)                                | 13.25          |
| 21110 | - Shipping Packer   | 14.60          |
| 21130 | - Shipping/Receiving Clerk  | 14.60          |
| 21140 | - Store Worker I  | 11.34          |
| 21150 | - Stock Clerk   | 16.06          |
| 21210 | - Tools And Parts Attendant   | 13.58          |
| 21410 | - Warehouse Specialist  | 13.25          |
| 23000 | - Mechanics And Maintenance And Repair Occupations                        |                |
| 23010 | - Aerospace Structural Welder   | 29.47          |
| 23021 | - Aircraft Mechanic I   | 28.07          |
| 23022 | - Aircraft Mechanic II  | 29.47          |
| 23023 | - Aircraft Mechanic III   | 30.94          |
| 23040 | - Aircraft Mechanic Helper  | 21.98          |
| 23050 | - Aircraft, Painter   | 25.61          |
| 23060 | - Aircraft Servicer   | 24.44          |
| 23080 | - Aircraft Worker   | 25.76          |
| 23110 | - Appliance Mechanic  | 18.61          |
| 23120 | - Bicycle Repairer  | 13.91          |
| 23125 | - Cable Splicer   | 25.34          |
| 23130 | - Carpenter, Maintenance  | 19.71          |
| 23140 | - Carpet Layer  | 18.45          |
| 23160 | - Electrician, Maintenance  | 26.51          |
| 23181 | - Electronics Technician Maintenance I                                    | 21.28          |
| 23182 | - Electronics Technician Maintenance II                                   | 23.89          |
| 23183 | - Electronics Technician Maintenance III                                  | 25.10          |
| 23260 | - Fabric Worker   | 17.17          |
| 23290 | - Fire Alarm System Mechanic  | 19.95          |
| 23310 | - Fire Extinguisher Repairer  | 15.88          |
| 23311 | - Fuel Distribution System Mechanic                                       | 20.96          |
| 23312 | - Fuel Distribution System Operator                                       | 16.33          |
| 23370 | - General Maintenance Worker  | 18.08          |
| 23380 | - Ground Support Equipment Mechanic                                       | 28.07          |
| 23381 | - Ground Support Equipment Servicer                                       | 24.44          |
| 23382 | - Ground Support Equipment Worker   | 25.76          |
| 23391 | - Gunsmith I  | 15.88          |
| 23392 | - Gunsmith II   | 18.45          |
| 23393 | - Gunsmith III  | 20.81          |
| 23410 | - Heating, Ventilation And Air-Conditioning Mechanic                      | 21.04          |
| 23411 | - Heating, Ventilation And Air Contditioning Mechanic (Research Facility) | 21.95          |
| 23430 | - Heavy Equipment Mechanic  | 19.79          |
| 23440 | - Heavy Equipment Operator  | 19.26          |
| 23460 | - Instrument Mechanic   | 25.87          |
| 23465 | - Laboratory/Shelter Mechanic   | 19.71          |
| 23470 | - Laborer   | 11.04          |

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| 23510 - Locksmith   | 18.99 |
| 23530 - Machinery Maintenance Mechanic                    | 24.33 |
| 23550 - Machinist, Maintenance                            | 20.81 |
| 23580 - Maintenance Trades Helper                         | 14.94 |
| 23591 - Metrology Technician I                            | 25.87 |
| 23592 - Metrology Technician II                           | 26.99 |
| 23593 - Metrology Technician III                          | 28.14 |
| 23640 - Millwright  | 21.53 |
| 23710 - Office Appliance Repairer                         | 18.99 |
| 23760 - Painter, Maintenance                              | 18.99 |
| 23790 - Pipefitter, Maintenance                           | 21.38 |
| 23810 - Plumber, Maintenance                              | 20.88 |
| 23820 - Pneudraulic Systems Mechanic                      | 20.81 |
| 23850 - Rigger  | 20.81 |
| 23870 - Scale Mechanic                                    | 18.45 |
| 23890 - Sheet-Metal Worker, Maintenance                   | 19.95 |
| 23910 - Small Engine Mechanic                             | 18.08 |
| 23931 - Telecommunications Mechanic I                     | 23.89 |
| 23932 - Telecommunications Mechanic II                    | 24.95 |
| 23950 - Telephone Lineman                                 | 25.52 |
| 23960 - Welder, Combination, Maintenance                  | 20.27 |
| 23965 - Well Driller                                      | 20.81 |
| 23970 - Woodcraft Worker                                  | 20.81 |
| 23980 - Woodworker  | 15.04 |
| 24000 - Personal Needs Occupations                        |       |
| 24570 - Child Care Attendant                              | 10.65 |
| 24580 - Child Care Center Clerk                           | 13.27 |
| 24610 - Chore Aide  | 7.35  |
| 24620 - Family Readiness And Support Services Coordinator | 13.83 |
| 24630 - Homemaker   | 16.84 |
| 25000 - Plant And System Operations Occupations           |       |
| 25010 - Boiler Tender                                     | 22.20 |
| 25040 - Sewage Plant Operator                             | 18.70 |
| 25070 - Stationary Engineer                               | 22.20 |
| 25190 - Ventilation Equipment Tender                      | 14.58 |
| 25210 - Water Treatment Plant Operator                    | 18.32 |
| 27000 - Protective Service Occupations                    |       |
| 27004 - Alarm Monitor                                     | 16.14 |
| 27007 - Baggage Inspector                                 | 11.56 |
| 27008 - Corrections Officer                               | 19.62 |
| 27010 - Court Security Officer                            | 21.18 |
| 27030 - Detection Dog Handler                             | 17.90 |
| 27040 - Detention Officer                                 | 19.62 |
| 27070 - Firefighter                                       | 20.41 |
| 27101 - Guard I   | 11.56 |
| 27102 - Guard II  | 17.90 |
| 27131 - Police Officer I                                  | 24.19 |
| 27132 - Police Officer II                                 | 26.88 |
| 28000 - Recreation Occupations                            |       |
| 28041 - Carnival Equipment Operator                       | 11.63 |
| 28042 - Carnival Equipment Repairer                       | 12.36 |
| 28043 - Carnival Equipment Worker                         | 8.51  |
| 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                            | 17.44 |
| 29000 - Stevedoring/Longshoremen Occupational Services    |       |
| 29010 - Blocker And Bracer                                | 20.12 |
| 29020 - Hatch Tender                                      | 20.12 |

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| 29030 | - Line Handler   |                | 20.12 |
| 29041 | - Stevedore I  |                | 18.72 |
| 29042 | - Stevedore II   |                | 21.50 |
| 30000 | - Technical Occupations  |                |       |
| 30010 | - Air Traffic Control Specialist, Center (HFO) (see 2)             |                | 40.33 |
| 30011 | - Air Traffic Control Specialist, Station (HFO) (see 2)            |                | 27.81 |
| 30012 | - Air Traffic Control Specialist, Terminal (HFO) (see 2)           |                | 30.63 |
| 30021 | - Archeological Technician I                                       |                | 21.56 |
| 30022 | - Archeological Technician II                                      |                | 25.47 |
| 30023 | - Archeological Technician III                                     |                | 30.62 |
| 30030 | - Cartographic Technician  |                | 30.62 |
| 30040 | - Civil Engineering Technician                                     |                | 30.03 |
| 30061 | - Drafter/CAD Operator I   |                | 21.56 |
| 30062 | - Drafter/CAD Operator II  |                | 24.71 |
| 30063 | - Drafter/CAD Operator III   |                | 27.56 |
| 30064 | - Drafter/CAD Operator IV  |                | 33.10 |
| 30081 | - Engineering Technician I   |                | 20.02 |
| 30082 | - Engineering Technician II  |                | 22.48 |
| 30083 | - Engineering Technician III                                       |                | 25.15 |
| 30084 | - Engineering Technician IV  |                | 31.09 |
| 30085 | - Engineering Technician V   |                | 38.65 |
| 30086 | - Engineering Technician VI  |                | 46.10 |
| 30090 | - Environmental Technician   |                | 29.96 |
| 30210 | - Laboratory Technician  |                | 23.56 |
| 30240 | - Mathematical Technician  |                | 30.62 |
| 30361 | - Paralegal/Legal Assistant I                                      |                | 22.52 |
| 30362 | - Paralegal/Legal Assistant II                                     |                | 27.90 |
| 30363 | - Paralegal/Legal Assistant III                                    |                | 34.12 |
| 30364 | - Paralegal/Legal Assistant IV                                     |                | 41.27 |
| 30390 | - Photo-Optics Technician  |                | 30.62 |
| 30461 | - Technical Writer I   |                | 23.21 |
| 30462 | - Technical Writer II  |                | 28.38 |
| 30463 | - Technical Writer III   |                | 34.93 |
| 30491 | - Unexploded Ordnance (UXO) Technician I                           |                | 25.63 |
| 30492 | - Unexploded Ordnance (UXO) Technician II                          |                | 31.01 |
| 30493 | - Unexploded Ordnance (UXO) Technician III                         |                | 37.17 |
| 30494 | - Unexploded (UXO) Safety Escort                                   |                | 25.63 |
| 30495 | - Unexploded (UXO) Sweep Personnel                                 |                | 25.63 |
| 30620 | - Weather Observer, Combined Upper Air or Surface Programs (see 2) |                | 26.35 |
| 30621 | - Weather Observer, Senior (see 2)                                 |                | 30.48 |
| 31000 | - Transportation/Mobile Equipment Operation Occupations            |                |       |
| 31020 | - Bus Aide   |                | 11.88 |
| 31030 | - Bus Driver   |                | 17.06 |
| 31043 | - Driver Courier   |                | 14.03 |
| 31260 | - Parking and Lot Attendant  |                | 9.17  |
| 31290 | - Shuttle Bus Driver   |                | 15.28 |
| 31310 | - Taxi Driver  |                | 11.54 |
| 31361 | - Truckdriver, Light   |                | 15.28 |
| 31362 | - Truckdriver, Medium  |                | 18.98 |
| 31363 | - Truckdriver, Heavy   |                | 20.32 |
| 31364 | - Truckdriver, Tractor-Trailer                                     |                | 20.32 |
| 99000 | - Miscellaneous Occupations  |                |       |
| 99030 | - Cashier  |                | 10.01 |
| 99050 | - Desk Clerk   |                | 11.72 |
| 99095 | - Embalmer   |                | 23.71 |
| 99251 | - Laboratory Animal Caretaker I                                    |                | 9.83  |
| 99252 | - Laboratory Animal Caretaker II                                   |                | 10.71 |
| 99310 | - Mortician  |                | 26.44 |
| 99410 | - Pest Controller  |                | 15.80 |
| 99510 | - Photofinishing Worker  |                | 12.62 |
| 99710 | - Recycling Laborer  |                | 16.46 |
| 99711 | - Recycling Specialist   |                | 20.06 |

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| 99730 - Refuse Collector                |                | 14.67 |
| 99810 - Sales Clerk                     |                | 12.66 |
| 99820 - School Crossing Guard           |                | 10.96 |
| 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 |

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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 \$3.50 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 NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) **COMPUTER EMPLOYEES:** 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;

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(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 ordnance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, 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 ordnance, (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 ordnance, 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 ordnance, 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,

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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 link 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

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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.

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WD 05-2512 (Rev.-13) was first posted on www.wdol.gov on 06/29/2010

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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                      Division of  
Director                                      Wage Determinations

Wage Determination No.: 2005-2512  
Revision No.: 13  
Date Of Revision: 06/21/2010

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                                 | FOOTNOTE | RATE  |
|---|----------|-------|
| 01000 - Administrative Support And Clerical Occupations |          |       |
| 01011 - Accounting Clerk I                              |          | 12.78 |
| 01012 - Accounting Clerk II                             |          | 14.46 |
| 01013 - Accounting Clerk III                            |          | 16.18 |
| 01020 - Administrative Assistant                        |          | 17.66 |
| 01040 - Court Reporter                                  |          | 15.70 |
| 01051 - Data Entry Operator I                           |          | 9.57  |
| 01052 - Data Entry Operator II                          |          | 10.56 |
| 01060 - Dispatcher, Motor Vehicle                       |          | 13.41 |
| 01070 - Document Preparation Clerk                      |          | 11.19 |
| 01090 - Duplicating Machine Operator                    |          | 11.19 |
| 01111 - General Clerk I                                 |          | 9.61  |
| 01112 - General Clerk II                                |          | 10.49 |
| 01113 - General Clerk III                               |          | 11.77 |
| 01120 - Housing Referral Assistant                      |          | 14.98 |
| 01141 - Messenger Courier                               |          | 8.76  |
| 01191 - Order Clerk I                                   |          | 10.48 |
| 01192 - Order Clerk II                                  |          | 11.44 |
| 01261 - Personnel Assistant (Employment) I              |          | 12.80 |
| 01262 - Personnel Assistant (Employment) II             |          | 14.44 |
| 01263 - Personnel Assistant (Employment) III            |          | 15.99 |
| 01270 - Production Control Clerk                        |          | 16.69 |
| 01280 - Receptionist                                    |          | 9.47  |
| 01290 - Rental Clerk                                    |          | 10.50 |
| 01300 - Scheduler, Maintenance                          |          | 12.00 |
| 01311 - Secretary I                                     |          | 12.01 |
| 01312 - Secretary II                                    |          | 13.43 |
| 01313 - Secretary III                                   |          | 14.98 |
| 01320 - Service Order Dispatcher                        |          | 11.77 |
| 01410 - Supply Technician                               |          | 17.23 |
| 01420 - Survey Worker                                   |          | 13.70 |
| 01531 - Travel Clerk I                                  |          | 11.16 |
| 01532 - Travel Clerk II                                 |          | 12.20 |
| 01533 - Travel Clerk III                                |          | 13.00 |
| 01611 - Word Processor I                                |          | 12.87 |
| 01612 - Word Processor II                               |          | 14.45 |
| 01613 - Word Processor III                              |          | 16.16 |
| 05000 - Automotive Service Occupations                  |          |       |
| 05005 - Automobile Body Repairer, Fiberglass            |          | 16.41 |
| 05010 - Automotive Electrician                          |          | 15.40 |
| 05040 - Automotive Glass Installer                      |          | 14.37 |
| 05070 - Automotive Worker                               |          | 14.37 |

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|-------|--|----------------|
| 05110 | - Mobile Equipment Servicer                    | 12.32          |
| 05130 | - Motor Equipment Metal Mechanic               | 16.41          |
| 05160 | - Motor Equipment Metal Worker                 | 14.37          |
| 05190 | - Motor Vehicle Mechanic                       | 17.31          |
| 05220 | - Motor Vehicle Mechanic Helper                | 11.29          |
| 05250 | - Motor Vehicle Upholstery Worker              | 13.34          |
| 05280 | - Motor Vehicle wrecker                        | 14.37          |
| 05310 | - Painter, Automotive                          | 15.40          |
| 05340 | - Radiator Repair Specialist                   | 14.37          |
| 05370 | - Tire Repairer                                | 11.33          |
| 05400 | - Transmission Repair Specialist               | 16.41          |
| 07000 | - Food Preparation And Service Occupations     |                |
| 07010 | - Baker  | 10.51          |
| 07041 | - Cook I                                       | 9.61           |
| 07042 | - Cook II                                      | 11.41          |
| 07070 | - Dishwasher                                   | 7.37           |
| 07130 | - Food Service Worker                          | 8.06           |
| 07210 | - Meat Cutter                                  | 11.04          |
| 07260 | - Waiter/Waitress                              | 7.30           |
| 09000 | - Furniture Maintenance And Repair Occupations |                |
| 09010 | - Electrostatic Spray Painter                  | 15.73          |
| 09040 | - Furniture Handler                            | 8.80           |
| 09080 | - Furniture Refinisher                         | 15.73          |
| 09090 | - Furniture Refinisher Helper                  | 11.05          |
| 09110 | - Furniture Repairer, Minor                    | 13.15          |
| 09130 | - Upholsterer                                  | 15.73          |
| 11000 | - General Services And Support Occupations     |                |
| 11030 | - Cleaner, Vehicles                            | 8.07           |
| 11060 | - Elevator Operator                            | 8.07           |
| 11090 | - Gardener                                     | 12.04          |
| 11122 | - Housekeeping Aide                            | 9.02           |
| 11150 | - Janitor                                      | 9.02           |
| 11210 | - Laborer, Grounds Maintenance                 | 9.02           |
| 11240 | - Maid or Houseman                             | 7.74           |
| 11260 | - Pruner                                       | 7.79           |
| 11270 | - Tractor Operator                             | 11.51          |
| 11330 | - Trail Maintenance Worker                     | 9.02           |
| 11360 | - Window Cleaner                               | 10.45          |
| 12000 | - Health Occupations                           |                |
| 12010 | - Ambulance Driver                             | 12.83          |
| 12011 | - Breath Alcohol Technician                    | 14.94          |
| 12012 | - Certified Occupational Therapist Assistant   | 22.21          |
| 12015 | - Certified Physical Therapist Assistant       | 21.09          |
| 12020 | - Dental Assistant                             | 12.61          |
| 12025 | - Dental Hygienist                             | 27.43          |
| 12030 | - EKG Technician                               | 25.42          |
| 12035 | - Electroneurodiagnostic Technologist          | 25.42          |
| 12040 | - Emergency Medical Technician                 | 12.83          |
| 12071 | - Licensed Practical Nurse I                   | 16.95          |
| 12072 | - Licensed Practical Nurse II                  | 18.96          |
| 12073 | - Licensed Practical Nurse III                 | 21.15          |
| 12100 | - Medical Assistant                            | 10.86          |
| 12130 | - Medical Laboratory Technician                | 13.77          |
| 12160 | - Medical Record Clerk                         | 13.27          |
| 12190 | - Medical Record Technician                    | 14.84          |
| 12195 | - Medical Transcriptionist                     | 14.31          |
| 12210 | - Nuclear Medicine Technologist                | 33.37          |
| 12221 | - Nursing Assistant I                          | 9.26           |
| 12222 | - Nursing Assistant II                         | 10.41          |
| 12223 | - Nursing Assistant III                        | 11.36          |
| 12224 | - Nursing Assistant IV                         | 12.75          |
| 12235 | - Optical Dispenser                            | 11.21          |
| 12236 | - Optical Technician                           | 9.30           |

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|-------|---|----------------|-------|
| 12250 | - Pharmacy Technician                                     |                | 13.41 |
| 12280 | - Phlebotomist  |                | 13.52 |
| 12305 | - Radiologic Technologist                                 |                | 23.81 |
| 12311 | - Registered Nurse I                                      |                | 23.99 |
| 12312 | - Registered Nurse II                                     |                | 28.64 |
| 12313 | - Registered Nurse II, Specialist                         |                | 28.64 |
| 12314 | - Registered Nurse III                                    |                | 34.65 |
| 12315 | - Registered Nurse III, Anesthetist                       |                | 34.65 |
| 12316 | - Registered Nurse IV                                     |                | 41.55 |
| 12317 | - Scheduler (Drug and Alcohol Testing)                    |                | 21.37 |
| 13000 | - Information And Arts Occupations                        |                |       |
| 13011 | - Exhibits Specialist I                                   |                | 19.15 |
| 13012 | - Exhibits Specialist II                                  |                | 23.08 |
| 13013 | - Exhibits Specialist III                                 |                | 27.03 |
| 13041 | - Illustrator I   |                | 19.15 |
| 13042 | - Illustrator II  |                | 23.08 |
| 13043 | - Illustrator III   |                | 27.03 |
| 13047 | - Librarian   |                | 24.46 |
| 13050 | - Library Aide/Clerk                                      |                | 11.49 |
| 13054 | - Library Information Technology Systems Administrator    |                | 22.09 |
| 13058 | - Library Technician                                      |                | 17.24 |
| 13061 | - Media Specialist I                                      |                | 15.83 |
| 13062 | - Media Specialist II                                     |                | 17.83 |
| 13063 | - Media Specialist III                                    |                | 19.88 |
| 13071 | - Photographer I  |                | 12.93 |
| 13072 | - Photographer II   |                | 16.45 |
| 13073 | - Photographer III  |                | 20.57 |
| 13074 | - Photographer IV   |                | 24.45 |
| 13075 | - Photographer V  |                | 27.88 |
| 13110 | - Video Teleconference Technician                         |                | 14.70 |
| 14000 | - Information Technology Occupations                      |                |       |
| 14041 | - Computer Operator I                                     |                | 13.67 |
| 14042 | - Computer Operator II                                    |                | 15.46 |
| 14043 | - Computer Operator III                                   |                | 17.25 |
| 14044 | - Computer Operator IV                                    |                | 19.17 |
| 14045 | - Computer Operator V                                     |                | 21.22 |
| 14071 | - Computer Programmer I                                   | (see 1)        | 21.43 |
| 14072 | - Computer Programmer II                                  | (see 1)        | 26.56 |
| 14073 | - Computer Programmer III                                 | (see 1)        |       |
| 14074 | - Computer Programmer IV                                  | (see 1)        |       |
| 14101 | - Computer Systems Analyst I                              | (see 1)        |       |
| 14102 | - Computer Systems Analyst II                             | (see 1)        |       |
| 14103 | - Computer Systems Analyst III                            | (see 1)        |       |
| 14150 | - Peripheral Equipment Operator                           |                | 13.67 |
| 14160 | - Personal Computer Support Technician                    |                | 22.41 |
| 15000 | - Instructional Occupations                               |                |       |
| 15010 | - Aircrew Training Devices Instructor (Non-Rated)         |                | 26.13 |
| 15020 | - Aircrew Training Devices Instructor (Rated)             |                | 32.14 |
| 15030 | - Air Crew Training Devices Instructor (Pilot)            |                | 37.89 |
| 15050 | - Computer Based Training Specialist / Instructor         |                | 26.13 |
| 15060 | - Educational Technologist                                |                | 32.13 |
| 15070 | - Flight Instructor (Pilot)                               |                | 37.89 |
| 15080 | - Graphic Artist  |                | 19.52 |
| 15090 | - Technical Instructor                                    |                | 18.06 |
| 15095 | - Technical Instructor/Course Developer                   |                | 22.09 |
| 15110 | - Test Proctor  |                | 14.58 |
| 15120 | - Tutor   |                | 14.58 |
| 16000 | - Laundry, Dry-Cleaning, Pressing And Related Occupations |                |       |
| 16010 | - Assembler   |                | 7.64  |
| 16030 | - Counter Attendant                                       |                | 7.64  |
| 16040 | - Dry Cleaner   |                | 9.31  |
| 16070 | - Finisher, Flatwork, Machine                             |                | 7.64  |

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| 16090 - Presser, Hand  |  | 7.64  |
| 16110 - Presser, Machine, Drycleaning  |  | 7.64  |
| 16130 - Presser, Machine, Shirts   |  | 7.64  |
| 16160 - Presser, Machine, Wearing Apparel, Laundry                                 |  | 7.64  |
| 16190 - Sewing Machine Operator  |  | 9.84  |
| 16220 - Tailor   |  | 10.41 |
| 16250 - Washer, Machine  |  | 8.19  |
| 19000 - Machine Tool Operation And Repair Occupations                              |  | 15.73 |
| 19010 - Machine-Tool Operator (Tool Room)  |  | 20.26 |
| 19040 - Tool And Die Maker   |  |       |
| 21000 - Materials Handling And Packing Occupations                                 |  | 10.91 |
| 21020 - Forklift Operator  |  | 16.69 |
| 21030 - Material Coordinator   |  | 16.69 |
| 21040 - Material Expediter   |  | 9.14  |
| 21050 - Material Handling Laborer  |  | 10.49 |
| 21071 - Order Filler   |  | 10.91 |
| 21080 - Production Line Worker (Food Processing)                                   |  | 10.48 |
| 21110 - Shipping Packer  |  | 10.49 |
| 21130 - Shipping/Receiving Clerk   |  | 8.93  |
| 21140 - Store Worker I   |  | 12.82 |
| 21150 - Stock Clerk  |  | 10.91 |
| 21210 - Tools And Parts Attendant  |  | 10.91 |
| 21410 - Warehouse Specialist   |  |       |
| 23000 - Mechanics And Maintenance And Repair Occupations                           |  | 26.14 |
| 23010 - Aerospace Structural welder  |  | 23.82 |
| 23021 - Aircraft Mechanic I  |  | 26.14 |
| 23022 - Aircraft Mechanic II   |  | 27.45 |
| 23023 - Aircraft Mechanic III  |  | 16.39 |
| 23040 - Aircraft Mechanic Helper   |  | 18.67 |
| 23050 - Aircraft, Painter  |  | 19.25 |
| 23060 - Aircraft Servicer  |  | 20.78 |
| 23080 - Aircraft Worker  |  | 16.14 |
| 23110 - Appliance Mechanic   |  | 11.33 |
| 23120 - Bicycle Repairer   |  | 21.87 |
| 23125 - Cable Splicer  |  | 15.73 |
| 23130 - Carpenter, Maintenance   |  | 14.64 |
| 23140 - Carpet Layer   |  | 19.20 |
| 23160 - Electrician, Maintenance   |  | 19.57 |
| 23181 - Electronics Technician Maintenance I                                       |  | 21.02 |
| 23182 - Electronics Technician Maintenance II                                      |  | 22.67 |
| 23183 - Electronics Technician Maintenance III                                     |  | 13.46 |
| 23260 - Fabric Worker  |  | 16.62 |
| 23290 - Fire Alarm System Mechanic   |  | 12.26 |
| 23310 - Fire Extinguisher Repairer   |  | 19.79 |
| 23311 - Fuel Distribution System Mechanic  |  | 15.20 |
| 23312 - Fuel Distribution System Operator  |  | 14.64 |
| 23370 - General Maintenance worker   |  | 23.82 |
| 23380 - Ground Support Equipment Mechanic  |  | 19.25 |
| 23381 - Ground Support Equipment Servicer  |  | 20.78 |
| 23382 - Ground Support Equipment Worker  |  | 12.26 |
| 23391 - Gunsmith I   |  | 14.64 |
| 23392 - Gunsmith II  |  | 16.96 |
| 23393 - Gunsmith III   |  | 16.12 |
| 23410 - Heating, Ventilation And Air-Conditioning<br>Mechanic                      |  | 17.24 |
| 23411 - Heating, Ventilation And Air Contditioning<br>Mechanic (Research Facility) |  | 17.80 |
| 23430 - Heavy Equipment Mechanic   |  | 16.96 |
| 23440 - Heavy Equipment Operator   |  | 18.50 |
| 23460 - Instrument Mechanic  |  | 15.73 |
| 23465 - Laboratory/Shelter Mechanic  |  | 9.14  |
| 23470 - Laborer  |  | 15.73 |
| 23510 - Locksmith  |  |       |

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|---|--|----------------|
| 23530 - Machinery Maintenance Mechanic                    |  | 16.96          |
| 23550 - Machinist, Maintenance                            |  | 16.31          |
| 23580 - Maintenance Trades Helper                         |  | 11.27          |
| 23591 - Metrology Technician I                            |  | 18.50          |
| 23592 - Metrology Technician II                           |  | 19.66          |
| 23593 - Metrology Technician III                          |  | 20.93          |
| 23640 - Millwright  |  | 17.46          |
| 23710 - Office Appliance Repairer                         |  | 15.62          |
| 23760 - Painter, Maintenance                              |  | 16.14          |
| 23790 - Pipefitter, Maintenance                           |  | 17.63          |
| 23810 - Plumber, Maintenance                              |  | 16.55          |
| 23820 - Pneudraulic Systems Mechanic                      |  | 16.96          |
| 23850 - Rigger  |  | 16.96          |
| 23870 - Scale Mechanic                                    |  | 14.64          |
| 23890 - Sheet-Metal Worker, Maintenance                   |  | 16.83          |
| 23910 - Small Engine Mechanic                             |  | 14.64          |
| 23931 - Telecommunications Mechanic I                     |  | 21.99          |
| 23932 - Telecommunications Mechanic II                    |  | 23.51          |
| 23950 - Telephone Lineman                                 |  | 19.48          |
| 23960 - Welder, Combination, Maintenance                  |  | 16.96          |
| 23965 - Well Driller                                      |  | 16.96          |
| 23970 - Woodcraft Worker                                  |  | 16.96          |
| 23980 - Woodworker  |  | 12.26          |
| 24000 - Personal Needs Occupations                        |  |                |
| 24570 - Child Care Attendant                              |  | 8.41           |
| 24580 - Child Care Center Clerk                           |  | 10.49          |
| 24610 - Chore Aide  |  | 8.29           |
| 24620 - Family Readiness And Support Services Coordinator |  | 11.01          |
| 24630 - Homemaker   |  | 12.70          |
| 25000 - Plant And System Operations Occupations           |  |                |
| 25010 - Boiler Tender                                     |  | 19.71          |
| 25040 - Sewage Plant Operator                             |  | 17.19          |
| 25070 - Stationary Engineer                               |  | 18.43          |
| 25190 - Ventilation Equipment Tender                      |  | 12.83          |
| 25210 - Water Treatment Plant Operator                    |  | 17.19          |
| 27000 - Protective Service Occupations                    |  |                |
| 27004 - Alarm Monitor                                     |  | 15.20          |
| 27007 - Baggage Inspector                                 |  | 10.38          |
| 27008 - Corrections Officer                               |  | 18.66          |
| 27010 - Court Security Officer                            |  | 18.66          |
| 27030 - Detection Dog Handler                             |  | 14.84          |
| 27040 - Detention Officer                                 |  | 18.66          |
| 27070 - Firefighter                                       |  | 19.83          |
| 27101 - Guard I   |  | 10.38          |
| 27102 - Guard II  |  | 14.84          |
| 27131 - Police Officer I                                  |  | 21.41          |
| 27132 - Police Officer II                                 |  | 23.78          |
| 28000 - Recreation Occupations                            |  |                |
| 28041 - Carnival Equipment Operator                       |  | 11.64          |
| 28042 - Carnival Equipment Repairer                       |  | 12.69          |
| 28043 - Carnival Equipment Worker                         |  | 8.45           |
| 28210 - Gate Attendant/Gate Tender                        |  | 13.37          |
| 28310 - Lifeguard   |  | 11.90          |
| 28350 - Park Attendant (Aide)                             |  | 14.96          |
| 28510 - Recreation Aide/Health Facility Attendant         |  | 10.92          |
| 28515 - Recreation Specialist                             |  | 14.10          |
| 28630 - Sports Official                                   |  | 11.92          |
| 28690 - Swimming Pool Operator                            |  | 16.36          |
| 29000 - Stevedoring/Longshoremen Occupational Services    |  |                |
| 29010 - Blocker And Bracer                                |  | 17.06          |
| 29020 - Hatch Tender                                      |  | 17.06          |
| 29030 - Line Handler                                      |  | 17.06          |

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|--|-------|
| 29041 - Stevedore I  | 15.68 |
| 29042 - Stevedore II   | 18.98 |
| 30000 - Technical Occupations                                  |       |
| 30010 - Air Traffic Control Specialist, Center (HFO) (see 2)   | 35.77 |
| 30011 - Air Traffic Control Specialist, Station (HFO) (see 2)  | 24.66 |
| 30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2) | 27.16 |
| 30021 - Archeological Technician I                             | 18.13 |
| 30022 - Archeological Technician II                            | 20.27 |
| 30023 - Archeological Technician III                           | 25.11 |
| 30030 - Cartographic Technician                                | 25.12 |
| 30040 - Civil Engineering Technician                           | 19.04 |
| 30061 - Drafter/CAD Operator I                                 | 15.03 |
| 30062 - Drafter/CAD Operator II                                | 16.81 |
| 30063 - Drafter/CAD Operator III                               | 19.99 |
| 30064 - Drafter/CAD Operator IV                                | 26.25 |
| 30081 - Engineering Technician I                               | 15.71 |
| 30082 - Engineering Technician II                              | 17.63 |
| 30083 - Engineering Technician III                             | 20.27 |
| 30084 - Engineering Technician IV                              | 24.96 |
| 30085 - Engineering Technician V                               | 29.90 |
| 30086 - Engineering Technician VI                              | 36.17 |
| 30090 - Environmental Technician                               | 19.33 |
| 30210 - Laboratory Technician                                  | 19.91 |
| 30240 - Mathematical Technician                                | 24.90 |
| 30361 - Paralegal/Legal Assistant I                            | 16.54 |
| 30362 - Paralegal/Legal Assistant II                           | 20.49 |
| 30363 - Paralegal/Legal Assistant III                          | 25.07 |
| 30364 - Paralegal/Legal Assistant IV                           | 30.33 |
| 30390 - Photo-Optics Technician                                | 22.90 |
| 30461 - Technical Writer I                                     | 26.05 |
| 30462 - Technical Writer II                                    | 31.87 |
| 30463 - Technical Writer III                                   | 38.56 |
| 30491 - Unexploded Ordnance (UXO) Technician I                 | 22.74 |
| 30492 - Unexploded Ordnance (UXO) Technician II                | 27.51 |
| 30493 - Unexploded Ordnance (UXO) Technician III               | 32.97 |
| 30494 - Unexploded (UXO) Safety Escort                         | 22.74 |
| 30495 - Unexploded (UXO) Sweep Personnel                       | 22.74 |
| 30620 - Weather Observer, Combined Upper Air Or (see 3)        | 19.99 |
| Surface Programs   |       |
| 30621 - Weather Observer, Senior (see 3)                       | 20.83 |
| 31000 - Transportation/Mobile Equipment Operation Occupations  |       |
| 31020 - Bus Aide   | 9.98  |
| 31030 - Bus Driver   | 15.52 |
| 31043 - Driver Courier   | 11.32 |
| 31260 - Parking and Lot Attendant                              | 7.85  |
| 31290 - Shuttle Bus Driver                                     | 12.39 |
| 31310 - Taxi Driver  | 10.33 |
| 31361 - Truckdriver, Light                                     | 12.39 |
| 31362 - Truckdriver, Medium                                    | 14.19 |
| 31363 - Truckdriver, Heavy                                     | 17.82 |
| 31364 - Truckdriver, Tractor-Trailer                           | 17.82 |
| 99000 - Miscellaneous Occupations                              |       |
| 99030 - Cashier  | 7.93  |
| 99050 - Desk Clerk   | 10.35 |
| 99095 - Embalmer   | 22.74 |
| 99251 - Laboratory Animal Caretaker I                          | 9.70  |
| 99252 - Laboratory Animal Caretaker II                         | 10.76 |
| 99310 - Mortician  | 22.69 |
| 99410 - Pest Controller  | 14.84 |
| 99510 - Photofinishing worker                                  | 11.95 |
| 99710 - Recycling Laborer                                      | 11.26 |
| 99711 - Recycling Specialist                                   | 14.37 |
| 99730 - Refuse Collector                                       | 9.72  |

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|   |       |
|---|-------|
| 99810 - Sales Clerk                     | 10.14 |
| 99820 - School Crossing Guard           | 8.48  |
| 99830 - Survey Party Chief              | 17.09 |
| 99831 - Surveying Aide                  | 11.84 |
| 99832 - Surveying Technician            | 13.97 |
| 99840 - Vending Machine Attendant       | 9.87  |
| 99841 - Vending Machine Repairer        | 12.54 |
| 99842 - Vending Machine Repairer Helper | 9.87  |

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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 \$3.50 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 NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) **COMPUTER EMPLOYEES:** 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

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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 ordnance, explosives, and incendiary materials. This includes work such as screening, blending, dyeing, mixing, and pressing of sensitive ordnance, 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 ordnance, (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 ordnance, 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 ordnance, 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"

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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 link 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.

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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.

**J.7 LISTS OF GOVERNMENT-FURNISHED PROPERTY**

**J.7A GOVERNMENT FURNISHED EQUIPMENT**

**J.7B INSTALLATION PROVIDED PROPERTY**

**J.7C LIST OF NASA PROVIDED ANALYSIS TOOLS**

Contract NNJ06JE86C  
RFP NNJ05106317R

Section J  
Modification 112

ATTACHMENT J.7A LIST OF GOVERNMENT FURNISHED PROPERTY

6. Attachment J.7A List of Government Furnished Property is amended to add the following property:

| Safety and Mission Assurance (S&MA) Support Services Contract<br>Contract No. NNJ06JE86C |         |                        |                          |              |               |          |            |      |  |
|--|---------|------------------------|--------------------------|--------------|---------------|----------|------------|------|--|
| Number   | ECN     | Item Name              | Manufacturer             | Model No.    | Serial No.    | Cost     | Building   | Room |  |
| G210375  | 1913977 | PRINTER, ADP           | HEWLETT-PACKARD          | C3917A       | JKH004434     | \$1,454  | JS-LM3     | 129  |  |
| G210376  | 2081285 | SCANNER, ADP           | FUJITSU AMERICA INC      | M4099D       | 501336        | \$14,300 | JS-LM3     | 140B |  |
| G210377  | 1601884 | CAMERA SYSTEM, DIGITAL | SONY CORP                | MVC-FD88     | 134498        | \$700    | JS-LM3     | 317D |  |
| G210378  | 1849611 | DISPLAY UNIT           | MAGITRONIC               | C-SV2000PS   | T1580638D0017 | \$1,124  | JS-LM3     | 431D |  |
| G210379  | 1996144 | SCANNER, IMAGE         | FUJITSU AMERICA INC      | M4099D       | 612           | \$15,314 | JS-LM3     | 158  |  |
| G210380  | 1617044 | CAMERA SYSTEM, DIGITAL | NIKON CORP               | COOLPIX885   | 3204477       | \$530    | JS-LM3     | 421  |  |
| G210381  | 1919988 | PRINTER, ADP           | HEWLETT-PACKARD          | C4121A       | USEF167471    | \$1,461  | JS-LM3     | 146  |  |
| G210382  | 1855762 | DISPLAY UNIT           | mitsubishi electric corp | TFW9105SKTKW | 705E03473     | \$1,400  | JS-LM3     | 245  |  |
| G210383  | 1914925 | SCANNER, ADP           | FUJITSU LTD              | M3099GX      | 6             | \$19,000 | JS-LM3     | 140B |  |
| G210384  | 1929543 | PRINTER, ADP           | HEWLETT-PACKARD CO       | C4121A       | USEK090195    | \$1,487  | JS-LM3     | 325C |  |
| G210385  | 1618057 | SWITCH, 50 VPN DEVICE  | NETSCREEN TECHNOLOGIES   | NS-050-001   | 1.9112E+14    | \$5,267  | JS-LM3     | 431E |  |
| G310386  | -       | PRINTER, OFFICEJET PRO | HEWLETT-PACKARD          | 1175Cxi      | SGB89AGKK5    | \$995    | Austin, TX |      |  |
| G210387  | -       | ZIP DRIVE              | IOmega                   | Zip 100      | PKAV48H5TB    | \$141    | Austin, TX |      |  |
| G210388  | 2143453 | COMPUTER, LAPTOP       | DELL COMPUTER            | PP05L        | 43307013061   | \$1,949  | Austin, TX |      |  |
| G210389  | Decal   | ISS M MODEL WITH CASE  | JOHNSON ENGINEERING      | N/A          | N/A           | \$3,028  | JS-LM3     | 407E |  |
| G210390  | -       | TELEPHONE HEADSET      | PLANTRONICS              | M12          | N/A           | \$99     | JS-LM3     | 345F |  |
| G210391  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 351F |  |
| G210392  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 149D |  |
| G210393  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 251A |  |
| G210394  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 349E |  |
| G210395  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 305D |  |
| G210396  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 357C |  |
| G210397  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 149H |  |
| G210398  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 349R |  |
| G210399  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 219B |  |
| G210400  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 352A |  |
| G210401  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 349D |  |
| G210402  | -       | TELEPHONE HEADSET      | PLANTRONICS              | S12          | N/A           | \$99     | JS-LM3     | 149E |  |

| Number  | ECN | Item Name         | Manufacturer | Model No. | Serial No. | Cost | Building | Room |
|---------|-----|-------------------|--------------|-----------|------------|------|----------|------|
| G210403 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 347D |
| G210404 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 357B |
| G210405 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 351C |
| G210406 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 151C |
| G210407 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 151A |
| G210408 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 345E |
| G210409 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 151H |
| G210410 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 349C |
| G210411 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 351A |
| G210412 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 345C |
| G210413 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 337B |
| G210414 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 335B |
| G210415 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 309A |
| G210416 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 341B |
| G210417 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 343D |
| G210418 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 343F |
| G210419 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 222B |
| G210420 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 221D |
| G210421 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 114B |
| G210422 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 335A |
| G210423 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 341C |
| G210424 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 222C |
| G210425 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 345B |
| G210426 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 253E |
| G210427 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 253B |
| G210428 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 440B |
| G210429 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 440B |
| G210430 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 440B |
| G210431 | -   | TELEPHONE HEADSET | PLANTRONICS  | S12       | N/A        | \$99 | JS-LM3   | 440B |

ATTACHMENT J.7B LIST OF INSTALLATION PROVIDED PROPERTY

| ECN     | ITEM_NAME                 | MANUFACTURER                     | MODEL         | SERIAL_NUM    | BLDG  | ROOM  | COST      |
|---------|---------------------------|----------------------------------|---------------|---------------|-------|-------|-----------|
| 1354789 | DISPLAY UNIT              | VIEWSONICS INC                   | 2082          | 5442510938    | JS-17 | 2063  | \$ 1,430  |
| 1449770 | COMPUTER, LAPTOP          | DELL COMPUTER<br>CORP F-PC'S LTD | 48432         | 2Q8J25020     | JS-45 | 528   | \$ 4,300  |
| 1455300 | COMPUTER, MICRO           | ADOSEA                           | ADSX20        | AD1054        | JS-36 | 1003A | \$ 1,530  |
| 1455307 | TAPE DRIVE UNIT           | EXABYTE CORP                     | EXB8500ST     | 1609770       | JS-15 | 1002B | \$ 8,248  |
| 1553537 | STORAGE UNIT, ADP         | COMPAQ COMPUTER<br>CORP          | SERIES3092    | D625HNM10763  | JS-46 | 300   | \$ 5,134  |
| 1553539 | SERVER, ADP               | COMPAQ COMPUTER<br>CORP          | PROLIANT4500  | 6539HNV50053  | JS-46 | 300   | \$ 15,371 |
| 1553540 | STORAGE UNIT, ADP         | COMPAQ COMPUTER<br>CORP          | SERIES3092    | D625HNM10749  | JS-46 | 300   | \$ 5,134  |
| 1601884 | CAMERA SYSTEM,<br>DIGITAL | SONY CORP                        | MVC-FD88      | 134498        | JS-45 | 616   | \$ 700    |
| 1846724 | DISPLAY UNIT              | PANASONIC                        | EA21          | FA6630063     | JS-45 | 454   | \$ 1,421  |
| 1848580 | DISPLAY UNIT              | VIEWSONICS INC                   | 1782DC        | 2G70200127    | JS-46 | 300   | \$ 531    |
| 1849611 | DISPLAY UNIT              | MAGITRONIC                       | C-SV2000PS    | T1580638D0017 | JS-17 | 2070  | \$ 1,124  |
| 1855754 | DISPLAY UNIT              | MITSUBISHI<br>ELECTRIC CORP      | TFW9105SKTKW  | 705E04063     | JS-45 | 626   | \$ 1,400  |
| 1913977 | PRINTER, ADP              | HEWLETT-PACKARD<br>CO            | C3917A        | JPKH004434    | JS-45 | 211AB | \$ 1,454  |
| 1913981 | PRINTER, ADP              | HEWLETT-PACKARD<br>CO            | C3917A        | USLC002488    | JS-15 | 2000B | \$ 1,454  |
| 1913984 | PRINTER, ADP              | HEWLETT-PACKARD<br>CO            | C3917A        | JPKH004426    | JS-17 | 204   | \$ 1,454  |
| 1914118 | SERVER, ADP               | COMPAQ COMPUTER<br>CORP          | SERIES4000    | D735HWA10427  | JS-46 | 300   | \$ 6,648  |
| 1929618 | COMPUTER, LAPTOP          | TOSHIBA HOSHASEN<br>CO LTD       | PAS401U       | 29451619A     | JS-45 | 528   | \$ 1,299  |
| 1984694 | DISPLAY UNIT              | COMPAQ COMPUTER<br>CORP          | 630           | 851GC25KC573  | JS-45 | 528   | \$ 1,107  |
| 1984729 | COMPUTER, MICRO           | COMPAQ COMPUTER<br>CORP          | SP700         | D942CMW8K032  | JS-45 | 548   | \$ 3,964  |
| 1986152 | PROCESSOR<br>CENTRAL, ADP | COMPAQ COMPUTER<br>CORP          | PROLIANT 3000 | D029DDL2K049  | JS-46 | 300   | \$ 15,014 |

|         |                           |                                  |                         |              |       |       |           |
|---------|---------------------------|----------------------------------|-------------------------|--------------|-------|-------|-----------|
| 1986210 | PROCESSOR<br>CENTRAL, ADP | COMPAQ COMPUTER<br>CORP          | PROLIANT3000            | D029DDL2K053 | JS-46 | 300   | \$ 12,160 |
| 1986475 | SERVER, ADP               | COMPAQ COMPUTER<br>CORP          | PROLIANT3000A016<br>615 | D918CMJ10369 | JS-46 | 300   | \$ 11,220 |
| 1987351 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3A2        | JS-15 | 1002B | \$ 1,113  |
| 1987356 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3AY        | JS-15 | 1001  | \$ 1,113  |
| 1987357 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3DE        | JS-32 | 143   | \$ 1,113  |
| 1987361 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3C2        | JS-15 | 1001B | \$ 1,113  |
| 1987362 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3CA        | JS-15 | 1001A | \$ 1,113  |
| 1987363 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3AX        | JS-45 | 240   | \$ 1,113  |
| 1987365 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3DA        | JS-15 | 1002B | \$ 1,113  |
| 1987368 | COMPUTER, MICRO           | DELL COMPUTER<br>CORP F-PC'S LTD | P6450                   | 5J3CE        | JS-15 | 1002B | \$ 1,113  |
| 1987927 | CONTROLLER,<br>INTERFACE  | RENISHAW INC                     | 1S1                     | S96331       | JS-10 | 116A  | \$ 13,998 |
| 1987928 | POWER SUPPLY              | ARTESIAN<br>INDUSTRIES INC       | CL40-7610               | ZATN0181     | JS-10 | 116A  | \$ 13,997 |
| 1991051 | PROCESSOR<br>CENTRAL, ADP | COMPAQ COMPUTER<br>CORP          | 161156-001              | D046FPR1K042 | JS-46 | 300   | \$ 12,956 |
| 1991305 | COMPUTER, MICRO           | COMPAQ COMPUTER                  | PROLIANT ML350          | D117FSC1K320 | JS-15 | 1001  | \$ 4,002  |
| 1991327 | COMPUTER, MICRO           | COMPAQ COMPUTER<br>CORP          | PROLIANT-ML530          | D113FPR1K018 | JS-46 | 300   | \$ 2,999  |
| 2080086 | COMPUTER, LAPTOP          | DELL COMPUTER<br>CORP F-PC'S LTD | PPL                     | ZFC01        | JS-45 | 548   | \$ 2,570  |
| 2080087 | COMPUTER, LAPTOP          | DELL COMPUTER<br>CORP F-PC'S LTD | PPL                     | ZFCOR        | JS-45 | 548   | \$ 2,570  |
| 2081285 | SCANNER, ADP              | FUJITSU AMERICA<br>INC           | M4099D                  | 501336       | JS-45 | 422C  | \$ 14,300 |
| 2084436 | PROCESSOR<br>CENTRAL, ADP | COMPAQ COMPUTER<br>CORP          | ML370PROLIANT           | D234KF51D078 | JS-46 | 300   | \$ 3,884  |
| 2084437 | PROCESSOR<br>CENTRAL, ADP | COMPAQ COMPUTER<br>CORP          | ML370PROLIANT           | D234KF51D091 | JS-46 | 300   | \$ 5,589  |

|         |                  |                                  |                |              |              |      |          |
|---------|------------------|----------------------------------|----------------|--------------|--------------|------|----------|
| 2143453 | COMPUTER, LAPTOP | DELL COMPUTER<br>CORP F-PC'S LTD | PP05L          | 43307013061  | JS-45        | 233  | \$ 1,949 |
| 2152028 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-225       | 116  | \$ 1,563 |
| 2152029 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-225       | 116  | \$ 1,563 |
| 2152030 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-45        | 528  | \$ 1,563 |
| 2152031 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-45        | 528  | \$ 1,563 |
| 2152032 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-45        | 458  | \$ 1,563 |
| 2152033 | COMPUTER, LAPTOP | VIEWSONICS INC                   | VSVPD2297-1M   | 3.44023E+11  | JS-33        | 113  | \$ 1,563 |
| 2521659 | SERVER, ADP      | HEWLETT-PACKARD<br>CO            | PROLIANT ML350 | EA5KKZRZ3G   | JS-45        | 458  | \$ 5,122 |
| 1008417 | PRINTER, ADP     | HEWLETT-PACKARD<br>CO            | LJ III         | 3038J71482   | JS-HB-<br>17 | 205  | \$ 1,790 |
| 1354416 | PRINTER, ADP     | HEWLETT-PACKARD<br>CO            | C2009A         | USFB378280   | JS-HB-<br>17 | D210 | \$ 4,046 |
| 1744326 | TAPE DRIVE UNIT  | QUANTUM CORP                     | TH3BA-YF       | CX70702218   | JS-HB-<br>17 | D210 | \$ 2,525 |
| 1854517 | SERVER, ADP      | COMPAQ COMPUTER<br>CORP          | SERIES4000     | D735HWA10120 | JS-HB-<br>17 | D210 | \$ 6,648 |
| 1913982 | PRINTER, ADP     | HEWLETT-PACKARD<br>CO            | C3917A         | JPKH004132   | JS-HB-<br>17 | 2D36 | \$ 1,454 |
| 1914026 | SERVER, ADP      | COMPAQ COMPUTER<br>CORP          | SERIES4000     | 3734HWA16029 | JS-<br>PALMD | 150  | \$ 6,648 |
| 1919138 | PRINTER, ADP     | XEROX CORP F-<br>XEROX DATA SYS  | DOCPRINT4517   | M3F-021044   | JS-HB-<br>17 | 2C34 | \$ 1,303 |
| 1919139 | PRINTER, ADP     | XEROX CORP F-<br>XEROX DATA SYS  | DOCPRINT4517   | M3F-015339   | JS-HB-<br>14 | 1D85 | \$ 1,303 |
| 1987364 | COMPUTER, MICRO  | DELL COMPUTER<br>CORP F-PC'S LTD | P6450          | 5J3B7        | JS-<br>PALMD | 150  | \$ 1,113 |
| 1987410 | COMPUTER, LAPTOP | DELL COMPUTER<br>CORP F-PC'S LTD | PPX            | JW8P601      | JS-HB-<br>17 | 2D34 | \$ 2,638 |
| 1987411 | COMPUTER, LAPTOP | DELL COMPUTER<br>CORP F-PC'S LTD | PPX            | 5X8P601      | JS-<br>PALMD | 150  | \$ 2,638 |

|         |                          |                                  |                 |              |              |       |          |
|---------|--------------------------|----------------------------------|-----------------|--------------|--------------|-------|----------|
| 2078685 | PRINTER, ADP             | HEWLETT-PACKARD<br>CO            | C4254A          | USQB065791   | JS-<br>PALMD | 150   | \$ 1,683 |
| 2080089 | SERVER, ADP              | COMPAQ COMPUTER<br>CORP          | PROLIANT ML370  | D021DKH1K045 | JS-HB-<br>17 | 2D35  | \$ 5,355 |
| 2082026 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | 146P031      | JS-<br>PLMDL | 150   | \$ 1,416 |
| 2082027 | PRINTER, ADP             | HEWLETT-PACKARD<br>CO            | LASERJET 2300N  | CNBDD11821   | JS-<br>PLMDL | 150   | \$ 976   |
| 2086581 | PROJECTOR, POWER<br>LITE | EPSON AMERICA INC                | 730C            | EE20380083C  | JS-HB-<br>17 | 2C34  | \$ 2,428 |
| 2086582 | SEVER, ADP               | DELL COMPUTER<br>CORP F-PC'S LTD | 2600            | 5HLFC31      | JS-HB-<br>17 | 2D34  | \$ 4,982 |
| 2086583 | COMPUTER,<br>NOTEBOOK    | DELL COMPUTER<br>CORP F-PC'S LTD | C840            | 4BJHC31      | JS-HB-<br>17 | 2D34  | \$ 2,500 |
| 2086584 | COMPUTER,<br>NOTEBOOK    | DELL COMPUTER<br>CORP F-PC'S LTD | C840            | 2BJHC31      | JS-HB-<br>17 | 2D34  | \$ 2,500 |
| 2086700 | PRINTER, ADP             | HEWLETT-PACKARD<br>CO            | C9661A          | JPGMD47889   | JS-HB-<br>17 | 2D34  | \$ 2,464 |
| 2139240 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | CGWKV11      | JS-HB-<br>14 | 1D93  | \$ 1,702 |
| 2139241 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | 4JWKV11      | JS-HB-<br>14 | 1D82  | \$ 1,702 |
| 2139242 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | 6JWKV11      | JS-HB-<br>14 | 1D90  | \$ 1,702 |
| 2139243 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | FGWKV11      | JS-<br>PALMD | 150   | \$ 1,702 |
| 2139244 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | BHWKV11      | JS-HB-<br>14 | 1D85  | \$ 1,702 |
| 2139245 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | FHWKV11      | JS-HB-<br>14 | 1D113 | \$ 1,702 |
| 2139246 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | 5HWKV11      | JS-HB-<br>14 | 1D92  | \$ 1,702 |
| 2139247 | COMPUTER, MICRO          | DELL COMPUTER<br>CORP F-PC'S LTD | OPTIPILEX GX260 | HGWKV11      | JS-HB-<br>17 | 2D30B | \$ 1,702 |

|         |                                |   |                 |              |              |       |           |
|---------|--------------------------------|---|-----------------|--------------|--------------|-------|-----------|
| 2139248 | COMPUTER, MICRO                | DELL COMPUTER<br>CORP F-PC'S LTD                        | OPTIPILEX GX260 | JGWQKV11     | JS-HB-<br>17 | 2D34  | \$ 1,702  |
| 2139249 | COMPUTER, MICRO                | DELL COMPUTER<br>CORP F-PC'S LTD                        | OPTIPILEX GX260 | 7HWKV11      | JS-<br>PALMD | 150   | \$ 1,702  |
| 2139250 | COMPUTER, MICRO                | DELL COMPUTER<br>CORP F-PC'S LTD                        | OPTIPILEX GX260 | HHWKV11      | JS-<br>PALMD | 150   | \$ 1,702  |
| 2139251 | COMPUTER, MICRO                | DELL COMPUTER<br>CORP F-PC'S LTD                        | OPTIPILEX GX260 | 8GWKV11      | JS-HB-<br>14 | 1D80  | \$ 1,702  |
| 156744  | RECORDER, VIDEO<br>CASSETTE    | PANASONIC   | AG6100          | E6TA00356    | JS-45        | 248A  | \$ 1,098  |
| 304473  | RECEIVER,<br>TELEVISION        | SONY CORP   | CVM1271         | 2006717      | JS-17        | 2062A | \$ 562    |
| 1033304 | PRINTER, COLOR<br>VIDEO        | SONY CORP   | UP5000          | 59699        | JS-9B        | 2150A | \$ 5,718  |
| 1033312 | HANDLER, DIGITAL<br>INFO W/KB  | SONY CORP   | DIH2000         | 10162        | JS-9B        | 2150A | \$ 2,416  |
| 1033317 | MONITOR,<br>TELEVISION         | SONY CORP   | PVM1342Q        | 2012239      | JS-9B        | 2150A | \$ 883    |
| 1033343 | RECORDER/PLAYER<br>STILL VIDEO | SONY CORP   | MVR5600         | 11305        | JS-9B        | 2150A | \$ 3,156  |
| 1033860 | SCANNER, COLOR<br>VIDEO        | SONY CORP   | UY-T55          | 10573        | JS-9B        | 2150A | \$ 5,100  |
| 1456314 | READER, CD ROM                 | SUN MICROSYSTEMS<br>INC                                 | 411             | 137G4348     | JS-15        | 1000  | \$ 766    |
| 1549207 | COMPUTER, MICRO                | RAYNOR COMPUTER<br>SERVICE INC                          | B260            | 304828       | JS-9B        | 2150A | \$ 1,838  |
| 1554132 | RECORDER, VIDEO<br>CASSETTE    | HITACHI DENSHI LTD<br>NEC TECHNOLOGIES<br>INC FRMLY NEC | VT3800A         | 80908532     | JS-9B        | 2150A | \$ 950    |
| 1554146 | DISPLAY UNIT                   | COMPAG COMPUTER<br>CORP                                 | JC1404HMA       | 93M10114S    | JS-9B        | 2150A | \$ 908    |
| 1554147 | COMPUTER, MICRO                | ELECTROHOME LTD   | 2571            | 4808AQ280350 | JS-9B        | 2150A | \$ 6,383  |
| 1554155 | PROJECTOR                      | ELECTROHOME LTD   | ECP3000         | 105370008 A  | JS-9B        | 2150A | \$ 10,460 |
| 1617044 | CAMERA SYSTEM,<br>DIGITAL      | NIKON CORP  | COOLPIX885      | 3204477      | JS-17        | 236   | \$ 530    |
| 1653512 | CAMERA SYSTEM,                 | NIKON CORP  | COOLPIX885      | 3204478      | JS-45        | 528   | \$ 530    |



|         |                               |                             |               |            |        |       |            |
|---------|-------------------------------|-----------------------------|---------------|------------|--------|-------|------------|
| 1446925 | TEST STATION, AUTOMATED ELECT | INTEGRATED SYSTEMS INC      | NONE          | 330        | JS-420 | 4013  | \$ 215,750 |
| 1447124 | CAMERA, DIGITAL VIDEO         | SONY CORP                   | DKC5000       | 10507      | JS-15  | 1002B | \$ 9,220   |
| 1447125 | CAMERA, DIGITAL VIDEO         | SONY CORP                   | DKC5000       | 10514      | JS-15  | 1002B | \$ 9,220   |
| 1447126 | MONITOR                       | SONY CORP                   | PVM1953MD     | 2011487    | JS-15  | 1002B | \$ 2,011   |
| 1447127 | CAMERA, DIGITAL MICROSCOPE    | POLAROID CORP               | DMC1          | 08701005AJ | JS-15  | 1002B | \$ 5,275   |
| 1447129 | PRINTER, VIDEO                | SONY CORP                   | UP5500        | 11069      | JS-15  | 1002B | \$ 5,450   |
| 1455808 | SPLICER, MICRO W/CASE         | PERFORMED LINE PRODUCTS CO  | MS2           | AA1751     | JS-15  | 3001A | \$ 6,490   |
| 1455815 | MONITOR, TELEVISION           | SONY CORP                   | KV2511CR      | 2000574    | JS-15  | 3002  | \$ 1,121   |
| 1455817 | CAMERA-RECORDING, VIDEO       | SONY CORP                   | DXC107A       | 101134     | JS-15  | 3001A | \$ 1,360   |
| 1455819 | DISPLAY UNIT                  | SONY CORP                   | PVM1343MD     | 2021238    | JS-15  | 3002  | \$ 1,260   |
| 1455850 | SPLICER, MICRO W/CASE         | PERFORMED LINE PRODUCTS CO  | MS2           | AA1748     | JS-15  | 3001A | \$ 6,490   |
| 1456392 | COMPUTER, MICRO               | M & A TECHNOLOGY INC        | MANDA CXP150+ | 2668       | JS-15  | 1001  | \$ 1,314   |
| 1457027 | MICROMANIPULATOR              | CO INC THE                  | 6000          | 910178     | JS-15  | 1001  | \$ 27,227  |
| 1457029 | CONTROL UNIT, TEMPERATURE     | MICROMANIPULATOR CO INC THE | HCSM          | 907177     | JS-15  | 1001B | \$ 8,000   |
| 1457037 | MICROTESTER                   | DAGE BACKPLANE SYSTEMS LTD  | SERIES22A     | 91288      | JS-15  | 1001  | \$ 14,808  |
| 1457041 | SIMULATOR, ELECTROSTATIC      | ELECTRO-TECH SYS INC        | 910           | 180        | JS-15  | 1001A | \$ 5,494   |
| 1457048 | OSCILLOSCOPE                  | TEKTRONIX INC               | 2467B         | B051280    | JS-15  | 1001  | \$ 12,804  |
| 1457051 | CYCLING SYSTEM, THERMAL       | F T S CORP                  | TJ80B2        | TJ-8-91-52 | JS-420 | 4013  | \$ 17,875  |
| 1457052 | TESTER, COMPONENT             | ANALOG DEVICES INC          | LST2020       | 122-1108   | JS-15  | 1001A | \$ 34,100  |
| 1457053 | DISPLAY UNIT                  | QUME CORP                   | QVT101+       | AA010752   | JS-15  | 1001A | \$ 792     |
| 1457054 | OSCILLOSCOPE                  | HEWLETT-PACKARD CO          | 54510A        | 3022A01894 | JS-15  | 1001  | \$ 9,822   |
| 1457056 | TEST HEAD, MIX                | ANALOG DEVICES              | LTS0680       | 1067670    | JS-15  | 1001  | \$ 14,000  |

|         | SIGNAL                             | INC                                 |             |               |        |       |  |  |           |
|---------|------------------------------------|-------------------------------------|-------------|---------------|--------|-------|--|--|-----------|
| 1457058 | TEST HEAD, DIGITAL                 | ANALOG DEVICES<br>INC               | LTS0655     | 9150450       | JS-15  | 1001  |  |  | \$ 10,995 |
| 1457059 | COMPONENT TEST<br>SYSTEM           | ANALOG DEVICES<br>INC               | LTS2410     | 2190017       | JS-15  | 1001  |  |  | \$ 5,500  |
| 1457060 | TESTER,<br>COMPONENT               | ANALOG DEVICES<br>INC               | LTS2600     | 256098        | JS-15  | 1001A |  |  | \$ 8,580  |
| 1457061 | TESTER,<br>COMPONENT               | ANALOG DEVICES<br>INC               | LTS2510     | 1158161       | JS-15  | 1001  |  |  | \$ 5,500  |
| 1457066 | CURVE TRACER                       | SONY CORP                           | 370A        | J302151       | JS-15  | 1001A |  |  | \$ 20,935 |
| 1457071 | MULTIMETER                         | HEWLETT-PACKARD<br>CO               | 3458A       | 2823A09365    | JS-15  | 1001  |  |  | \$ 6,914  |
| 1457073 | METER, PRECISION<br>LCR            | HEWLETT-PACKARD<br>CO               | 4284A       | 2940J02897    | JS-15  | 1001A |  |  | \$ 10,728 |
| 1457084 | SPECTROMETER,<br>ATOMIC            | APPLIED RESEARCH<br>LABORATORIES    | 3460        | 5359          | JS-15  | 1001A |  |  | \$ 74,062 |
| 1457085 | TESTER, WIRE                       | CLINTON<br>INSTRUMENT CO            | 30-Jun      | NONE          | JS-15  | 1001A |  |  | \$ 14,600 |
| 1457089 | CABINET, X-RAY<br>SYSTEM           | HEWLETT-PACKARD<br>CO               | 438558      | 2317A10279    | JS-15  | 1001A |  |  | \$ 17,717 |
| 1457091 | LEAK DETECTOR,<br>MASS SPECTROMTR  | VARIAN VACUUM<br>PRODUCTS           | 947         | DJAE 1001     | JS-15  | 1001A |  |  | \$ 30,920 |
| 1457095 | PINDTESTER                         | SPECTRAL<br>DYNAMICS                | 4501A       | 9131B820 156  | JS-15  | 1001A |  |  | \$ 10,000 |
| 1457107 | CIRCULATOR<br>REFRIGERATED<br>BATH | NESLAB<br>INSTRUMENTS INC           | RTE100      | 91HML92780-10 | JS-15  | 1001B |  |  | \$ 8,475  |
| 1457108 | ION ETCHER, MICRO<br>REACTIVE      | TECHNICS INC                        | 85RIE       | NONE          | JS-15  | 1001B |  |  | \$ 22,000 |
| 1457121 | SAW, DIAMOND<br>PRECISION          | BUEHLER LTD<br>AEHR TEST<br>SYSTEMS | ISOMET PLUS | 443-ISP-0666  | JS-15  | 1001B |  |  | \$ 6,775  |
| 1457150 | OVEN                               | GENERAL SIGNAL<br>CORP LINDBERG     | MAX64000    | 7676          | JS-333 | 20012 |  |  | \$ 76,265 |
| 1457151 | SHOCK TESTER,<br>THERMAL           | GENERAL SIGNAL<br>CORP LINDBERG     | WSP109C-MP3 | WSP-247       | JS-15  | HIBAY |  |  | \$ 26,527 |
| 1457152 | CHAMBER,<br>TEMP/HUMIDITY          | DESPATCH<br>INDUSTRIES INC          | 16619A      | 148493        | JS-15  | HIBAY |  |  | \$ 18,269 |
| 1457167 | EDDY CURRENT<br>INSTRUMENT         | UNI WEST                            | 51294       | 39            | JS-15  | HIBAY |  |  | \$ 9,750  |

|         |                             |                                     |               |               |       |       |           |
|---------|-----------------------------|-------------------------------------|---------------|---------------|-------|-------|-----------|
| 1457177 | TESTER HARDNESS             | KRAUTKRAMER<br>BRANSON INC          | MIC2          | 31990-1139    | JS-15 | HIBAY | \$ 7,698  |
| 1457180 | FUME HOOD                   | KEWAUNEE<br>SCIENTIFIC<br>EQUIPMENT | 501152NWE     | R917275       | JS-15 | 1001B | \$ 6,730  |
| 1457181 | FUME HOOD                   | KEWAUNEE<br>SCIENTIFIC<br>EQUIPMENT | 501152NWE     | R918085       | JS-15 | 1001B | \$ 6,730  |
| 1457190 | DISPLAY UNIT                | TOSHIBA AMERICAN<br>INFO SYSTEMS    | TVM901        | 70559         | JS-15 | 1002  | \$ 4,805  |
| 1457203 | COMPARATOR,<br>OPTICAL      | STARRETT L S CO<br>WEBBER GAGE DV   | HB400         | 3549          | JS-15 | 1001A | \$ 9,939  |
| 1457206 | SCALE TESTER                | NEW AGE<br>INDUSTRIAL CORP<br>INC   | NI400C        | 91846         | JS-15 | 1002  | \$ 11,875 |
| 1457218 | PRINTER, ADP                | OKIDATA CORP                        | GE5253A       | 012C0447611   | JS-15 | 1001A | \$ 1,200  |
| 1457231 | DISPLAY UNIT                | SONY CORP                           | GVM2020       | 2004433       | JS-15 | 1002B | \$ 1,870  |
| 1457234 | PRINTER, ADP                | TEKTRONIX INC                       | 4684          | JPR578        | JS-15 | 1002B | \$ 8,576  |
| 1457240 | MICROSCOPE<br>MEASURING     | LEICA<br>MICROSYSTEMS INC           | 301-371.011   | 561001/141264 | JS-15 | 1002B | \$ 29,090 |
| 1457241 | CAMERA-<br>RECORDING, VIDEO | SONY CORP                           | DXG151A       | 101279        | JS-15 | 1001  | \$ 1,310  |
| 1457249 | TESTER,<br>MICROHARDNESS    | LECO CORP F-<br>LABORATORY EQUIP    | M400G1        | 200681        | JS-15 | 1002B | \$ 12,105 |
| 1457251 | METALLOGRAPH                | OLYMPUS AMERICA<br>INC              | 866-100-400   | 812004        | JS-15 | 1002B | \$ 25,525 |
| 1457255 | MONITOR,<br>TELEVISION      | SONY CORP                           | PVM1390       | 5006418       | JS-15 | 1001  | \$ 500    |
| 1550064 | COMPUTER, MICRO             | RAYNOR COMPUTER<br>SERVICE INC      | MT460S        | VL000115      | JS-15 | 1001A | \$ 2,573  |
| 1553791 | SPLICER, MICRO<br>FUSION    | NOYES FIBER<br>SYSTEMS              | MS2           | AA1756        | JS-15 | 3001A | \$ 5,531  |
| 1554170 | COMPONENT TEST<br>SYSTEM    | ANALOG DEVICES<br>INC               | LTS2800       | 27379         | JS-15 | 1001  | \$ 7,500  |
| 1605799 | CAMERA, DIGITAL<br>CCD      | PHOTOMETRICS LTD                    | CH250         | NONE          | JS-15 | 1001  | \$ 27,886 |
| 1606360 | SCANNER, HRO                | UNI WEST                            | 2.887.01-1001 | 1001          | JS-15 | HIBAY | \$ 5,850  |
| 1618239 | CAMERA, DIGITAL<br>VIDEO    | SONY CORP                           | DCR-TRV27     | 401508        | JS-15 | 1002B | \$ 970    |

|         |                              |                                |                |                       |       |       |            |
|---------|------------------------------|--------------------------------|----------------|-----------------------|-------|-------|------------|
| 1618244 | CAMERA, DIGITAL SYSTEM       | PIXERA                         | PRO 600ES      | NONE                  | JS-15 | 1002A | \$ 6,944   |
| 1619932 | HOLDER, WORK DP4721          | DAGE BACKPLANE SYSTEMS LTD     | DP4721-BT22-MB | 2021142               | JS-15 | 1001A | \$ 5,635   |
| 1620038 | DISPLAY UNIT                 | DELL COMPUTER CORP F-PC'S LTD  | 1801FB         | MX0X1106483234 2B33JL | JS-15 | 1001  | \$ 534     |
| 1620039 | DISPLAY UNIT                 | DELL COMPUTER CORP F-PC'S LTD  | 1801FB         | MX0X1106483234 2B33CL | JS-15 | 1000  | \$ 534     |
| 1653049 | SCANNER, TEST POINT          | CIRRISS SYSTEMS CORP           | CH+            | 30532                 | JS-15 | 1001A | \$ 5,795   |
| 1653050 | ANALYZER, DIELECTRIC         | VITREK CORP                    | 944I           | 12278                 | JS-15 | 1001A | \$ 5,080   |
| 1653289 | CAMERA SYSTEM, DIGITAL       | NIKON INC                      | D1X            | E162072               | JS-15 | 1001  | \$ 7,782   |
| 1653290 | CAMERA SYSTEM, DIGITAL       | NIKON INC                      | 995 COOL PIX   | 3001320               | JS-15 | 1002B | \$ 899     |
| 1653333 | MICROSCOPE, STEREO           | LEICA MICROSYSTEMS INC         | MZ6            | NONE                  | JS-15 | 3002  | \$ 5,804   |
| 1734953 | CURRENT TESTER, BASE UNIT    | UNI WEST                       | US450LT        | 26                    | JS-15 | HIBAY | \$ 7,000   |
| 1736973 | CHAMBER, BURN-IN AND TEST    | MICRO INSTRUMENT CO            | 2110           | 8943-001              | JS-15 | 1001  | \$ 31,756  |
| 1736978 | DISPLAY UNIT                 | NEC TECHNOLOGIES INC FRMLY NEC | JC1743UMA      | 6631637LA             | JS-15 | 1001  | \$ 1,400   |
| 1736979 | COMPUTER, MICRO              | ZEISS CARL INC                 | TITAN II EISA  | A913111964945         | JS-15 | 1001  | \$ 33,000  |
| 1736980 | MICROSCOPE, LASER SCANNING   | ZEISS CARL INC                 | LSM310         | NONE                  | JS-15 | 1001  | \$ 170,873 |
| 1736981 | DISPLAY UNIT                 | SONY CORP                      | MICROC1782     | 6310313               | JS-15 | 1001  | \$ 1,400   |
| 1736984 | ENCLOSURE, OPTICAL W/TABLE   | TECHNICAL MFG CORP             | NONEX          | NONE                  | JS-15 | 1001  | \$ 5,050   |
| 1825551 | MICROSCOPE, STEREO           | LEICA MICROSYSTEMS INC         | MZ6            | NONE                  | JS-15 | 1002B | \$ 5,735   |
| 1825554 | MICROSCOPE, STEREO           | LEICA MICROSYSTEMS INC         | MZ6            | NONE                  | JS-15 | 3002  | \$ 5,626   |
| 1847577 | SPOOLER, HIGH FREQUENCY WIRE | HALL INDUSTRIES                | CUSTOM         | 2179                  | JS-15 | HIBAY | \$ 120,900 |
| 1847578 | PRINTER, ADP                 | EPSON AMERICA INC              | P710A FX870    | 61P1348349            | JS-15 | HIBAY | \$ 500     |
| 1850353 | COMPUTER, MICRO              | M & A TECHNOLOGY INC           | CXP200         | 75157                 | JS-15 | 1001B | \$ 944     |

|         |   |                               |                 |                 |       |       |            |
|---------|---|-------------------------------|-----------------|-----------------|-------|-------|------------|
| 1855765 | COMPUTER, MICRO                         | M & A TECHNOLOGY INC          | P200            | 76220           | JS-15 | 3002  | \$ 1,446   |
| 1855766 | DISPLAY UNIT                            | MITSUBISHI ELECTRIC CORP      | TFW9105SSTKW    | 705E04007       | JS-15 | 3002  | \$ 1,400   |
| 1918079 | CHAMBER, ENVIRONMENTAL                  | CINCINNATI SUB-ZERO PRODUCTS  | WU26-2-2LN2H/AC | 97-WU-13025     | JS-15 | HIBAY | \$ 57,185  |
| 1922485 | SIMULATOR, ELECTROSTATIC                | ELECTRO-TECH SYS INC          | 930C            | 177             | JS-15 | 1001A | \$ 8,190   |
| 1927088 | CAMERA-RECORDING, VIDEO                 | SONY CORP                     | CCDTRV815       | 1011162         | JS-15 | 1002B | \$ 1,000   |
| 1927089 | SANDER, DISK                            | WILTON CORP                   | 4406            | 33682           | JS-15 | HIBAY | \$ 11,063  |
| 1928796 | CAMERA, DIGITAL STILL                   | SONY CORP                     | MVC-FD7         | 174087          | JS-15 | 1002B | \$ 748     |
| 1928797 | CUTTER, DUAL WAVE LASER                 | NEW WAVE RESEARCH             | LCSI532/355     | 2760            | JS-15 | 1001  | \$ 42,140  |
| 1928798 | POWER SUPPLY                            | HEWLETT-PACKARD CO            | 6624A           | U537350941      | JS-15 | HIBAY | \$ 5,121   |
| 1928799 | SAW, CUTOFF                             | BUEHLER EQUIPMENT CO          | 95C1800         | 532-71MSC-2523  | JS-15 | 1001B | \$ 6,887   |
| 1987359 | COMPUTER, MICRO                         | DELL COMPUTER CORP F-PC'S LTD | P6450           | 5J3B1           | JS-15 | 2000A | \$ 1,113   |
| 1987776 | FURANCE, SAMPLE RE-MELT                 | ZEEBAC INC                    | 900751          | KK084674        | JS-15 | HIBAY | \$ 12,600  |
| 1995757 | OSCILLOSCOPE, INFINIUM                  | HEWLETT-PACKARD CO            | 54815A          | US40110205      | JS-15 | 1001  | \$ 14,508  |
| 1995758 | MAINFRAME, LOAD TESTER, NOISE DETECTION | HEWLETT-PACKARD CO            | 6050A           | US37141739      | JS-15 | HIBAY | \$ 1,891   |
| 1995760 | HARNESS TESTER                          | PTI CONTROLS                  | 4501L           | 0018L820170-597 | JS-15 | 1001A | \$ 17,995  |
| 1995761 | BASE UNIT                               | CIRRISS SYSTEMS CORP          | CH+             | 23255           | JS-15 | 1001A | \$ 6,295   |
| 1995765 | MOVER, AUTOMATIC SPECIMAN               | STRUJERS INC                  | ROTOFORCE4      | 5251515         | JS-15 | 1001B | \$ 6,506   |
| 1996159 | TESTER, ROCKWELL HARDNESS               | INSTRON CORP                  | 2000T           | R2000P4697      | JS-15 | 1002  | \$ 15,040  |
| 1996179 | X-RAY UNIT, MICROFOCUS                  | CRYSTAL TECHNOLOGY INC        | CRX2000         | 1S2086.0800     | JS-15 | 1001  | \$ 128,798 |
| 1996180 | MONITOR, COLOR VIDEO                    | SONY CORP                     | CPD-G500        | 2729826         | JS-15 | 1001  | \$ 821     |

|         |                                |                                |                |                      |       |       |            |
|---------|--------------------------------|--------------------------------|----------------|----------------------|-------|-------|------------|
| 1996181 | PRINTER, ADP                   | MITSUBISHI ELECTRIC CORP       | CP7000         | 100764               | JS-15 | 1001  | \$ 2,670   |
| 1996199 | POWER SUPPLY                   | POWER TEN INC                  | R83C150100     | 0045C0038            | JS-15 | 1001  | \$ 8,100   |
| 1996200 | DISPLAY UNIT                   | SONY CORP                      | PVM14M4U       | 2018942              | JS-15 | 1002B | \$ 1,570   |
| 1996201 | MICROSCOPE                     | LEICA MICROSYSTEMS INC         | SZ6            | NONE                 | JS-15 | 1001A | \$ 5,418   |
| 1996202 | COMPUTER, LAPTOP               | INTERNATIONAL BUSINESS MACHINE | 2629H1U        | 78-W3377             | JS-15 | 2000  | \$ 4,112   |
| 1996203 | MULTIMETER, DIGITAL            | AGILENT TECH INC               | 3458A          | 2823A26776           | JS-15 | 1001A | \$ 7,195   |
| 1996204 | PRESS, MOUNTING                | STRUERS INC                    | LABOPRESS3     | 5081471              | JS-15 | 1001B | \$ 6,578   |
| 1996205 | CAMERA, DIGITAL COLOR          | FUJI PHOTO FILM CO LTD         | HC300Z         | 01B0020              | JS-15 | 1002B | \$ 4,703   |
| 2078603 | CHAMBER, ENVIRONMENTAL TESTING | DESPATCH INDUSTRIES INC        | 926E1-4-0-120  | 168454               | JS-15 | HIBAY | \$ 5,900   |
| 2078604 | SAW, CUT-OFF ABRASIVE          | STRUERS INC                    | DISCOTOM5      | 5110531              | JS-15 | 1001B | \$ 12,620  |
| 2080065 | COMPUTER, MICRO MONITOR, VIDEO | COMPAQ COMPUTER CORP           | NONEX          | 6106 FCJ6 A001       | JS-15 | 1002  | \$ 1,700   |
| 2080327 | COLOR                          | SONY CORP                      | PVM20L5        | 2000803              | JS-15 | 1002B | \$ 2,343   |
| 2081144 | POWER SUPPLY CONTROL           | IVS INC                        | 2000           | 15                   | JS-15 | HIBAY | \$ 5,000   |
| 2081145 | COMPUTER, MICRO                | IVS INC                        | 8100-7000-0210 | 142                  | JS-15 | HIBAY | \$ 16,000  |
| 2081146 | INTERFACE, DIGITAL             | IVS INC                        | 8100-7000-021D | 142                  | JS-15 | HIBAY | \$ 5,000   |
| 2081147 | INTERFACE, ANALOG              | IVS INC                        | 8100-7000-021A | 142                  | JS-15 | HIBAY | \$ 5,000   |
| 2081148 | VACUUM CONTROL SYSTEM          | IVS INC                        | NONE           | 1-359                | JS-15 | HIBAY | \$ 128,275 |
| 2081161 | PRINTER, ADP                   | KODAK CANADA LTD               | XLS8660        | HG704622             | JS-15 | 1002B | \$ 4,130   |
| 2082200 | OVEN                           | DESPATCH INDUSTRIES INC        | RAD1-42-2E     | 170607               | JS-15 | HIBAY | \$ 7,180   |
| 2082202 | COMPUTER, MICRO                | DELL COMPUTER CORP F-PC'S LTD  | 4600           | 0U0314-42940-37C00LX | JS-15 | 1001A | \$ 1,538   |
| 2082203 | SPECTRAL IMAGING SYSTEM        | THERMO ELECTRON CORP           | C10015         | 903064               | JS-15 | 1002A | \$ 32,600  |
| 2082208 | MICROSCOPE, ELECTRON           | JEOL U S A INC                 | JSM-6360LV     | MP18300062           | JS-15 | 1002A | \$ 100,000 |

|         |                                  |                                   |           |                          |       |       |           |
|---------|----------------------------------|-----------------------------------|-----------|--------------------------|-------|-------|-----------|
| 2082210 | DETECTOR, EDS                    | THERMO ELECTRON<br>CORP           | 4637      | 664F-1SUS-SN             | JS-15 | 1002A | \$ 19,900 |
| 2082211 | COMPUTER, MICRO                  | DELL COMPUTER<br>CORP F-PC'S LTD  | 4600      | 0U0314-42940-<br>37C00LV | JS-15 | 1001  | \$ 1,538  |
| 2082212 | COMPUTER, MICRO                  | DELL COMPUTER<br>CORP F-PC'S LTD  | 4600      | 0U0314-42940-<br>37C00LW | JS-15 | 1001A | \$ 1,538  |
| 2082214 | COMPUTER, MICRO                  | DELL COMPUTER<br>CORP F-PC'S LTD  | 4600      | 0U0314-42940-<br>37C00LE | JS-15 | 1001  | \$ 1,538  |
| 2082228 | MILLING MACHINE                  | FADAL ENGINEERING<br>CO INC       | EMC       | 12003095626              | JS-15 | HIBAY | \$ 47,004 |
| 2082447 | TELEVISION, FLAT<br>PANEL PLASMA | PANASONIC                         | TH-50PHW3 | XB2220388                | JS-15 | 3002  | \$ 9,999  |
| 2082450 | COMPUTER, LAPTOP                 | INTERNATIONAL<br>BUSINESS MACHINE | 2653-H4U  | 78-LV221                 | JS-15 | 3002  | \$ 3,182  |
| 2082453 | COMPUTER, LAPTOP                 | INTERNATIONAL<br>BUSINESS MACHINE | A31P4     | 78-LV267                 | JS-15 | 1001  | \$ 3,182  |
| 2082456 | PUMP                             | VARIAN VACUM<br>PRODUCTS          | DS302     | 108101-2002              | JS-15 | 1000  | \$ 8,450  |
| 2082457 | LEAK DETECTOR                    | VARIAN VACUM<br>PRODUCTS          | 959 TURBO | LLH2035                  | JS-15 | 1000  | \$ 12,851 |
| 2082459 | COMPUTER, MICRO                  | INTERNATIONAL<br>BUSINESS MACHINE | 6229-2PU  | 1S62292PUS8G7<br>026     | JS-15 | 1001  | \$ 3,406  |
| 2082460 | DISPLAY UNIT                     | INTERNATIONAL<br>BUSINESS MACHINE | 6657-HG2  | BN75-00103A              | JS-15 | 1001  | \$ 807    |
| 2082461 | COMPUTER, LAPTOP                 | INTERNATIONAL<br>BUSINESS MACHINE | 2653-H4U  | 78-LV206                 | JS-15 | 3001  | \$ 3,182  |
| 2082463 | CAMERA, INFRARED                 | FLIR SYSTEMS AB                   | SC500     | 19320021                 | JS-15 | 1001  | \$ 38,208 |
| 2082465 | MAINFRAME, LOAD                  | AGILENT TECH                      | N3300A    | MY41000517               | JS-15 | 1001B | \$ 7,050  |
| 2082466 | DISPLAY UNIT                     | INTERNATIONAL<br>BUSINESS MACHINE | 6657-HG2  | 55-F9886                 | JS-15 | 1001  | \$ 807    |
| 2082467 | DISPLAY UNIT                     | INTERNATIONAL<br>BUSINESS MACHINE | 6657-HG2  | 55-F9894                 | JS-15 | 1001  | \$ 807    |
| 2082468 | COMPUTER, MICRO                  | INTERNATIONAL<br>BUSINESS MACHINE | 6229-2PU  | 1S6229PU78G70<br>35      | JS-15 | 1001  | \$ 3,406  |
| 2082469 | DISPLAY UNIT,<br>COMBO           | INTERNATIONAL<br>BUSINESS MACHINE | 18U       | AM890VF                  | JS-15 | 1001  | \$ 1,947  |
| 2083821 | POWER SOURCE                     | HEWLETT-PACKARD<br>CO             | 6813A     | US37290126               | JS-15 | 1001  | \$ 6,300  |
| 2083822 | MULTIMETER,                      | KEITHLEY                          | 2750      | NONE                     | JS-15 | 1001A | \$ 6,235  |

|         | SWITCH SYSTEM                                | INSTRUMENTS INC  |                       |                 |       |       |  |  |                        |
|---------|--|--|-----------------------|-----------------|-------|-------|--|--|------------------------|
| 2083823 | COMPUTER, MICRO                              | DELL COMPUTER<br>CORP F-PC'S LTD                                     | SMM                   | CNGYG11         | JS-15 | 1001  |  |  | \$ 7,300               |
| 2083824 | DISPLAY UNIT                                 | DELL COMPUTER<br>CORP F-PC'S LTD                                     | E551                  | NONE            | JS-15 | 1001  |  |  | \$ 4,400               |
| 2083826 | TESTER, TENSILE TO<br>DISPLAY UNIT,<br>COMBO | TINIUS OLSEN<br>TESTING MACHINE<br>INTERNATIONAL<br>BUSINESS MACHINE | SUPER L<br>18U        | NONE<br>AM890YH | JS-15 | 1002  |  |  | \$ 111,200<br>\$ 1,947 |
| 2083830 | DISPLAY UNIT                                 | INTERNATIONAL<br>BUSINESS MACHINE                                    | 6657-HG2              | 55-F9884        | JS-15 | 3001  |  |  | \$ 807                 |
| 2083831 | SPLICER,<br>FIBEROPTIC FUSION                | TRITEK SOLUTIONS<br>INC.   | FASEII                | 200700          | JS-15 | 3001A |  |  | \$ 8,490               |
| 2083947 | COMPUTER, MICRO                              | INTERNATIONAL<br>BUSINESS MACHINE                                    | 6229-2PU              | 78G7071         | JS-15 | HIBAY |  |  | \$ 3,406               |
| 2086562 | SPECTROMETER,<br>OPTICAL EMISSION            | THERMO ELECTRON<br>CORP  | 3460                  | 2704            | JS-15 | 1001A |  |  | \$ 138,810             |
| 2086596 | PLASTIC MOLD<br>DECAPSULATION<br>SYS         | NSC INTERNATIONAL<br>CORP  | PS101                 | 5182            | JS-15 | 1001B |  |  | \$ 40,222              |
| 2086597 | MICROSCOPE<br>STEREO<br>W/WORKSTATIO         | NIKON CORP<br>INTERNATIONAL<br>BUSINESS MACHINE                      | P-FMD<br>A31P         | 1004923         | JS-15 | 1002B |  |  | \$ 21,671              |
| 2086659 | COMPUTER, LAPTOP                             | INTERNATIONAL<br>BUSINESS MACHINE                                    | A31P                  | KP-PYHY9        | JS-15 | 1001  |  |  | \$ 2,199               |
| 2086661 | COMPUTER, LAPTOP                             | INTERNATIONAL<br>BUSINESS MACHINE                                    | A31P                  | KP-PYHY5        | JS-15 | 1001B |  |  | \$ 2,199               |
| 2120007 | COMPUTER, MICRO                              | DELL COMPUTER<br>CORP F-PC'S LTD                                     | WHL                   | JPRR431         | JS-15 | 1001  |  |  | \$ 4,439               |
| 2120008 | COMPUTER, MICRO                              | DELL COMPUTER<br>CORP F-PC'S LTD                                     | WHL                   | 3QRRH31         | JS-15 | 1000  |  |  | \$ 4,439               |
| 2120009 | METER, PRECISION<br>LCR                      | QUADTECH INC   | 1420 PRECISION<br>LCR | 4156030         | JS-15 | 1001A |  |  | \$ 5,020               |
| 2145277 | TESTER, MICRO<br>HARDNESS                    | STRUERS INC  | DURAMIN A-300         | 5640018         | JS-15 | 1002B |  |  | \$ 58,514              |
| 2145278 | SYSTEM,<br>THERMOJET TEMP<br>CYCLING         | FTS SYSTEMS INC  | THJ80120              | 25082           | JS-15 | 1001  |  |  | \$ 32,825              |

|         |                                |  |               |            |         |       |           |
|---------|--------------------------------|--|---------------|------------|---------|-------|-----------|
| 2145279 | TESTER, COMPUTERIZED LOAD FRAM | MTS SYSTEMS CORP<br>HEWLETT-PACKARD CO | QTEST/50LP    | M10167205  | JS-15   | 1002  | \$ 30,575 |
| 75376   | PRINTER, ADP                   |  | 33440A        | 15741      | JS-36   | 1003A | \$ 1,672  |
| 1003559 | HEIGHT GAGE MICROHITE ELECTRON | BROWN AND SHARPE MFG CO                | 2J0777506     | 7.90014    | JS-10   | 116A  | \$ 14,203 |
| 1003668 | MICROWATCHER SYSTEM            | PHOTOVOLT CORP                         | VS30H         | 82MH1161   | JS-10   | 116A  | \$ 11,500 |
| 1003669 | PRINTER, VIDEO                 | MITSUBISHI ELECTRIC CORP               | CP10U         | 100886     | JS-10   | 116A  | \$ 1,599  |
| 1007564 | PRINTER, ADP                   | HEWLETT-PACKARD CO                     | 33449A        | 3044J77274 | JS-10   | CAGE  | \$ 1,420  |
| 1007984 | MICROWATCHER SYSTEM            | PHOTOVOLT CORP                         | VS30H         | 82MH0820   | JS-10   | 138   | \$ 11,500 |
| 1118441 | PRINTER, ADP                   | HEWLETT-PACKARD CO                     | 33449A        | 3104JD3898 | JS-222  | MODEL | \$ 1,696  |
| 1119355 | PRINTER, ADP                   | PRINTRONIX INC                         | P6280L        | 124599     | JS-45   | 243E  | \$ 8,454  |
| 1168290 | PRINTER, ADP                   | HEWLETT-PACKARD CO                     | 33449A        | 3221A86120 | JS-45   | 448G  | \$ 1,385  |
| 1168298 | PRINTER, ADP                   | HEWLETT-PACKARD CO                     | 33449A        | 3221A86021 | JS-45   | 211C  | \$ 1,385  |
| 1235200 | PRINTER, ADP                   | EPSON AMERICA INC                      | P18MA         | 0FG0010931 | JS-49   | 2300  | \$ 739    |
| 1293584 | DISPLAY UNIT                   | NEC ELECTRONICS USA INC                | JC1404HMA     | 96K23685M  | JS-13   | HIBAY | \$ 649    |
| 1445981 | PRINTER, ADP                   | HEWLETT-PACKARD CO                     | C3982A        | USCB037923 | JS-920N | 3339  | \$ 860    |
| 1447723 | COMPUTER, MICRO                | M & A TECHNOLOGY INC                   | MANDA CXP150+ | 2887       | JS-10   | 116   | \$ 1,314  |
| 1457163 | PARTICLE UNIT                  | ECONOSPECT CORP                        | WH2500        | 912697     | JS-10   | 110   | \$ 7,650  |
| 1457173 | FIBERSCOPE, FLEXIBLE           | OLYMPUS AMERICA INC                    | IF8D4-20      | NONE       | JS-10   | 138   | \$ 10,431 |
| 1457175 | TESTER ULTRASONIC              | HITACHI INSTRUMENTS INC                | DT2000        | 286        | JS-10   | 138   | \$ 8,900  |
| 1457176 | GAGE, ELECTRONIC THICKNESS     | PANAMETRICS INC                        | 26DL          | 910186505  | JS-10   | 138   | \$ 6,000  |
| 1457244 | CAMERA, STILL PICTURE          | HITACHI DENSHI LTD                     | VK-C350       | 90900759   | JS-10   | 138   | \$ 2,930  |

|         |                                   |                               |              |             |         |       |            |
|---------|-----------------------------------|-------------------------------|--------------|-------------|---------|-------|------------|
| 1542940 | CAMERA-RECORDING, VIDEO MACHINE   | PANASONIC                     | GP-KR212     | 39B17213    | JS-45   | 243   | \$ 500     |
| 1546171 | COORDINATE MEASURING              | BROWN AND SHARPE MFG CO       | 9129         | 1094-438    | JS-10   | 116A  | \$ 153,719 |
| 1546172 | COMPUTER, MICRO CONTROLLER, RETRO | AST RESEARCH INC.             | 543W         | A05202946   | JS-10   | CAGE  | \$ 1,895   |
| 1546174 | COMPUTER, MICRO                   | BROWN AND SHARPE MFG CO       | S32CS        | 177506/25   | JS-10   | 116A  | \$ 18,600  |
| 1549238 | COMPUTER, MICRO                   | RAYNOR COMPUTER SERVICE INC   | B260         | 304838      | JS-16A  | 1012  | \$ 1,838   |
| 1603976 | CAMERA, DIGITAL STILL             | SONY CORP                     | MVC-FD7      | 36252       | JS-920N | 3339  | \$ 733     |
| 1604063 | COMPUTER, ELECTRONIC NOTEBOOK     | APPLE COMPUTER INC            | H0149        | JE72510T9BU | JS-45   | 211BA | \$ 1,071   |
| 1604064 | COMPUTER, PALMTOP                 | HEWLETT-PACKARD CO            | HP320LX      | SG74203143  | JS-45   | 211BA | \$ 546     |
| 1606340 | FIBERSCOPE, INDUSTRIAL            | OLYMPUS OPTICAL CO LTD        | IF2D5-12     | 1600172     | JS-10   | 138   | \$ 8,188   |
| 1618057 | SWITCH, 50 VPN DEVICE             | NETSCREEN TECHNOLOGIES        | NS-050-001   | 1.9112E+14  | JS-45   | 528   | \$ 5,267   |
| 1650596 | SERVER, ADP                       | DELL COMPUTER CORP F-PC'S LTD | SMP01        | 2CXDH31     | JS-46   | 300   | \$ 6,339   |
| 1650741 | SERVER, ADP                       | DELL COMPUTER CORP F-PC'S LTD | SMP01        | FCXDH31     | JS-46   | 300   | \$ 6,339   |
| 1653476 | CAMERA SYSTEM, DIGITAL            | OLYMPUS OPTICAL CO LTD        | E10          | 1080806     | JS-10   | 138   | \$ 1,800   |
| 1735911 | DISPLAY UNIT                      | mitsubishi ELECTRIC CORP      | TFW9105SKTKW | 705E04090   | JS-16   | 277   | \$ 1,400   |
| 1735913 | DISPLAY UNIT                      | mitsubishi ELECTRIC CORP      | TFW9105SKTKW | 705E03368   | JS-44   | 244   | \$ 1,400   |
| 1846726 | DISPLAY UNIT                      | PANASONIC                     | E21          | FA6630167   | JS-45   | 422B  | \$ 1,421   |
| 1846727 | DISPLAY UNIT                      | PANASONIC                     | E21          | FA6630774   | JS-17   | 2070  | \$ 1,421   |
| 1846728 | DISPLAY UNIT                      | PANASONIC                     | E21          | FA6630777   | JS-10   | 116A  | \$ 1,421   |
| 1846729 | DISPLAY UNIT                      | PANASONIC                     | E21          | FA6630779   | JS-17   | 2063A | \$ 1,421   |
| 1846730 | DISPLAY UNIT                      | PANASONIC                     | E21          | FA6630781   | JS-9    | 143   | \$ 1,421   |
| 1847919 | COORDINATE MEAS. MACHINE, PORT    | ROMER INC                     | SYSTEM6 2500 | S6-1-533    | JS-10   | 116A  | \$ 98,200  |

|         |                  |  |              |                              |        |       |           |
|---------|------------------|--|--------------|------------------------------|--------|-------|-----------|
| 1847920 | COMPUTER, LAPTOP | NEC TECHNOLOGIES<br>INC FRMLY NEC<br>M & A TECHNOLOGY<br>INC | PC6620-91803 | 317042666                    | JS-10  | 116A  | \$ 14,500 |
| 1850097 | COMPUTER, MICRO  | MITSUBISHI<br>ELECTRIC CORP                                  | CXP200       | 75123<br>2AAWEF705E034<br>76 | JS-49  | 2300  | \$ 944    |
| 1854566 | DISPLAY UNIT     | M & A TECHNOLOGY<br>INC                                      | 91TXM        | 76258                        | JS-36  | 2030  | \$ 1,400  |
| 1854567 | COMPUTER, MICRO  | MITSUBISHI<br>ELECTRIC CORP                                  | 686          | 705104103                    | JS-36  | 3028  | \$ 1,446  |
| 1854945 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705104204                    | JS-36  | 2030  | \$ 1,400  |
| 1854949 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705104097                    | JS-7A  | 245A  | \$ 1,400  |
| 1854951 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04190                    | JS-45  | 243D  | \$ 1,400  |
| 1855742 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03587                    | JS-45  | 442C  | \$ 1,400  |
| 1855744 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03336                    | JS-10  | 116A  | \$ 1,400  |
| 1855746 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03327                    | JS-10  | 116A  | \$ 1,400  |
| 1855748 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03490                    | JS-37  | 1209B | \$ 1,400  |
| 1855750 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04176                    | JS-32  | 109   | \$ 1,400  |
| 1855752 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04167                    | JS-350 | 122   | \$ 1,400  |
| 1855760 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03473                    | JS-45  | 243E  | \$ 1,400  |
| 1855762 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03480                    | JS-45  | 211BA | \$ 1,400  |
| 1855764 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04092                    | JS-36  | 2030  | \$ 1,400  |
| 1913060 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04060                    | JS-10  | CAGE  | \$ 1,400  |
| 1913066 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E04608                    | JS-33  | 113   | \$ 1,400  |
| 1913072 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW | 705E03464                    | JS-36  | 2030  | \$ 1,400  |
| 1913074 | DISPLAY UNIT     | MITSUBISHI<br>ELECTRIC CORP                                  | TFW9105SSTKW |                              | JS-44  | 244   | \$ 1,400  |



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|         |                             |             |                |           |       |       |    |       |
|---------|-----------------------------|-------------|----------------|-----------|-------|-------|----|-------|
|         | SURFTEST                    |             |                |           |       |       |    |       |
| 2082209 | MASTERSCAN FLAW<br>DETECTOR | SONATEST    | MASTERSCAN 340 | 3401537C  | JS-10 | 138   | \$ | 7,646 |
| G099396 | COMPUTER, MICRO             | UNISYS CORP | T3146-00       | 382326783 | JS-13 | HIBAY | \$ | 2,253 |

**ATTACHMENT J.7C LIST OF NASA PROVIDED ANALYSIS TOOLS**

Below is a list of the primary analysis tools that S&MA provides. The list included below is not all-inclusive, but is representative of the tools provided by the Government.

**SAPHIRE** – Systems Analysis Programs for Hands-on Integrated Reliability Evaluations

**ECTree** – Event Sequence Tree

**ASSAP** – Galileo/Advanced System Safety Assessment Program

**SEaCLIF** – Systems Effects and Capability Losses from Inserted Failures

**RMAT** – Reliability and Maintainability Assessment Tool (RMAT)

**RBDA** – Reliability Block Diagram Analysis (RBDA)

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**J.8 SAFETY AND HEALTH PLAN**

|

**J.10 CONTRACTOR MANAGED DATABASES**

| Name        | Type of Database          | Language | Use  |
|-------------|---------------------------|----------|--|
| ADP         | MS Access/Web application | VBA/ASP  | Tracking status of GFE Acceptance Data Packages. |
| ALERTS      | MS Access                 | VBA      | Hardware alerts                                  |
| CaseATS     | MS Access                 | VBA      | Action Tracking System                           |
| CI&TATS     | MS Access                 | VBA      | Action Tracking System                           |
| ContractATS | MS Access                 | VBA      | Action Tracking System                           |
| CSWGATS     | MS Access                 | VBA      | Action Tracking System                           |
| CTATS       | MS Access                 | VBA      | Action Tracking System                           |
| EVAATS      | MS Access                 | VBA      | Action Tracking System                           |
| FED         | MS Access                 | VBA      | Action Tracking System                           |
| FEDATS      | MS Access                 | VBA      | Action Tracking System                           |
| GAPATS      | MS Access                 | VBA      | Action Tracking System                           |
| GCHAPATS    | MS Access                 | VBA      | Action Tracking System                           |
| GFEATS      | MS Access                 | VBA      | Action Tracking System                           |
| IAATS       | MS Access                 | VBA      | Action Tracking System                           |
| IRMATS      | MS Access                 | VBA      | Action Tracking System                           |
| ISSATS      | MS Access                 | VBA      | Action Tracking System                           |
| JSAPATS     | MS Access                 | VBA      | Action Tracking System                           |
| LPAATS      | MS Access                 | VBA      | Action Tracking System                           |
| MAATS       | MS Access                 | VBA      | Action Tracking System                           |
| NAATS       | MS Access                 | VBA      | Action Tracking System                           |
| NAATS       | MS Access                 | VBA      | Action Tracking System                           |
| NTATS       | MS Access                 | VBA      | Action Tracking System                           |
| RMPANEL     | MS Access                 | VBA      | Action Tracking System                           |
| SAICATS     | MS Access                 | VBA      | Action Tracking System                           |
| SAICIRM     | MS Access                 | VBA      | Action Tracking System                           |
| SHUTATS     | MS Access                 | VBA      | Action Tracking System                           |
| SMARTATS    | MS Access                 | VBA      | Action Tracking System                           |
| STATIONATS  | MS Access                 | VBA      | Action Tracking System                           |
| TAATS       | MS Access                 | VBA      | Action Tracking System                           |
| TRAINATS    | MS Access                 | VBA      | Action Tracking System                           |
| TSOATS      | MS Access                 | VBA      | Action Tracking System                           |
| Awards      | MS Access                 | VBA      | Awards database                                  |
| Budget      | MS Access                 | VBA      | Budget tracking?                                 |
| Calendar    | MS Access                 | VBA      | NA calendar                                      |
| Casper      | MS Access                 | VBA      | Former Director's Q&A system                     |
| Combats     | MS Access                 | VBA      | Action Tracking System                           |
| Comments    | MS Access/Web Application | VBA/ASP  | Collects Feedback about All-Hands meetings       |
| Compus      | MS Access                 | VBA      | Code M Payload Utilization                       |

|               |                            |         |   |
|---------------|----------------------------|---------|---|
|               |                            |         | system  |
| CTS           | MS Access                  | VBA     | Correspondence Tracking system  |
| CustSer       | MS Access                  | VBA     | Customer Service Database?  |
| DistList      | MS Access                  | VBA     | Distribution List database for S&MA ISS Division                        |
| EEEParts      | MS Access                  | VBA     | EEE Parts Assurance database  |
| EVA           | MS Access/Web Application  | VBA/ASP | Dynamic Website Management tool for EVA                                 |
| EvalSCAT      | MS Access                  | VBA     | Logging Significant Accomplishments                                     |
| EVASCAT       | MS Access                  | VBA     | Logging Significant Accomplishments                                     |
| Generic       | MS Access                  | VBA     | Maintains records of Change Papers for NC division.                     |
| SSP CP Add-On | MS Access ADE / SQL Server | VBA     | Additional interface to the Generic database for the NC division.       |
| GFE Cert      | MS Access ADE /SQL Server  | VBA     | Contains Certification data for GFE hardware.                           |
| GFESCAT       | MS Access                  | VBA     | Logging Significant Accomplishments for GFE                             |
| GPTD          | MS Access                  | VBA     | GFE Project Tracking Database   |
| IAASSESS      | MS Access                  | VBA     | Station Assessment Information from Independent Assessment              |
| ICTS          | MS Access                  | VBA     | Incoming Correspondence Tracking System                                 |
| Infobases     | MS Access/Web Application  | VBA/ASP | Dynamic Website Management tool for Folio Infobases                     |
| Innovations   | MS Access                  | VBA     | Database for Tracking NA Innovations                                    |
| Inventory     | MS Access                  | VBA     | Inventory database for awards that have flown on shuttle missions.      |
| ISS CP        | MS Access ADE/SQL Server   | VBA     | Maintains records of Space Station Change Papers                        |
| ISSRM         | MS Access/Web Application  | VBA/ASP | Dynamic population of the ISS Reliability and Maintainability web site. |
| JAPC          | MS Access/Web Application  | VBA/ASP | Supports Joint Audit Planning Committee                                 |

|                           |  |          |   |
|---------------------------|--|----------|---|
| Learner                   | MS Access/Web Application?               | VBA/ASP? | S&MA Training Database  |
| MechParts                 | MS Access                                | VBA      | Mechanical Parts database   |
| MerLog                    | MS Access                                | VBA      | Database support for MER. Now used by S&MA personnel at KSC.  |
| Payloads                  | MS Access                                | VBA      | Payloads tracking database  |
| PEI                       | MS Access/Web Application                | VBA/ASP  | Personnel Emergency Information database  |
| Pressure Systems Database | MS Access ADE/SQL Server/Web Application | VBA/ASP  | Database that maintains information on pressurized systems at JSC.                                      |
| PM Database               | MS Access                                | VBA      | Preventive Maintenance database   |
| GFE PRACA                 | MS Access ADE/SQL Server                 | VBA      | Stores Problem Reporting and Corrective Action data for GFE hardware                                    |
| PRDB                      | MS Access                                | VBA      | Problem Reports database used by NE to track, assess and close software issues on station applications? |
| QARC                      | SQL Server Web application               | VB/ASP   | Maintains records of documents submitted to the Quality Assurance Record Centers                        |
| QReX                      | SQL Server Web application               | ASP      | Quality Records/Assessments   |
| Risk                      | MS Access                                | VBA      | Risk Management database  |
| RITF                      | MS Access                                | VBA      | Supports Receiving, Inspecting, Testing Facility  |
| RMQAWAR                   | MS Access                                | VBA      | RMQA Weekly Activity Reporting system   |
| SAICTeam                  | MS Access                                | VBA      | Dynamic population of Contract team web site  |
| SAS                       | SQL Server/Web Application               | ASP      | Supplier Assessment System  |
| SATS                      | MS Access                                | VBA      | Safety Action Tracking System   |
| SMARTSCH                  | MS Access                                | VBA      | Panels Schedule Database  |
| SFA                       | MS Access                                | VBA      | Space Flight Awareness Awards database  |
| ShutSCAT                  | MS Access                                | VBA      | Shuttle Significant Accomplishments database  |

|                  |                            |     |   |
|------------------|----------------------------|-----|---|
| SIRMA            | SQL Server                 |     | Risk Management database  |
| SMART            | MS Access                  | VBA | Subsystem Measurement Automated Retrieving Tool                         |
| SoftInv          | MS Access                  | VBA | Software Inventory Database   |
| SpaceUtil        | MS Access                  | VBA | Space/Resource Utilization Database                                     |
| SRP              | MS Access                  | VBA | Safety Review Panel   |
| SRRAD            | MS Access ADE / SQL Server | VBA | Shuttle Reliability database  |
| StationG         | MS Access                  | VBA | Station Generic database  |
| Vaults           | MS Access                  | VBA | Payload Vaults databas  |
| VersionDB        | MS Access                  | VBA | Maintains versions of databases, performs automatic upgrades of clients |
| VSEWAR           | MS Access                  | VBA | Vehicle Safety Engineers Weekly Activity Report database                |
| WARTS            | MS Access                  | VBA | Weekly Activity Reporting database                                      |
| ESC_Safety       | MS Access                  | VBA | Dynamic population of Executive Safety Committee web site               |
| HT               | MS Access                  | VBA | Dynamic population of a safety web site                                 |
| ISSRM2           | MS Access                  | VBA | Dynamic population of ISSRM web site                                    |
| LPA              | MS Access                  | VBA | Dynamic population of Mission Logistics Planning web site               |
| NSTC             | MS Access                  | VBA | Dynamic population of NS TC web site                                    |
| Sites            | MS Access                  | VBA | Dynamic population of SSRP web site                                     |
| SRQA             | MS Access                  | VBA | Dynamic population of SRQA web site                                     |
| ST               | MS Access                  | VBA | Dynamic population of ST calendar                                       |
| STH              | MS Access                  | VBA | Dynamic population of Safety and Total Health calendar                  |
| GNATS            | SQL Server Web Application | ASP | A generic weekly activity reporting system for SR&QA                    |
| IPS              | SQL Server Web Application | ASP | Information Technology planning and budgeting tool                      |
| IRS/ResourceUtil | SQL Server Web Application | ASP | Tracking tool for SR&QA resources                                       |

|               |   |     |   |
|---------------|---|-----|---|
| NA            | SQL Server<br>Web Application             | ASP | Dynamic population of the<br>NA web site                              |
| NAATS         | SQL Server<br>Web Application             | ASP | Action tracking system for NA   |
| PayloadsSQL   | SQL Server<br>Web Application             | ASP | Shuttle payloads tracking<br>database                                 |
| RITF          | SQL Server<br>Web Application             | ASP | Dynamic population of the<br>RITF web site                            |
| RTFATS        | SQL Server<br>Web Application             | ASP | Return to Flight Action<br>Tracking System                            |
| SIRMA_Web     | SQL Server<br>Web Application             | ASP | Risk management database  |
| Survey Wizard | SQL Server<br>Web Application             | ASP | Tool used to building custom<br>surveys                               |
| PSRP          | SQL Server<br>Web Application             | ASP | Payload Safety Review Panel<br>Document Management<br>System          |
| Aspen         | MS Access /<br>SQL Server                 | VBA | Commercially available<br>Laboratory Information<br>Management System |
| IRMA          | SQL Server<br>Web Application             | ASP | Risk management database  |
| IRMA-Arch     | SQL Server<br>Web Application             | ASP | Risk management database  |
| ISSCP         | MS Access<br>MDE / SQL<br>Server database | VBA | Change Paper database for the<br>International Space Station.         |

## J.11 CONTRACTOR MANAGED WEBSITES

ADP Status Tracker  
S&MA Recognition Program  
SR&QA MER Console Reports  
NA SR&QA Executive Calendar  
SAIC S&MA's E-Learning  
SAIC Team Page  
All Hands Comments  
Ops Customer Survey  
S&MA Extra Vehicular Activity  
Flight Equipment S&MA Branch (GFE)  
Government Furnished Equipment (GFE) Problem Reporting and Corrective Action (PRACA) Database  
Generic Activity Tracking System (GNATS)  
Shuttle and Station Infobases  
I.T.M. Action Tracking System  
SR&QA Infrastructure Resource System  
S&MA QMS/ISO 9000 Road Map  
NASA Space Station Reliability and Maintainability  
SR&QA Information Technology Planning  
Life Cycle Risk Management  
Mission and Logistics Planning  
S&MA Action Tracking System  
Safety & Mission Assurance Website  
Safety and Test Operations Division (NS)  
Prelaunch Assessment Review (PAR)  
Payloads Web  
Payload Safety  
    Desk Instructions  
Personnel Emergency Information  
QARC Reports  
QREX  
JSC Nonconformance Trend Data (Quality)  
Resource Util  
Learner S&MA On-Line Training System  
Risk Management at JSC  
Receiving Inspection & Test Facility (RITF)  
SR&QA Skills Assessment Survey  
ISS SRP Planning Calendar  
International Space Station Division (NE)  
Independent Assessment (NO)  
Flight Equipment Division (NT)  
S&MA Space Shuttle Division Website (SSD)  
The SR&QA Flight Operations Training Web  
System Safety Review Panel  
Station Generic User Guide  
S&MA Web-Based Survey Wizard  
SR&QA Software Assurance Technology Team  
SR&QA Shuttle & Reliability Analysis  
S&MA Academy  
Test Safety Officer Planning Calendar

Cycle Tracking and Reporting Tool  
JSC Integrated Risk Management Application (IRMA)  
Space Shuttle Program Integrated Risk Management Application (SIRMA)  
NESC Assessment Risk Management Application  
SAS  
Integrated Supplier Assurance Management Program (ISAMP)