

Modification No. 9

Cargo Mission Contract

International Space Station Program

Solicitation Number NNJ09ZBG003R

Contract Number NNJ10GA35C

National Aeronautics and Space Administration
International Space Station Program
Johnson Space Center
Houston, Texas



SOLICITATION, OFFER AND AWARD	1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) ➤	RATING DC-09	PAGE 1 of See sect 11 below
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2. CONTRACT NO. NNJ10GA35C	3. SOLICITATION NO. NNJ09ZBG003R	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED	6. REQUISITION/PURCHASE NO.
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7. ISSUED BY NASA Lyndon B. Johnson Space Center Space Station Procurement Office 2101 NASA Parkway Mail Code: BG Houston, TX 77058	CODE BG	8. ADDRESS OFFER TO (If other than Item 7) NASA Lyndon B. Johnson Space Center 2101 NASA Parkway Attn: Eric Schell, Building 259 Houston, TX 77058
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NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder"

SOLICITATION

9. Sealed offers in original and copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, at the Lyndon B. Johnson Space Center, until _____, local time, on _____. **NOTE:** Volume IV, Past Performance, and Section K, Representations and Certifications are due at the place specified in Item 8, at the Lyndon B. Johnson Space Center, until _____ local time, on _____. All offers are subject to all terms and conditions contained in this solicitation. CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: ➤	A. NAME Eric Schell	B. TELEPHONE NO. (NO COLLECT CALLS) AREA CODE (281) NUMBER 244-6425 EXT.	C. EMAIL ADDRESS eric.j.schell@nasa.gov
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OFFER (Must be fully completed by offeror)

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

12. In compliance with the above, the undersigned agrees, if this offer is accepted within 180 calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT ➤ (See Section I, clause No. 52-232-8)	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %
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14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION). For offerors and related documents numbered and dated:	AMENDMENT NO	DATE	AMENDMENT NO	DATE

15. NAME AND ADDRESS OF OFFEROR	CODE 1BYL8	FACILITY 5316	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
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15B. TELEPHONE NO. (Include area code)	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE – ENTER <input type="checkbox"/> SUCH ADDRESS IN SCHEDULE	17. SIGNATURE	18. OFFER DATE
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AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION
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22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()	23. SUBMIT INVOICES TO ADDRESS SHOWN IN: ➤ (4 copies unless otherwise specified)	ITEM G.3
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24. ADMINISTERED BY (If other than Item 7) CODE	25. PAYMENT WILL BE MADE BY CODE
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26. NAME OF CONTRACTING OFFICER (Type or print)	27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE
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IMPORTANT – Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS

B.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
None included by reference		

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

CLAUSE NUMBER	DATE	TITLE
None included by reference		

B.2 TOTAL CONTRACT VALUE

The current cumulative contract value is \$64,767,199 (including the Firm Fixed-Price (FFP) Phase-In).

The minimum amount of IDIQ supplies and services ordered in total and paid for under this contract shall be \$15,000.

The maximum not-to-exceed (NTE) value of IDIQ supplies and services ordered in total under this contract is \$20 Million, which includes incidental materials and travel. The maximum NTE amount does not reflect an obligation of the Government. The Government's obligation hereunder shall be based on that specified in the task/delivery orders issued during the period of the contract.

Basic Period of Performance Table

	Maximum Contract Value
Phase-In (ref Clause B.5)	(b) (4)
CPAF (ref Clause B.3)	(b) (4)

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IDIQ (NTE)	(b) (4)
TOTAL	(b) (4)

Option 1 Table

	Maximum Contract Value
CPAF (ref Clause B.3)	(b) (4)
IDIQ (NTE)	(b) (4)
TOTAL	(b) (4)

Option 2 Table

	Maximum Contract Value
CPAF (ref Clause B.3)	(b) (4)
IDIQ (NTE)	(b) (4)
TOTAL	(b) (4)

Option 3 Table

	Maximum Contract Value
CPAF (ref Clause B.3)	(b) (4)
IDIQ (NTE)	(b) (4)
TOTAL	(b) (4)

Option 4 Table

	Maximum Contract Value
CPAF (ref Clause B.3)	(b) (4)
IDIQ (NTE)	(b) (4)
TOTAL	(b) (4)

Total Table

	Maximum Contract Value
FFP	(b) (4)
CPAF (ref Clause B.3)	(b) (4)
IDIQ (NTE)	(b) (4)
TOTAL	\$171,180,957

(End of clause)

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

The estimated cost of this contract is (b) (4). The maximum available award fee, excluding base fee, if any, is (b) (4). Total estimated cost, base fee, and maximum award fee is (b) (4).

(End of clause)

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B.4 NFS 1852.232-81 CONTRACT FUNDING (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 (b) (4). This allotment is for cargo mission services and covers the following estimated period of performance: January 1, 2011 through June 24, 2011.

(b) An additional amount of (b) (4) is obligated under this contract for payment of fee.

(End of clause)

B.5 FUNDING FOR FIXED-PRICE ITEMS PHASE-IN

Fixed-Price (FP) Milestone Payments for Phase-In exist under a FP arrangement in this contract and therefore must be fully funded. FP Milestone Payments for Phase-In is fully funded at the time of contract award. Funds obligated under this clause are separate and distinct from those allotted under Clause B.3

(b) (4) amount obligated and available for FP Milestone Payment for Phase-In is (b) (4)

The TOTAL FP amount obligated and available is (b) (4)

(End of clause)

B.6 INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) ORDERS

The Government may order Indefinite Delivery/Indefinite Quantity (IDIQ) work at any time after contract start in accordance with the procedures set forth in Clause H.3 and SOW section 5.0 of this contract. The contractor shall provide engineering and technical skills in support of Government-led studies, analyses, and unforeseen hardware requirements such as hardware builds and modifications. The tasks may be dynamic in nature and may be performed in a teaming arrangement with the Government or other contractors.

IDIQ work will be ordered by the Government on a cost-reimbursement basis. The Government will issue a cost-reimbursement task order authorizing the contractor to perform all effort, or, alternatively, to define the overall requirements, performance standards, and specifications associated with the work. The Government will utilize the defined requirements, performance standards, and specifications delivered by the contractor to request a proposal for completion of the work. The negotiated proposal will form the basis for the Government to issue a cost reimbursement task order for this work.

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The contractor shall accept only task orders issued by the Contracting Officer. The total value of task orders issued under this clause shall not exceed \$20,000,000 during the contract period of performance. Any work which falls under SOW 5.0 and would otherwise be ordered under the IDIQ provisions of this contract, but which is valued at less than \$650,000, will be processed as an underlimit change pursuant to Clause H.16, Special Clause for Contract Changes and IDIQ Task Orders, in lieu of the task ordering procedures of this contract; these SOW 5.0 underlimit changes are excluded from the value of task orders issued, and are not subject to the IDIQ maximum value.

RATE TABLE FOR PRICING TASK ORDERS

The following labor and indirect rates shall be used in the establishment of the estimated cost of individual task orders. The labor rates are fully burdened composite team rates (prime and all subcontractors); but exclude prime fee. Fee will be negotiated as it is applied to each actual Task Order and will be paid based on the negotiated arrangement. Any negotiated fee will not exceed the max fee proposed by the contractor in the table below. The indirect rates are those that may be applied to non-labor resources costs, such as materials, travel and other. These indirect rates and the basis of application must be identified at the bottom of the table.

The parties agree that the fully burdened labor rates established below shall not be subject to any adjustment (upwards or downwards), regardless of actual rates incurred during contract performance.

IDIQ Rate per Hour Table
(All labor rates are fully burdened exclusive of fee)

SLC	CY1	CY2	CY3	CY4	CY5	CY6	CY7						
Program Manager	(b)	(4)											
Manager													
Supervisor													
Technical Professional III													
Technical Professional II													
Technical Professional I													
Technician III													
Technician II													
Technician I													
Drafter II													
Drafter I													
IT Professional													
Analyst II													
Analyst I													
Secretary													
Clerk													
Business Specialist													
Other													
Procurement Burden (Basis: Subcontractor/Material Cost)													
G&A (Basis: Value Added Cost)													
G&A Cost of Money (Basis: Value Added Cost)													
Maximum Award Fee													

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*Propose additional Labor Categories that cannot be logically mapped into any of the Standard Labor Categories above. Provide a job description and qualifying education and experience for all additional labor categories.

**Rates to be applied to non-labor costs (i.e. material, travel). Identify the rates and basis of application.

(End of clause)

B.7 AWARD FEE

The amount of fee earned by the contractor shall be determined in accordance with Attachment J-5, Award Fee Evaluation Plan.

The amount of available and earned fee, by evaluation period, is provided in Table B-5 below:

Table B-5 Available and Earned Fee									
Basic	Evaluation Periods	Available Fee	Earned Fee	Score	Rating	AF Payment Mod			
1	04/01/11 – 09/30/11	(b)	(4)			(b) (4)			
2	10/01/11 – 3/31/12								
3	04/01/12 – 09/30/12								
4	10/01/12 – 3/31/13								
5	04/01/13 – 09/30/13								
6	10/01/13 – 03/31/14								
	TOTAL								
Option 1	Evaluation Periods								
7	04/01/14 – 09/30/14								
8	10/01/14 – 03/31/15								
Option 2	Evaluation Periods								
9	04/01/15 – 09/30/15								

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10	10/01/15 – 03/31/16	(b) (4)			(b) (4)
Option 3	Evaluation Periods				
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13	04/01/17 – 09/30/17				
14	10/01/17 – 03/31/18				

(End of clause)

B.8 FIXED PRICE MILESTONE PAYMENTS – PHASE-IN

The following fixed-price amounts, identified in column C, will be paid for delivery of each of the milestones as shown in the table below on or before their associated due date in column B. Payment is dependent upon the contractor satisfactorily completing the milestones identified in their Attachment J-3, Phase-In Plan. When the milestone is not completed on or before the due date (column B) the fixed-price payment (column C) will be reduced by 2% per work day until the milestone is satisfactorily completed. These milestone payments only apply to milestone deliveries in the “phase-in period” identified in the contractor’s Attachment J-3, Phase-In Plan.

A) Milestone	B) Due Date	C) Amount for Early or On Time Delivery
Milestone 1	1/7/11	(b) (4)
Milestone 2	11/14/11	
Milestone 3	3/1/11	
Milestone 4	1/28/11	
Milestone 5	2/11/11	
Milestone 6	2/18/11	
Milestone 7	3/31/11	
Milestone 8	3/31/11	
Milestone 9	3/31/11	
Milestone 10	3/31/11	
Milestone 11	3/31/11	
Total	-----	

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(End of clause)

B.9 NFS 1852.216-78 FIRM FIXED PRICE (CONTRACT PHASE-IN) (DEC 1988)

The total firm fixed price of the phase-in of this contract is **(b) (4)** The contract phase-in period is from January 1, 2011 through March 31, 2011.

(End of clause)

[END OF SECTION]

Statement of Work

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- 5.5 Safety and Reliability Assessments
- 5.6 Development Schedules

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FOREWORD

The products and services provided in this Statement of Work (SOW) support the ISS Program, the Constellation Program (CxP) or any related technology development activities, and any commercial provider of visiting vehicles. The contractor shall maintain flexibility and responsiveness to changing requirements. The contractor shall perform the activities in the most cost-effective and efficient manner while supporting the Government's priorities for safety, mission success, and customer satisfaction.

The ISS requires support consisting of analytical and physical processing activities to support pressurized cargo requirements for visiting vehicle flights to and from the ISS. The ISS Program process for ground processing will be utilized by the CxP for both ISS Program and CxP provided Flight Crew Equipment (FCE). This support includes:

- Cargo Mission Planning
- Cargo Coordination
- Stowage Integration
- Cargo Physical Processing
- International Shipping
- Decals, Placards and Graphics Production
- The capability to build hardware to support pressurized and unpressurized cargo transportation, as needed.

The contractor shall perform Flight Crew Equipment processing related activities necessary to provide and maintain flight and training hardware and services in support of the ISS and Constellation Programs. All hardware shall be provided on an as needed basis and meet design and operational requirements. FCE includes:

- Crew Clothing and Personal Hygiene Items
- Housekeeping Items
- Audio/Video Equipment and Associated Cabling
- Laptop Computers and Support Equipment
- Batteries
- Crew Survival Equipment (Constellation unique requirement)

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1.0 Management Integration and Control

1.1 Cargo Mission Management and Administration

The contractor shall conduct management and administration activities, including but not limited to risk management, to develop and deliver the required products and services as defined within this contract. The contractor shall provide for the planning, organization, control, and reporting of all activities required by this contract to assure accomplishment of all outcomes and deliverable products required by this contract. The contractor shall develop, maintain and implement a Cargo Mission Management Plan in accordance with Data Requirements Description (DRD) C-PM-01, Cargo Mission Management Plan. The contractor shall describe in the plan the contractor's management structure that integrates all related plans and systems, including those of major subcontractors and vendors. (Major subcontractor and vendors are those that exceed \$1 Million dollars in annual cost to the prime contractor.) The contractor shall address in the plan the contractor's management of all systems, functions, and data requirements described in this Statement of Work (SOW).

The contractor shall provide the government web-based electronic access to the cost, schedule and performance data to enable the government to monitor performance whenever desired to supplement the insight provided by monthly reports and quarterly reviews.

1.1.1 Performance Management Reviews (PMR)

The contractor shall conduct quarterly Performance Management Reviews (PMRs) for the Government and provide monthly integrated management review products in accordance with DRD C-PM-02, Integrated Management Review Product (IMRP), for the work performed on this contract. The reviews shall provide the ISS Program insight into the contractor's, subcontractors', and vendors' overall technical, schedule, and cost performance. Metrics that indicate the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this SOW or elsewhere in this contract shall be presented at the PMR. The PMR presentation shall include a correlation of the metrics to the requirements and measurements of management responsiveness to the performance indicated by the metrics. The PMR presentations shall depict performance measurement, accomplishments, issues and corrective actions, company financial status, including rates and all other data necessary to status the ISS Program.

1.1.2 External and Internal Reviews

The contractor shall develop and deliver briefing materials and analyses including but not limited to ISS Program technical, cost, and schedule status, specific safety or risk issues from the scope of its work on this contract for ISS Program presentations and meetings with internal and external review groups. These groups include, but are not limited to: the Aerospace Safety Advisory Panel (ASAP), Space Flight Advisory Committee (SFAC), Inspector General (IG) and United States (U.S.) Government Accountability Office (GAO), and Cost Assessments Teams.

The contractor shall contribute to program reviews, control boards and panels, working groups, Technical Interchange Meetings, including but not limited to reviews leading up to the formal review or board meeting, as required by the SOW and SSP 50200-01.

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1.2 Business Management

The contractor shall provide overall contract management and administration for this contract. The contractor shall perform all business and administrative functions and integrate these functions across all areas of performance. The contractor's on-going business analysis shall support the ISS Program business process.

1.2.1 Contract Financial System

The contractor shall utilize a contract financial system which discretely tracks resources by fund source, contract Work Breakdown Structure (WBS), and elements of cost including labor, overhead, other direct costs (i.e. travel and subcontracts), and indirect costs. The contractor shall provide financial planning to the Government budget process (i.e. Program Planning, Budgeting, and Execution [PPBE] budget calls), and special requests for budget impacts. The contractor shall provide financial reporting in accordance with DRD C-PC-01, NF533 Monthly Cost Reporting. The contractor shall include financial reporting requirements in any subcontracts for all tiers of subcontracts with annual expenditures of \$1 million or more.

1.2.2 Contract Work Breakdown Structure

The contractor shall develop, provide, and maintain a contract Work Breakdown Structure (WBS) Dictionary, in accordance with DRD C-PC-04, Work Breakdown Structure (WBS) and Dictionary. The contract WBS shall serve as the framework for contract planning, budgeting, cost reporting, schedule resource loading, and schedule status reporting to the ISS Program. The WBS map shall show mapping of the contractor WBS to SSP 50659, ISS Program WBS, at the lowest level of the ISS Program WBS. Elements of work provided by subcontractors with a total value of \$1M or more shall be identified in the contract WBS.

1.2.3 Workforce Reports

The contractor shall produce Workforce Reports in accordance with DRD C-PC-03, Workforce Reports, to show organization, geographical breakdown and off-site versus on site workforce data.

1.3 Configuration and Data Management and Integration

The contractor shall develop, implement and administer configuration management operations in accordance with SSP 41170, ISS Program Configuration Management Requirements; SSP 50010, Standards for ISS Program Documentation; SSP 50123, Configuration Management Handbook; and SSP 50172, Data Management Handbook. The contractor shall develop and maintain a Configuration Management Plan in accordance with DRD C-CM-01, Configuration Management Plan.

1.4 Program Information Technology (IT)

The contractor shall provide the IT necessary to meet the ISS Program IT requirements in accordance with SSP 50013, Information Systems Plan. The contractor is responsible for training of CMC personnel in use of standard and unique IT skills. The contractor shall develop and implement RDR C-IT-02, IT Management Plan for reportable IT. The contractor shall report all IT delivered implementing an IT Capital Investment Plan and associated reports in

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accordance with SSP 50222, ISS Capital Investment Planning document. The contractor shall develop and implement an IT Security Plan in accordance with DRD C-IT-01. The contractor shall implement an architecture that enables bi-directional digital data sharing and web-based access to CMC tools, information and data products with authorized users of the JSC network domain with Government representatives including transmission of information across firewalls and the required security access defined requirements. The contractor shall adhere to JSC IT website policies including NASA JSC Web Policy, JSC Policy on the Registration of Websites, and Section 508 of the Rehabilitation Act of 1974.

1.5 Certification of Flight Readiness

The contractor shall develop, maintain, and implement a Certification of Flight Readiness (CoFR) Plan in accordance with DRD C-MI-01, Certification of Flight Readiness (CoFR) Plan, and SSP 50108, Certification of Flight Readiness Process Document. The contractor shall develop and implement an auditable approach to verify and ensure that flight preparation responsibilities and requirements are met and all problems dispositioned in accordance with SSP 50108.

1.6 Export Control

The contractor shall provide export control functions for all hardware, software and data requiring export in the execution of contract responsibilities. The contractor shall establish export control procedures that are compliant with regulations, and perform self-audits of their established export control procedures per DRD C-II-01, Export Control Plan (ECP), and SSP 50223 and deliver results of the Export Control Audits per DRD C-II-02, Export Control Audit Results.

The contractor shall identify contacts at Department of Homeland Security/Transportation Security Administration to aid cargo transport through US airports and expedite issue resolution.

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2.0 Safety and Mission Assurance (S&MA)

2.1 S&MA Management

The contractor shall develop, maintain, and implement a Mission Assurance and Risk Management (MA&RM) Plan in accordance with NPR 8715.3, NASA General Safety Program Requirements, and DRD C-SA-01, Mission Assurance and Risk Management (MA&RM) Plan. The MA&RM plan shall contain S&MA Management, Risk Management, ISS Safety Program, Reliability and Maintainability, Quality Assurance and Operations Safety.

2.1.1 Safety and Health

The contractor shall develop, implement and maintain a Safety and Health (S&H) Plan in accordance with OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual; JPR 1700.1, JSC Safety and Health Handbook; JSC 17773, Instructions for Preparation of Hazard Analysis for JSC Ground Operations, and DRD C-SA-02, Safety and Health (S&H) Plan. The contractor shall document assessments for Monthly Safety and Health Metrics in accordance with DRD C-SA-03, Monthly Safety and Health Metrics, and perform an Annual Safety and Health Program self-evaluation in accordance with DRD C-SA-04, Safety and Health Program Self-Evaluation.

2.1.2 Lessons Learned

The contractor shall develop, update and implement a process to capture, disseminate, and implement mishap related lessons learned, both positive and negative, in accordance with NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping. For non-mishap related lessons learned, the contractor shall meet NPR 7120.6, Lesson Learned Process, and enter the lessons learned into the Government provided database in accordance with JPR 2310.1, JSC Organizational Learning Program.

2.2 Reserved

2.3 Agency Risk Management

The contractor shall identify risks and coordinate the abatement or acceptance of these risks in accordance with NPR 8000.4, Agency Risk Management Procedural Requirements; SSP 50175, Risk Management Plan; and JPD 306, Establishment of the Program Risk Management System.

2.4 ISS Safety Program

The contractor shall perform and deliver safety assessments for all packed bags, and hardware sustained and, or developed on this contract in accordance with SSP 30599, Safety Review Process; SSP 30309, Safety Analysis and Risk Assessment Requirements; SSP 50021, Safety Requirements Document; SSP 51700 Payload Safety Policy and Requirements for the International Space Station; and DRD C-SA-05, Safety Analysis and Hazard Reports. The contractor shall investigate and report mishaps, in accordance with NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.

2.5 Reliability and Maintainability (R&M)

The contractor shall develop, maintain and deliver the Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) Report and worksheets in accordance with SSP 30234,

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Failure Modes and Effects Analysis and Critical Items List Requirements for Space Station, and DRD C-SA-08, Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL), for hardware developed or sustained under this contract.

The contractor shall develop, and deliver the R&M Allocation, Assessment, and Analysis (AAA) Report in accordance with DRD C-SA-06, R&M Allocations, Assessments, and Analyses Reports. The contractor shall develop and, or maintain hardware R&M source data. Source data updates are required to reflect operational performance. The contractor shall utilize approved reliability block diagrams and data to perform quantitative R&M analyses. The contractor shall submit newly generated or updated source data and analyses to NASA R&M for approval.

2.6 Quality Assurance

The contractor shall develop, implement and maintain a quality assurance plan, as documented in the Mission Assurance and Risk Management (MA&RM) Plan in accordance with DRD C-SA-01, Mission Assurance and Risk Management (MA&RM) Plan, and SSP 41173, Space Station Quality Assurance Requirements.

The contractor shall establish and maintain a Quality Management System (QMS) that complies with the SAE Aerospace Standard AS9100C, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations. The contractor shall obtain AS9100C certification within the 18 months of contract start.

The contractor shall report, promote and participate in the investigation and resolution of applicable problems in accordance with SSP 41173, Space Station Quality Assurance Requirements, and SSP 30223, International Space Station Problem Reporting and Corrective Action (PRACA) System Requirements.

Contractor developed hardware shall be accepted in accordance with SSP 50287, Hardware/Software Acceptance Process. The contractor shall provide an Acceptance Data Package (ADP) in accordance with SSP 30695, Acceptance Data Package Requirements Specification, and DRD C-SA-07, Acceptance Data Package (ADP), for contractor developed hardware. The contractor shall maintain the ADP for hardware sustained and, or maintained on the contract.

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3.0 Hardware Sustaining

Hardware Sustaining responsibility will be designated as either Maintenance and Operations (M&O) or Sustaining Engineering (SE). The contractor shall have M&O responsibility for all hardware on this contract. For hardware identified as M&O only, NASA will retain overall SE responsibility. The hardware for which the contractor has SE responsibility, NASA will retain System Management oversight. Attachment J-9, Contractor Maintained and, or Sustained Hardware, defines the contractor's responsibility for each hardware item (SE or M&O only). The contractor shall provide SE and M&O for all Ground Support Equipment (GSE) on this contract.

3.1 Maintenance and Operations (M&O)

The contractor shall warehouse, acquire issue, track, maintain, and process all hardware identified in Attachment J-9, Contractor Maintained and, or Sustained Hardware, to ensure availability for flight and training requirements.

3.1.1 Storage

The contractor shall operate a total storage function, including controlled facilities, associated with this SOW. The contractor shall receive, verify, and issue flight and non-flight equipment into storage. The contractor shall segregate property in storage by flight or non-flight classification and as serviceable or non-serviceable. The contractor shall control perishable, shelf-life, and limited-life equipment.

3.1.2 Inventory Management

The contractor shall develop, implement, and maintain an automated inventory control system and workflow tool for all contractor-held Government property. The contractor shall define and maintain inventory levels required to support ISS flight and training requirements. To maintain inventories, the contractor shall acquire and, or fabricate parts, materials, and replacement units.

The contractor shall maintain a current inventory of all non-consumable FCE and stowage accommodations by location with location identified as "on ISS," "on a space transportation vehicle (and identify the transportation vehicle)," "disposed of," or "on the ground." For items identified as "on the ground" the contractor shall identify the location and status, e.g. "warehouse," "shipped to training facility," "under repair," "staged at launch site for contingency use."

3.1.3 Crew Provisioning

The contractor shall perform Crew Provisioning Fit Checks/Reviews and participate in the Crew Provisioning Working Group as defined in SSP 50409, Crew Provisioning Management Plan. These activities allow the Mission Integration Contractor (MIC) to determine the type and quantity of crew clothing, hygiene, and personal items required to be flown for ISS Increment Crews.

3.1.4 Maintenance and Repair

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The contractor shall maintain, repair and test the hardware identified in Attachment J-9 to maintain the required inventory. The contractor shall update required technical documentation including ADPs to maintain a record of the hardware's history. The contractor shall certify repair facilities, personnel and processes in accordance with SSP 50276, Depot/Manufacturing Facility Certification Plan.

3.1.5 Processing of Hardware

The contractor shall perform processing required to make the hardware identified in Attachment J-9, Contractor Maintained and, or Sustained Hardware, ready for flight or training use when requested by the Government. The contractor shall update required technical documentation including acceptance data packages to maintain a record of the hardware's history.

3.1.6 M&O Schedules

The contractor shall prepare and deliver schedules for all maintenance, repair, and processing activities to provide the Government with insight into overall project status in accordance with DRD C-PC-05, Cargo Mission Contract Program Schedules.

3.2 Sustaining Engineering

3.2.1 Hardware Performance Analysis

The contractor shall monitor, analyze, and document hardware reliability and performance to determine actual versus expected performance, anomalous behavior, and required updates to repair, maintenance plans, check out plans, and operational procedures for hardware sustained on this contract. The contractor shall perform an analysis of the use, maintenance (Preventive and Corrective), replacement, and problems to be used in inventory management for all the equipment for which the contractor has accountability.

3.2.2 Anomaly Resolution

The contractor shall identify, investigate, resolve, and document flight and ground hardware anomalies for all hardware sustained by this contract in support of the ISS Program and Constellation Program anomaly resolution processes. Applicable anomalies shall be documented per SSP 41173, Space Station Quality Assurance Requirements, and SSP 30223, Problem Reporting and Corrective Action (PRACA) for the Space Station Program per paragraph 2.6 of this SOW. The contractor shall conduct anomaly resolution in accordance with MGT-OA-019, On-Orbit Anomaly Resolution Process Work Instruction.

3.2.3 Engineering Drawings/Data

The contractor shall maintain drawings for all hardware sustained on this contract in accordance with ASME Y14.100, Engineering Drawing Practices; ASME Y14.24M, Types and Applications of Engineering Drawings; ASME Y14.34M Associated Lists; and ASME Y14.35M, Revision of Engineering Drawings and Associated Documents; and DRD C-MI-05, Engineering Drawings and Associated Lists.

3.2.4 Computer-Aided Design (CAD) Models

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The contractor shall maintain CAD models for all hardware sustained on this contract in accordance with DRD C-MI-03, Cargo Integration Cargo CAD Models for Launch, Return and On-orbit Configurations.

3.2.5 Obsolescence Management

The contractor shall perform obsolescence management for repair parts and commercial off the shelf (COTS) end items for hardware sustained on this contract as identified in Attachment J-9, Contractor Maintained and, or Sustained Hardware, in order to ensure hardware is available to support maintenance or manufacturing activities. In the event that original materials and/or parts are no longer available, or desirable, the contractor is responsible for notifying NASA, certifying the new sources, and updating engineering products per ISS Program processes.

3.2.6 Standard Repair Procedures (SRPs)

The contractor shall generate, review and approve standard repair procedures (SRPs) affecting hardware within the sustaining engineering responsibility of this contract to expedite hardware repair when an SRP does not already exist for items that need frequent repair.

3.2.7 Sustaining Engineering Schedules

The contractor shall prepare and deliver schedules for all Sustaining Engineering activities to provide the Government with insight into overall project status in accordance with DRD C-PC-05, Cargo Mission Contract Program Schedules.

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4.0 Pressurized Cargo Integration

Unless otherwise specified, tasks outlined in this section apply to cargo manifested on ISS visiting vehicles, excluding IP provided cargo flying on its own vehicle. Visiting vehicles include but are not limited to Soyuz, Progress, Automated Transfer Vehicle (ATV), H-II Transfer Vehicle (HTV), Commercial Orbital Transportation System (COTS), Commercial Resupply Services (CRS) providers, and the Constellation Program (CxP) Crew Exploration Vehicle (CEV).

4.1 Cargo Mission Planning

4.1.1 Manifest Assessments

The contractor shall provide tactical level assessments of manifests and manifest options, when requested by the Government, for the integration of these assessments into the overall ISS Program planning process. Descriptions of the tactical planning processes are defined in SSP 50200-01, Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan, and SSP 50200-02, Station Program Implementation Plan (SPIP) Volume 2: Program Planning and Manifesting. The following Program documents define ISS Planning requirements:

- SSP 54100, Increment Definition and Requirements Document Flight Program,
- SSP 50489, Mission Integration Templates.

4.1.2 Launch Package Team Support

The contractor shall support the Mission Integration Contract (MIC) development and maintenance of flight-specific Performance-to-Plan and Level III Schedules for the Launch Package Manager (LPM). The purpose of the flight-specific schedule is to coordinate delivery dates for activities and products with the hardware providers, operations community, and the Next Level Integrator (NLI).

The contractor shall attend NASA Launch Package Team (LPT) meetings and report on the progress of planned activities and issues associated with cargo mission plans. This shall include ready assessment of potential impacts to CMC M&O, Sustaining Engineering, and Product Delivery Schedules. The LPT is described in SSP 50200-01, Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan, and SSP 50200-01-ANXC, Station Program Implementation Plan Volume 1: Station Program Management Plan, Annex C: Mission Integration and Operations.

4.1.3 NASA Cargo Integration Office Support

The contractor shall develop, maintain, and deliver to the Cargo Integration Lead a single, multi-flight integrated schedule in accordance with DRD C-PC-05, Cargo Mission Contract Program Schedules. The purpose of the integrated schedule is to assess major mission milestones related to cargo processing and turnover to the NLI for all active missions to provide the Government with insight into overall cargo processing resource loading.

The contractor shall book coordinate, as defined in Attachment J-1: Dictionary, the following program process and requirements documents:

- SSP 50007, Space Station Inventory Management System Label Specification,

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- SSP 50200-03, Station Program Implementation Plan (SPIP), Volume 3: Cargo Analytical Integration,
- SSP 50200-06, Station Program Implementation Plan (SPIP), Volume 6: Cargo Physical Processing,
- SSP 50465, Return Manifest Disposition Plan (RMDP) Blank Book, including flight specific appendices (i.e., Appendix D (team rosters), Appendix E (RMDP flight appendix), Appendix F (As-Flown RMDP) and Appendix G (Excess Integration and Unplanned Hardware) to be delivered using the Mission Integration Database Application System (MIDAS) RMDP application.

4.2 Cargo Coordination

The contractor shall perform the cargo coordination function as described in SSP 50200-03, Station Program Implementation Plan Volume 3: Cargo Analytical Integration, and SSP 50200-06, Station Program Implementation Plan Volume 6: Cargo Physical Processing. The contractor shall use the approved Manifest and approved Manifest Request (MR) reports from the MIDAS system as the flight specific source for cargo to be processed under this contract to ensure work is performed using a Government approved list. . In addition, the following documents define the MIDAS data interface for the HTV and ATV vehicles:

- SSP 50849, MIDAS to JAXA HTV Cargo Integration System ICD,
- SSP 50647, Mission Integration Database Applications System (MIDAS) to CIDMT ICD for ATV.

4.2.1 Cargo Integration Planning

The contractor shall establish and implement a flight specific Hardware Audit (HA) process for each manifested hardware item to collect ground handling and packing requirements, assess certification and export control status (when applicable), verify manifest data, and confirm delivery dates in accordance with SSP 50200-03, Station Program Implementation Plan, Volume 3: Cargo Analytical Integration, and SSP 50200-06, Station Program Implementation Plan, Volume 6: Cargo Physical Processing. The contractor shall perform as the facilitator for identification and resolution of issues related to schedules and deliverables, including but not limited to export control status, to ensure on-time delivery of manifested cargo to the NLI. The contractor shall update MIDAS to ensure completeness and accuracy of the Hardware Accountability Matrix Report (HAMR). Issues that cannot be resolved shall be reported to the LPM, NASA Cargo Integration Lead, and Daily Space Station Review (DSSR) Board to ensure Government awareness of cargo integration activities. The contractor shall deliver a Packing Data Report for cargo planned to be packed for launch on Progress and Soyuz flights.

4.2.2 Cargo De-Integration Planning

The contractor shall coordinate de-integration and hardware return plans with the Soyuz, COTS, CRS and CEV return vehicle providers, on-site NASA representatives (where applicable), and hardware owners to ensure returned hardware is delivered to the owner within the required time constraints. The contractor shall develop and maintain the requirements in the flight specific

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RMDP Appendices (SSP 50465-XXX, where XXX is flight specific). The contractor shall provide a hardware return summary to the Mission Integration and Operations Control Board (MIOCB) following the completion of return hardware disposition to identify impacts to future manifest plans, on-orbit inventory, and on-orbit stowage volume.

4.2.3 Inventory Management System (IMS) Bar Code Tracking

The contractor shall collect hardware to barcode relationships, including any encoded and associated Radio Frequency Identification (RFID) data, and maintain the relationship in MIDAS to ensure the accuracy of the on-orbit IMS database. The contractor shall maintain the content of the Barcode Inventory Tracking System (BITS) website with flight-specific MIDAS Inventory Tracking Reports (MITR) to support IMS bar code function. The contractor shall review and process barcode label requests JSC Form 733, Decal Design and Production Facility (DDPF) Support Request, and JF 1364, BITS Label Request [Supplement to DDPF] in accordance with JSC 27260, Decal Process Document and Catalog. The contractor shall review and concur on, and process barcode label exemption requests to the NASA Cargo Integration Lead for approval in accordance with JF 1345, ISS Inventory Management System Bar Code Label Request for Exemption.

4.2.4 IMS Containment Data

The contractor shall document As-Built packing data in the MIDAS database system for hardware packed within the scope of this SOW for upload to the on-orbit IMS to ensure a full accounting of hardware containment within each packed bag or locker. As-Built packing data is defined per SSP 50200-06, Station Program Implementation Plan, Volume 6: Cargo Physical Processing. The contractor shall provide a capability for electronic upload of As-Built data in to MIDAS. For pre-packed cargo delivered to the contractor or to the launch vehicle integration site from other packing organizations, the contractor shall coordinate upload of As-Built packing data not automatically loaded into the MIDAS database system for upload to the on-orbit IMS database.

4.3 Stowage Integration

The contractor shall perform the Stowage Integration (SI) function as described in SSP 50200-03, Station Program Implementation Plan, Volume 3: Cargo Analytical Integration for NASA packed bags and specialized stowage accommodations. The contractor shall provide facilitating tools and/or process mechanisms that aid the ISSP in identifying and analyzing stowage options for late requirements. Additional requirements applicable to the SI function are described in the following Program documents:

- SSP 50273, Segment Specification for the H-II Transfer Vehicle,
- SSP 50438, International Space Station to H-II Transfer Vehicle Interface Control Document Part 1,
- SSP 50833, International Space Station Program Cargo Transport Interface Requirements Document,
- SSP 50835, ISS Pressurized Volume Common Hardware Interface Requirements Document,

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- SSP 541XX-ANX 1 Annex 1, Increment Definition and Requirements Document for Increment XX, Annex 1 Manifest, and interim updates.

The following International Partner (IP) controlled documents are available for reference when performing the bag-level integration function for NASA cargo launching in IP vehicles. The Contractor shall notify the Government if compliance with any requirements in these documents conflicts with the other requirements in this solicitation:

- I132928-103 Requirements for International Partner Cargoes Transported on Russian Progress and Soyuz Vehicles,
- OPS-PL-0-008-ESA, ESA Cargo Integration Plan,
- OPS-IDD0-200, ATV Cargo Integration IDD,
- ATV-HB-AI-0001, ATV Cargo Accommodations Handbook,
- ATV-E-RIBRE-PL-0054, ATV 2 Launch Site Operations Plan,
- ESA-ATV-1700.7b, Safety Requirements for payloads/cargos on board the ATV,
- ESA-ATV-PR-13830, ATV Pressurized Payload/Cargo Safety Certification Process,
- NASDA-ESPC-2857, HTV Cargo Standard Interface Requirements Document Part 1,
- JSX-2208041, HTV Cargo Safety Review Process,
- JSX-2001015, HTV Cargo Safety Requirements,
- JFX-99102, HTV Cargo Accommodation Handbook, and
- JFX-20090175, HTV Cargo Integration Plan (CIP).

4.3.1 Cargo Layouts

The contractor shall develop, maintain and deliver bag-level stowage products to define the arrangement of passive cargo in its packed configuration in accordance with hardware packing and vehicle loading requirements. The contractor shall develop and maintain bag-level descent cargo packing products for COTS, CRS and CEV flights only and deliver to the Government for Mission Operations Directorate (MOD) uplink and execution by the on-orbit crew. Descent cargo layouts are only required for cargo having specific orientation requirements or for bags with complex packing plans. The contractor shall implement a cargo layout review process that enables review participants, including but not limited to the hardware provider(s), MOD, and Crew Office representatives, to view the proposed packing configuration in accordance with SSP 50200-03, Station Program Implementation Plan, Volume 3: Cargo Analytical Integration. The process shall allow for near real-time review of the impacts of suggested changes to a bag: content configuration, weight, orientation, analytical center of mass, packing instructions, volume utilization.

4.3.2 Mass Properties Analysis

The contractor shall develop, maintain and deliver mass properties for cargo processed under this contract to the launch vehicle provider to be used for structural math model development,

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stowage analysis and vehicle integrated safety assessment. Mass properties shall include measured dimensions and mass values for all specialized stowage accommodations and packed bags, and center of gravity (including origin frame of reference) for bags of size Triple Cargo Transfer Bag (CTB) or larger, or as defined in the vehicle specific Interface Definition Document (IDD).

4.3.3 On-Orbit Operations Support

The contractor shall provide on-call support during on-orbit cargo return stowage integration operations to ensure timely resolution of on-orbit issues. On-console operations, if required, shall be performed in accordance with the ISS Management Center Operations Handbook (IMCOH).

4.4 Physical Cargo Processing

The contractor shall perform physical processing of ISS pressurized cargo to the bag level and deliver to the NLI as described in this SOW.

4.4.1 Facilities Requirements

The contractor shall maintain all contractor facilities contracted under this SOW, used for processing of flight hardware, as no less than Generally Clean in accordance with SN-C-0005, Contamination Control Requirements. The contractor shall provide facility space with Visibly Clean (VC) requirements in accordance with SN-C-0005, Contamination Control Requirements, to accommodate VC hardware requirements for all flights in flow. The contractor shall provide controlled storage holding areas for pass-thru flight hardware and packed bags to ensure safe storage of the hardware for all flights in flow. The contractor shall co-locate the functions of hardware sustaining and pressurized cargo integration to minimize physical travel requirements for hardware.

4.4.2 Inventory Control

The contractor shall maintain inventory control by tracking and recording inventory data on all cargo that is received, stored, or processed under this contract.

4.4.3 Hardware Verification

The contractor shall implement a hardware verification process for each hardware item received to verify compliance with all ISS hardware requirements, including but not limited to labeling and sharp edge inspections in accordance with SSP 50005, Flight Crew Integration Standard (NASA-STD-3000/T). The contractor shall implement an approach that emphasizes early identification of issues with manifested hardware, before the hardware is shipped from the hardware provider. The contractor shall perform sharp edge inspections on EVA-related hardware items identified by the Government as having an EVA interface, and notify the Government when required sharp edge inspections are not performed or when discrepancies are noted on hardware. In addition to standard reporting, notification should be provided to the EVA Analysis Integration Team (AIT) point of contact. The contractor shall document discrepancies to hardware delivered for packing and coordinate with the hardware provider to resolve the discrepancy.

When requested by the Government, the contractor shall implement agreed-to resolutions and standard repair procedures, including but not limited to removal of sharp edges and ground handling items, addition of protective caps, and scratch repair on aluminum surfaces. These

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repairs will be requested by the Government when hardware providers are not available to perform the work. For cargo that cannot be made compliant with all ISS hardware requirements in time for nominal cargo processing, the contractor shall notify the LPM for a decision to return such cargo to the hardware provider.

4.4.4 Labeling

If hardware is not pre-labeled or is labeled incorrectly and the hardware provider cannot add or replace the label prior to the start of bag packing, the contractor shall apply contingency labels on the hardware according to the directions of the hardware provider to complete labeling requirements. If the coordination and application of contingency labeling cannot be completed prior to the required NLI need date, the contractor shall inform the Government.

The contractor shall produce flight labels for all packed stowage configurations developed by this contractor. CTB labels shall be produced in accordance with drawing number SEG 32106109 (4 inch Contents Label) and installed in accordance with SSP 50005, Flight Crew Integration Standard (NASA-STD-3000/T).

4.4.5 Cargo Imagery

The contractor shall provide imagery of cargo items and integrated bags and assemblies (including labeling) prior to or during the cargo integration and de-integration processes in accordance with SSP 50200-06, Station Program Implementation Plan, Volume 6: Cargo Physical Processing, and SSP 50502, International Space Station Preflight Imagery Requirements. The contractor shall provide this imagery to the community with sufficient time, not less than 48 hours, for review and comment to support implementation of approved changes to the final configuration before shipping to the NLI.

4.4.6 Foam Cutting Services

The contractor shall provide foam-cutting services to manufacture packing provisions for all bags packed on this contract or for any NASA hardware to be launched on ISS visiting vehicles to meet hardware packing requirements. The contractor shall provide foam-cutting services to manufacture packing provisions or mockups for other contractors and IPs, when approved by the Government.

4.4.7 Cargo Packing

The contractor shall integrate the flight hardware and stowage provisions in accordance with stowage layouts, implementing all packing and labeling requirements defined from the Hardware Audit and any cargo layout review(s) and maintained in the HAMR. The contractor shall perform internal fit checks of pressurized cargo bags or assemblies to be integrated into launch vehicle racks or stowage volumes, using a fit check tool sized to the internal rack or stowage volume dimensions, prior to shipment to NLI to mitigate issues with vehicle integration at the launch site.

4.4.8 Reserved

4.4.9 As-Built Data Delivery to NLI

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The contractor shall provide as-built data for cargo processed under this contract to the NLI during shipment to ensure accurate accounting for vehicle mass properties. This data includes as-built lists identifying bag type, bag-level mass properties, external identifier, Integrated Bag Level Hazards Assessment (IBLHA), constraints on bag co-location, ground handling requirements and orientation requirements.

The contractor shall provide as-packed bag weights to the Mission Integration Contract (MIC) for use in accounting for the launched mass of stowage provisions.

4.4.10 Hardware Shipment

The contractor shall ship packed cargo to the NLI and ship returned flight hardware to the hardware owners. The contractor shall ship loose hardware, including but not limited to non-manifested flight hardware, articles consigned to the U.S. Embassy in Russia and non-flight hardware when requested by the Government. The contractor shall pre-coordinate approval of International shipping, export and customs paperwork with receiving offices, and resolve issues with customs and handling agents to ensure timely cargo turnover. Translation services in the native language of the receiving country may be required to facilitate customs clearance.

4.4.11 Return Cargo Processing

For each Soyuz, COTS, CRS and CEV flight that returns cargo, the contractor shall receive, de-integrate, and disposition hardware (including waste or non-recoverable items) according to the flight specific RMDP. The contractor shall notify the hardware provider for any unplanned return hardware items and update the As-Flown RMDP accordingly to provide MIC with an official source for As-Flown Manifest updates. The contractor shall develop, update, and implement contingency procedures to disposition improperly labeled cargo, containers, and waste.

4.5 Decals, Placards and Graphics

The contractor shall provide flight and non-flight decals, placards, and graphics for NASA’s ISS Program, and related research and development programs and spacecraft, including prototypes, mockups, trainers, and engineering mockups. This task includes scheduling, production, and technical and delivery coordination. The contractor shall provide inputs to JSC 27260, Data Process Document and Catalog, based on changing requirements, lessons learned, improved technology or revised processes.

4.5.1 Flight and Non-flight Decals, Placards and Graphics

The contractor shall produce flight and non-flight decals, placards, and graphics, for external customers, when authorized by Johnson Space Center (JSC) Form 733, Decal Design and Production Facility (DDPF) Support Request, and released engineering drawing. The contractor shall be capable of producing all decals, placards and graphics that are described in JSC 27260, Data Process Document and Catalog. The items described in JSC 27260, Data Process Document and Catalog, typically include but are not limited to:

Photosensitive Products Screen Print	Accron Back Plate
Gerber Vinyl	Canon Graphics
Merlin Decals	Laser Print

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Decal Mounting	Screen Making
Computer Artwork	Nomex
Helioscan	Gerber Edge
Canon Copies	Laminating
Barcode - InterMec Labels	Camera Work
Die Punch	Computer Graphics
Color Anodized Products	Lexan
Metalphoto	

4.5.2 Product Delivery Schedule

Specific end products and deliverables are identified in the specifics of the initiating JSC Form 733, Decal Design and Production Facility (DDPF) Support Request. The contractor shall provide end products and deliverables no later than 30 calendar days after NASA approval of the initiating JSC Form 733, Decal Design and Production Facility (DDPF) Support Request, unless the required delivery date has been negotiated with and approved by the NASA Technical Representative.

4.5.3 Delivery Report

The contractor shall provide monthly status and tracking reports of all work submitted to the Decal Lab to facilitate NASA budgeting and cost sharing with other organizations. The reports shall be delivered to the NASA Technical Representative within 15 calendar days of the end of each month. The reports shall include the submittal request number, requester name and company, requesting Program or International Partner (IP), job title (drawing name), quantity of products, materials and processes, date submitted, due date, charge number, and status.

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5.0 Hardware Development and Manufacturing

The contractor shall design, manufacture, assemble and certify flight and training hardware, including but not limited to Flight Support Equipment (FSE), stowage accommodations, and FCE as directed by the Government.

5.1 Design and Manufacturing Requirements

The contractor shall design flight and training hardware, including but not limited to FSE, stowage accommodations, and FCE in compliance with all applicable design requirements including but not limited to the following:

SSP 50835, ISS Pressurized Volume Hardware Common Interface Requirements Document (CIRD),

SSP 50492, General ISS On-orbit Requirements for Non-Pressurized Support Equipment,

SSP 50021, Safety Requirements Document,

SSP 50004, Ground Support Equipment Design Requirements International Space Station,

JSC 27472, Requirements For Submission Of Data Needed For Toxicological Assessment Of Chemicals and Biologicals To Be Flown On Manned Spacecraft,

DX12-SLP-014, Neutral Buoyancy Laboratory Mockup and Training Hardware Requirements,

JSC-28528, Mockup Design and Requirements Document, and

NPR 6000.1, Requirements for Packaging, Handling and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components.

The contractor shall manufacture and assemble flight and training hardware. Facilities, processes and personnel shall be certified in accordance with SSP 50276, Depot/Manufacturing Facility Certification Plan.

5.2 Hardware/Data Deliveries

For each end item being designed and built, the contractor shall deliver the corresponding data and hardware in accordance with SSP 50287, Hardware/Software Acceptance Process, and DRD C-EL-01, New Hardware Interim Design Review Deliverables.

5.3 Engineering Drawings/Data

Drawings shall be developed in accordance with ASME Y14.100, Engineering Drawing Practices; ASME Y14.24M, Types and Applications of Engineering Drawings; ASME Y14.34M Associated Lists; and ASME Y14.35M, Revision of Engineering Drawings and Associated Documents; and DRD C-MI-05, Engineering Drawings and Associated Lists. For all engineering drawings and associated engineering products that are delivered to NASA, or to NASA contractors, the contractor shall also transmit them to the Vehicle Master Database (VMDB) in accordance with DRD C-MI-04, ISS Vehicle Engineering Data.

5.4 CAD Models

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The contractor shall deliver all CAD models developed under the Cargo Mission Contract (CMC) for new hardware or hardware modified on the CMC to the United States On-Orbit Segment (USOS) Acceptance and ISS Vehicle Sustaining contractor to maintain in a model library in accordance with DRD C-MI-03, Cargo Integration Cargo CAD Models for Launch, Return and On-orbit Configurations.

5.5 Safety and Reliability Assessments

The contractor shall perform and deliver safety assessments and FMEA/CIL worksheets in accordance with paragraph 2.5, respectively, for contractor developed hardware.

5.6 Development Schedules

The contractor shall prepare and deliver schedules for all hardware development projects to provide the Government with insight into overall project status in accordance with DRD C-PC-05, Cargo Mission Contract Program Schedules.

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SECTION D

PACKAGING AND MARKING

D.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
None included by reference		

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

CLAUSE NUMBER	DATE	TITLE
None included by reference		

D.2 NFS 1852.211-70 PACKAGING, HANDLING, AND TRANSPORTATION (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]

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SECTION E - INSPECTION AND ACCEPTANCE**E.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE**

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
52.246-3	MAY 2001	INSPECTION OF SUPPLIES – COST-REIMBURSEMENT
52.246-4	AUG 1996	INSPECTION OF SERVICES – FIXED PRICE
52.246-5	APR 1984	INSPECTION OF SERVICES – COST-REIMBURSEMENT
52.246-11	FEB 1999	HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT <i>Insert: SAE AS9100C, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations</i>
52.246-16	APR 1984	RESPONSIBILITY FOR SUPPLIES

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

CLAUSE NUMBER	DATE	TITLE
1852.246-72	AUG 2003	MATERIAL INSPECTION AND RECEIVING REPORT <i>Insert: 3 copies, an original and 2 copies</i>
1852.246-73	MAR 1997	HUMAN SPACE FLIGHT ITEM

E.2 INSPECTION AND ACCEPTANCE

Final inspection and acceptance shall be accomplished by the Contracting Officer or his/her duly authorized representative at any of the locations specified in the statement of work where services shall be provided. The contractor shall prepare the DD Form 250 in accordance with NFS 1846.6, Material Inspection and Receiving Reports. The contractor shall enclose the copies of the DD Form 250

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in the package or seal them in a waterproof envelope, which shall be securely attached to the exterior of the package in the most protected location.

(End of clause)

E.3 SUBMISSION OF MATERIAL INSPECTION AND RECEIVING REPORTS

Material Inspection and Receiving Reports (DD Form 250) are only required for equipment and hardware deliveries and system turnovers to the Government. DD Form 250s will normally be signed by the Government within 30 days of contractor submission.

(End of clause)

[END OF SECTION]

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SECTION F - DELIVERIES OR PERFORMANCE

F.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following 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 (ALTERNATE I) (APR 1984)
52.247-34	NOV 1991	F.O.B. DESTINATION

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

CLAUSE NUMBER	DATE	TITLE
None included by reference		

(End of clause)

F.2 NFS 1852.247-73 BILLS OF LADING (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. Destination.

- (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: _____

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- (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 work days before shipment, the Contractor shall request in writing GBLs from: TBD [Insert name, title, and mailing address of designated transportation officer or other official delegated responsibility for GBLs]. If time is limited, requests may be by telephone: TBD [Insert appropriate telephone number]. 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.3 PERIOD OF PERFORMANCE

The basic period of performance of this contract shall be from April 1, 2011, through March 31, 2014. Task Orders placed prior to the expiration date of this contract shall remain in full force and effect until deliveries have been completed and payment has been made.

The periods of performance for the option years are as follows:

- Option Year 1: April 1, 2014 through March 31, 2015
- Option Year 2: April 1, 2015 through March 31, 2016
- Option Year 3: April 1, 2016 through March 31, 2017
- Option Year 4: April 1, 2017 through March 31, 2018

(End of clause)

F.4 PLACE OF PERFORMANCE

The primary effort required under this contract shall be performed at or near Johnson Space Center and the immediate surrounding geographical area and at other locations as covered by the SOW.

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(End of clause)**F.5 OPTION TO EXTEND**

In accordance with Section I clause, FAR 52.217-9, Option to Extend the Term of the Contract, the Contracting Officer may exercise the option(s) identified in F.3 Period of Performance, by issuance of a unilateral contract modification. The contract values will be increased as set forth in Clause B.2, Total Contract Value.

(End of clause)**F.6 SHIPPING INSTRUCTIONS**

All documentation shall be shipped to the addresses cited in Attachment J-8, Data Requirements List – Data Requirements Descriptions. Shipment of all other items shall be as follows:

Parcel Post Shipments and Freight Shipments

Ship to: Transportation Officer,
National Aeronautics and Space Administration
Central Receiving, Building 421
Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, TX 77058-3696

Mark for: Accountable Property Officer
Mark with: Purchase Request No: __N/A__
Mark with: Contract Number: NNJ10GA35C
For reissue to: Larry Bamford/OA111/Bldg 1, Room 522
(Name)(Mail Code)(Bldg.)(Rm.)

(End of clause)**F.7 PHASE-IN AND CONTRACT CLOSE-OUT**

The services provided by this contract are vital to the Government's overall effort, and continuity must be maintained at a consistently high level without disruption. The contractor is expected to meet full performance requirements from the start date of the base contract period. The Phase-In period shall be 90 calendar days prior to the start date of the base contract period. Office space will not be provided by the Government during the Phase-In period. The contractor shall participate in a weekly meeting with the incumbent contractor(s) to discuss/identify problems or areas requiring attention during this Phase-In

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period. The contractor shall provide a Phase-In Plan in accordance with Section L.19, Instructions for Proposal Preparation.

The total firm fixed price of Phase-In is identified in Clause B.2, Total Contract Value - Phase-In (Firm Fixed Price). Any costs incurred in excess of this amount shall be unallowable under this or any other Government contract.

- (a) Contractor Close-Out. The contractor shall close-out at contract end in a cooperative manner with the Government and new contractor to allow for continuity of services and smooth transition. Close-Out activities shall be accomplished in accordance with FAR 52.237-3, Continuity of Services, and DRD C-CO-01, Close-Out Plan. Contractor's cooperation and compliance with this clause will be considered as part of the final Award Fee period and final Past Performance Evaluation.

(End of clause)

[END OF SECTION]

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SECTION G – CONTRACT ADMINISTRATION DATA

G.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
None included by reference		

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

CLAUSE NUMBER	DATE	TITLE
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 (DEVIATION)
1852.245-73	SEP 2007	FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS <i>Insert: 2101 NASA Parkway, Houston, TX 77058, MC JB3</i>

G.2 NFS 1852.216-76 AWARD FEE FOR SERVICE CONTRACTS (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

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performance in accordance with Attachment J-5, Award Fee Evaluation Plan. 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 NASA/JSC Financial Management Office (LF231) will make payment based on issuance of a unilateral contract 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 in Clause B.7, Table B-5, Available and Earned Fee. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.
- (f)
 - (1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80 percent or the prior period's evaluation score.
 - (2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.
 - (3) If the Contracting Officer determines that the contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the contractor in writing if it is determined that such discontinuance or reduction is appropriate.
 - (4) Provisional award fee payments will not 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.

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(End of clause)

G.3 NFS 1852.216-87 SUBMISSION OF VOUCHERS FOR PAYMENT (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:

NASA Shared Services Center (NSSC)
Financial Management Division (FMD) – Accounts Payable
Bldg 1111, C. Road
Stennis Space Center, MS 39529
Phone #: 1-877-677-2123
Fax: 1-866-209-5415
Email: NSSC-AccountsPayable@nasa.gov

(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 the cognizant DCAA office.

(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

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- (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:

BG/Contracting Officer
 National Aeronautics and Space Administration
 Johnson Space Center
 Houston, TX 77058-3696

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.4 NFS 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (JUL 1997)

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

Title	Office Code	Address (including zip code)
New Technology Representative	AT	NASA, Lyndon B. Johnson Space Center Technology Transfer and Commercialization Office Houston, TX 77058
Patent Representative	AL	Patent Counsel Office of Chief Counsel NASA, Lyndon B. Johnson Space Center 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

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to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

G.5 NFS 1852.242-70 TECHNICAL DIRECTION (SEP 1993)

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

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- (d) The contractor shall proceed promptly with the performance of the technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the contractor's opinion, any instruction or direction by the COTR falls within any of the categories defined in paragraph (b) above, the contractor shall not proceed but shall notify the Contracting Officer in writing within 5 days after receiving it and shall request the Contracting Officer to 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.6 NFS 1852.245-70 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED EQUIPMENT (SEP 2007) (DEVIATION) AND (ALTERNATE I) (SEP 2007) (DEVIATION)

- (a) The contractor shall provide all property required for the performance of this contract. The contractor shall not acquire or construct items of property to which the Government will have title under the provisions of this contract without the Contracting Officer's written authorization. Property which will be acquired as a deliverable end item as material or as a component for incorporation into a deliverable end item is exempt from this requirement.
- (b) (1) In the event the contractor is unable to provide the property necessary for performance, and the contractor requests provision of property by the Government, the contractor's request shall –
- (i) Justify the need for the property;

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- (ii) Provide the reasons why contractor-owned property cannot be used;
 - (iii) Describe the property in sufficient detail to enable the Government to screen its inventories for available property or to otherwise acquire property, including applicable manufacturer, model, part, catalog, National Stock Number or other pertinent identifiers;
 - (iv) Combine requests for quantities of items with identical descriptions and estimated values when the estimated values do not exceed \$100,000 per unit; and
 - (v) Include only a single unit when the acquisition or construction value equals or exceeds \$100,000.
- (2) Contracting Officer authorization is required for items the contractor intends to manufacture as well as those it intends to purchase.
- (3) The contractor shall submit requests to the Contracting Officer no less than 30 days in advance of the date the contractor would, should it receive authorization, acquire or begin fabrication of the item.
- (c) The contractor shall maintain copies of Contracting Officer authorizations, appropriately cross-referenced to the individual property record, within its property management system.
- (d) Property furnished from Government excess sources is provided as-is, where-is. The Government makes no warranty regarding its applicability for performance of the contract or its ability to operate. Failure of property obtained from Government excess sources under this clause is insufficient reason for submission of requests for equitable adjustments discussed in the clause at 52.245-1, Government Property.
- (e) In the event the Contracting Officer issues written authorization to provide property, the contractor shall screen Government sources to determine the availability of property from Government inventory or excess property.
- (1) The contractor shall review NASA inventories and other authorized Federal excess sources for availability of items that meet the performance requirements of the requested property.
- (i) If the contractor determines that a suitable item is available from NASA supply inventory, it shall request the item using applicable Center procedures.
 - (ii) If the contractor determines that an item within NASA or Federal excess is suitable, it shall contact the Center Industrial Property Officer to

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arrange for transfer of the item from the identified source to the contractor.

- (2) If the contractor determines that the requested property is not available from inventory or excess sources, the contractor shall note the acquisition file with a list of sources reviewed and the findings regarding the lack of availability. If the required property is available, but unsuitable for use, the contractor shall document the rationale for rejection of available property. The contractor shall retain appropriate cross-referenced documentary evidence of the outcome of those screening efforts as part of its property records system.

(End of clause)

G.7 NFS 1852.245-71 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (SEP 2007) (DEVIATION) (ALTERNATE I) (SEP 2007) (DEVIATION)

- (a) The Government property described in paragraph (c) of this clause may be made available to the contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property unless authorized by the Contracting Officer under (b)(1)(iv). Under this clause, the Government retains accountability for, and title to, the property, and the contractor shall comply with the following:

NASA Procedural Requirements (NPR) 4100.1, NASA Materials Inventory Management Manual

NASA Procedural Requirements (NPR) 4200.1, NASA Equipment Management Procedural Requirements

NASA Procedural Requirement (NPR) 4300.1, NASA Personal Property Disposal Procedural Requirements

JSC Work Instruction (JWI) 4210.2, JSC Instructions for Control of Program Stock

JSC will provide the contractor with all applicable regulations, handbooks, and other materials that may be required.

Property not recorded in NASA property systems must be managed in accordance with the requirements of FAR 52.245-1.

The contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and compliance with these

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user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.

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

- (i) The contractor shall not utilize the installation's central receiving facility for receipt of contractor-acquired property. However, the contractor shall provide listings suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.
- (ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area.
- (iii) The contractor shall establish a record of the property as required by FAR 52.245-1, Government Property, and furnish to the Industrial Property Officer a DD Form 1149, Requisition and Invoice/Shipping Document, (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.
- (iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the Contracting Officer and notification of the Industrial Property Officer. The property shall be considered Government furnished and the contractor shall assume accountability and financial reporting responsibility. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR 52.245-1, Government Property, until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by contractors.

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

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(c) The following property and services are provided if checked.

- (1) Office space, work area space, and utilities. Government telephones are available for official purposes only.
- (2) Office furniture.
- (3) Property listed in Section J, Attachment 12 – List of Installation Accountable Government Property
 - (i) 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.
 - (ii) The contractor shall not bring to the installation for use under this contract any property owned or leased by the contractor, or other property that the contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.
- (4) Supplies from stores stock.
- (5) Publications and blank forms stocked by the installation.
- (6) Safety and fire protection for contractor personnel and facilities.
- (7) Installation service facilities: Section J, Attachment 13 – List of Installation Provided Services and Facilities.
- (8) Medical treatment of a first-aid nature for contractor personnel injuries or illnesses sustained during on-site duty.
- (9) Cafeteria privileges for contractor employees during normal operating hours.
- (10) Building maintenance for facilities occupied by contractor personnel.
- (11) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

(End of clause)

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G.8 NFS 1852.245-74 IDENTIFICATION AND MARKING OF GOVERNMENT EQUIPMENT (SEP 2007) (DEVIATION)

- (a) The Contractor shall identify all equipment to be delivered to the Government using NASA Technical Handbook (NASA-HDBK) 6003, Application of Data Matrix Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques, and NASA Standard (NASA-STD) 6002, Applying Data Matrix Identification Symbols on Aerospace Parts Handbook. This includes deliverable equipment listed in the schedule and other equipment when NASA directs physical transfer to NASA or a third party. The contractor shall identify property in both machine and human readable form unless the use of a machine readable-only format is approved by the NASA Industrial Property Officer.
- (b) Property shall be marked in a location that will be human readable, without disassembly or movement of the property, when the items are placed in service unless such placement would have a deleterious effect on safety or on the item's operation.
- (c) Concurrent with equipment delivery or transfer, the contractor shall provide the following data in an electronic spreadsheet format:
- (1) Item Description.
 - (2) Unique Identification Number (License Tag).
 - (3) Unit Price.
 - (4) An explanation of the data used to make the unique identification number.
- (d) For items physically transferred under paragraph (a) the following additional data is required:
- (1) Date originally placed in service.
 - (2) Item condition.
 - (3) Date last serviced.
- (e) The data required in paragraphs (c) and (d) shall be delivered to the NASA center receiving activity listed below:

Transportation Officer JB7
NASA Lyndon B. Johnson Space Center
Building 421 Central Receiving
2101 NASA Parkway

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Houston, TX 77058

- (f) The contractor shall include the substance of this clause, including paragraph (f), in all subcontracts that require delivery of equipment.

(End of clause)

G.9 NFS 1852.245-75 PROPERTY MANAGEMENT CHANGES (SEP 2007) (DEVIATION)

- (a) The contractor shall submit any changes to standards and practices used for management and control of Government property under this contract to the assigned property administrator and Industrial Property Officer (IPO), prior to making the change whenever the change –
- (1) Employs a standard that allows increase in thresholds or changes the timing for reporting loss, damage, or destruction of property;
 - (2) Alters physical inventory timing or procedures;
 - (3) Alters recordkeeping practices;
 - (4) Alters practices for recording the transport or delivery of Government property; or
 - (5) Alters practices for disposition of Government property.
- (b) The Contractor shall contact the IPO at:

Michael Caputo
NASA/JSC/JA
2101 NASA Parkway
Houston, TX 77058-3696

281-483-7909
michael.caputo-1@nasa.gov

(End of clause)

G.10 NFS 1852.245-76 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (SEP 2007) (DEVIATION)

- (a) For performance of work under this contract, the Government will make available Government property identified below or in, Section J, Attachment 11 –Government Furnished Property, per 52.245-1, of this contract on a no-charge-

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for-use basis pursuant to the clause at FAR 52.245-1, Government Property. The contractor shall use this property in the performance of this contract at TBD and at other location(s) as may be approved by the Contracting Officer. Under FAR 52.245-1, the contractor is accountable for the identified property.

Item Description	Acquisition Date	Acquisition Cost	Quantity	If equipment		
				Manufacturer	Model	Serial Number
See Section J Attachment 11 – Government Furnished Property per 52.245-1						

(End of clause)

G.11 NFS 1852.245-78 PHYSICAL INVENTORY OF CAPITAL PERSONAL PROPERTY (SEP 2007) (DEVIATION)

(a) In addition to physical inventory requirements under the clause at FAR 52.245-1, Government Property, the contractor shall conduct annual physical inventories for individual property items with an acquisition cost exceeding \$100,000.

(1) The contractor shall inventory --

- (i) Items of property furnished by the Government;
- (ii) Items acquired by the contractor and titled to the Government under the clause at FAR 52.245-1;
- (iii) Items constructed by the contractor and not included in the deliverable, but titled to the Government under the clause at FAR 52.245-1; and
- (iv) Complete but undelivered deliverables.

(2) The Contractor shall use the physical inventory results to validate the property record data, specifically location, condition and use status, and to prepare summary reports of inventory as described in paragraph (c) of this clause.

(b) Unless specifically authorized in writing by the NASA Industrial Property Officer (IPO), the inventory shall be performed and posted by individuals other than those assigned custody of the items, responsibility for maintenance, or responsibility for posting to the property record. The contractor may request a waiver from this separation of duties requirement from the NASA IPO, when

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all of the conditions in either (1) or (2) below are met.

- (1) The contractor utilizes an electronic system for property identification, such as a laser bar-code reader or radio frequency identification reader, and
 - (i) The programs or software preclude manual data entry of inventory identification data by the individual performing the inventory; and
 - (ii) The inventory and property management systems contain sufficient management controls to prevent tampering and assure proper posting of collected inventory data.
 - (2) The contractor has limited quantities of property, limited personnel, or limited property systems; and,
 - (i) The contractor provides written confirmation that the Government property exists in the recorded condition and location; and
 - (ii) The items continue to be used exclusively for performance of the contract or as otherwise authorized by the Contracting Officer.
 - (3) The contractor shall submit the request to the cognizant property administrator and obtain approval from the IPO prior to implementation of the practice.
- (c) The contractor shall report the results of the physical inventory to the property administrator and the NASA Industrial Property Officer within 10 calendar days of completion of the physical inventory. The report shall --
- (1) Provide a summary showing number and value of items inventoried; and
 - (2) Include additional supporting reports of --
 - (i) Loss, damage or destruction, in accordance with the clause at 52.245-1, Government Property;
 - (ii) Idle property available for reuse or disposition; and
 - (iii) A summary of adjustments made to location, condition, status, or user as a result of the physical inventory reconciliation.
- (d) The contractor shall retain all physical inventory records, including records of all transactions associated with inventory reconciliation. All records shall be subject to Government review and/or audit.

(End of clause)

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G.12 NFS 1852.245-82 OCCUPANCY MANAGEMENT REQUIREMENTS (SEP 2007) (DEVIATION)

- (a) In addition to the requirements of the clause at FAR 52.245-1, Government Property, the contractor shall comply with the following in performance of work in and around Government real property:
- (1) NPD 8800.14, Policy for Real Property Management
 - (2) NPR 8831.2, Facilities Maintenance Management
 - (3) J69W-01, Real Property Management
 - (4) J69W-02, Facility Space Allocation and Utilization
 - (5) JPD 4310.1, National Historic Landmark Preservation
- (b) The contractor shall obtain the written approval of the Contracting Officer before installing or removing contractor-owned property onto or into any Government real property or when movement of contractor-owned property may damage or destroy Government-owned property. The contractor shall restore damaged property to its original condition at the contractor's expense.
- (c) The contractor shall not acquire, construct or install any fixed improvement or structural alterations in Government buildings or other real property without the advance, written approval of the Contracting Officer. Fixed improvement or structural alterations, as used herein, means any alteration or improvement in the nature of the building or other real property that, after completion, cannot be removed without substantial loss of value or damage to the premises. Title to such property shall vest in the Government.
- (d) The contractor shall report any real property or any portion thereof when it is no longer required for performance under the contract, as directed by the Contracting Officer.

(End of clause)

G.13 JSC 52.204-91 SECURITY/BADGING REQUIREMENTS FOR FOREIGN NATIONAL VISITORS AND EMPLOYEES/REPRESENTATIVES OF FOREIGN CONTRACTORS (JAN 2006) (JSC PROCUREMENT INSTRUCTION)

- (a) An employee of a domestic JSC contractor or its subcontractor who is not a United States (U.S.) citizen (foreign national) may not be admitted to the JSC

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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 3 weeks prior to the scheduled need for access to the site so that instructions on obtaining access may be provided. Contractors should be aware that approval for access to the site and issuance of a badge may take much longer than three weeks and sufficient lead time must be allowed to accommodate the approval process.

- (b) All visit/badge requests for persons described in (a) above must be entered in the NASA Foreign National Management System (NFMNS) 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. The authorized company officials shall serve as the contractor's representative(s) in certifying that all visit/badge request forms are processed in accordance with JSC and WSTF security and export control procedures. No foreign national, representative, or resident alien contractor/subcontractor employee shall be granted access into JSC or WSTF until approved and processed through the NFMNS. Unescorted access will not be granted unless a favorable National Agency Check (NAC) has been completed by the JSC Security Office, and an approved NASA Foreign National Visitor Security/ Technology Control Plan (STTCP), (previously called the Access Control Plan) has been submitted and approved.
- (c) The contractor agrees that it will not employ for the performance of work onsite at the JSC or WSTF any individuals who are not legally authorized to work in the U.S. 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 the 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

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manner in accordance with instructions provided by JSC or any other Center to be visited.

(End of clause)

G.14 JSC 52.223-92 JSC HAZARDOUS MATERIALS USE (MAY 2009) (JSC PROCUREMENT INSTRUCTION)

- (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 supersede 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 1910.119, 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.

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- (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 Clinical Services Branch (SD3) 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.15 JSC 52.242-92 IDENTIFICATION OF EMPLOYEES (OCT 2006) (JSC PROCUREMENT INSTRUCTION)

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 and Visitor Control Office, located in Building 110 at the Johnson Space Center (JSC), or at the Main Gate at the White Sands Test Facility (WSTF). JSC employee credentials and visitor badges will be issued only between the hours of 6:00 a.m. to 7:30 p.m., Monday through Friday, and 7:30 a.m. to 3:00 p.m. on Saturday. WSTF employee badges will be issued only between the hours of 8 a.m. to 2 p.m., Monday through Friday. WSTF visitor badges will be issued on a 7-day-a-week, 24-hour-a-day basis. Resident aliens and foreign nationals/representatives shall be issued green foreign national badges.

Each individual who wears a badge shall be required to sign personally for the badge. The contractor shall be held accountable for issued badges and all other related items and must assure that they are returned to the NASA Badging and 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.

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(End of clause)

G.16 INFORMATION INCIDENTAL TO CONTRACT ADMINISTRATION

- (a) With the exception of financial information, the Government shall have unlimited rights to use and distribute to third parties any administrative or management information developed by the contractor or a subcontractor at any tier in whole or in part for the performance of the contract or first produced in the performance of the contract, whether or not said information is specified as a contract deliverable, if created in whole or in part at Government expense. The Contracting Officer may, at any time during the contract performance or within a period of 3 years after acceptance of all items to be delivered under this contract, order any administrative or management information developed by the contractor or a subcontractor at any tier in whole or in part for the performance of the contract or first produced in the performance of the contract.
- (b) The Contracting Officer may release the contractor from the requirements of this clause for specifically identified information at any time during the 3-year period set forth in paragraph (a) of this clause.

(End of clause)

G.17 NFS 1852.245-79 RECORDS AND DISPOSITION REPORTS FOR GOVERNMENT PROPERTY WITH POTENTIAL HISTORIC OR SIGNIFICANT REAL VALUE (DEVIATION) (SEP 2007)

- (a) Items of Government property flown in space or used to support other pioneering NASA programs have increased probability of historic significance and an intrinsic value that is likely to exceed their unused material or physical value. Descriptions of physical characteristics alone are often insufficient to determine an item's historic significance or real value. In addition to the property record data required by the clause at FAR 52.245-1, Government Property in this contract, Contractor records of all Government property under this contract shall --
- (1) Identify the projects or missions that used the items;
 - (2) Specifically identify items of flown property;
 - (3) When known, associate individual items of property used in space flight operations with the using astronaut(s); and
 - (4) Identify property used in test activity and, when known, the individuals who conducted the test.
- (b) The Contractor shall include this information within item descriptions --

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- (1) On any Standard Form 1428, Inventory Schedule;
 - (2) In automated disposition systems;
 - (3) In any other disposition related reports; and
 - (4) In other requests for disposition instructions.
- (c) The Contractor shall not remove NASA identification or markings from Government-furnished property prior to disposition without the advanced written approval of the NASA Industrial Property Officer.

(End of clause)

[END OF SECTION]

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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)

CLAUSE NUMBER	DATE	TITLE
None included by reference		

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

CLAUSE NUMBER	DATE	TITLE
1852.208-81	NOV 2004	RESTRICTIONS ON PRINTING AND DUPLICATING
1852.223-75	FEB 2002	MAJOR BREACH OF SAFETY OR SECURITY
1852.225-70	FEB 2000	EXPORT LICENSES (ALTERNATE I) (FEB 2000)
1852.228-76	DEC 1994	CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES (DEVIATION)
1852.246-70	MAR 1997	MISSION CRITICAL SPACE SYSTEMS PERSONNEL RELIABILITY PROGRAM
1852.247-71	MAR 1989	PROTECTION OF THE FLORIDA MANATEE

H.2 NFS 1852.209-71 LIMITATION OF FUTURE CONTRACTING (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of prospective offerors is invited to [FAR Subpart 9.5](#)--Organizational Conflicts of Interest.

(b) The nature of this conflict is:

- 9.505-3 Providing evaluation services
- 9.505-4 Obtaining access to proprietary information
- Reference Clause H.11, ISS Contract Strategy Conflict of Interest Agreement.

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(c) The restrictions upon future contracting are as follows:

- (1) If the contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the contractor to prepare such specifications or statements of work under this contract.
- (2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as 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 those other companies.

(End of clause)

H.3 NFS 1852.216-80 TASK ORDERING PROCEDURE (OCT 1996)

- (a) Only the Contracting Officer may issue task orders to the contractor, providing specific authorization or direction to perform work within the scope of the contract and as specified in the schedule. The contractor may incur costs under this contract in performance of task orders and task order modifications issued in accordance with this clause. No other costs are authorized unless otherwise specified in the contract or expressly authorized by the Contracting Officer.
- (b) Prior to issuing a task order, the Contracting Officer shall provide the contractor with the following data:
 - (1) A functional description of the work identifying the objectives or results desired from the contemplated task order.
 - (2) Proposed performance standards to be used as criteria for determining whether the work requirements have been met.
 - (3) A request for a task plan from the contractor to include the technical approach, period of performance, appropriate cost information, and any other information required to determine the reasonableness of the Contractor's proposal.

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- (c) Within 10 working days after receipt of the Contracting Officer's request, the contractor shall submit a task plan conforming to the request.
- (d) After review and any necessary discussions, the Contracting Officer may issue a task order to the contractor containing, as a minimum, the following:
 - (1) Date of the order.
 - (2) Contract number and order number.
 - (3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.
 - (4) Performance standards, and where appropriate, quality assurance standards.
 - (5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.
 - (6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.
 - (7) Delivery/performance schedule including start and end dates.
 - (8) If contract funding is by individual task order, accounting and appropriation data.
- (e) The contractor shall provide acknowledgment of receipt to the Contracting Officer within 3 working days after receipt of the task order.
- (f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.
- (g) The Contracting Officer may amend tasks in the same manner in which they were issued.
- (h) In the event of a conflict between the requirements of the task order and the contractor's approved task plan, the task order shall prevail.
- (i) Contractor shall submit monthly task order progress reports. As a minimum, the reports shall contain the following information:
 - (1) Contract number, task order number, and date of the order.

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- (2) Task ceiling price.
- (3) Cost and hours incurred to date for each issued task.
- (4) Costs and hours estimated to complete each issued task.
- (5) Significant issues/problems associated with a task.
- (6) Cost summary of the status of all tasks issued under the contract.

(End of clause)

H.4 NFS 1852.223-70 SAFETY AND HEALTH (APR 2002)

- (a) Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.
- (b) The Contractor shall take all reasonable safety and occupational health measures in performing this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and occupational health and with the safety and occupational health standards, specifications, reporting requirements, and any other relevant requirements of this contract.
- (c) The Contractor shall take, or cause to be taken, any other safety, and occupational health-measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the changes clause of this contract; provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other clause of the contract.
- (d) The Contractor shall immediately notify and promptly report to the Contracting Officer or a designee any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property beyond any stated acceptable limits set forth in the contract schedule; or property loss of \$25,000 or more, or Close Call (a situation or occurrence with no injury, no damage or only minor damage [less than \$1,000] but possesses the potential to cause any type mishap, or any injury, damage, or negative mission impact) that may be of immediate interest to NASA, arising out of work performed under this contract. The Contractor is

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not required to include in any report an expression of opinion as to the fault or negligence of any employee. In addition, service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract schedule.

- (e) The Contractor shall investigate all work-related incidents, accidents, and Close Calls, to the extent necessary to determine their causes and furnish the Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.
- (f)(1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. When the Contracting Officer becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. The Contractor shall promptly take and report any necessary corrective action.
 - (2) If the Contractor fails or refuses to institute prompt corrective action in accordance with subparagraph (f)(1) of this clause, the Contracting Officer may invoke the stop-work order clause in this contract or any other remedy available to the Government in the event of such failure or refusal.
- (g) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (g) and any applicable Schedule provisions and clauses, with appropriate changes of designations of the parties, in all solicitations and subcontracts of every tier, when one or more of the following conditions exist:
 - (1) The work will be conducted completely or partly on premises owned or controlled by the Government.
 - (2) The work includes construction, alteration, or repair of facilities in excess of the simplified acquisition threshold.
 - (3) The work, regardless of place of performance, involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value equipment or property, and the hazards are not adequately addressed by Occupational Safety and Health Administration (OSHA) or Department of Transportation (DOT) regulations (if applicable).

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- (4) When the Contractor (or subcontractor or supplier) determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.
- (h) The Contractor (or subcontractor or supplier) may exclude the provisions of paragraph (g) from its solicitation(s) and subcontract(s) of every tier when it determines that the clause is not necessary because the application of the OSHA and DOT (if applicable) regulations constitute adequate safety and occupational health protection. When a determination is made to exclude the provisions of paragraph (g) from a solicitation and subcontract, the Contractor must notify and provide the basis for the determination to the Contracting Officer. In subcontracts of every tier above the micro-purchase threshold for which paragraph (g) does not apply, the Contractor (or subcontractor or supplier) shall insert the substance of paragraphs (a), (b), (c), and (f) of this clause.
- (i) Authorized Government representatives of the Contracting Officer shall have access to and the right to examine the sites or areas where work under this contract is being performed in order to determine the adequacy of the Contractor's safety and occupational health measures under this clause.
- (j) The contractor shall continually update the safety and health plan when necessary. In particular, the Contractor shall furnish a list of all hazardous operations to be performed, and a list of other major or key operations required or planned in the performance of the contract, even though not deemed hazardous by the Contractor. NASA and the Contractor shall jointly decide which operations are to be considered hazardous, with NASA as the final authority. Before hazardous operations commence, the Contractor shall submit for NASA concurrence --
- (1) Written hazardous operating procedures for all hazardous operations; and/or
 - (2) Qualification standards for personnel involved in hazardous operations.

(End of clause)

H.5 NFS 1852.235-71 KEY PERSONNEL AND FACILITIES (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

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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.

(b) (4)	Program Manager
	- Program Integration Lead
	- Business Manager
	Safety and Mission Assurance

(End of clause)

H.6 NFS 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992)

- (a) The on-site Government personnel observe the following holidays:
 - New Year's Day
 - Labor Day
 - Martin Luther King, Jr.'s Birthday
 - Columbus Day
 - President's Day
 - Veterans Day
 - Memorial Day
 - Thanksgiving Day
 - Independence Day
 - Christmas DayAny other day designated by Federal statute, Executive order, or the President's proclamation.
- (b) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(End of clause)

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H.7 JSC 52.219-90 SMALL BUSINESS SUBCONTRACTING GOALS (OCT 2006) (JSC PROCUREMENT INSTRUCTION)

For purposes of this clause, the terms, “HUBZone Small Business Concern,” “Small Disadvantaged Business Concern,” “Service-Disabled, Veteran-Owned Small Business Concern,” “Veteran-Owned Small Business Concern,” “Women-Owned Small Business Concern,” and “Historically Black College or University (HBCU)” are defined in paragraph 2.101 of the Federal Acquisition Regulation.

The total small business goal, expressed as a percent of total contract value including options, is (b) (4). The small business percentage goal, includes the following goals expressed as a percent of total contract value

- Small Disadvantaged Business Concerns
- Woman-Owned Small Business Concerns
- HUBZone Small Business Concerns
- Veteran-Owned Small Business Concern
- Service-Disabled, Veteran-Owned Small Business Concern
- HBCU’s (includes other minority institutions)

(b) (4)

If the offeror proposes higher small business subcontracting goals in the Subcontracting Plan, Attachment J-6, than those listed above, the offeror shall modify the goals above to match the proposed numbers in the Subcontracting Plan.

(End of clause)

H.8 JSC 52.223-93 ENVIRONMENTAL AND ENERGY CONSERVATION REQUIREMENTS (MAY 2008) (JSC PROCUREMENT INSTRUCTION)

- (a) The contractor shall ensure that all work performed and equipment used to fulfill the requirements of this contract are in compliance with all Federal, state, and local regulations and public laws, and the following NASA JSC directives: JPD 8500.1, JSC Environmental Excellence Policy; JPR 8550.1, JSC Environmental Compliance Procedural Requirements; JPR 8553.1, JSC Environmental Management System Manual; CWI JE9W-06, EMS Aspect/Impact Assessment and EMP Process; NPR 8570.1, Energy Efficiency and Water Conservation; JSC’s Energy and Water Conservation 5-Year Plan; and CWI J69W-03, Energy Conservation. The contractor shall provide data on affirmative procurement, waste reduction activity, energy efficient product procurement, and ozone depleting substances in accordance with DRD C-EV-01, Environmental and Energy Consuming Product Compliance Reports

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- (b) The Government remains the owner and operator of record for all environmental activities conducted at NASA owned properties unless otherwise documented in a signed agreement between NASA and the contractor. The contractor is advised that activities performed at JSC and associated facilities are subject to Federal, state and local regulatory agency inspections to review compliance with environmental laws and regulations. For on-site issues, JSC's Environmental Office will be the single point of contact with Federal and state regulatory agencies and their representatives unless otherwise directed by the Contracting Officer or the Environmental Office. The contractor shall immediately notify the JSC Environmental Office when contacted by external regulatory agency representatives and shall cooperate fully. The contractor shall complete, maintain, and make available to the Contracting Officer, JSC Environmental Office, JSC Energy Manager, or regulatory agency personnel all documentation relating to environmental compliance matters under applicable laws. The contractor shall immediately notify the JSC Environmental Office upon issuance of a Notice of Violation or noncompliance to the contractor.
- (c) Should a Notice of Violation, Notice of Noncompliance, Notice of Deficiency, or similar regulatory agency notice be issued to the Government as a facility owner/operator on account of the actions or inactions of the contractor or one of its subcontractors in the performance of work under this contract, the contractor shall fully cooperate with the Government in correcting any problems and defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

(End of clause)

H.9 JSC 52.242-94 ADMINISTRATIVE LEAVE (SEP 2008) (JSC PROCUREMENT INSTRUCTION)

- (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
 - (i) Working off-site within 10 miles of JSC; and
 - (ii) 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.).

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However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

- (b) Administrative leave granted under this clause shall be subject to modification or termination by the Contracting Officer and in all instances shall be subject to the availability of funds. The cost of salaries and wages to the contractor for the period of any such excused absence shall be a reimbursable item of cost under this contract for effected employees in accordance with the contractor's established accounting policy.
 - (1) If a labor hour-based contract, administrative leave granted under this clause shall be accounted for consistent with productive hours under this contract for employees in accordance with the contractor's established accounting policy.
 - (2) For fixed price contracts based on other than labor hours for deliverables, the Contracting Officer and contractor shall as a precondition to any reimbursement negotiate an advanced agreement to determine the appropriate method in which to grant administrative leave under this clause.
 - (3) All invoices requesting payment under this clause shall be marked as "Administrative Leave in accordance with 52.242-94, Administrative Leave." All such invoices paid will be subject to review, audit, and revision when routine operations re-commence.
- (c) The contractor shall include this clause in all services subcontracts that include personnel in the categories described in (a) above.

(End of clause)

H.10 REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFEROR

The completed provision 52.204-8, Annual Representations and Certifications, including any amended representation(s) made at paragraph (b) of the provision; and other representations, certifications and other statements contained in Section K completed and submitted as part of the offer dated April 1, 2010 are hereby incorporated by reference in this resulting contract.

(End of clause)

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H.11 ISS CONTRACT STRATEGY CONFLICT OF INTEREST AGREEMENT

- (a) An organizational conflict of interest exists for this contract as it relates to the contracts awarded as part of the overall ISS Contract Strategy in that the contractor may be in a position to favor its own products or capabilities. Two of the contracts to be awarded will be responsible for support to ISS Program Management. These two contracts are the Program Integration and Control Contract and the Mission Integration Contract. The other contracts to be awarded will be responsible for the overall implementation of these Program requirements. The intent of this clause is to prohibit a contractor from developing Program requirements in one of the aforementioned two contracts designed for "Support to ISS Program Management" and also implementing those requirements in one of the additional contracts responsible for "ISS Program Implementation." Therefore, the contractor, by signing this contract, fully understands, agrees, and will comply with the following conditions:
- (1) The contractor will not perform work as a prime for the ISS follow-on contract responsible for ISS Program requirements.
 - (2) The contractor will perform no more than 49% (total contract costs) of the work as a subcontractor under any of the requirements contracts.
 - (3) The contractor shall not, and will not, make the day-to-day program management decisions under any of the requirements contracts set forth in (a)(1).
- (b) If by the performance of this contract, or by any other means, the contractor believes they may violate any of these conditions above, the contractor shall notify the Contracting Officer in writing immediately.

(End of clause)

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H.12 SMALL DISADVANTAGED BUSINESS PARTICIPATION – CONTRACT TARGETS

(This clause applies to all offerors including Small Disadvantaged Businesses [SDBs].)

(a) FAR 19.1202-4(a) requires that SDB subcontracting targets be incorporated in the Contract.

Targets for this contract are as follows:

<i>NAICS Industry Subsectors*</i>	<i>Dollar Target</i>	<i>Percent of Contract Value</i>
541712	\$23,573,350	15.6%
541330	\$3,303,621	2.2%
611310	\$891,005	0.6%
Total	\$27,767,976	

*North American Industry Classification System (NAICS) Industry Subsectors as determined by the Department of Commerce as being underrepresented in accordance with FAR 19.201(b)

(b) FAR 19.1202-4(b) requires that SDB concerns that are specifically identified by the offeror be listed in the contract when the identification of such subcontractors was evaluated as part of the sub factor on Small Business Utilization. SDB concerns (subcontractors) specifically identified by the offeror are as follows:

Name of Concern(s):



The Contractor shall notify the Contracting Officer of any substitutions of the firms listed if the replacement Contractor is not an SDB concern.

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- (c) If the prime offeror is an SDB the target for the work it intends to perform as the prime Contractor is as follows:

<u>NAICS Industry Subsectors</u>	<u>Dollars</u>	<u>Percent of Contract Value</u>
<i>Not Applicable</i>		

(End of clause)

H.13 SPECIAL COMPUTER SOFTWARE PROVISION

- A. In addition to any restricted or unrestricted computer software specified elsewhere to be delivered under this contract, the contractor, upon request of the Contracting Officer, shall deliver to the Government any computer software, including its documentation and available source code, which was created in performance of this contract.
- B. The restricted and unrestricted rights in computer software acquired or created during the performance of this contract shall remain in the custody of the contractor until such time as the Contracting Officer calls for the delivery thereof under paragraph A.

(End of clause)

H.14 ASSOCIATE CONTRACTOR AGREEMENT FOR ISS

- (a) (a) The success of the International Space Station (ISS) Program is dependent on the efforts of multiple contractors. The MIC contractor is a key participant. The other contracts of the key participating contractors include, but are not limited to:

- Program Integration and Control (PI&C) Contract
- Cargo Mission Contract (CMC)
- United States On-Orbit Segment (USOS) Completion and Sustaining Engineering Contract
- Exploration Ground Launch Services (EGLS)
- ISS Commercial Resupply Services (CRS)

Under the aforementioned contracts the contractors will provide the necessary technical, engineering and processing products and services required to develop, operate, maintain and utilize the ISS.

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- (b) In order to achieve efficient and effective implementation of the operation and utilization phase of the ISS, the contractor shall establish the means for coordination and exchange of information with associate contractors. The information to be exchanged shall be that required by the contractors in the execution of their respective contract requirements. The contractors are strongly encouraged to seek out and foster cooperative efforts that will benefit the ISS Program with increased safety, efficiency, and productivity.
- (c) Given the unique role of this contract, and interrelations with the development, operation, maintenance and utilization of the ISS, the contractor will engage in cooperative relationships that facilitate effective management of the overall ISS effort. This joint cooperation will be evaluated as part of the contract award fee process, as defined in Attachment J-5, Award Fee Evaluation Plan, for the contract. Successful performance will be determined by the Government's assessment of the overall and combined performance of the operation and utilization requirements in the contracts, as modified.
- (d) To ensure successful implementation and utilization of the ISS, the contractors shall establish formal guidelines to address coordination, cooperation and communication. All program elements shall work in a coordinated fashion. Each contractor shall establish the means for the exchange of such data as needed to keep other project elements fully informed.

(End of clause)

H.15 ADDITIONAL EXPORT CONTROL REQUIREMENTS

In addition to the requirements set forth in NFS 1852.225-70, Export Licenses, the contractor shall perform the following tasks when they facilitate exports of NASA hardware, software or technical data according to the Export Administration Regulations, International Traffic in Arms Regulations or any other U.S. export control regulations (e.g. Nuclear Regulatory Commission, Drug Enforcement Agency etc.) pursuant to this contract:

- (a) Provide to the JSC Export Services Team (EST), in writing, an Advanced Notification of Export (ANE) for all program related exports (hardware, software and technical data) where NASA is considered the U.S. Principal Party in Interest (USPPI). The requirements below shall be met by the contractor and its subcontractors, respectively, when accomplishing the following activities:

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1. Submitting requests for NASA to apply for an export license with the Department of Commerce or Department of State for use under the contract activity in support of the ISS Program.
 2. Submitting notice of the contractor's intent to use Department of Commerce or Department of State export licenses obtained by NASA as they apply to the contract activity in support of the ISS Program.
 3. Submitting notice of the contractor's intent to use any export license exceptions or exemptions as they apply to the contract activity in support of the ISS Program.
- (b) For all program related exports (hardware, software or technical data), submit the equivalent information described below to the Center Export Administrator (CEA) at the geographically closest NASA Space Flight Center according to the policies and procedures of that center (check with the cognizant Contracting Officer or CEA). A courtesy copy of equivalent information submitted to MSFC or KSC shall be provided to the JSC CEA's office. Provide copies of shipping documents for shipments made under a NASA Export License, exemption or exception to the appropriate CEA within two weeks after the shipment.
1. The contractor shall submit requests for NASA to apply for a license at least 7 months prior to the need date to export. Note that the agencies which approve the licenses can take up to 6 months or more to process them.
 2. The contractor shall submit an ANE in a formal letter, fax or e-mail (e-mail is preferred), containing the information described below (as applicable), addressed to the CEA's Office in accordance with the submission schedule below. The schedule provides a minimum amount of time required to process the information, however license requests may take longer than 6 months to process by the controlling agency.

Required Information	License Application	Use of License	Use Exemption/Exception
Submission Schedule	7 months prior to need date	At least 30 days prior to planned export date	At least 30 days prior to planned export date
Description of Commodity (as it appears on the license)	X	X	X
Specific End Use	X		X

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Required Information	License Application	Use of License	Use Exemption/ Exception
1) NASA license number (include date of expiration), International Traffic in Arms Regulation (ITAR) license exemption (e.g. 125.4(b)(3)) or Export Administration Regulation (EAR) exception (e.g. GOV, RPL, TMP, ENC, etc.). *		X	X
2) Quantity and description as it appears on the applicable license.	X	X	X
3) Date of planned export	X	X	X
4) Origin of export (Company and city).	X	X	X
5) Intermediate and Ultimate Consignees, End User (full name and address), and Destination of export (Country, city and company).	X		
6) Point of contact with current phone number and e-mail address (for technical questions – must be a representative of the contractor originating the export).	X	X	X
7) Contractor Point of contact, current e-mail address and phone number for CEA's use to send response	X	X	X
8) Export Classification Control Number (ECCN) under the Export Administration Regulations or category under the United States Munitions List regulations	X		X
9) The technical rationale used to support the classification	X		X

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Required Information	License Application	Use of License	Use Exemption/Exception
10) Requirement to export (i.e., MOU, contract number, meeting minutes). Upon request by the CEA or CO, the contractor shall provide a copy of the requirement within 3 working days	X		X
11) Additional information as necessary to clarify the export	X	X	X
12) A copy of the completed Pro Forma Invoice (JSC Form 1735) or equivalent form/ document attached to an email if prepared for the export	X	X	X
13) A copy of the completed electronically signed JSC Form 1724 (Export Control Request and Approval Worksheet) or equivalent form	X Signed by Civil Servant -Export Rep	X Copy of Signed form	X Signed by Civil Servant - Export Rep
NASA Point of Contact	X		X
Specific End Use	X	X	X

* Additional information is required for these exceptions.

- i. If using RPL, provide the license number, or copy of records confirming export authorization for the item being replaced.
- ii. If using ENC, provide reference to the manufacturer's record verifying eligibility for ENC (e.g. full internet address (URL), e-mail from manufacturer or copy of Commerce Department communication to manufacturer.
- iii. If using TMP, provide the expected return date.) **

3. After all the information is submitted, the cognizant CEA's office will respond to the contractor or its subcontractor with a status within ten (10) working days. It is the CEA's goal to provide a notice of approval or other disposition within 10 working days for "Use of License" and "Use of Exemption/Exception" to the contractor or its subcontractors who are exporting on behalf of NASA. Once approved, NASA will provide the destination control statement to use on all export documentation via e-mail or hardcopy letter.

- (c) In addition to other applicable export exemptions, the contractor or its subcontractors are authorized to export hardware, software or data to ISS

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International Partner (IP) governmental offices that meet the conditions of license exception GOV (15 CFR 740.11(b)(2)(iii)(A)).

- (d) ** For temporary exports (TMP), the contractor or its subcontractors shipping on behalf of NASA shall submit written notice to the CEA and Contracting Officer within five (5) business days of the date that the item was actually returned, along with the incoming documentation.
- (e) The contractor or its subcontractors shall keep those records required by Department of Commerce and Department of State regulations for all exports and make them available upon request to NASA and its representatives.
- (f) These requirements do not apply to contractor or subcontractor commercial contract related exports or exports pursuant to Technical Assistance Agreements or other license authorizations received by the contractor or its subcontractors and for which the contractor or its subcontractors will be the USPPI and/or "Exporter of Record."
- (g) These requirements do not apply to exports for which there is "No License Required" (e.g. EAR99, 9A004 to Canadian International Partners on ISS, etc.)
- (h) The contractor and its subcontractors shall report to the NASA JSC EST, in writing, any potential export issues (including those related to support of sustaining engineering and operations of ISS) that cannot be resolved by the contractor or its subcontractors, respectively. Such report and/or notification of issues and technical tasks should be reported to the NASA JSC EST at least three (3) months in advance of requested action.
- (i) Upon discovery of unforeseen adverse export issues, the contractor shall immediately notify NASA JSC EST by telephone with a follow up e-mail or hardcopy letter of said issue and shall report to the NASA JSC EST, in writing, as the facts become known.
- (j) This clause applies when the contractor or its subcontractors elect to export NASA owned Government Furnished Equipment and Property (GFE, GFP) (including data, software or hardware). In such instances, the contractor or its subcontractors are the USPPI. They shall provide verifiable evidence that a valid export license, exemption or exception has been processed and approved (as applicable). They shall also provide this information for additional property that is not GFE or GFP that the contractor or its subcontractors elect to include with the GFE and GFP.

(End of clause)

H.16 SPECIAL CLAUSE FOR CONTRACT CHANGES AND IDIQ TASK ORDERS

1. The parties agree that notwithstanding the provisions of Section I Clause 52.243-2 Changes—Cost Reimbursement, no change made pursuant to this clause shall give rise to an equitable adjustment in the estimated cost and applicable fees when such change causes, (i) contract cost increase(s) totaling less than \$650,000, or (ii) contract cost decrease(s) totaling less than \$650,000, or (iii) a combination of contract cost increases and decreases which in the aggregate total (i.e. the absolute value of which is) less than \$650,000. Each such change shall be controlling in making this determination, and, for purposes of determining applicability of this clause, such change shall not be added to any other change nor shall any change be split into sub elements. The parties recognize that several changes may be grouped together in a bilateral contract modification for administrative purposes. Further, the parties agree that a Task Order will not be used pursuant to clause B.6, IDIQ Ordering Procedures, unless the value of said Task Order exceeds \$700,000.
2. This clause applies to all contract changes authorized and issued pursuant to clause 52.243-2 Changes-Cost Reimbursement and all orders issued under B.6 IDIQ Orders and shall continue to apply to all such changes issued and authorized from April 1, 2011 through March 31, 2012.
3. The UL pool for the first contract year, April 1, 2011 through March 31, 2012, (b) (4)
4. Establishing the Annual Underlimit (UL) Pool:
 - a. The annual UL pool is based on the preceding year's definitized UL changes, from February 1 through January 31.
 - b. The contractor shall submit the UL proposal by the third Friday of February each year.
 - c. The contractor shall submit a proposal outlining the work description, period of performance, and cost by labor, travel, materials, indirect, overhead, G&A, fee, and the total cost.
 - d. UL modifications will be issued for all UL changes under \$700,000; therefore, no TO's or NTEs will be needed for UL contract modifications.

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5. The UL pool for contract year 2 shall be based on the definitized UL changes for the time period of April 1, 2011 to March 31, 2012, multiplied by a factor of 1.2. The result shall equal the UL pool for contract year 2.

(End of clause)

H.17 REPROCUREMENT PACKAGE

The contractor shall provide a Data Reprourement Package in accordance with DRD C-RP-01, Reprourement Data Package.

(End of clause)

H.18 GOVERNMENT-PROVIDED RUSSIAN LANGUAGE AND LOGISTICS SERVICES (RLLS)

The contractor is authorized use of the following RLLS in performance of this contract or any subcontract entered into under this contract:

- Russian Translations
- Russian Interpretations
- Russian Language Training
- Russian Logistics services (both in the U.S. and in Russia), including a) Ground Services (e.g. airport pickup/drop-off, transportation between hotels and meeting locations); b) Meeting Services (e.g. coordination of schedules, agendas, and protocols); c) Hotel Reservations; and d) Visa Coordination.

The Contracting Officer shall be promptly notified by the contractor upon identification of a need for RLLS. The Contracting Officer shall provide instructions as to the point of contact for submitting a request for RLLS. Failure of the Government to provide adequate or timely RLLS shall entitle the contractor to an equitable adjustment in all affected contract terms and conditions, exclusive of any adjustment to fee. This provision, including this flow-down requirement, shall be inserted in all subcontracts where it is anticipated that RLLS may be necessary for contract performance.

(End of clause)

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H.19 SUBCONTRACTING WITH RUSSIAN ENTITIES FOR GOODS OR SERVICES

(a) Definitions: In this provision:

(1) The term “Russian entities” means:

(A) Russian persons, or

(B) Entities created under Russian law or owned, in whole or in part, by Russian persons or companies including, but not limited to, the following:

(i) The Russian Federal Space Agency (Roscosmos),

(ii) Any organization or entity under the jurisdiction or control of Roscosmos, or

(iii) Any other organization, entity, or element of the Government of the Russian Federation.

(2) The term “extraordinary payments” means payments in cash or in kind made or to be made by the United States Government prior to July 1, 2016, for work to be performed or services to be rendered prior to that date necessary to meet United States obligations under the Agreement Concerning Cooperation on the Civil International Space Station, with annex, signed at Washington January 29, 1998, and entered into force March 27, 2001, or any protocol, agreement, memorandum of understanding, or contract related thereto.

(b) This clause implements the reporting requirement in section 6(i) of the Iran, North Korea, and Syria Nonproliferation Act. The provisions of this clause are without prejudice to the question of whether the Contractor or its subcontractor(s) are making extraordinary payments under section 6(a) or fall within the exceptions in section 7(1)(B) of the Act. NASA has applied the restrictions in the Act to include funding of Russian entities via U.S. Contractors.

(c) (1) The Contractor shall not subcontract with Russian entities without first receiving written approval from the Contracting Officer (CO). In order to obtain this written approval to subcontract with any Russian entity as defined in paragraphs (a), the Contractor shall provide the CO with the following information related to each planned new subcontract and any change to an existing subcontract with entities that fit the description in paragraph (a):

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- (A) A detailed description of the subcontracting entity, including its name, address, and a point of contact, as well as a detailed description of the proposed subcontract including the specific purpose of payments that will be made under the subcontract.
- (B) The Contractor shall provide certification that the subcontracting entity is not, at the date of the subcontract approval request, on any of the lists of proscribed denied parties, specially designated nationals and entities of concern found at:
- BIS's Listing of Entities of Concern (see <http://www.access.gpo.gov/bis/ear/pdf/744spir.pdf>)
 - BIS's List of Denied Parties (see <http://www.bis.doc.gov/dpl/Default.shtm>)
 - OFAC's List of Specially Designated Nationals (Adobe® PDF format) (see <http://www.treas.gov/offices/enforcement/ofac/sdn/t11sdn.pdf>)
 - List of Unverified Persons in Foreign Countries (see http://www.bis.doc.gov/Enforcement/UnverifiedList/unverified_parties.html)
 - State Department's List of Parties Statutorily Debarred for Arms Export Control Act Convictions (see <http://www.pmddtc.state.gov/debar059.htm>)
 - State Department's Lists of Proliferating Entities (see <http://www.state.gov/t/isn/c15231.htm>)
- (2) Unless relief is granted by the CO, the information necessary to obtain approval to subcontract shall be provided to the CO 30 work days prior to executing any planned subcontract with entities defined in paragraph (a).
- (d) After receiving approval to subcontract, the Contractor shall provide the CO with a report every six months that documents the individual payments made to an entity in paragraph (a). The reports are due on July 15th and January 15th. The July 15th report shall document all of the individual payments made from the previous January through June. The January 15th report shall document all of the individual payments made from the previous July through December. The content of the report shall provide the following information for each time a payment is made to an entity in paragraph (a):
- (1) The name of the entity
 - (2) The subcontract number
 - (3) The amount of the payment

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- (4) The date of the payment
- (e) The CO may direct the Contractor to provide additional information for any other prospective or existing subcontract at any tier. The CO may direct the Contractor to terminate for the convenience of the Government any subcontract at any tier with an entity described in paragraph (a), subject to an equitable adjustment.
- (f) Notwithstanding FAR 52.216-7, "Allowable Cost and Payments," on or after June 30, 2016 the Contractor shall be responsible to make payments to entities defined in paragraph (a) of this provision. Any subcontract with entities defined in paragraph (a), therefore, shall be completed in sufficient time to permit the U.S. Government to make extraordinary payments on subcontracts with Russian entities on or before June 30, 2016.
- (g) The Contractor shall include the substance of this clause in all its subcontracts, and shall require such inclusion in all other subcontracts of any tier. The Contractor shall be responsible to obtain written approval from the CO to enter into any tier subcontract that involves entities defined in paragraph (a).

(End of clause)

H.20 FLIGHT ITEM MARKING

Flight hardware or equipment to be shipped under this contract shall be annotated with the following:

"THIS IS A FLIGHT ITEM" or "THIS IS MISSION ESSENTIAL GROUND SUPPORT EQUIPMENT," as applicable.

This annotation must either be hand written or rubber stamped. The annotation shall not smaller than ¼ inch letters. The annotation shall be on block 16 of each Department of Defense (DD) Form 250 "Material Inspection and Receiving Report" or block 4 of the DD Form 1149 "Requisition and Invoice/Shipping Document."

(End of clause)

H.21 EVIDENCE OF COMPLETION MATRIX

The Contractor shall submit a SOW Evidence of Completion Matrix in accordance with DRD C-CO-02, Evidence of Completion Matrix. The SOW

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Evidence of Completion Matrix shall define completion criteria for each numbered paragraph of the statement of work. Upon contract completion, each SOW task will require proof of closure in accordance with the Evidence of Completion Matrix pursuant to DRD C-CO-02, Evidence of Completion Matrix.

(End of clause)

H.22 TRANSITIONED HARDWARE DATA ACCEPTABILITY

The parties hereby understand and agree that hardware transitioned to the CMC has engineering and safety documentation that is not necessarily compliant to the requirements in the CMC Statement of Work (SOW) and Data Requirements Deliverables (DRDs). Furthermore, this documentation is herewith agreed to as being acceptable in the existing delivered “as-is” configuration, for all history prior to transition to the CMC.

In the event that any hardware item is modified, altered, or maintained, subsequent to transition to the CMC, in such a manner so as to require changes to the engineering and safety documentation, the “current version” of the documentation will be required to be updated for the work performed as required to be fully compliant with the requirements in the CMC SOW and DRDs; although the historical version will continue to be acceptable “as is.”

(End of clause)

[END OF SECTION]

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PART II - CONTRACT CLAUSES**SECTION I - CONTRACT CLAUSES****I.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE**

NOTICE: The following 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	SEP 2006	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	SEP 2007	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
52.203-13	DEC 2008	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT
52.204-4	AUG 2000	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER
52.204-7	APR 2008	CENTRAL CONTRACTOR REGISTRATION
52.204-9	SEP 2007	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL
52.209-6	SEP 2006	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
52.211-5	AUG 2000	MATERIAL REQUIREMENTS
52.211-15	APR 2008	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS

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CLAUSE NUMBER	DATE	TITLE
52.215-2	JUN 1999	AUDIT AND RECORDS - NEGOTIATION
52.215-8	OCT 1997	ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT
52.215-11	OCT 1997	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - MODIFICATIONS
52.215-13	OCT 1997	SUBCONTRACTOR COST OR PRICING DATA - MODIFICATIONS
52.215-14	OCT 1997	INTEGRITY OF UNIT PRICES
52.215-15	OCT 2004	PENSION ADJUSTMENTS AND ASSET REVERSIONS
52.215-18	JUL 2005	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS
52.215-21	OCT 1997	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA – MODIFICATIONS AND ALTERNATES II (OCT 1997) & III (OCT 1997) <i>Insert (Alt III): USB Port(s), or CD-ROM(s)</i>
52.215-23	OCT 2009	LIMITATION ON PASS THROUGH CHARGES AND ALTERNATE I (OCT 2009)
52.216-7	DEC 2002	ALLOWABLE COST AND PAYMENT
52.216-18	OCT 1995	ORDERING <i>Insert: See Clause F.2 Period of Performance</i>
52.216-19	OCT 1995	ORDER LIMITATIONS <i>Insert: (a) \$5,000, (b)(1) \$20,000,000, (b)(2) \$20,000,000 (b)(3) 60, (d) 3</i>
52.216-22	OCT 1995	INDEFINITE QUANTITY <i>Insert: See Clause F.4 Period of Performance</i>
52.217-8	NOV 1999	OPTION TO EXTEND SERVICES <i>Insert: 30 days</i>
52.217-9	MAR 2000	OPTION TO EXTEND THE TERM OF THE CONTRACT <i>Insert: (a) 30 days, (b) 7 years</i>
52.219-4	JUL 2005	NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS

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CLAUSE NUMBER	DATE	TITLE
52.219-8	MAY 2004	UTILIZATION OF SMALL BUSINESS CONCERNS
52.219-9	APR 2008	SMALL BUSINESS SUBCONTRACTING PLAN (ALTERNATE II) (OCT 2001)
52.219-16	JAN 1999	LIQUIDATED DAMAGES – SUBCONTRACTING PLAN
52.219-25	APR 2008	SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM – DISADVANTAGED STATUS AND REPORTING
52.219-28	APR 2009	POST-AWARD SMALL BUSINESS PROGRAM REPRESENTATION
52.222-1	FEB 1997	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES
52.222-2	JUL 1990	PAYMENT FOR OVERTIME PREMIUMS <i>Insert: \$0</i>
52.222-3	JUN 2003	CONVICT LABOR
52.222-19	FEB 2008	CHILD LABOR – COOPERATION WITH AUTHORITIES AND REMEDIES
52.222-21	FEB 1999	PROHIBITION OF SEGREGATED FACILITIES
52.222-26	MAR 2007	EQUAL OPPORTUNITY
52.222-29	JUN 2003	NOTIFICATION OF VISA DENIAL
52.222-35	SEP 2006	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	SEP 2006	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS
52.222-41	NOV 2007	SERVICE CONTRACT ACT OF 1965
52.222-44	FEB 2002	FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT – PRICE ADJUSTMENT
52.222-49	MAY 1989	SERVICE CONTRACT ACT – PLACE UNKNOWN
52.222-50	FEB 2009	COMBATING TRAFFICKING IN PERSONS
52.222-54	JAN 2009	EMPLOYMENT ELIGIBILITY VERIFICATION

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CLAUSE NUMBER	DATE	TITLE
52.223-3	JAN 1997	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA AND ALTERNATE I (JUL 1995)
52.223-5	AUG 2003	POLLUTION PREVENTION & RIGHT-TO-KNOW INFORMATION AND ALTERNATES I (AUG 2003) AND II (AUG 2003)
52.223-6	MAY 2001	DRUG FREE WORKPLACE
52.223-10	AUG 2000	WASTE REDUCTION PROGRAM
52.223-14	AUG 2003	TOXIC CHEMICAL RELEASE REPORTING
52.225-1	FEB 2009	BUY AMERICAN ACT – SUPPLIES
52.225-8	FEB 2000	DUTY-FREE ENTRY
52.225-13	JUN 2008	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	DEC 2007	AUTHORIZATION AND CONSENT (ALTERNATE I) (APR 1984)
52.227-2	DEC 2007	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
52.227-11	DEC 2007	PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM) AS MODIFIED BY NFS 1852.227-11
52.227-14	DEC 2007	RIGHTS IN DATA-GENERAL AS MODIFIED BY NFS 1852.227-14 AND ALTERNATES II (DEC 2007) AND III (DEC 2007) <i>Insert (Alt II): See clause I.19</i>
52.227-16	JUN 1987	ADDITIONAL DATA REQUIREMENTS
52.228-7	MAR 1996	INSURANCE – LIABILITY TO THIRD PERSONS
52.230-2	OCT 2008	COST ACCOUNTING STANDARDS
52.230-6	MAR 2008	ADMINISTRATION OF COST ACCOUNTING STANDARDS
52.231-2	APR 1984	PAYMENTS
52.232-8	FEB 2002	DISCOUNTS FOR PROMPT PAYMENT
52.232-17	OCT 2008	INTEREST
52.232-18	APR 1984	AVAILABILITY OF FUNDS
52.232-22	APR 1984	LIMITATION OF FUNDS
52.232-23	JAN 1986	ASSIGNMENT OF CLAIMS
52.232-25	OCT 2008	PROMPT PAYMENT AND ALTERNATE I (FEB 2002)

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CLAUSE NUMBER	DATE	TITLE
52.232-3	JAN 2010	PAYMENT BY ELECTRONIC FUNDS TRANSFER –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
52.242-1	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
52.243-1	AUG 1987	CHANGES – FIXED PRICE (ALTERNATE I) (APR 1984)
52.243-2	AUG 1987	CHANGES-COST REIMBURSEMENT (ALTERNATE II) (APR 1984)
52.244-2	JUN 2007	SUBCONTRACTS
52.244-5	DEC 1996	COMPETITION IN SUBCONTRACTING
52.244-6	MAR 2009	SUBCONTRACTS FOR COMMERCIAL ITEMS
52.245-1	JUN 2007	GOVERNMENT PROPERTY (JUN 2007)
52.245-9	JUN 2007	USE AND CHARGES
52.246-23	FEB 1997	LIMITATION OF LIABILITY
52.246-24	FEB 1997	LIMITATION OF LIABILITY – HIGH-VALUE ITEMS
52.246-25	FEB 1997	LIMITATION OF LIABILITY – SERVICES
52.247-1	FEB 2006	COMMERCIAL BILL OF LADING NOTATIONS
52.247-63	JUN 2003	PREFERENCE FOR U.S.-FLAG AIR CARRIER
52.247-64	FEB 2006	PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS (ALTERNATE I) (APR 2003)
52.248-1	FEB 2000	VALUE ENGINEERING

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CLAUSE NUMBER	DATE	TITLE
52.249-2	MAY 2004	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED PRICE)
52.249-6	MAY 2004	TERMINATION (COST-REIMBURSEMENT)
52.249-8	APR 1984	DEFAULT (FIXED PRICE SUPPLY AND SERVICES)
52.249-14	APR 1984	EXCUSABLE DELAYS
52.251-1	APR 1984	GOVERNMENT SUPPLY SOURCES
52.251-2	JAN 1991	INTERAGENCY FLEET MANAGEMENT SYSTEM VEHICLES AND RELATED SERVICES
52.253-1	JAN 1991	COMPUTER GENERATED FORMS

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

CLAUSE NUMBER	DATE	TITLE
1852.203-70	JUN 2001	DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS
1852.216-89	JUL 1997	ASSIGNMENT AND RELEASE FORMS
1852.219-74	SEP 1990	USE OF RURAL AREA SMALL BUSINESSES
1852.219-75	MAY 1999	SMALL BUSINESS SUBCONTRACTING REPORTING
1852.219-77	JUL 2009	NASA MENTOR PROTÉGÉ PROGRAM
1852.219-79	JUL 2009	MENTOR REQUIREMENTS AND EVALUATION <i>Applicable to prime contractors who are participants in the NASA Mentor-Protégé Program</i>
1852.223-74	MAR 1996	DRUG- AND ALCOHOL-FREE WORKPLACE
1852.228-75	OCT 1998	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

I.2 FAR 52.204-1 APPROVAL OF CONTRACT (DEC 1989)

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

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(End of clause)

I.3 FAR 52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

- (a) The contractor shall make the following notifications in writing:
- (1) When the contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.
 - (2) The contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.
- (b) The contractor shall—
- (1) Maintain current, accurate, and complete inventory records of assets and their costs;
 - (2) Provide the ACO or designated representative ready access to the records upon request;
 - (3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the contractor's ownership changes; and
 - (4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each contractor ownership change.
- (c) The contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR [15.408\(k\)](#).

(End of clause)

**I.4 FAR 52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS
CONCERNING PAYMENT OF UNION DUES OR FEES (DEC 2004)**

- (a) *Definition.* As used in this clause—
“United States” means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

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- (b) Except as provided in paragraph (e) of this clause, during the term of this contract, the contractor shall post a notice, in the form of a poster, informing employees of their rights concerning union membership and payment of union dues and fees, in conspicuous places in and about all its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the information pertaining to National Labor Relations Board shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended ([45 U.S.C. 151-188](#))).

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you do not want to pay that portion of dues or fees used to support activities not related to collective bargaining, contract administration, or grievance adjustment, you are entitled to an appropriate reduction in your payment. If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights, you may wish to contact the National Labor Relations Board (NLRB) either at one of its Regional offices or at the following address or toll free number:

National Labor Relations Board
Division of Information
1099 14th Street, N.W.
Washington, DC 20570
1-866-667-6572
1-866-316-6572 (TTY)

To locate the nearest NLRB office, see NLRB's website at <http://www.nlr.gov>.

- (c) The contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR Part 470, and orders of the Secretary of Labor.
- (d) In the event that the contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this

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- contract be cancelled, terminated, or suspended in whole or in part, and declare the contractor ineligible for further Government contracts in accordance with procedures at 29 CFR Part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR Part 470, which implements Executive Order 13201, or as are otherwise provided by law.
- (e) The requirement to post the employee notice in paragraph (b) does not apply to—
- (1) Contractors and subcontractors that employ fewer than 15 persons;
 - (2) Contractor establishments or construction work sites where no union has been formally recognized by the contractor or certified as the exclusive bargaining representative of the contractor’s employees;
 - (3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;
 - (4) Contractor facilities where upon the written request of the contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the contractor’s facilities if the Deputy Assistant Secretary finds that the contractor has demonstrated that—
 - (i) The facility is in all respects separate and distinct from activities of the contractor related to the performance of a contract; and
 - (ii) Such a waiver will not interfere with or impede the effectuation of the Executive order; or
 - (5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.
- (f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors. The contractor shall—
- (1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department’s Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;
 - (2) Download a copy of the poster from the Office of Labor-Management Standards website at <http://www.olms.dol.gov>; or
 - (3) Reproduce and use exact duplicate copies of the Department of Labor’s official poster.
- (g) The contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of

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29 CFR 470.3(c). For indefinite quantity subcontracts, the contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR Part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

(End of clause)

I.5 FAR 52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (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.

See Section J, Attachment J-4, Department of Labor Wage Determination,.

(End of clause)

I.6 RESERVED

(End of clause)

I.7 FAR 52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) *Definition.* "Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as-

- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- (2) Class II, including, but not limited to, hydrochlorofluorocarbons.

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- (b) The contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR part 82, Subpart E, as follows:

“WARNING: Contains (or manufactured with, if applicable) *_____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.”

* The contractor shall insert the name of the substance(s).

(End of clause)

I.8 FAR 52.247-67 SUBMISSION OF TRANSPORTATION DOCUMENTS FOR AUDIT (FEB 2006)

- (a) The contractor shall submit to the address identified below, for prepayment audit, transportation documents on which the United States will assume freight charges that were paid –
- (1) By the contractor under a cost-reimbursement contract; and
 - (2) By a first-tier subcontractor under a cost-reimbursement subcontract thereunder.
- (b) Cost-reimbursement contractors shall only submit for audit those bills of lading with freight shipment charges exceeding \$100. Bills under \$100 shall be retained on-site by the contractor and made available for on-site audits. This exception only applies to freight shipment bills and is not intended to apply to bills and invoices for any other transportation services.
- (c) Contractors shall submit the above referenced transportation documents to

NASA Johnson Space Center
2101 NASA Parkway
Houston, TX 77058
Attn: Contracting Officer
Mail Code: BG
Contract Number: NNJ10GA35C

(End of clause)

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I.9 FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

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

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

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

(End of clause)

I.10 FAR 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

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

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

(End of clause)

**I.11 NFS 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (OCT 2009)
(DEVIATION)**

- (a) The Contractor shall protect the confidentiality, integrity, and availability of NASA Electronic Information and IT resources and protect NASA Electronic Information from unauthorized disclosure.
- (b) This clause is applicable to all NASA contractors and subcontractors that process, manage, access, or store unclassified electronic information, to include Sensitive But Unclassified (SBU) information, for NASA in support of NASA’s missions, programs, projects and/or institutional requirements. Applicable requirements, regulations, policies, and guidelines are identified in the Applicable Documents List (ADL) provided as an attachment to the contract. The documents listed in the ADL can be found at: www.nasa.gov/offices/ocio/itsecurity/index.html. For policy information considered sensitive, the documents will be identified as such in the ADL and made available through the Contracting Officer.

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(c) Definitions

- (1) IT resources means any hardware or software or interconnected system or subsystem of equipment, that is used to process, manage, access, or store electronic information.
- (2) NASA Electronic Information is any data (as defined in the Rights in Data clause of this contract) or information (including information incidental to contract administration, such as financial, administrative, cost or pricing, or management information) that is processed, managed, accessed or stored on an IT system(s) in the performance of a NASA contract.
- (3) IT Security Management Plan -- This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract.
- (4) IT Security Plan – this is a FISMA requirement; see the ADL for applicable requirements.

Within 30 days after contract award, the Contractor shall develop and deliver an IT Security Management Plan. The delivery address and approval authority will be included in the ADL.

All contractor personnel requiring physical or logical access to NASA IT resources must complete NASA's annual IT Security Awareness training. Refer to the IT Training policy located in the IT Security website at <https://itsecurity.nasa.gov/policies/index.html>.

- (d) The Contractor shall afford Government 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 a program of IT inspection (to include vulnerability testing), investigation and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA Electronic Information or to the function of IT systems operated on behalf of NASA, and to preserve evidence of computer crime.
- (e) 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 in accordance with retention documentation available in the ADL. The Contractor shall provide a listing of all NASA Electronic information and IT resources generated in performance of the contract. At that time, the Contractor shall request disposition instructions from the Contracting Officer. The Contracting Officer will provide

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disposition instructions within 30 calendar days of the contractor's request.

- (f) The Contracting Officer may waive specific requirements of this clause upon request of the contractor. The Contractor shall provide all relevant information requested by the Contracting Officer to support the waiver request.

The Contractor shall insert this clause, including this paragraph in all subcontracts that process, manage, access or store NASA Electronic Information in support of the mission of the Agency.

(End of clause)

I.12 NFS 1852.215-84 OMBUDSMAN (OCT 2003)

- (a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the pre-award and post-award phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the Contracting Officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the Contracting Officer for resolution.
- (b) If resolution cannot be made by the Contracting Officer, interested parties may contact the Installation Ombudsman, Melanie Saunders, address 2101 NASA Parkway, Houston, Texas, at 281-483-0490, facsimile 281-483-2200, and e-mail Melanie.saunders-1@nasa.gov. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA Ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail james.a.balinskas@nasa.gov. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

(End of clause)

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I.13 NFS 1852.219-76 NASA 8 PERCENT GOAL (JUL 1997)**(a) Definitions.**

“Historically Black Colleges or University,” as used in this clause, means an institution determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2. The term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

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

“Small disadvantaged business concern,” as used in this clause, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

“Women-owned small business concern,” as used in this clause, means a small business concern (1) which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women, and (2) whose management and daily business operations are controlled by one or more women.

- (b) The NASA Administrator is required by statute to establish annually a goal to make available to small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns, at least 8 percent of NASA’s procurement dollars under prime contracts or subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained.

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- (c) The contractor hereby agrees to assist NASA in achieving this goal by using its best efforts to award subcontracts to such entities to the fullest extent consistent with efficient contract performance.
- (d) Contractors acting on good faith may rely on written representations by their subcontractors regarding their status as small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns.

(End of clause)

I.14 NFS 1852.237-72 ACCESS TO SENSITIVE INFORMATION (JUN 2005)

- (a) As used in this clause, “sensitive information” refers to information that a contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.
- (b) To assist NASA in accomplishing management activities and administrative functions, the contractor shall provide the services specified elsewhere in this contract.
- (c) If performing this contract entails access to sensitive information, as defined above, the contractor agrees to –
 - (1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in another procurement.
 - (2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
 - (3) Allow access to sensitive information only to those employees that need it to perform services under this contract.
 - (4) Preclude access and disclosure of sensitive information to persons and entities outside of the contractor’s organization.
 - (5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.

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- (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)

I.15 NFS 1852.237-73 RELEASE OF SENSITIVE INFORMATION (JUNE 2005)

- (a) As used in this clause, "sensitive information" refers to information, not currently in the public domain, that the contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.
- (b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the contractor under this contract. By submitting this proposal or performing this contract, the contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject

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to the enumerated protections mandated by the clause at NFS 1852.237-72, Access to Sensitive Information.

- (c)(1) The contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at NFS 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages [insert page numbers or other identification of pages].

Mark each page of sensitive information the contractor wishes to restrict with the following legend:

Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document.

- (2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at NFS 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.
- (d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at NFS 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

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- (1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.
 - (2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.
 - (3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
 - (4) Allow access to sensitive information only to those employees that need it to perform services under its contract.
 - (5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.
 - (6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.
 - (7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.
 - (8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.
- (e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at NFS 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.
- (f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

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- (g) The contractor shall insert this clause, including this paragraph (g), suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of clause)

**I.16 NFS 1852.243-70 ENGINEERING CHANGE PROPOSALS (OCT 2001)
ALTERNATE I (JUL 1997) AND ALTERNATE II (SEP 1990)**

- (a) Definitions.
“**ECP**” means an Engineering Change Proposal (ECP) which is a proposed engineering change and the documentation by which the change is described, justified, and submitted to the procuring activity for approval or disapproval.
- (b) Either party to the contract may originate ECPs. Implementation of an approved ECP may occur by either a supplemental agreement or, if appropriate, as a written change order to the contract.
- (c) Any ECP submitted to the Contracting Officer shall include a "not-to-exceed" estimated cost increase or decrease adjustment amount, if any, and the required time of delivery or period of performance adjustment, if any, acceptable to the originator of the ECP. If the change is originated within the Government, the Contracting Officer shall obtain a written agreement with the contractor regarding the "not-to-exceed" estimated cost and delivery or period of performance adjustments, if any, prior to issuing an order for implementation of the change. An ECP accepted in accordance with the Changes clause of this contract shall not be considered an authorization to the contractor to exceed the estimated cost in the contract Schedule, unless the estimated cost is increased by the change order or other contract modification.
- (d) After submission of a contractor initiated ECP, the Contracting Officer may require the contractor to submit the following information:
- (1) Cost or pricing data in accordance with [FAR 15.403-5](#) if the proposed change meets the criteria for its submission under FAR 15.403-4; or
 - (2) Information other than cost or pricing data adequate for Contracting Officer determination of price reasonableness or cost realism. The Contracting Officer reserves the right to request additional information if that provided by the contractor is considered inadequate for that purpose. If the contractor claims applicability of one of the exceptions to submission of cost or pricing data, it shall cite the exception and provide rationale for its applicability.

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- (e) If the ECP is initiated by NASA, the Contracting Officer shall specify the cost information requirements, if any.
- (f) If the estimated cost adjustment proposed for any contractor-originated ECP is \$100,000 or less, the ECP shall be executed with no adjustment to the contract estimated cost.

(End of clause)

I.17 TECHNICAL INFORMATION RELEASES AND PUBLICATIONS

As authorized by paragraph (d)(1) of the Rights in Data-General Clause (FAR 52.227-14) of this contract, the following exception shall apply:

During the performance of this contract, if data relating to this contract is planned for use in oral or written presentations, professional meetings, seminars, or in articles to be published in professional, scientific, and technical journals and similar media, the contractor shall assure that an advance information copy of the presentation or article is sent to the ISS Program in accordance with NF1676JSC, JSC Approval of Scientific and Technical Information for External Release, to have the benefit of advance information concerning accomplishments of interest, and will provide the ISS Program an opportunity to make suggestions to the contractor concerning revisions if it is considered that such comments might be useful to the contractor to help assure the technical accuracy of the information to be presented or published. The information copy will be forwarded to the technical monitor of the contract at least four weeks in advance of the date the author intends to give the presentation or submit the article for publication.

The advance information copy may be submitted in the format or medium, which will be utilized in its ultimate release.

(End of clause)

I.18 DATA RIGHTS NOTICE

- (a) Any proposal submitted during the course of contract performance must expressly identify any computer software or technical data that is to be provided with less than unlimited data rights. The contractor shall notify the Contracting Officer in writing prior to incorporating any item, component, subcomponent, process, or software, wherein the related technical data or computer software qualifies as limited rights data or restricted computer software in accordance with Alternate II and III of FAR 52.227-14 and NFS 1852.227-86. This notification does not apply to commercial off-the-shelf (shrink-wrapped) computer software, and corresponding documentation, that

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has a standard commercial license unless the software is to be incorporated as a subcomponent in a developmental effort.

- (b) Technical data and computer software delivered shall not be marked with restrictive legends unless the Contracting Officer has given prior written consent.
- (c) All license agreements shall be compliant with Federal laws, regulations and the terms and conditions of this contract and shall be transferable to the government upon completion of the contract without additional cost to the Government. One copy of the final negotiated license agreement shall be forwarded to the Contracting Officer within 30 days of agreement to ensure compliance.

(End of clause)

I.19 LIMITED RIGHTS DATA NOTICE (DEC 2007)

(See Alternate II of the Rights in Data-General Clause (52.227-14 as modified at 1852.227-14)

- (a) These data are submitted with limited rights under Government Contract No. NNJ10GA35C (and subcontract TBD, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, provided that the Government makes such disclosure subject to prohibition against further use and disclosure:
 - 1. Use (except for manufacture) by support service contractors.
 - 2. Evaluation by nongovernment evaluators.
 - 3. Use (except for manufacture) by other contractors participating in the Government's program of which the specific contract is a part, for information and use in connection with the work performed under each contract.
 - 4. Emergency repair or overhaul work.
 - 5. Release to a foreign government, or instrumentality thereof, as the interests of the United States Government may require, for information or evaluation, or for emergency repair or overhaul work by such government.

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- (b) This notice shall be marked on any reproduction of these data, in whole or in part.

(End of clause)

I.20 ACCESS TO CONTRACTOR DATA

- (a) "Data" for purposes of this clause, means recorded information, regardless of the form or media on which it may be recorded. The term includes technical data; computer software; and information incidental to contract administration, such as financial, administrative, cost or pricing, or management information. Types of data contained in the definition also include Contractor internal audits of any discipline, system, or task, which directly or indirectly supports the performance of this contract as well as data from any audit of subcontractor(s) performing this contract. These examples are illustrative and are not to be construed as a limitation on the definition of data.
- (b) The Contracting Officer or designee shall, through closeout, have access to and the right to examine any of the data produced or specifically used in the performance of this contract. The purpose of this access provision is to permit the Government to monitor the Contractor's performance under this contract and to permit sampling of Contractor data to verify requirements compliance and continuous improvement without unduly increasing the number of data deliverables to this contract.
- (c) The contractor shall make available at all reasonable times for Government inspection all existing Government data provided to the Contractor and any data first produced or used in the performance of this contract for examination through closeout. Moreover, information provided by the Contractor on this system shall contain all necessary technical and business application data to determine the degree to which contract requirements are met.
- (d) Except for software systems being provided as part of this contract, the contractor shall maintain all data on a commercially available system for information management that is easily accessible by NASA. For the purposes of this clause, "commercially available system" is defined as a system comprised of a commercial off-the-shelf (COTS) database management system with its associated reporting/query tools, and a COTS text and graphics viewer software package. The contractor must obtain the approval of the Contracting Officer prior to using any noncommercial system for information management of data generated under this contract. As part of this request, the contractor must justify why no commercial system to manage

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information is adequate for this contract. If use of a noncommercial system is approved, then the contractor shall demonstrate the system to the Government and provide thorough training to Government personnel to ensure they are able to access (i.e., read and copy) all data maintained on the system.

- (e) The Contractor shall provide the Government unimpeded access to all areas determined by Government representatives as necessary for surveillance, audit and independent evaluation purposes. In those instances that access is restricted due to hazards or other personnel access limitations, the Contractor shall accommodate Government personnel such that access is provided and operational safety is not compromised.
- (f) Notwithstanding the *Additional Data Requirements* clause, the Government shall have the right to reproduce any data found during the examination that it wishes to retain. The Government will reimburse reproduction costs only when it uses Contractor equipment for the reproduction. The Government shall retain no greater rights in the reproduced data than it would have under the *Rights in Data--General* clause.
- (g) The Contractor shall describe the areas of its internal systems where NASA access will be permitted, define access and interface requirements, and provide NASA the required training to be able to access and use these systems.
- (h) The Contractor shall flow this clause to all cost type subcontracts.

(End of clause)

I.21 PIV CARD ISSUANCE PROCEDURES in accordance with FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel

FIPS 201 Appendix A graphically displays the following procedure for the issuance of a PIV credential.

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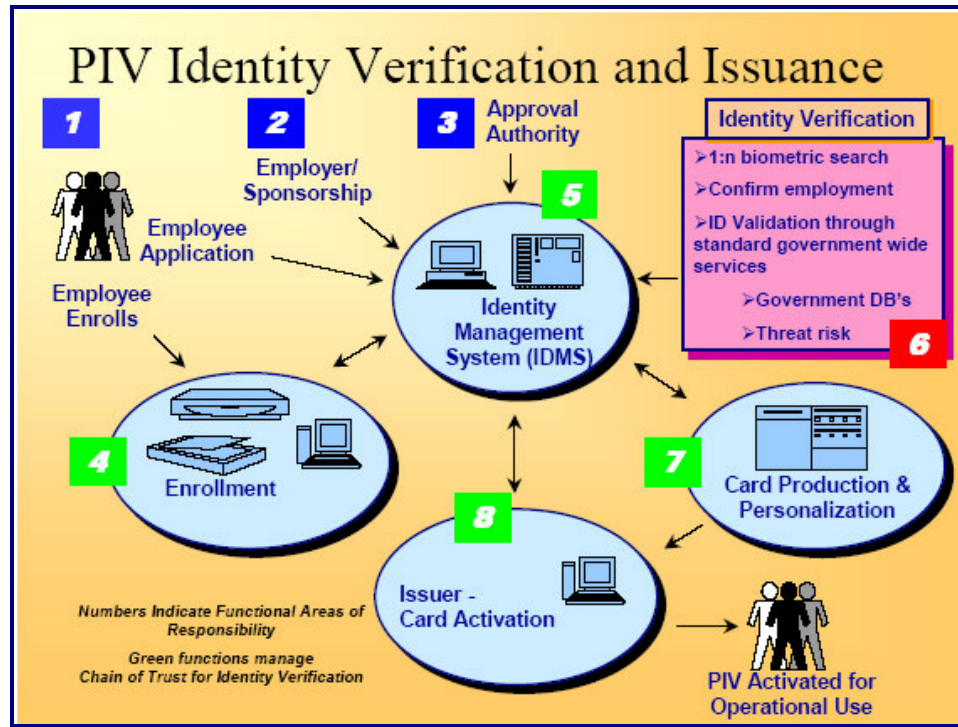


Figure A-1, FIPS 201, Appendix A

The following steps describe the procedures for the NASA Personal Identity Verification Card Issuance (PCI) of a PIV credential:

Step 1:

The contractor’s Corporate Security Officer (CSO), Program Manager (PM), or Facility Security Officer (FSO) submits a formal letter that provides a list of contract employees (applicant) names requesting access to the NASA Contracting Officer’s Technical Representative (COTR). In the case of a foreign national applicant, approval through the NASA Foreign National Management System (NFMMS) must be obtained for the visit or assignment before any processing for a PIV credential can take place. Further, if the foreign national is not under a contract where a COTR has been officially designated, the foreign national will provide the information directly to their visit/assignment host, and the host sponsor will fulfill the duties of the COTR mentioned herein. In each case, the letter shall provide notification of the contract or foreign national employee’s (hereafter the “applicant”) full name (first, middle and last), social security number (SSN) or NASA Foreign National Management System Visitor Number if the foreign national does not have a SSN, and date of birth. If the contract employee has a current satisfactorily completed National Agency Check with Inquiries (NACI) or an equivalent or higher degree of background investigation, the letter shall indicate the type of investigation, the agency completing the investigation, and date the investigation was completed. Also, the letter must specify the risk/sensitivity level associated with the position in which each

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applicant will be working (NPR 1600.1, §4.5 is germane) Further, the letter shall also acknowledge that contract employees may be denied access to NASA information or information systems based on an unsatisfactory background investigation/adjudication. .

After reviewing the letter for completeness and concurring with the risk/sensitivity levels, the COTR/host must forward the letter to the Center Chief of Security (CCS). The CCS shall review the OPM databases (e.g., DCII, PIP, et al.), and take appropriate steps to validate the applicant's investigation status. Requirements for a NACI or other investigation shall be initiated only if necessary.

Applicants who do not currently possess the required level of background investigation shall be directed to the e-QIP web site to complete the necessary background investigation forms online. The CCS shall provide to the COTR/host information and instructions on how to access the e-QIP for each contract or foreign national employee requiring access

Step 2:

Upon acceptance of the letter/background information, the applicant will be advised that in order to complete the investigative process, he or she must appear in-person before the authorized PIV registrar and submit two forms of identity source documents in original form. The identity source documents must come from the list of acceptable documents included in Form I-9, Employment Eligibility Verification, one which must be a Federal¹ or State issued picture identification. Fingerprints will be taken at this time. The applicant must appear **no later than** the entry on duty date.

When the applicant appears, the registrar will electronically scan the submitted documents; any document that appears invalid will be rejected by the registrar. The registrar will capture electronically both a facial image and fingerprints of the applicant. The information submitted by the applicant will be used to create or update the applicant identity record in the Identity Management System (IDMS).

Step 3:

Upon the applicant's completion of the investigative document, the CCS reviews the information, and resolves discrepancies with the applicant as necessary. When the applicant has appeared in person and completed fingerprints, the package is electronically submitted to initiate the NACI. The CCS includes a request for feedback on the NAC portion of the NACI at the time the request is submitted.

¹ A non-PIV government identification badge, including the NASA Photo Identification Badge, **MAY NOT BE USED** for the original issuance of a PIV vetted credential

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Step 4:

Prior to authorizing physical access of a contractor employee to a federally-controlled facility or access to a Federal information system, the CCS will ensure that a check has been performed with the National Crime Information Center (NCIC) and Interstate Identification Index. In the case of a foreign national, a national check of the Bureau of Immigration and Customs Enforcement (BICE) database will be performed for each applicant. If this process yields negative information, the CCS will immediately notify the COTR/host of the determination regarding access made by the CCS.

Step 5:

Upon receipt of the completed NAC, the CCS will update IDMS from the NAC portion of the NACI and indicate the result of the suitability determination. If an unsatisfactory suitability determination is rendered, the COTR will advise the contractor that the employee is being denied physical access to all federally-controlled facilities and Federal information systems.

Based on a favorable NAC and NCIC/III or BICE check, the CCS will authorize the issuance of a PIV federal credential in the Physical Access Control System (PACS) database. The CCS, based on information provided by the COTR/host, will determine what physical access the applicant should be granted once the PIV issues the credential.

Step 6:

Using the information provided by the applicant during his or her in-person appearance, the PIV card production facility creates and instantiates the approved PIV card for the applicant with an activation date commensurate with the applicant's start date.

Step 7:

The applicant proceeds to the credential issuance facility to begin processing for receipt of his/her federal credential.

The applicant provides to the credential issuing operator proof of identity with documentation that meets the requirements of FIPS 201 (DHS Employment Eligibility Verification (Form I-9) documents. These documents **must** be the same documents submitted for registration.

The credential issuing operator will verify that the facial image, and optionally reference finger print, matches the enrollment data used to produce the card. Upon verification of identity, the operator will locate the employee's record in the PACS database, and modify the record to indicate the PIV card has been issued. The applicant will select a PIN for use with his or her new PIV card. Although root data is inaccessible to the operator, certain fields (hair color, eye color, et al.) may be modified to more accurately record the employee's information.

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The applicant proceeds to a kiosk or other workstation to complete activation of the PIV card using the initial PIN entered at card issuance.

**ALTERNATIVE FOR APPLICANTS WHO DO NOT HAVE A
COMPLETED AND ADJUDICATED NAC AT THE TIME OF
ENTRANCE ON DUTY**

Steps 1 through 4 shall be accomplished for all applicants in accordance with the process described above. If the applicant is unable to appear in person until the time of entry on duty, or does not, for any other reason, have a completed and adjudicated NAC portion of the NACI at the time of entrance on duty, the following interim procedures shall apply.

1. If the documents required to submit the NACI have not been completed prior to EOD, the applicant will be instructed to complete all remaining requirements for submission of the investigation request. This includes presentation of I-9 documents and completion of fingerprints, if not already accomplished. If the applicant fails to complete these activities as prescribed in NPR 1600.1 (Chapters 3 and 4), it may be considered as failure to meet the conditions required for physical access to a federally-controlled facility or access to a Federal information system, and result in denial of such access.
2. Based on favorable results of the NCIC, the applicant shall be issued a temporary NASA identification card for a period not-to-exceed six months. If at the end of the six month period the NAC results have not been returned, the agency will at that time make a determination if an additional extension will be granted for the temporary identification card.
3. Upon return of the completed NAC, the process will continue from Step 5.

(End of clause)

[END OF SECTION]

Cargo Mission Contract

Dictionary

Attachment J-1

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Dictionary

Acceptance Testing	Tests to determine that a part, component, subsystem, or system is capable of meeting performance requirements prescribed in purchase specifications or other documents specifying what constitutes the adequate performance capability for an item in question.
Analytical Integration (Pressurized Cargo)	The development of stowage products (layouts and mass properties) and hazards analysis required to ensure all hardware item packing requirements are met.
Anomaly	An unexpected event, hardware damage, a departure from past experience, established procedures or performance, or a deviation of system, subsystem, and/or hardware/software performance outside certified design/performance specification limits.
Applicable (context of documents)	Documentation that has been identified, in which the contractor has requirements that derive from that document
As-Built Packing List	A list of the current as-built configuration of packed hardware items.
As-Flown	The final configuration of the flight item as it was delivered to the NLI.
Audit	A systematic and independent examination to determine whether activities and related results comply with planned arrangements, whether these arrangements are implemented effectively, and are suitable to achieve objectives.
Barcode Inventory Tracking System (BITS)	BITS is the program team, including CMC Contractor representatives, responsible for generating, tracking and maintaining the MITR data in the MIDAS system and coordinating with the Mission Operations Directorate for upload of the IMS database.
Bench Stock	Low cost, repetitively used, consumption-type supplies and repair parts, established at or near points of consumption/use to ensure continuous and uninterrupted operations.
Benchmarking	The continuous process of measuring a product, service, or process against the best practices of recognized leaders in the field to achieve superior performance.
Bi-lateral	Any action involving two (2) parties.
Blank Book	A document that shows the format and provides an explanation for the contents of each section of other documents. Used for defining the contents of flight, increment or planning period specific documentation (example the IDRDR blank book defines the contents and format to be used for the IDRDR Increment 1, 2, 3 etc specific documents)

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Dictionary

Book Coordinator	A function that provides for developing new documents or updates to existing documents. Tasks include the following: integrating inputs from technical experts, submitters and reviewers; maintaining the technical consistency of the document; updating the document using CM CR process; interfacing with CM and DQA; coordinating IP inputs and IP issue resolution; developing NDCs for documents that affect RSC-E; coordinating translations as required; coordinating and conducting TCMs; production, distribution and resolution of minutes and actions from TCMs; and developing and presenting presentations to the appropriate control boards as required for CR and document approvals.
Budget	A formal estimate of future revenues, obligations to be incurred, and outlays to be made during a definite period of time and, when determined to be appropriate, upon the basis of accrued expenditures and costs to be incurred.
Calendar Day	The period from one midnight to the following midnight. For example, there are 31 calendar days in October.
Calibration	Comparison of a standard or unit of test equipment of unknown accuracy with standard of known accuracy to detect, correlate, report, or eliminate by adjustment any deviation in the accuracy of the unit being compared.
Cargo	The combined flight complement of manifested hardware items to be packed and turned over for loading into an ISS visiting vehicle.
Certification	The responsible official formal written act that attests to the satisfactory accomplishment of specified activities and authorizes the specified hardware/software, procedures, facilities, and/or personnel for program usage.
Change	Modification requested to reflect an operational characteristic, correct a potentially hazardous condition, meet new operational requirement, improve efficiency, make a system work for a longer duration, or another requirement.
Change Request (CR)	Document used to request a change to a program baseline, including hardware, software, documents, configuration, and drawings.
Checkout Systems	Systems specifically designed to assist in testing space flight systems prior to flight. Currently such systems include extensive system software and test oriented application software along with extensive features to capture and process significant amounts of test data.
Close Call	An unplanned occurrence in which there is no injury/damage but under similar circumstances could have resulted in a reportable mishap.

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Closed Loop Requirement Traceability /Tracking	A cross-reference between OMRS and any other mission requirements and the implementing Work Authorization Document (WAD) number and step or exception/waiver reference that records completion.
Closeout Photo	Images retained by the use of conventional film or digital electronics and stored or viewed for the express purpose of scientific evaluation and comparison against the as-built configuration of flight systems and payloads.
Commercial Off-the-Shelf (COTS)	A product, such as an item, material, component, subsystem, or system, sold or traded to general public in the course of normal business operations at established catalog or market prices.
Compliance	Completion or within constraints of documented requirements
Component	A part or assembly of parts, subassemblies and assemblies, and assemblies mounted together and normally capable of independent operation in a variety of situations.
Computer Aided Design (CAD)	Computer software that enables creation of drawings that are stored in the computer and that may be printed or displayed on a computer monitor.
Computer Aided Engineering (CAE)	Computer software designed to aid various engineering functions.
Condition Assessment	The inspection and documentation of the material condition of facilities and equipment, as measured against the applicable maintenance standards.
Configuration Control	The task of ensuring that each proposed change, waiver, or deviation is properly defined, coordinated, evaluated and dispositioned by the appropriate authority prior to its implementation.
Configuration Management	The task of integrating and accomplishing, in an optimal manner, the four subtasks of configuration identification, configuration control, configuration accounting, and configuration verification.
Contractor	The supplier of the associated products and services to the government under the terms of this contract.
Control Board	A management forum, which establishes and controls changes to the programmatic baseline and associated documentation. It is also a forum for resolving related technical and schedule issues. The specific scope, responsibilities, authority, and membership of the boards are defined in program approved board charters.
Control panels	A subordinate forum to a parent control board with delegated responsibility and control as defined in the charter.
Corrective Action	An action(s) taken to eliminate the root cause of a problem to prevent its recurrence.
Customer (or User)	An organization or individual requiring the services of this contract.

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Depot	A ground maintenance provider, usually used for repair of an item.
Design	The process of defining a new system or modifying a previously defined system in response to new requirements.
Design Change	An approved engineering change incorporated into the end item that modifies, adds to, deletes, or supersedes functions or parts in the end item.
Design Review, Critical	A meeting to assure that the design is in consonance with program and project specifications. Reference NPR 7120.5.
Design Review, Preliminary	A meeting at which preliminary designs are reviewed with customers and prime contractors to assure compliance with system and project requirements. Reference NPR 7120.5.
Design Services	Engineering, procurement, logistics, safety, and quality expertise needed for the design and development of new or modified systems or equipment.
Desktop Computers	Computers designed for primary general use by one employee in one specific location. Such machines typically have one CPU, one or more non-redundant hard disks, a keyboard, mouse, and monitor.
Develop	The process of converting initial requirements into a completed product. (Reference Sustaining Engineering).
Develop Requirements (context of documents)	The development of requirements includes coordination of efforts with stakeholder to satisfy ISS Program mission objectives as allocated to the Cargo Mission. This activity includes documenting requirements baselines and managing requirements baselines as Cargo Mission needs are identified through the ISS Program process.
Develop Requirements (context of hardware requirements)	Development of requirements for hardware includes defining the engineering and maintenance requirements of the hardware and documenting those requirements into the appropriate sustaining engineering and maintenance documentation for traceability.
Deviation	Authorization granted before the fact, to depart from a particular requirement, specification, or related document. (Reference Waiver)
Disposal	The process of transferring NASA excess property to another Federal Agency or donating, selling, abandoning, or destroying surplus property.
Distributed IT Systems	Relatively small and cost effective systems which are usually geographically distributed to be close to their primary user area but which are still often connected to a wide area network to support wider data access.

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Document Release Authorization (DRA)	Formal release of engineering drawings, engineering order (EO), specifications, and other documents into an Engineering Release System (KSC uses KSC Form 21-68 for release into the CAPPS Documentation Center, JSC Form XXX for release into the Engineering Documentation Control Center [EDCC]) performed by the ERU.
Drawings	Graphic or tabular data, including drawings, graphs, or diagrams, industry standards and industry specifications, on which details are represented with sufficient information to define completely, directly or by reference, the end result in the selection, procurement, and manufacture of the item required.
Equipment and Equipment Item	An item of real or personal property in the configuration of a mechanical, electrical, or electronic apparatus or tool, which may perform a function independently or in conjunction with other equipment or components.
Engineering Release Unit	Process of loading electronic copy of documentation or drawing to an official repository and filing of the hardcopy.
Exception	A pre-planned request to deviate from the approved requirement.
Expendable Item	Component or part (such as bolt, nut, rivet) for which (1) no authorized repair procedure exists, and, or (2) the cost of repair would exceed cost of its replacement. Expendable items are usually considered to be consumed when issued and are not recorded as returnable inventory.
External Carriers	External Carriers are a family of existing and proposed unpressurized carriers that supply Orbital Replaceable Units (ORU's), critical spares, payloads and logistical hardware on a reflight basis to and from ISS and/or orbit. External Carriers include, but are not limited to carriers such as: Space Lab Pallet (SLP), Side Wall Carrier (SWC), Lightweight MPESS Carrier (LMC), Unpressurized Logistics Carriers (ULC), Multi Purpose Experiment Support Structure (MPESS), or GAS bridge assembly.
Extravehicular Activity (EVA)	Activities by crewmembers conducted outside the space vehicle pressure hull or within the cargo bay when the cargo bay doors are open.
Facility	A term used to encompass land, buildings, or other structures, and real property improvements, including utilities and collateral equipment.
Factory Equipment	Non-flight support equipment that is not certified as GSE in accordance with SSP 50004.
Failure	The inability of a system, subsystem, component, or part to perform its specified function within specified limits, under specified conditions, and for a specified duration.

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Failure Mode, Effects and Analysis (FMEA)	An analysis to determine an item or systems method and frequency of failure and the resulting effects.
Flight	The launch and, or return of a visiting spacecraft vehicle to and from the ISS. Also, the level of certification for hardware items that are approved for launch and, or on-orbit operation aboard the ISS.
Flight Support Equipment	An item required to attach ORU/Contingency Items into/onto the carrier used in the shuttle payload bay or any pressurized volume, which is transported to orbit by a launch vehicle (e.g. adapter plates, shrouds).
Government Furnished Data (GFD)	Technical data provided to the contractor by the Government.
Government Furnished Equipment (GFE)	Hardware and software Equipment in the possession of, or directly acquired by, the government from suppliers and subsequently made available to the contractor.
Government Furnished Property (GFP)	Hardware and software in the possession of, or directly acquired by, the government from suppliers and subsequently made available to the contractor.
Government Property	All property owned by or leased to the Government or acquired by the Government under the terms of the contract. It includes both Government-furnished property and contractor-acquired property as defined in this section.
Ground Support Equipment (GSE)	Ground-based systems, hardware or software functionally designed to support flight hardware prelaunch and postlanding activities including servicing, checkout, test, movement, alignment, protection or calibration. GSE is certified in accordance with SSP 50004.
Ground Systems	Consists of the facility, facility systems, checkout systems, ground support equipment and tools and the service operators required to operate the infrastructure (i.e., network monitors, facility schedulers, tape operators, system administrators, etc.).
Hardware Provider	Organization responsible for providing hardware for flight or hardware to be processed for flight.
Hardware Audit	A meeting conducted (under the current contract process) to bring hardware providers and the Launch Package team together to review the list of manifested flight hardware for a given flight, and to collect packing, labeling and Imagery requirements for implementation by the CMC Contractor during physical processing.
Hardware Accountability Matrix Report	A report generated by the MIDAS system which includes hardware item information required for the development of analytical and physical cargo products.

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Hazard	A risk of personnel exposure, injury, or death, or of hardware damage or loss.
Hazardous Material	Any solid, liquid, or gaseous material which meets the hazard reporting requirements of 29CFR 1910.1200. This includes commodities, which, under foreseeable conditions, are toxic, carcinogenic, cryogenic, explosive, flammable, pyrophoric, water-reactive, corrosive, an oxidizer, a compressed gas, a combustible liquid, or are chemically unstable.
Hazardous Operation (Hazardous Tasks)	Any operation involving activities that could result in exposure, injury, or loss of life to operating personnel and/or damage to systems/equipment.
Increment Definition and Requirements Document, Annex 1	The Increment Definition and Requirements Document, Annex 1 establishes the ISS Program detailed launch and return manifest requirements for each ISS mission. Annex 1 establishes the items contained within ISS Program elements or carriers. Annex 1 is updated post-flight to reflect the actual as-flown details.
Information Technology (IT)	Any equipment, interconnected system, or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information that is used by the ISS Program. IT includes computers, ancillary equipment, software, firmware, and similar procedures, services (including support services), and related resources.
Insight	Government personnel monitoring contractor technical task, assembly and test support operations to assure engineering direction/ documentation is properly implemented and customer/Principle Investigator requirements are fully met. (Reference Oversight)
In-Situ	The physical location where an activity occurs.
Inspection	A method of certification of physical characteristics that determined compliance without the use of special equipment, procedures, test support items, or services. Inspection uses standard methods such as visuals, gauges, etc., to verify compliance with requirements.
Integration	A combination of activities and processes to combine various inputs (e.g. manifest data and hardware items from different sources) and develop the end product (e.g. packed cargo) in the desired configuration, and to verify compatibility with defined requirements.

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International Partner (IP)	Five international partners encompassing sixteen countries are involved in the ISS. Each partner is designing, developing and will be operating separate pieces of hardware, to be integrated on-orbit into a single orbital station. The International Partners include Roscosmos (Russia), Japan Aerospace Exploration Agency (JAXA), Canadian Space Agency (CSA), and the European Space Agency (ESA).
Inventory Management	The inventory management function is a program wide function to provide the infrastructure and tools to track hardware on the ground and on-orbit. The inventory management function integrates the ground and on-orbit activities through provision of multi-lateral requirements, equipment labeling, integration of packing data, and oversight of Inventory Management System (IMS) application development and associated tools (barcode reader).
Inventory Management System (IMS)	The ISS Inventory Management System (IMS) is a software application used by control centers and crews to manage on-orbit inventory. NASA and RSC-E jointly manage development efforts through the Bilateral Inventory Management System Working Group (BIMSWG). The ISS IMS is used to track assets during ground processing and in flight. This system includes bar code readers, bar code labels and JSC database for tracking (reference SSP 50007, Space Station Inventory Management System Bar Code Label Requirements and Specification).
ISSP Management Center	A program facility in the Mission Control Center that is staffed and operated by program personnel to provide real-time on-console support of ISS operations.
Launch Package	Full complement of ISS hardware and software delivered or returned on a visiting vehicle flight to the ISS.
Long Lead Items	Those items which because of their complexity of design, complicated manufacturing processes, or limited production, may cause production or procurement cycles which would preclude timely or adequate delivery, if not ordered in advance of normal provisioning.
Maintain (documentation)	A revision to incorporate "lessons learned," corrections or other improvements.
Maintainability	The design installation, and operating characteristics of an item that enables it to be retained in or returned to a specified operational condition by expending resources at an acceptable rate using prescribed procedures.
Maintenance	That broad range of activities involved in the day-to-day tasks required to keep or restore hardware, software and equipment in serviceable condition or replaced if economically feasible.

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Maintenance Concept	A description of a planned method for accomplishing maintenance. A thought process that relates the maintenance tasks to be performed to the maintenance levels to support the operation of the system or equipment in the planned operational environment.
Maintenance Plan (MP)	Documentation that itemizes maintenance requirements, resources, and procedures.
Major Subcontractor Past Performance	\$1M annual contract value.
Major Subcontractor Cost Templates	\$10M annual contract value.
Manifest	A Government approved list of flight hardware, software or data to be processed for launch or return on an ISS visiting vehicle. The list is maintained in the MIDAS system and is controlled by Government approval of Manifest Requests.
Manifest Request (MR)	A Government approved form submitted by hardware providers to request launch or return of a particular hardware, software or data item(s). The form is accessible on the MIDAS system and is approved by the Launch Package Team, Increment Management Team and the Manifest Working Group.
Material Review Board	The formal Contractor-Government Board established for the purpose of reviewing, evaluating, and disposing of specific nonconforming supplies or services; and, for assuring the initiation and accomplishment of corrective action.
Material Review Crib (MRC)	A controlled storage area for holding nonconforming articles and materials.
Material Service Center	A storage location of commonly used parts, hardware, equipment, and material near the point of use or consumption.
Memorandum of Understanding (MOU)/ Memorandum of Agreement (MOA)	A signed document between two or more parties that detail an understanding or agreement.
Minor Subcontractor Cost Template	Less than \$10M annual contract value.
Mission Integration Database Applications System (MIDAS)	The software tool maintained by the MIC team and utilized by the Government and the CMC contractor to define the flight manifest and related cargo integration requirements and products.
Mishap	An unplanned event which results in personnel fatality, injury, or exposure; damage to or loss of flight hardware, environment, public property; or could result in an unsafe situation or operational mode.
Mission	The performance of a defined set of operations in space to achieve program goals.

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Mission Evaluation Room (MER)	A program facility in the Mission Control Center that is staffed and operated by ISS program personnel to provide near real-time on-console engineering support of vehicle hardware, subsystems, and systems performance and anomaly resolution.
Mission Support	On-call support to real-time operations in the ISS Management Center, Mission Evaluation Room (MER) or other facility to monitor activities and recommend resolution of technical issues during supported flights including anomaly resolution.
MIDAS Inventory Tracking Report (MITR)	The MIDAS report that provides the hardware (part number, serial number and nomenclature) to barcode relationship for all items packed by the Contractor for a given flight. It is used to update the onboard IMS database.
Model	A software based description or conception of a particular system, situation, or process often used for additional calculations, predictions, or further investigations.
Modification	The work required to change, adjust, or modernize an existing facility, system, or item of equipment, so that it can be more effectively adapted or used for its designated purpose or to support new customer requirements.
Modification Package/Kit	Documentation, instructions, parts, and planning information necessary for implementation of a requirement.
Multi-lateral	Any action involving more than two (2) parties.
Network Servers	Computers that connect to a network for the purpose of providing bulk memory, printing functions, web publication, other functions across the network to other computers.
Next-Level Integrator	Organization next in line to process hardware for flight. In the context of this contract, the next-level integrator in many instances is the launch vehicle provider.
Nonconformance	A condition of any article or material in which one or more characteristics do not conform to requirements. Includes failures, discrepancies, defects, malfunctions and problems.
Non-Recoverable Cargo	Non-recoverable cargo is defined as crew waste, replaced hardware and experiment waste removed from the ISS and is not required to be returned to the original hardware provider.
Off-line maintenance	That maintenance function performed at the intermediate and depot maintenance levels.
On-Dock Date	Date of the physical arrival of hardware at the next-level integrator's facility ready for flight and next-level processing.
Operate	To control hardware, systems, firmware, or software in accordance with approved processes and practices.

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Operational Readiness Date	That date when a facility, system, or equipment, is operationally ready and is turned over to the user/operator for operational training and systems familiarization prior to first use in support of flight hardware checkout.
Operations and Maintenance Instruction (OMI)	A formally controlled document defining step-by-step instructions that provide the sequence and method of accomplishing operations and maintenance on end items or any part thereof. These instructions include such tasks as test and checkout, diagnostic inspection, handling, removal and installation, repair-in-place, servicing, calibrating, and cleaning.
Orbital Replacement Unit (ORU)	Any assembly that can be removed and replaced as a unit from the system on orbit.
Orbital Support Equipment (OSE)	An item required to support Flight hardware in the On-orbit ISS. OSE items are required to accommodate integrated assemblies used to deliver ORU/Contingency Items to/from on-orbit worksites and on-orbit storage locations (e.g. micro-meteoroid debris protection).
Out-of-family	<p>Processing activities that:</p> <ul style="list-style-type: none"> • Involve the first-time occurrence of a failure mode • Limit hardware life • Restrict hardware or software use • Affect the performance or reliability of safety or mission success critical hardware functions • Affect hazard control • Result in a weight change in excess of 2 pounds (equivalent weight to orbit) • Affect flight or ground operating procedures that are controlled by the government • Change software or hardware configuration • Allow use of hardware that does not meet performance specifications, exceeds certification limits, or surpasses time, age, or cycle life limits (waivers/exceptions) • Close or defer resolution of an unexplained anomaly • Requires government design element analysis or assistance • Affect critical hardware manufacture or repair processes • Affect interchangeability of like parts.

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<p>Oversight</p>	<p>Government personnel partnering/participating in contractor technical task, assembly and test support operations on first time, high risk, unique operation, to assure engineering direction/documentation is properly implemented and customer/Principle Investigator requirements are fully met. Includes providing real-time engineering change approvals for the first time utilization of each type cargo/payload element. Civil service will provide independent verification, validation assessment and approval of selected critical mission analysis, procedures, processes, tests, and acceptance criteria to maximize mission success. Specific areas requiring Government approval are as follows:</p> <ol style="list-style-type: none"> 1. Cargo/payload to launch vehicle and GSE interface control documents/drawings, 2. Decisions/resolutions of action items as determined by NASA-led teams, 3. Mission unique hardware/software design, analysis, manufacturing and test, 4. Risk management and systems effectiveness plan/approaches, 5. Top level test plans, requirements, and success criteria for first time/R&D integrated cargo/payload and ground systems and test that verify the integrated interfaces, 6. Launch commit criteria, closeout actions from NASA chaired mission and Flight Readiness Reviews, 7. Closeout actions from NASA chaired ground systems design and design certification reviews, 8. Cargo/Payload handling procedures and deviations, 9. Integrated cargo/payload mates, tests and closeout procedures and deviations on first-time unique R&D missions, 10. Launch countdown procedures and deviations that affect cargo/payload integrated assemblies, 11. Anomaly resolution, 12. Launch Go/No-Go. <p>(Reference Insight)</p>
<p>Pallet</p>	<p>An unpressurized platform, designed for installation in the Orbiter cargo bay, for mounting instruments and equipment requiring direct space exposure or can survive direct space exposure.</p>
<p>Performance-to-Plan</p>	<p>An integrated measurement of technical, cost (when applicable) and schedule performance of a project/program that includes an assessment and identification of variances to the integrated baseline plan, and estimates to completion.</p>

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Peripherals	Computational support equipment such as printers, monitors, external speakers, cameras, etc., that work with and communicate with a specific computer.
Phase-in Period	The period of time from the date of contract award through contract start (i.e. day 1).
Physical Integration	Physical integration consists of the physical (hands-on) processing of flight hardware in preparation for flight and the physical de-integration of cargo upon return. Processing activities begin with the receipt of the manifest through the final delivery of packed stowage containers to the next level integrator. De-integration activities include the return inventory and physical return of the flight hardware to the hardware provider.
Physical Integrator	The organization responsible for the physical integration of the cargo item. Specifically the packing of the cargo item into stowage provisions.
Pressurized Cargo Integration	Pressurized Cargo Integration is defined as the processing of pressurized cargo, from receipt of the manifest through the stowage integration and analytical integration processes to the performance of physical integration and de-integration.
Preventive Maintenance (PM)	The planned, scheduled periodic inspection, adjustment, cleaning, lubrication, parts replacement, and minor repair of equipment and systems.
Problem	A nonconformance which is, or is suspected of being, a failure, an unsatisfactory condition, an unexplained anomaly, or an overstress occurring during or subsequent to production acceptance testing or qualification testing.
Problem Reporting and Corrective Action (PRACA)	A management system for identifying, reporting, analyzing for cause, remedying, and preventing recurrence of problems.
Problem Resolution Team (PRT)	A team that is activated when an on-orbit failure or anomaly condition is identified.
Program	An activity involving management, manpower, material, funding, and scheduling which is necessary to achieve desired goals. (e.g. ISS Program)
Program Authorized Repository	NASA owned database/repository accessible to all ISS Program participants.
Property Accountability	A record of transaction, systematically maintained, which by any given time will disclose item identification, quantity, cost, location, and custodial responsibility of property controlled by an installation or a contractor.

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Reference (context of documents)	The document is provided for general context of the ISS Program execution and for influence on the Cargo Mission in its roll of support to the ISS Program.
Refurbishable Item	Capable of being restored to acceptable operating condition or state after use, damage, or failure. Also called Repairable Item.
Repair	Operations performed on a nonconforming article or material to place it in a usable and acceptable condition; requires additional written procedures and additional operations.
Repair Part	A part needed to return a higher assembly or component to a service or operational condition.
Reviewer (context of documents)	Within the documentation review and approval process, an individual having organizational responsibility to provide comments on a document that supports the Cargo Mission (goals, processes, or products).
Return Manifest Disposition Pl	SSP 50465 Return Manifest Disposition Plan aids ground personnel in the post-flight disposition and inventory of ISS manifested hardware returned on the Space Shuttle Orbiter. This document supplements the disposition instructions contained in the Landing Site Disposition Report (LSDR), Time-Critical Ground Handling Requirements (TGHR)/KSC Operational Middeck Agreements (KOMA), Mission Requirements and Allocations Document (MRAD) and Operations and Maintenance Requirements and Specifications (OMRS).
Rough Order of Magnitude (ROM)	Estimate based on a general evaluation of the work and materials required to accomplish a loosely defined task.
Serviceable Item	Item capable and ready to perform its intended function, usually after being overhauled and, or repaired, and calibrated and tested.
Signatory (context of documents)	Within the documentation review and approval process, an individual having organizational responsibility to approve a document that supports the Cargo Mission (goals, processes, or products).
Soft goods	End item constructed of fabric materials.
Spares	Those support items that are selected to be repairable or replaceable.
Stowage Payload Integration Manager (SPIM)	Point of contact for payload hardware consisting of logistics, research and development hardware items responsible for the coordination and implementation of payload hardware cargo integration requirements.

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Stowage Integration	Stowage Integration is defined as the engineering tasks required to determine appropriate launch, return or on-orbit stowage configurations required to ensure the safety and operability of the hardware that meets the defined carrier, vehicle and cargo's requirements.
Stowage Provisions	FSE used to contain and, or protect flight hardware for launch, on-orbit stowage and return, including but not limited to cargo transfer bags, foam cushions, dividers, labels, zip-lock ® bags and bubble wrap.
Station Program Implementation	The Station Program Implementation Plans (SPIPs) address the multilateral functions and processes of the tactical and execute organizations for the International Space Station Program.
Station Program Implementation Vol. 3	SSP 50200-03, Station Program Implementation Plan Vol. 3 Cargo Analytical Integration and its annex define the Cargo Integration processes and interfaces for analytically integrating cargo delivered to the International Space Station by NASA and its International Partners.
Station Program Implementation Vol. 6	SSP 50200-06, Station Program Implementation Plan Vol. 6 Cargo Physical Processing defines the physical processing pre-launch and post landing tasks. The scope covers from the start of physical processing, to the launch of the flight hardware; and from the landing of the flight through deintegration and return of the hardware to the International Partners.
Sustaining Engineering	Sustaining engineering is defined as the essential engineering required to maintain the integrity of the design and ensure operability of hardware and software. Sustaining Engineering is categorized by tasks required for mission preparation, ground operations, mission execution, and generic tasks. Sustaining engineering includes: performance and anomaly analysis and resolution; maintenance of analytical models; development of hardware and software modifications; and configuration management of both flight and non-flight hardware and software.
System	One or more equipment items and their interconnecting elements serving a common purpose.
Tactical	Period of time from two years until implementation phase or "real-time."

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Technical Data	Recorded information, regardless of form, used to define, produce, test evaluate, modify, deliver, support, maintain, or operate a configuration item. Technical data may be recorded as: graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design type documents; in machine forms such as punched cards, magnetic tape, disks, computer memory printouts or computer memory. Examples of technical data include, but are not limited to, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, commercial item descriptions, logic diagrams, flow charts, and minutes of technical reviews and configuration audits. Research and engineering data are included, but financial and administrative data are excluded.
Technical Direction	A directive to the contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description 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 tasks and requirements in Section C of this contract.
Technical Interchange Meeting	Meetings between two or more technical teams to exchange information, develop processes, and work issues.
Task Preparation Sheet (TPS)	A Work Authorization Document (WAD), KSC Form 4-124, used, generally, on a one-time basis to accomplish specific tasks on Payload Elements or Ground Support Equipment (GSE).
Turnover (Cargo)	Cargo turnover is the process of handing over packed cargo to the Next Level Integrator. At the completion of cargo turnover, the NLI assumes responsibility for the cargo.
Unexplained Anomaly	An anomaly that cannot be repeated (phantom or ghost) or for which a cause cannot be determined.
Uni-lateral	Any action involving only one (1) party.
Unserviceable Item	Item not capable or ready to perform its intended function, usually requires overhaul and, or repair and calibration and test.
Update	A revision to incorporate "lessons learned," corrections or other improvements.
Use	To employ an item of hardware, firmware, or software to perform specific functions or meet identified requirements.
User	An organization or individual requiring the services of a system or item of equipment.
Validation	Verification that the equipment/system meets the operational needs of the Operations and Maintenance user. Part of the turnover process from the design agency to the O&M agency.

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Vehicle	The vehicle includes the whole, integrated, on-orbit station (including hardware and software) as it exists today and in future station configurations as it evolves to the assembly complete configuration. The vehicle configuration is defined by the particular point in time under assessment or discussion.
Vehicle Master Database	The Vehicle Master DataBase (VMDB) is the authoritative source of engineering and operations data for the ISS Program. The VMDB tracks all parts and part resources that are used in the ISS.
Vendor	An open market or established commercial source to obtain end items.
Verification	A process that determines that the hardware and software systems meet all design, performance, and safety requirements. The certification process includes analysis, test, inspection, demonstration, or a combination thereof.
Verify	Review of recorded data (inspection, test, etc.) for conformance to specifications, drawing requirements, etc.
Virtual	A process that does not require the physical presence of the participants but provides them with the same data and, or information that would otherwise be available if they had been present.
Visibly Clean	The absence of all particulate and non-particulate visible to the normal, unaided (except corrected vision) eye. Particulate is identified as matter of miniature size with observable length, width, and thickness. Non-particulate is film matter without definite dimension.
Voting Member	A participate in a process or board where the participant has a right to vote for or against a new requirement or a change in the process.
Waiver	A written authorization, granted for a one time technical requirement noncompliance granted after the fact, for use or acceptance of an article or to perform an action which does not meet specified requirements. (Reference Deviation)
Work Authorization Document (WAD)	An approved written communication that identifies/directs work to be performed, and provides the detailed instructions necessary for accomplishing a task, and records accomplishment of the task.
Work Breakdown Structure (WBS)	A product-oriented hierarchical division of the hardware, software, services, and data required to produce the program/project's end product(s), structured according to the way the work will be performed, and reflective of the way in which program/project costs, schedule, technical and risk data are to be accumulated, summarized and reported.

NNJ10GA35C

SECTION J
Attachment J-1

CARGO MISSION CONTRACT

Dictionary

Work Day (s)	Monday through Friday, except for observance of legal holidays as defined in Clause H.6. For example, October 2009 has 21 work days.
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ATTACHMENT J-2

ACRONYM

LIST

CARGO MISSION CONTRACT

Attachment J-2 – Acronym List

A/R	Acceptance Review
AAA	Allocation Assessment and Analysis
ABCL	As Built Configuration List
ACA	Associate Contractor Agreement
ACC	Aft Cargo Carrier
ACO	Administrative Contracting Officer
ADCN	Advanced Design Change Notice
ADL	Applicable Documents List
ADP	Acceptance Data Package
AF	Award Fee
AL	Associated List
ANE	Advanced Notification of Export
ANSI	American National Standards Institute
ANX	Annex
AOE	Area of Emphasis
APFR	Articulating Portable Foot Restraint
ASAP	Aerospace Safety Advisory Panel
ASCII	American Standard Code of Informational Interchange
ASME	American Society of Mechanical Engineer
Assy	Assembly
ATA	Action Tracking Application
ATV	Automated Transfer Vehicle
BDEALS	Bilateral Data Exchange Agreements, Lists and Schedules
BICE	Bureau of Immigration and Custom Enforcement
BIMSWG	Bilateral Inventory Management System Working Group
BIS	Bureau of Industry and Security
BIT	Built-In Testing
BITS	Barcode Inventory Tracking System
Bldg	Building
BMRRM	Bearing Motor Roll Ring Module
BOE	Basis of Estimate
BTU	British Thermal Unit
c.g.	Center of Gravity
C&A	Certification and Accreditation
C&DH	Command and Data Handling
CAD	Computer-Aided Design

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CAE	Computer-Aided Engineering
CAGE	Corporate and Government Entity
CAM	Camera
CAM	Cost Account Manager
CAOT	Cognizant Audit Office Template
CAP	Corrective Action Plan
CARD	Certification and Acceptance Requirements Document
CAS	Cost Accounting Standards
CBL	Commercial Bill of Lading
CCITT	International Consultative Committee on Telegraphy and Telephony
CCR	Central Contractor Registration
CCS	Center Chief of Security
CD	Compact Disc
CDR	Critical Design Review
CDRW	Compact Disc Read/Write
CEA	Center Export Administrator
CETA	Crew and Equipment Translation Assembly
CEV	Crew Exploration Vehicle
CFR	Code of Federal Regulation
CFT	Conversion Factor Template
Char	Character
CI	Configuration Item
CIL	Critical Items List
CIO	Chief Information Officer
CIP	Capital Investment Process
CIRD	Common Interface Requirements Document
CM	Configuration Management
CMC	Cargo Mission Contract
CO	Close-Out
CO	Contracting Officer
CoFR	Certification of Flight Readiness
COSMOS	Configuration Status Management Operations System
COTR	Contracting Officer Technical Representative
COTS	Commercial-Off-The-Shelf
COTS	Commercial Orbital Transportation System
CPACS	Cargo Planning, Analysis and Configuration System
CPAF	Cost Plus Award Fee
CPU	Central Processing Unit
CR	Change Request
CRLF	Carriage Return Line Feed
CRS	Commercial Resupply Services
CRU	Crew Remote Unit

CARGO MISSION CONTRACT

CSA	Configuration Status Accounting
CSA	Canadian Space Agency
CSCI	Computer Software Configuration Item
CSO	Corporate Security Officer
CST	Central Standard Time
CST	Cost Summary Template
CTB	Cargo Transfer Bag
CUCD	Contingency Urine Collection Device
CWI	Common Work Instruction
CxP	Constellation Program
CY	Calendar Year
DACR	Days Away Case Rate
DART	Days Away plus Restricted Duty Job Transfer
DC	Direct Current
DC	District of Columbia
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DCN	Document Change Notice
DD	Department of Defense form
DDPF	Decal Design and Production Facility
DDT&E	Design, Development, Test and Evaluation
DHS	Department of Homeland Security
DIMS	Digital Imagery Management System
DoD	Department of Defense
DOL	Department of Labor
DOT	Department of Transportation
DQA	Document Quality Assurance
DR	Data Requirement
DRA	Document Release Authorization
DRD	Data Requirements Description
DRL	Data Requirements List
DSSR	Daily Space Station Review
DWG	Drawing
DVD	Digital Video Disc
EAGLE	Enhanced Automated Graphical Logistics Environment
EAR	Export Administration Regulation
EBA	Equipment Bag Assembly
EC	Export Control
ECCN	Export Classification Control Number
ECL	Engineering Configuration List

CARGO MISSION CONTRACT

ECLSS	Environmental Control/Life Support System
ECN	Engineering Change Notice
ECP	Engineering Change Proposal
ECP	Export Control Plan
EDCC	Engineering Documentation Control Center
EDMS	Electronic Document Management System
EDO	Extended Duration Orbiter
EGLS	Exploration Ground Launch Services
EHIP	EVA Helmet Interchangeable Portable Light
EHTKA	Extension Hose/Tee Kit Assembly
EL	Engineering
EMP	Environmental Monitoring Package
EO	Engineering Order
EOD	Entrance On Duty
EP	Equivalent Personnel
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
EPM	Electronic Pricing Model
EPM	Excel Cost Model
EPS	Electric Power Specification
ESA	European Space Agency
ESC	Electronic Still Camera
ESD	Electrostatic Discharge
EST	Export Services Team
ET	Efficiency Template
EVA	Extravehicular Activity
EVR	Extravehicular Robotics Activity
FAR	Federal Acquisition Regulation
FAS	Financial Accounting Standards
FBR	Fully Burdened Rates
FCA	Functional Configuration Audit
FCE	Flight Crew Equipment
FCS	Flight Crew Systems
FDO	Fee Determination Official
FEMP	Federal Energy Management Program
FFP	Firm Fixed Price
FIPS	Federal Information Processing Standards
FMD	Financial Management Division
FMEA	Failure Modes and Effects Analysis
F.O.B.	Freight On Board
FOD	Foreign Orbital Debris

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FP	Fixed Price
FPRA	Forward Pricing Rate Agreement
FRAM	Flight Releasable Adjustment Mechanism
FSE	Flight Support Equipment
FSO	Facility Security Officer
FTE	Full Time Equivalent
FY	Fiscal Year
G&A	General and Administration
Gal	Gallon
GAO	Government Accountability Office
GAS	Get Away Special
GAT	General and Administrative Template
GB	Gigabyte
GBL	Government Bill of Lading
GFD	Government Furnished Data
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GFY	Government Fiscal Year
GN&C	Guidance, Navigation and Control
GOLD	Government On-Line Database
GOV	Government
GPE	Government-wide Point of Entry
GSE	Ground Support Equipment
HA	Hardware Audit
HAMR	Hardware Accountability Matrix Report
HATS	Hazard Abatement Tracking System
HBCU	Historically Black College or University
HBZ	HUBZone
HDBK	Handbook
HHM	Hand Held Microphone
HHRS	Hardware History Retrieval System
HPGL	Hewlett Packard Graphics Language
HQ	Headquarters
HTV	H-II Transfer Vehicle
I&O	Integration and Operations
I/F	Interface
IBM	International Business Machines
ICAMS	Integrated Checkout and Assembly Management System
ICP	Internal Camera Port

CARGO MISSION CONTRACT

ICST	IDIQ Rates Development Template – Contractor Specific
ID	Identification
IDD	Interface Definition Document
IDIQ	Indefinite Delivery/Indefinite Quantity
IDMS	Identity Management System
IDRD	Increment Definition and Requirements Document
IEEE	Institute of Electrical and Electronic Engineers
IG	Inspector General
II	International Integration
IMCOH	ISS Management Center Operations Handbook
IMRP	Integration Management Review Products
IMS	Inventory Management System
IP	International Partner
IP/P	International Partner/Participant
IPL	Indentured Parts List
IPO	Industrial Property Officer
IRIS	Incident Reporting Information System
IRMA	Integrated Risk Management Application
ISCT	IDIQ Summary Cost Template
ISS	International Space Station
IT	Information Technology
ITAR	International Traffic in Arms Regulation
ITS	Information Technology Security
ITT	IDIQ Rates Development Template Team
IVA	Intravehicular Activity
IWIS	ISS Wireless Instrumentation System
JAXA	Japan Aerospace Exploration Agency
JF	JSC Form
JPD	Joint Program Directive
JPD	JSC Procedural Directive
JPR	JSC Procedural Requirements
JSC	Johnson Space Center
JWI	JSC Work Instruction
KOMA	KSC Operational Middeck Agreements
KSC	Kennedy Space Center
LAN	Local Area Network
LED	Light Emitting Diode
LM	Lockheed Martin
LMC	Lightweight MPESS Carrier

CARGO MISSION CONTRACT

LPM	Launch Package Manager
LPT	Labor Pricing Template
LPT	Launch Package Team
LSAR	Logistic Support Analysis Record
LSB	Least Significant Bit
LSDR	Launch Site Dispositioning Record
M&O	Maintenance and Operations
MA	Management Approach
MA&RM	Mission Assurance and Risk Management
Max	Maximum
MCIU	Manipulator Controller Interface Unit
MEL	Master Equipment List
MER	Mission Evaluation Room
MI	Mission Integration
MIC	Mission Integration Contract
MIDAS	Mission Integration Database Application System
MIDSBB	Mission Integration Data Sets Blank Book
MIS	Management Information System
MITR	MIDAS Inventory Tracking Report
mm	Millimeter
MM/OD	Micrometeroid/Orbital Debris
MOA	Memorandum of Agreement
MOD	Mission Operations Directorate
MOU	Memorandum of Understanding
MP	Maintenance Plan
MPESS	Multi Purpose Experiment Support Structure
MPLM	Multi Purpose Logistics Module
MR	Manifest Request
MS	Mississippi
MS	Microsoft
MSB	Most Significant Bit
MSCST	Major Subcontractor Cost Summary Template
MSDS	Material Safety Data Sheet
MSFC	Marshall Space Flight Center
MSPT	Minor Subcontractor Pricing Template
MTBF	Mean Time Between Failures
MTBPM	Mean Time Between Preventive Maintenance
N/A	Not Applicable
NAC	National Agency Check
NACI	National Agency Check with Inquiries

CARGO MISSION CONTRACT

NAICS	North American Industry Classification System
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NASDA	National Space Development Agency
NASIRC	NASA Incident Response Center
NBL	Neutral Buoyancy Laboratory
NCIC	National Crime Information Center
NDC	Notification of Document Change
NF	NASA Form
NFNMS	NASA Foreign National Management System
NFS	NASA FAR Supplement
NITR	NASA Information Technical Requirements
NLI	Next Level Integrator
NLR	Non Labor Resources
NLRB	National Labor Relations Board
NLT	No Later Than
NM	Newton-meter
NPD	NASA Procedural Directive
NPR	NASA Procedural Requirements
NSCCB	Network Security Configuration Control Board
NSSC	NASA Shared Services Center
NTE	Not to Exceed
NW	North West
O&M	Operations and Maintenance
OCA	Orbiter Communication Adapter
ODS	Ozone Depleting Substance
OHT	Over Head Template
OMI	Operations and Maintenance Instructions
OMRS	Operations and Maintenance Requirements and Specification
OMRSD	Operations and Maintenance Requirements and Specification Document
OPR	Office of Primary Responsibility
OPT	Overtime Pricing Template
ORB	Orbital
ORCA	Online Representations and Certifications
ORU	Orbital Replacement Unit
OSE	Orbital Support Equipment
OSHA	Occupational Safety and Health Administration
oz	Ounce
P	Progress
PACS	Physical Access Control System

CARGO MISSION CONTRACT

PART	Problem Analysis Reporting Tool
PBA	Portable Breathing Apparatus
PBT	Prime Burdens Template
PC	Program Control
PC	Portable Computer
PCA	Physical Configuration Audit
PCI	PIV Card Issuance
PCMCIA	Personal Computer Memory Card International Adapter
PCMMU	Pulse Code Modulation Master Unit
PCS	Portable Computer System
PCST	Prime Cost Summary Template
PDIP	Payload Data Interface Panel
PDR	Preliminary Design Review
PDS	PRACA Data System
PEB	Performance Evaluation Board
PEB-IT	Performance Evaluation Board – Integration Team
PEP	Payload Execution Processor
PGSC	Payload General Support Computer
PGT	Pirani Gauge Transducers
PHA	Pre-breathe Hose Assembly
PHC	Permanently Human Capability
PHK	Personal Hygiene Kit
PI&C	Program Integration and Control
PIN	Personal Identification Number
PIT	Phase-In Template
PIV	Personal Identity Verification
PKI	Public Key Infrastructure
PM	Program Manager
PM	Preventive Maintenance
PMA	Pressurized Mating Adapter
PMB	Performance Measurement Baseline
PMR	Performance Management Review
POA&M	Plan of Actions and Milestones
POC	Point of Contact
POWER	Property Operations Workflow Enhancement Real-Time
PPBE	Program Planning, Budgeting, and Execution
PPE	Personal Protective Equipment
PR	Procurement
PRACA	Problem Reporting and Corrective Action
PRT	Problem Resolution Team
PSRP	Payload Safety Review Panel
PWR	Power

CARGO MISSION CONTRACT

QMS	Quality Management System
qt	Quart
R&M	Reliability and Maintainability
R&R	Remove and Replace
RFID	Radio Frequency Identification
RFP	Request For Proposal
RLLS	Russian Language and Logistic Services
Rm	Room
RMDP	Return Manifest Disposition Plan
ROM	Rough Order of Magnitude
Roscosmos	Federal Space Agency
RP	Re-Procurement
RSC-E	Rocket Space Corporation – Energia
RSP	Resupply Stowage Platform
S	Soyuz
S&H	Safety and Health
S&MA	Safety and Mission Assurance
SA	Safety Approach
SAPA	Small Adapter Plate Assembly
SARAH	Single Application Resource for Aerospace Hardware
SARSAT	Search and Rescue Satellite Aided Tracking
SB	Small Business Participation
SBU	Sensitive But Unclassified
SDB	Small Disadvantaged Business
SDVOCB	Service Disabled Veteran Owned Small Business
SE	Sustaining Engineering
SEB	Source Evaluation Board
SEMO	Supply and Equipment Management Officer
SF	Standard Form
SFAC	Space Flight Advisory Committee
SFAS	Statement of Financial Accounting Standards
SFBR	Subcontractor Fully Burdened Rate
SLA	Scanning Laser Altimeter
SGI	Square Grid Interface
SI	Stowage Integration
SIC	Standard Industry Code
SLC	Standard Labor Category
SLP	Spacelab Pallet
SMD	Security Management Directive

CARGO MISSION CONTRACT

SOP	Standard Operating Procedure
SORG	Shuttle Orbiter Repackaged Galley
SOW	Statement of Work
SP	Special Publication
SPDM	Special Purpose Dexterous Manipulator
SPIM	Stowage Payload Integration Manager
SPIP	Station Program Implementation Plan
SPT	Summary Pricing Template
Sp-X	Space-X
SRP	Standard Repair Procedure
SRP	Safety Review Panel
SRR	System Requirements Review
SSA	Source Selection Authority
SSAV	Space Station Accounting and Verification
SSN	Social Security Number
SSODB	Space Station Operations Data Book
SSP	Document prefix for ISS documents
SSRMS	Space Station Remote Manipulator System
SSS	Stanchion Support Structure
SSUAS	Space Station utilization Advisory Subcommittee
SSV	Still Sequential Video
STaR	Shuttle Transition and Retirement
Stbd	Starboard
STDIN/STDOUT	Standard In/Standard Out
STP-H2	Space Test Program, Houston 2
STT	Spacelab Transfer Tunnel
STD	Standard
STTCP	Security/Technology Control Plan
STWG	Stowage
SVF	Software Verification Facility
SVS	Space Vision System
SWC	Side Wall Carrier
TA	Technical Approach
TAA	Technical Assistance Agreement
TBD	To Be Determined
TC	Compensation Template
TCM	Technical Coordination Meeting
TCP	Total Compensation Plan
TCTI	Time Compliance Technical Instruction
TDH	Texas Department of Health
TeSS	Temporary Sleep Station

CARGO MISSION CONTRACT

TGHR	Time-Critical Handling Requirements
TMP	Temporary Export
TPS	Task Preparation Sheets
TRIR	Total Recordable Injury Rate
TRST	Technical Resources Summary Template
TRST-CF	Technical Resources Summary Template – Completion Form
TRT	Technical Resources Team
TRT	Technical Resources Template
TX	Texas
U.S.	United States
UL	Under Limit
ULC	Unpressurized Logistics Carrier
USA	United Space Alliance
USC	United States Code
US-CERT	United States Computer Emergency Readiness Team
USDA	United States Department of Agriculture
USOS	United States On-orbit Segment
USPPI	U.S. Principal Party in Interest
UV	Ultra Violet
VC	Visibly Clean
VDC	Volts Direct Current
VIU	Video Interface Unit
VMDB	Vehicle Master Database
VOSB	Veteran Owned Small Business
VPP	Voluntary Protection Program
VSU	Video Switch Unit
VTR	Video Tape Recorder
WAD	Work Authorization Document
WBS	Work Breakdown Structure
WCCS	Wireless Crew Communication System
WCS	Waste Collection System
WD	Wage Determination
WIB	Wireless Video Interface Box
WLE	Wing Leading Edge
WOSB	Women Owned Small Business
WPPR	Work Plan Revision Request
WSTF	White Sands Test Facility
ZSR	Zero-g Stowage Rack

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ATTACHMENT J-4

DOL WAGE

DETERMINATION

CARGO MISSION CONTRACT

STANDARD FORM e98 January 1996 U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION	NOTICE OF INTENTION TO MAKE A SERVICE CONTRACT AND RESPONSE TO NOTICE <i>(See Instructions on Reverse)</i>	1. NOTICE NO. 71814 NASA																		
MAIL TO: <p style="text-align: center;">Administrator Wage and Hour Division U.S. Department of Labor Washington, DC 20210</p>		2. Estimated solicitation date <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">01</td> <td style="text-align: center;">15</td> <td style="text-align: center;">10</td> </tr> </table> 3. Estimated date bids or proposals to be opened or negotiations begun <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">04</td> <td style="text-align: center;">01</td> <td style="text-align: center;">10</td> </tr> </table> 4. Date contract performance to begin <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">01</td> <td style="text-align: center;">01</td> <td style="text-align: center;">11</td> </tr> </table>	Month	Day	Year	01	15	10	Month	Day	Year	04	01	10	Month	Day	Year	01	01	11
Month	Day	Year																		
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5. PLACE(S) OF PERFORMANCE HARRIS COUNTY, TX BREVARD COUNTY, FL	6. SERVICES TO BE PERFORMED <i>(describe)</i> International Space Station Cargo Mission Contract																			
7. INFORMATION ABOUT PERFORMANCE A. <input checked="" type="checkbox"/> Services now performed by a contractor B. <input type="checkbox"/> Services now performed by Federal employees C. <input type="checkbox"/> Services not presently being performed																				
8. IF BOX A IN ITEM 7 IS MARKED, COMPLETE ITEM 8 AS APPLICABLE																				
a. Name and address of incumbent contractor Lockheed Martin Integrated Systems, Inc. 595 Gemini Houston, TX 77058	United Space Alliance, LLC 1150 Gemini Houston, TX 77058	b. Number(s) of any wage determination(s) in incumbent's contract WD 2005-2516 WD 2005-2118 WD 2005-2047 WD 2005-2008 WD 2005-2113																		
c. Name(s) of union(s) if services are being performed under collective bargaining agreement(s). Important: Attach copies of current applicable collective bargaining agreements None	RESPONSE TO NOTICE <i>(by Department of Labor)</i> A. <input checked="" type="checkbox"/> The attached wage determination(s) listed below apply to procurement. WD 2005-2516 Rev 11 WD 2005-2118 Rev 12 WD 2005-2047 Rev 9 WD 2005-2008 Rev 13 WD 2005-2113 Rev 7																			
9. OFFICIAL SUBMITTING NOTICE																				
SIGNED: Original signed by	DATE 01/08/10	B. <input type="checkbox"/> As of this date, no wage determination applicable to the specified locality and																		

CARGO MISSION CONTRACT

		classes of employees is in effect.
TYPE OR PRINT NAME Janet G. Arkinson Contracting Officer	TELEPHONE NO. 281-244-5433	C. <input type="checkbox"/> From information supplied, the Service Contract Act does not apply (<i>see attached explanation</i>).
10. TYPE OR PRINT NAME AND TITLE OF PERSON TO WHOM RESPONSE IS TO BE SENT AND NAME AND ADDRESS OF DEPARTMENT OR AGENCY, BUREAU, DIVISION, ETC. <p style="text-align: center;">NASA Johnson Space Center Eric Schell, Mail Code BG 2101 NASA Parkway Houston, TX 77058</p>		D. <input type="checkbox"/> Notice returned for additional information (<i>see attached explanation</i>) Signed: _____ <p style="text-align: center;">(U.S. Department of Labor)</p> _____ <p style="text-align: center;">(Date)</p>
98-103		COMPUTER-GENERATED 1/96

CARGO MISSION CONTRACT

<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2516 Revision No.: 11 Date Of Revision: 07/22/2009</p>

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		14.89
01012 - Accounting Clerk II		16.71
01013 - Accounting Clerk III		18.78
01020 - Administrative Assistant		23.55
01040 - Court Reporter		21.79
01051 - Data Entry Operator I		12.09
01052 - Data Entry Operator II		14.32
01060 - Dispatcher, Motor Vehicle		15.96
01070 - Document Preparation Clerk		13.41
01090 - Duplicating Machine Operator		13.41
01111 - General Clerk I		10.80
01112 - General Clerk II		12.97
01113 - General Clerk III		14.88
01120 - Housing Referral Assistant		20.55
01141 - Messenger Courier		11.95
01191 - Order Clerk I		13.52
01192 - Order Clerk II		15.24
01261 - Personnel Assistant (Employment) I		15.13
01262 - Personnel Assistant (Employment) II		16.92

CARGO MISSION CONTRACT

01263 - Personnel Assistant (Employment) III	18.86
01270 - Production Control Clerk	19.10
01280 - Receptionist	12.02
01290 - Rental Clerk	14.75
01300 - Scheduler, Maintenance	15.92
01311 - Secretary I	15.92
01312 - Secretary II	17.90
01313 - Secretary III	20.55
01320 - Service Order Dispatcher	15.16
01410 - Supply Technician	23.55
01420 - Survey Worker	16.59
01531 - Travel Clerk I	13.63
01532 - Travel Clerk II	14.69
01533 - Travel Clerk III	15.71
01611 - Word Processor I	13.50
01612 - Word Processor II	15.59
01613 - Word Processor III	17.44
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	24.80
05010 - Automotive Electrician	22.66
05040 - Automotive Glass Installer	21.68
05070 - Automotive Worker	20.91
05110 - Mobile Equipment Servicer	19.27
05130 - Motor Equipment Metal Mechanic	24.53
05160 - Motor Equipment Metal Worker	20.91
05190 - Motor Vehicle Mechanic	24.53
05220 - Motor Vehicle Mechanic Helper	18.48
05250 - Motor Vehicle Upholstery Worker	19.84
05280 - Motor Vehicle Wrecker	20.91
05310 - Painter, Automotive	22.66
05340 - Radiator Repair Specialist	22.88
05370 - Tire Repairer	14.40
05400 - Transmission Repair Specialist	25.17
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.04
07041 - Cook I	9.52
07042 - Cook II	10.88
07070 - Dishwasher	8.11
07130 - Food Service Worker	9.12
07210 - Meat Cutter	12.53
07260 - Waiter/Waitress	7.97
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	16.65
09040 - Furniture Handler	11.74

CARGO MISSION CONTRACT

09080 - Furniture Refinisher	16.09
09090 - Furniture Refinisher Helper	13.74
09110 - Furniture Repairer, Minor	15.29
09130 - Upholsterer	16.65
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.90
11060 - Elevator Operator	8.17
11090 - Gardener	14.52
11122 - Housekeeping Aide	8.17
11150 - Janitor	8.17
11210 - Laborer, Grounds Maintenance	10.93
11240 - Maid or Houseman	7.73
11260 - Pruner	8.99
11270 - Tractor Operator	12.82
11330 - Trail Maintenance Worker	10.93
11360 - Window Cleaner	8.92
12000 - Health Occupations	
12010 - Ambulance Driver	14.48
12011 - Breath Alcohol Technician	15.64
12012 - Certified Occupational Therapist Assistant	21.54
12015 - Certified Physical Therapist Assistant	22.53
12020 - Dental Assistant	15.64
12025 - Dental Hygienist	32.49
12030 - EKG Technician	23.56
12035 - Electroneurodiagnostic Technologist	23.56
12040 - Emergency Medical Technician	14.48
12071 - Licensed Practical Nurse I	18.94
12072 - Licensed Practical Nurse II	21.19
12073 - Licensed Practical Nurse III	23.62
12100 - Medical Assistant	12.40
12130 - Medical Laboratory Technician	15.90
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	7.79
12222 - Nursing Assistant II	10.02
12223 - Nursing Assistant III	10.94
12224 - Nursing Assistant IV	12.40
12235 - Optical Dispenser	15.26
12236 - Optical Technician	13.90
12250 - Pharmacy Technician	17.44
12280 - Phlebotomist	13.30
12305 - Radiologic Technologist	24.27

CARGO MISSION CONTRACT

12311 - Registered Nurse I	29.05
12312 - Registered Nurse II	35.53
12313 - Registered Nurse II, Specialist	35.53
12314 - Registered Nurse III	42.98
12315 - Registered Nurse III, Anesthetist	42.98
12316 - Registered Nurse IV	51.52
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	18.07
13042 - Illustrator II	22.56
13043 - Illustrator III	27.38
13047 - Librarian	26.69
13050 - Library Aide/Clerk	10.26
13054 - Library Information Technology Systems Administrator	24.09
13058 - Library Technician	14.58
13061 - Media Specialist I	17.39
13062 - Media Specialist II	19.46
13063 - Media Specialist III	21.68
13071 - Photographer I	13.93
13072 - Photographer II	17.60
13073 - Photographer III	22.56
13074 - Photographer IV	26.40
13075 - Photographer V	30.06
13110 - Video Teleconference Technician	16.73
14000 - Information Technology Occupations	
14041 - Computer Operator I	16.41
14042 - Computer Operator II	18.35
14043 - Computer Operator III	20.46
14044 - Computer Operator IV	22.74
14045 - Computer Operator V	25.18
14071 - Computer Programmer I	(see 1) 25.36
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	16.41
14160 - Personal Computer Support Technician	22.74
15000 - Instructional Occupations	

CARGO MISSION CONTRACT

15010 - Aircrew Training Devices Instructor (Non-Rated)	32.64
15020 - Aircrew Training Devices Instructor (Rated)	39.49
15030 - Air Crew Training Devices Instructor (Pilot)	47.34
15050 - Computer Based Training Specialist / Instructor	31.10
15060 - Educational Technologist	29.02
15070 - Flight Instructor (Pilot)	47.34
15080 - Graphic Artist	25.42
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
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)	18.32
19040 - Tool And Die Maker	21.12
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	12.84
21030 - Material Coordinator	18.58
21040 - Material Expediter	18.58
21050 - Material Handling Laborer	12.26
21071 - Order Filler	11.47
21080 - Production Line Worker (Food Processing)	12.84
21110 - Shipping Packer	14.60
21130 - Shipping/Receiving Clerk	14.60
21140 - Store Worker I	10.67
21150 - Stock Clerk	15.13
21210 - Tools And Parts Attendant	13.58
21410 - Warehouse Specialist	12.84
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	28.07
23021 - Aircraft Mechanic I	26.73
23022 - Aircraft Mechanic II	28.07
23023 - Aircraft Mechanic III	29.47

CARGO MISSION CONTRACT

23040 - Aircraft Mechanic Helper	20.93
23050 - Aircraft, Painter	24.39
23060 - Aircraft Servicer	23.28
23080 - Aircraft Worker	24.53
23110 - Appliance Mechanic	17.26
23120 - Bicycle Repairer	13.91
23125 - Cable Splicer	25.34
23130 - Carpenter, Maintenance	18.58
23140 - Carpet Layer	17.83
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	15.97
23290 - Fire Alarm System Mechanic	19.95
23310 - Fire Extinguisher Repairer	15.46
23311 - Fuel Distribution System Mechanic	19.28
23312 - Fuel Distribution System Operator	16.33
23370 - General Maintenance Worker	18.08
23380 - Ground Support Equipment Mechanic	26.73
23381 - Ground Support Equipment Servicer	23.28
23382 - Ground Support Equipment Worker	24.53
23391 - Gunsmith I	15.46
23392 - Gunsmith II	18.08
23393 - Gunsmith III	20.27
23410 - Heating, Ventilation And Air-Conditioning Mechanic	21.04
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	21.95
23430 - Heavy Equipment Mechanic	19.45
23440 - Heavy Equipment Operator	19.26
23460 - Instrument Mechanic	23.52
23465 - Laboratory/Shelter Mechanic	19.29
23470 - Laborer	10.97
23510 - Locksmith	18.99
23530 - Machinery Maintenance Mechanic	22.76
23550 - Machinist, Maintenance	20.16
23580 - Maintenance Trades Helper	13.58
23591 - Metrology Technician I	23.52
23592 - Metrology Technician II	24.54
23593 - Metrology Technician III	25.58
23640 - Millwright	21.53
23710 - Office Appliance Repairer	18.99
23760 - Painter, Maintenance	18.99

CARGO MISSION CONTRACT

23790 - Pipefitter, Maintenance	19.44
23810 - Plumber, Maintenance	18.98
23820 - Pneudraulic Systems Mechanic	20.27
23850 - Rigger	19.47
23870 - Scale Mechanic	18.08
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	23.20
23960 - Welder, Combination, Maintenance	20.27
23965 - Well Driller	20.27
23970 - Woodcraft Worker	20.27
23980 - Woodworker	15.04
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	10.65
24580 - Child Care Center Clerk	13.27
24610 - Chore Aide	7.25
24620 - Family Readiness And Support Services Coordinator	12.57
24630 - Homemaker	16.84
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21.14
25040 - Sewage Plant Operator	18.70
25070 - Stationary Engineer	21.14
25190 - Ventilation Equipment Tender	14.33
25210 - Water Treatment Plant Operator	18.32
27000 - Protective Service Occupations	
27004 - Alarm Monitor	16.14
27007 - Baggage Inspector	11.15
27008 - Corrections Officer	18.04
27010 - Court Security Officer	19.25
27030 - Detection Dog Handler	17.90
27040 - Detention Officer	18.04
27070 - Firefighter	19.10
27101 - Guard I	11.15
27102 - Guard II	17.90
27131 - Police Officer I	23.52
27132 - Police Officer II	26.14
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

CARGO MISSION CONTRACT

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	19.36
29020 - Hatch Tender	19.36
29030 - Line Handler	19.36
29041 - Stevedore I	17.98
29042 - Stevedore II	20.65
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	39.61
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	27.31
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	30.07
30021 - Archeological Technician I	21.10
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	21.10
30062 - Drafter/CAD Operator II	24.71
30063 - Drafter/CAD Operator III	27.56
30064 - Drafter/CAD Operator IV	32.42
30081 - Engineering Technician I	18.25
30082 - Engineering Technician II	22.45
30083 - Engineering Technician III	25.11
30084 - Engineering Technician IV	31.09
30085 - Engineering Technician V	38.65
30086 - Engineering Technician VI	46.04
30090 - Environmental Technician	29.96
30210 - Laboratory Technician	23.56
30240 - Mathematical Technician	30.62
30361 - Paralegal/Legal Assistant I	20.47
30362 - Paralegal/Legal Assistant II	25.36
30363 - Paralegal/Legal Assistant III	31.02
30364 - Paralegal/Legal Assistant IV	37.52
30390 - Photo-Optics Technician	30.62
30461 - Technical Writer I	21.46
30462 - Technical Writer II	26.25
30463 - Technical Writer III	31.75
30491 - Unexploded Ordnance (UXO) Technician I	25.17
30492 - Unexploded Ordnance (UXO) Technician II	30.45

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30493 - Unexploded Ordnance (UXO) Technician III	36.50
30494 - Unexploded (UXO) Safety Escort	25.17
30495 - Unexploded (UXO) Sweep Personnel	25.17
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	11.25
31030 - Bus Driver	16.38
31043 - Driver Courier	12.75
31260 - Parking and Lot Attendant	8.34
31290 - Shuttle Bus Driver	13.89
31310 - Taxi Driver	11.54
31361 - Truckdriver, Light	13.89
31362 - Truckdriver, Medium	17.25
31363 - Truckdriver, Heavy	19.46
31364 - Truckdriver, Tractor-Trailer	19.46
99000 - Miscellaneous Occupations	
99030 - Cashier	9.10
99050 - Desk Clerk	10.65
99095 - Embalmer	21.55
99251 - Laboratory Animal Caretaker I	9.74
99252 - Laboratory Animal Caretaker II	10.71
99310 - Mortician	24.04
99410 - Pest Controller	14.36
99510 - Photofinishing Worker	11.47
99710 - Recycling Laborer	14.96
99711 - Recycling Specialist	18.24
99730 - Refuse Collector	13.34
99810 - Sales Clerk	11.51
99820 - School Crossing Guard	9.96
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

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH AND WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer

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contributions costing an average of \$3.35 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 PARENTHESSES 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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

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- (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 AND 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 regarding 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

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contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the Wage and Hour Division (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

CARGO MISSION CONTRACT

there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2118 Revision No.: 12 Date Of Revision: 10/07/2009</p>

State: Florida

Area: Florida Counties of Brevard, Indian River

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		12.70
01012 - Accounting Clerk II		14.60
01013 - Accounting Clerk III		18.43
01020 - Administrative Assistant		19.20
01040 - Court Reporter		16.31
01051 - Data Entry Operator I		11.69
01052 - Data Entry Operator II		13.31
01060 - Dispatcher, Motor Vehicle		16.31
01070 - Document Preparation Clerk		12.71
01090 - Duplicating Machine Operator		12.71
01111 - General Clerk I		12.38
01112 - General Clerk II		13.39
01113 - General Clerk III		14.93
01120 - Housing Referral Assistant		17.45
01141 - Messenger Courier		11.29
01191 - Order Clerk I		11.55
01192 - Order Clerk II		13.60
01261 - Personnel Assistant (Employment) I		13.60
01262 - Personnel Assistant (Employment) II		15.04
01263 - Personnel Assistant (Employment) III		17.12
01270 - Production Control Clerk		18.69

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01280 - Receptionist	10.84
01290 - Rental Clerk	12.83
01300 - Scheduler, Maintenance	14.20
01311 - Secretary I	14.20
01312 - Secretary II	15.65
01313 - Secretary III	17.45
01320 - Service Order Dispatcher	14.82
01410 - Supply Technician	19.20
01420 - Survey Worker	16.31
01531 - Travel Clerk I	11.33
01532 - Travel Clerk II	12.24
01533 - Travel Clerk III	13.11
01611 - Word Processor I	12.21
01612 - Word Processor II	13.16
01613 - Word Processor III	15.77
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	18.40
05010 - Automotive Electrician	17.29
05040 - Automotive Glass Installer	16.35
05070 - Automotive Worker	16.35
05110 - Mobile Equipment Servicer	14.76
05130 - Motor Equipment Metal Mechanic	17.98
05160 - Motor Equipment Metal Worker	16.35
05190 - Motor Vehicle Mechanic	17.98
05220 - Motor Vehicle Mechanic Helper	13.89
05250 - Motor Vehicle Upholstery Worker	15.79
05280 - Motor Vehicle Wrecker	16.35
05310 - Painter, Automotive	17.18
05340 - Radiator Repair Specialist	16.35
05370 - Tire Repairer	13.08
05400 - Transmission Repair Specialist	17.98
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.08
07041 - Cook I	11.12
07042 - Cook II	12.08
07070 - Dishwasher	7.86
07130 - Food Service Worker	10.11
07210 - Meat Cutter	14.25
07260 - Waiter/Waitress	9.09
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	17.08
09040 - Furniture Handler	12.39
09080 - Furniture Refinisher	15.76
09090 - Furniture Refinisher Helper	12.74

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09110 - Furniture Repairer, Minor	14.28
09130 - Upholsterer	15.76
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.32
11060 - Elevator Operator	9.32
11090 - Gardener	12.29
11122 - Housekeeping Aide	11.00
11150 - Janitor	11.00
11210 - Laborer, Grounds Maintenance	10.30
11240 - Maid or Houseman	8.63
11260 - Pruner	9.37
11270 - Tractor Operator	12.00
11330 - Trail Maintenance Worker	10.30
11360 - Window Cleaner	12.07
12000 - Health Occupations	
12010 - Ambulance Driver	15.46
12011 - Breath Alcohol Technician	17.75
12012 - Certified Occupational Therapist Assistant	25.81
12015 - Certified Physical Therapist Assistant	24.67
12020 - Dental Assistant	15.19
12025 - Dental Hygienist	26.19
12030 - EKG Technician	17.72
12035 - Electroneurodiagnostic Technologist	17.72
12040 - Emergency Medical Technician	15.46
12071 - Licensed Practical Nurse I	15.85
12072 - Licensed Practical Nurse II	17.75
12073 - Licensed Practical Nurse III	19.67
12100 - Medical Assistant	12.15
12130 - Medical Laboratory Technician	17.28
12160 - Medical Record Clerk	14.62
12190 - Medical Record Technician	15.17
12195 - Medical Transcriptionist	14.09
12210 - Nuclear Medicine Technologist	30.91
12221 - Nursing Assistant I	10.98
12222 - Nursing Assistant II	12.35
12223 - Nursing Assistant III	13.47
12224 - Nursing Assistant IV	15.12
12235 - Optical Dispenser	17.11
12236 - Optical Technician	13.58
12250 - Pharmacy Technician	11.70
12280 - Phlebotomist	15.12
12305 - Radiologic Technologist	23.31
12311 - Registered Nurse I	22.67
12312 - Registered Nurse II	27.73

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12313 - Registered Nurse II, Specialist	27.73
12314 - Registered Nurse III	33.55
12315 - Registered Nurse III, Anesthetist	33.55
12316 - Registered Nurse IV	40.22
12317 - Scheduler (Drug and Alcohol Testing)	21.89
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	17.52
13012 - Exhibits Specialist II	20.85
13013 - Exhibits Specialist III	23.37
13041 - Illustrator I	16.29
13042 - Illustrator II	19.38
13043 - Illustrator III	21.19
13047 - Librarian	22.41
13050 - Library Aide/Clerk	10.90
13054 - Library Information Technology Systems Administrator	20.85
13058 - Library Technician	15.05
13061 - Media Specialist I	15.05
13062 - Media Specialist II	16.55
13063 - Media Specialist III	17.31
13071 - Photographer I	14.25
13072 - Photographer II	16.29
13073 - Photographer III	20.18
13074 - Photographer IV	22.44
13075 - Photographer V	24.81
13110 - Video Teleconference Technician	14.31
14000 - Information Technology Occupations	
14041 - Computer Operator I	16.15
14042 - Computer Operator II	18.06
14043 - Computer Operator III	20.14
14044 - Computer Operator IV	22.37
14045 - Computer Operator V	24.79
14071 - Computer Programmer I	(see 1) 21.07
14072 - Computer Programmer II	(see 1) 25.76
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	16.15
14160 - Personal Computer Support Technician	22.37
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	28.74
15020 - Aircrew Training Devices Instructor (Rated)	32.25

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15030 - Air Crew Training Devices Instructor (Pilot)	35.00
15050 - Computer Based Training Specialist / Instructor	28.74
15060 - Educational Technologist	23.50
15070 - Flight Instructor (Pilot)	35.00
15080 - Graphic Artist	20.58
15090 - Technical Instructor	21.82
15095 - Technical Instructor/Course Developer	24.80
15110 - Test Proctor	17.90
15120 - Tutor	17.90
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	8.37
16030 - Counter Attendant	8.37
16040 - Dry Cleaner	10.44
16070 - Finisher, Flatwork, Machine	8.37
16090 - Presser, Hand	8.37
16110 - Presser, Machine, Drycleaning	8.37
16130 - Presser, Machine, Shirts	8.37
16160 - Presser, Machine, Wearing Apparel, Laundry	8.37
16190 - Sewing Machine Operator	11.12
16220 - Tailor	11.82
16250 - Washer, Machine	9.06
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	17.55
19040 - Tool And Die Maker	20.86
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	12.88
21030 - Material Coordinator	19.05
21040 - Material Expediter	19.05
21050 - Material Handling Laborer	10.51
21071 - Order Filler	11.67
21080 - Production Line Worker (Food Processing)	13.84
21110 - Shipping Packer	13.47
21130 - Shipping/Receiving Clerk	13.52
21140 - Store Worker I	11.67
21150 - Stock Clerk	15.52
21210 - Tools And Parts Attendant	14.66
21410 - Warehouse Specialist	14.58
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	23.29
23021 - Aircraft Mechanic I	22.18
23022 - Aircraft Mechanic II	23.29
23023 - Aircraft Mechanic III	24.46
23040 - Aircraft Mechanic Helper	15.59
23050 - Aircraft, Painter	19.14

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23060 - Aircraft Servicer	17.47
23080 - Aircraft Worker	18.35
23110 - Appliance Mechanic	18.09
23120 - Bicycle Repairer	13.08
23125 - Cable Splicer	24.84
23130 - Carpenter, Maintenance	17.98
23140 - Carpet Layer	16.71
23160 - Electrician, Maintenance	20.25
23181 - Electronics Technician Maintenance I	20.59
23182 - Electronics Technician Maintenance II	24.24
23183 - Electronics Technician Maintenance III	25.72
23260 - Fabric Worker	15.92
23290 - Fire Alarm System Mechanic	17.44
23310 - Fire Extinguisher Repairer	14.79
23311 - Fuel Distribution System Mechanic	19.18
23312 - Fuel Distribution System Operator	16.75
23370 - General Maintenance Worker	17.61
23380 - Ground Support Equipment Mechanic	22.18
23381 - Ground Support Equipment Servicer	17.47
23382 - Ground Support Equipment Worker	18.35
23391 - Gunsmith I	17.56
23392 - Gunsmith II	20.20
23393 - Gunsmith III	22.75
23410 - Heating, Ventilation And Air-Conditioning Mechanic	18.49
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	19.55
23430 - Heavy Equipment Mechanic	18.85
23440 - Heavy Equipment Operator	16.89
23460 - Instrument Mechanic	19.20
23465 - Laboratory/Shelter Mechanic	20.21
23470 - Laborer	11.04
23510 - Locksmith	16.96
23530 - Machinery Maintenance Mechanic	21.72
23550 - Machinist, Maintenance	19.20
23580 - Maintenance Trades Helper	13.71
23591 - Metrology Technician I	19.20
23592 - Metrology Technician II	20.31
23593 - Metrology Technician III	21.39
23640 - Millwright	20.21
23710 - Office Appliance Repairer	18.13
23760 - Painter, Maintenance	17.34
23790 - Pipefitter, Maintenance	18.47
23810 - Plumber, Maintenance	17.66

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23820 - Pneudraulic Systems Mechanic	19.20
23850 - Rigger	19.20
23870 - Scale Mechanic	17.01
23890 - Sheet-Metal Worker, Maintenance	19.20
23910 - Small Engine Mechanic	16.50
23931 - Telecommunications Mechanic I	24.15
23932 - Telecommunications Mechanic II	25.23
23950 - Telephone Lineman	19.95
23960 - Welder, Combination, Maintenance	18.14
23965 - Well Driller	19.20
23970 - Woodcraft Worker	19.20
23980 - Woodworker	13.88
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	9.32
24580 - Child Care Center Clerk	13.34
24610 - Chore Aide	10.53
24620 - Family Readiness And Support Services Coordinator	12.05
24630 - Homemaker	16.32
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	19.20
25040 - Sewage Plant Operator	18.17
25070 - Stationary Engineer	19.20
25190 - Ventilation Equipment Tender	13.71
25210 - Water Treatment Plant Operator	18.17
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14.34
27007 - Baggage Inspector	11.76
27008 - Corrections Officer	18.77
27010 - Court Security Officer	18.77
27030 - Detection Dog Handler	17.09
27040 - Detention Officer	18.77
27070 - Firefighter	19.22
27101 - Guard I	11.76
27102 - Guard II	17.09
27131 - Police Officer I	20.03
27132 - Police Officer II	22.25
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	11.93
28042 - Carnival Equipment Repairer	12.21
28043 - Carnival Equipment Worker	8.22
28210 - Gate Attendant/Gate Tender	13.09
28310 - Lifeguard	11.66
28350 - Park Attendant (Aide)	14.64

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28510 - Recreation Aide/Health Facility Attendant	10.69
28515 - Recreation Specialist	18.14
28630 - Sports Official	11.66
28690 - Swimming Pool Operator	14.79
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	17.91
29020 - Hatch Tender	17.91
29030 - Line Handler	17.91
29041 - Stevedore I	17.02
29042 - Stevedore II	19.05
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	35.15
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	24.24
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	26.69
30021 - Archeological Technician I	14.56
30022 - Archeological Technician II	16.54
30023 - Archeological Technician III	20.23
30030 - Cartographic Technician	19.71
30040 - Civil Engineering Technician	20.89
30061 - Drafter/CAD Operator I	12.87
30062 - Drafter/CAD Operator II	15.05
30063 - Drafter/CAD Operator III	18.21
30064 - Drafter/CAD Operator IV	20.11
30081 - Engineering Technician I	14.20
30082 - Engineering Technician II	17.04
30083 - Engineering Technician III	19.06
30084 - Engineering Technician IV	23.61
30085 - Engineering Technician V	28.89
30086 - Engineering Technician VI	32.88
30090 - Environmental Technician	18.78
30210 - Laboratory Technician	22.77
30240 - Mathematical Technician	19.22
30361 - Paralegal/Legal Assistant I	13.81
30362 - Paralegal/Legal Assistant II	18.68
30363 - Paralegal/Legal Assistant III	22.84
30364 - Paralegal/Legal Assistant IV	27.66
30390 - Photo-Optics Technician	19.71
30461 - Technical Writer I	18.88
30462 - Technical Writer II	23.10
30463 - Technical Writer III	27.95
30491 - Unexploded Ordnance (UXO) Technician I	22.34
30492 - Unexploded Ordnance (UXO) Technician II	27.03
30493 - Unexploded Ordnance (UXO) Technician III	32.40
30494 - Unexploded (UXO) Safety Escort	22.34

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30495 - Unexploded (UXO) Sweep Personnel	22.34
30620 - Weather Observer, Combined Upper Air Or Surface Programs (see 2)	18.21
30621 - Weather Observer, Senior (see 2)	19.59
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	11.22
31030 - Bus Driver	11.65
31043 - Driver Courier	15.56
31260 - Parking and Lot Attendant	11.35
31290 - Shuttle Bus Driver	12.02
31310 - Taxi Driver	13.42
31361 - Truckdriver, Light	14.32
31362 - Truckdriver, Medium	15.11
31363 - Truckdriver, Heavy	15.18
31364 - Truckdriver, Tractor-Trailer	15.18
99000 - Miscellaneous Occupations	
99030 - Cashier	8.84
99050 - Desk Clerk	10.04
99095 - Embalmer	22.59
99251 - Laboratory Animal Caretaker I	10.25
99252 - Laboratory Animal Caretaker II	11.13
99310 - Mortician	22.59
99410 - Pest Controller	13.67
99510 - Photofinishing Worker	10.68
99710 - Recycling Laborer	12.76
99711 - Recycling Specialist	15.09
99730 - Refuse Collector	11.61
99810 - Sales Clerk	11.66
99820 - School Crossing Guard	10.48
99830 - Survey Party Chief	15.53
99831 - Surveying Aide	10.29
99832 - Surveying Technician	14.12
99840 - Vending Machine Attendant	13.23
99841 - Vending Machine Repairer	15.46
99842 - Vending Machine Repairer Helper	13.23

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH AND 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 \$3.35 per hour computed on the basis of all hours worked by service employees employed on the contract.

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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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY AND 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 regarding 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

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where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the Wage and Hour Division (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.

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- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2047 Revision No.: 9 Date Of Revision: 05/26/2009</p>

State: California

Area: California Counties of Los Angeles, Orange
OCCUPATION NOTES:

Heating, Air Conditioning and Refrigeration: Wage rates and fringe benefits can be found on Wage Determinations 1986-0879.

Laundry: Wage rates and fringe benefits can be found on Wage Determination 1977-1297.

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		14.59
01012 - Accounting Clerk II		16.38
01013 - Accounting Clerk III		18.61
01020 - Administrative Assistant		26.82
01040 - Court Reporter		19.38
01051 - Data Entry Operator I		12.05
01052 - Data Entry Operator II		13.15
01060 - Dispatcher, Motor Vehicle		22.41
01070 - Document Preparation Clerk		13.66
01090 - Duplicating Machine Operator		13.66
01111 - General Clerk I		10.69
01112 - General Clerk II		14.92
01113 - General Clerk III		16.67
01120 - Housing Referral Assistant		21.90
01141 - Messenger Courier		10.62

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01191 - Order Clerk I	16.98
01192 - Order Clerk II	18.53
01261 - Personnel Assistant (Employment) I	17.26
01262 - Personnel Assistant (Employment) II	19.31
01263 - Personnel Assistant (Employment) III	22.26
01270 - Production Control Clerk	23.51
01280 - Receptionist	14.51
01290 - Rental Clerk	15.10
01300 - Scheduler, Maintenance	16.84
01311 - Secretary I	16.84
01312 - Secretary II	19.17
01313 - Secretary III	21.90
01320 - Service Order Dispatcher	19.54
01410 - Supply Technician	26.82
01420 - Survey Worker	19.38
01531 - Travel Clerk I	14.25
01532 - Travel Clerk II	15.43
01533 - Travel Clerk III	16.57
01611 - Word Processor I	15.03
01612 - Word Processor II	16.87
01613 - Word Processor III	18.76
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	22.94
05010 - Automotive Electrician	21.60
05040 - Automotive Glass Installer	20.29
05070 - Automotive Worker	20.29
05110 - Mobile Equipment Servicer	18.66
05130 - Motor Equipment Metal Mechanic	2.94
05160 - Motor Equipment Metal Worker	20.29
05190 - Motor Vehicle Mechanic	22.94
05220 - Motor Vehicle Mechanic Helper	17.90
05250 - Motor Vehicle Upholstery Worker	19.86
05280 - Motor Vehicle Wrecker	20.29
05310 - Painter, Automotive	21.60
05340 - Radiator Repair Specialist	20.29
05370 - Tire Repairer	15.47
05400 - Transmission Repair Specialist	22.94
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.21
07041 - Cook I	12.91
07042 - Cook II	14.31
07070 - Dishwasher	9.89
07130 - Food Service Worker	10.85
07210 - Meat Cutter	15.92

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07260 - Waiter/Waitress	9.85
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.59
09040 - Furniture Handler	12.42
09080 - Furniture Refinisher	18.59
09090 - Furniture Refinisher Helper	14.82
09110 - Furniture Repairer, Minor	17.04
09130 - Upholsterer	18.59
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	11.19
11060 - Elevator Operator	11.19
11090 - Gardener	17.46
11122 - Housekeeping Aide	11.44
11150 - Janitor	13.27
11210 - Laborer, Grounds Maintenance	13.09
11240 - Maid or Houseman	9.36
11260 - Pruner	13.27
11270 - Tractor Operator	15.57
11330 - Trail Maintenance Worker	13.09
11360 - Window Cleaner	15.03
12000 - Health Occupations	
12010 - Ambulance Driver	17.82
12011 - Breath Alcohol Technician	17.82
12012 - Certified Occupational Therapist Assistant	26.03
12015 - Certified Physical Therapist Assistant	25.97
12020 - Dental Assistant	16.41
12025 - Dental Hygienist	38.30
12030 - EKG Technician	26.48
12035 - Electroneurodiagnostic Technologist	26.48
12040 - Emergency Medical Technician	17.82
12071 - Licensed Practical Nurse I	16.75
12072 - Licensed Practical Nurse II	18.77
12073 - Licensed Practical Nurse III	22.42
12100 - Medical Assistant	14.82
12130 - Medical Laboratory Technician	19.73
12160 - Medical Record Clerk	15.93
12190 - Medical Record Technician	17.82
12195 - Medical Transcriptionist	17.59
12210 - Nuclear Medicine Technologist	34.87
12221 - Nursing Assistant I	9.63
12222 - Nursing Assistant II	10.82
12223 - Nursing Assistant III	11.81
12224 - Nursing Assistant IV	13.26
12235 - Optical Dispenser	16.65

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12236 - Optical Technician	15.71
12250 - Pharmacy Technician	17.34
12280 - Phlebotomist	13.26
12305 - Radiologic Technologist	24.54
12311 - Registered Nurse I	30.80
12312 - Registered Nurse II	37.68
12313 - Registered Nurse II, Specialist	37.68
12314 - Registered Nurse III	45.63
12315 - Registered Nurse III, Anesthetist	45.63
12316 - Registered Nurse IV	54.69
12317 - Scheduler (Drug and Alcohol Testing)	22.81
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	24.83
13012 - Exhibits Specialist II	30.76
13013 - Exhibits Specialist III	37.63
13041 - Illustrator I	25.31
13042 - Illustrator II	31.37
13043 - Illustrator III	38.35
13047 - Librarian	30.36
13050 - Library Aide/Clerk	16.49
13054 - Library Information Technology Systems Administrator	26.57
13058 - Library Technician	21.38
13061 - Media Specialist I	18.51
13062 - Media Specialist II	20.69
13063 - Media Specialist III	23.07
13071 - Photographer I	17.95
13072 - Photographer II	20.08
13073 - Photographer III	26.61
13074 - Photographer IV	33.56
13075 - Photographer V	40.61
13110 - Video Teleconference Technician	18.25
14000 - Information Technology Occupations	
14041 - Computer Operator I	17.32
14042 - Computer Operator II	19.38
14043 - Computer Operator III	22.89
14044 - Computer Operator IV	25.73
14045 - Computer Operator V	25.80
14071 - Computer Programmer I	(see 1) 24.93
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)

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14103 - Computer Systems Analyst III	(see 1)	
14150 - Peripheral Equipment Operator		17.32
14160 - Personal Computer Support Technician		25.73
15000 - Instructional Occupations		
15010 - Aircrew Training Devices Instructor (Non-Rated)		34.08
15020 - Aircrew Training Devices Instructor (Rated)		41.23
15030 - Air Crew Training Devices Instructor (Pilot)		49.43
15050 - Computer Based Training Specialist / Instructor		34.08
15060 - Educational Technologist		32.81
15070 - Flight Instructor (Pilot)		49.43
15080 - Graphic Artist		25.66
15090 - Technical Instructor		23.72
15095 - Technical Instructor/Course Developer		29.02
15110 - Test Proctor		19.15
15120 - Tutor		19.15
19000 - Machine Tool Operation And Repair Occupations		
19010 - Machine-Tool Operator (Tool Room)		18.52
19040 - Tool And Die Maker		23.95
21000 - Materials Handling And Packing Occupations		
21020 - Forklift Operator		14.46
21030 - Material Coordinator		23.51
21040 - Material Expediter		23.51
21050 - Material Handling Laborer		13.02
21071 - Order Filler		13.31
21080 - Production Line Worker (Food Processing)		14.46
21110 - Shipping Packer		15.08
21130 - Shipping/Receiving Clerk		15.08
21140 - Store Worker I		11.30
21150 - Stock Clerk		16.13
21210 - Tools And Parts Attendant		14.46
21410 - Warehouse Specialist		14.46
23000 - Mechanics And Maintenance And Repair Occupations		
23010 - Aerospace Structural Welder		30.78
23021 - Aircraft Mechanic I		29.10
23022 - Aircraft Mechanic II		30.78
23023 - Aircraft Mechanic III		31.94
23040 - Aircraft Mechanic Helper		20.38
23050 - Aircraft, Painter		24.41
23060 - Aircraft Servicer		23.55
23080 - Aircraft Worker		24.58
23110 - Appliance Mechanic		19.52
23120 - Bicycle Repairer		15.47
23125 - Cable Splicer		29.85
23130 - Carpenter, Maintenance		27.29

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23140 - Carpet Layer	19.20
23160 - Electrician, Maintenance	30.18
23181 - Electronics Technician Maintenance I	23.38
23182 - Electronics Technician Maintenance II	24.90
23183 - Electronics Technician Maintenance III	26.53
23260 - Fabric Worker	23.38
23290 - Fire Alarm System Mechanic	20.30
23310 - Fire Extinguisher Repairer	18.25
23311 - Fuel Distribution System Mechanic	25.48
23312 - Fuel Distribution System Operator	19.48
23370 - General Maintenance Worker	23.26
23380 - Ground Support Equipment Mechanic	29.10
23381 - Ground Support Equipment Servicer	23.55
23382 - Ground Support Equipment Worker	24.58
23391 - Gunsmith I	18.25
23392 - Gunsmith II	21.11
23393 - Gunsmith III	23.87
23430 - Heavy Equipment Mechanic	26.97
23440 - Heavy Equipment Operator	31.04
23460 - Instrument Mechanic	25.70
23465 - Laboratory/Shelter Mechanic	22.49
23470 - Laborer	12.49
23510 - Locksmith	18.81
23530 - Machinery Maintenance Mechanic	24.65
23550 - Machinist, Maintenance	25.41
23580 - Maintenance Trades Helper	14.82
23591 - Metrology Technician I	25.70
23592 - Metrology Technician II	27.13
23593 - Metrology Technician III	29.73
23640 - Millwright	25.45
23710 - Office Appliance Repairer	20.86
23760 - Painter, Maintenance	21.05
23790 - Pipefitter, Maintenance	23.40
23810 - Plumber, Maintenance	22.04
23820 - Pneudraulic Systems Mechanic	23.87
23850 - Rigger	26.81
23870 - Scale Mechanic	21.11
23890 - Sheet-Metal Worker, Maintenance	22.13
23910 - Small Engine Mechanic	18.70
23931 - Telecommunications Mechanic I	24.92
23932 - Telecommunications Mechanic II	26.39
23950 - Telephone Lineman	24.18
23960 - Welder, Combination, Maintenance	19.75
23965 - Well Driller	23.18

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23970 - Woodcraft Worker	21.73
23980 - Woodworker	16.81
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	13.05
24580 - Child Care Center Clerk	16.03
24610 - Chore Aide	10.57
24620 - Family Readiness And Support Services Coordinator	15.39
24630 - Homemaker	19.21
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	26.22
25040 - Sewage Plant Operator	26.21
25070 - Stationary Engineer	26.22
25190 - Ventilation Equipment Tender	18.34
25210 - Water Treatment Plant Operator	26.21
27000 - Protective Service Occupations	
27004 - Alarm Monitor	23.77
27007 - Baggage Inspector	12.80
27008 - Corrections Officer	29.13
27010 - Court Security Officer	30.28
27030 - Detection Dog Handler	23.77
27040 - Detention Officer	29.13
27070 - Firefighter	29.97
27101 - Guard I	12.80
27102 - Guard II	23.77
27131 - Police Officer I	35.71
27132 - Police Officer II	39.68
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	12.76
28042 - Carnival Equipment Repairer	13.74
28043 - Carnival Equipment Worker	9.67
28210 - Gate Attendant/Gate Tender	14.09
28310 - Lifeguard	13.26
28350 - Park Attendant (Aide)	15.76
28510 - Recreation Aide/Health Facility Attendant	11.11
28515 - Recreation Specialist	18.75
28630 - Sports Official	12.55
28690 - Swimming Pool Operator	16.97
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	21.53
29020 - Hatch Tender	21.53
29030 - Line Handler	21.53
29041 - Stevedore I	20.46
29042 - Stevedore II	22.93

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30000 - Technical Occupations

30010 - Air Traffic Control Specialist, Center (HFO)	(see 2)	39.06
30011 - Air Traffic Control Specialist, Station (HFO)	(see 2)	27.98
30012 - Air Traffic Control Specialist, Terminal (HFO)	(see 2)	29.66
30021 - Archeological Technician I		20.47
30022 - Archeological Technician II		22.01
30023 - Archeological Technician III		31.33
30030 - Cartographic Technician		31.33
30040 - Civil Engineering Technician		28.07
30061 - Drafter/CAD Operator I		22.60
30062 - Drafter/CAD Operator II		25.28
30063 - Drafter/CAD Operator III		28.18
30064 - Drafter/CAD Operator IV		34.68
30081 - Engineering Technician I		18.14
30082 - Engineering Technician II		20.37
30083 - Engineering Technician III		22.78
30084 - Engineering Technician IV		28.23
30085 - Engineering Technician V		34.88
30086 - Engineering Technician VI		41.77
30090 - Environmental Technician		25.20
30210 - Laboratory Technician		21.03
30240 - Mathematical Technician		30.84
30361 - Paralegal/Legal Assistant I		21.17
30362 - Paralegal/Legal Assistant II		26.22
30363 - Paralegal/Legal Assistant III		32.07
30364 - Paralegal/Legal Assistant IV		38.81
30390 - Photo-Optics Technician		30.84
30461 - Technical Writer I		23.03
30462 - Technical Writer II		28.18
30463 - Technical Writer III		34.09
30491 - Unexploded Ordnance (UXO) Technician I		24.82
30492 - Unexploded Ordnance (UXO) Technician II		30.03
30493 - Unexploded Ordnance (UXO) Technician III		36.00
30494 - Unexploded (UXO) Safety Escort		24.82
30495 - Unexploded (UXO) Sweep Personnel		24.82
30620 - Weather Observer, Combined Upper Air Or Surface Programs	(see 2)	27.65
30621 - Weather Observer, Senior	(see 2)	30.72

31000 - Transportation/Mobile Equipment Operation Occupations

31020 - Bus Aide		13.63
31030 - Bus Driver		19.62
31043 - Driver Courier		12.90
31260 - Parking and Lot Attendant		8.83
31290 - Shuttle Bus Driver		14.07

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31310 - Taxi Driver	12.03
31361 - Truckdriver, Light	14.07
31362 - Truckdriver, Medium	20.63
31363 - Truckdriver, Heavy	21.78
31364 - Truckdriver, Tractor-Trailer	21.78
99000 - Miscellaneous Occupations	
99030 - Cashier	12.13
99050 - Desk Clerk	12.65
99095 - Embalmer	21.08
99251 - Laboratory Animal Caretaker I	10.66
99252 - Laboratory Animal Caretaker II	11.63
99310 - Mortician	34.35
99410 - Pest Controller	15.17
99510 - Photofinishing Worker	14.87
99710 - Recycling Laborer	19.12
99711 - Recycling Specialist	22.43
99730 - Refuse Collector	17.05
99810 - Sales Clerk	15.57
99820 - School Crossing Guard	9.51
99830 - Survey Party Chief	34.71
99831 - Surveying Aide	19.43
99832 - Surveying Technician	25.56
99840 - Vending Machine Attendant	12.77
99841 - Vending Machine Repairer	14.67
99842 - Vending Machine Repairer Helper	12.77

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$3.35 per hour or \$134.00 per week or \$580.66 per month.

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)

CARGO MISSION CONTRACT

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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as

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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 regarding 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, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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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.

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6) The contractor informs the affected employees.

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p> <p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p> <p>Wage Determination No.: 2005-2008 Revision No.: 13 Date Of Revision: 10/16/2009</p>
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State: Alabama, Tennessee

Area: Alabama Counties of Colbert, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, Winston
Tennessee Counties of Giles, Lawrence, Lincoln, Moore, Wayne

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.47
01012 - Accounting Clerk II		14.65
01013 - Accounting Clerk III		16.77
01020 - Administrative Assistant		21.27
01040 - Court Reporter		17.16
01051 - Data Entry Operator I		11.95
01052 - Data Entry Operator II		13.89
01060 - Dispatcher, Motor Vehicle		16.31
01070 - Document Preparation Clerk		12.47
01090 - Duplicating Machine Operator		12.47
01111 - General Clerk I		10.80
01112 - General Clerk II		11.78
01113 - General Clerk III		13.86
01120 - Housing Referral Assistant		19.14
01141 - Messenger Courier		9.49
01191 - Order Clerk I		11.51
01192 - Order Clerk II		15.27
01261 - Personnel Assistant (Employment) I		13.93
01262 - Personnel Assistant (Employment) II		15.59

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01263 - Personnel Assistant (Employment) III	17.38
01270 - Production Control Clerk	19.18
01280 - Receptionist	11.02
01290 - Rental Clerk	11.79
01300 - Scheduler, Maintenance	15.32
01311 - Secretary I	15.32
01312 - Secretary II	17.16
01313 - Secretary III	19.14
01320 - Service Order Dispatcher	13.83
01410 - Supply Technician	21.27
01420 - Survey Worker	16.81
01531 - Travel Clerk I	10.64
01532 - Travel Clerk II	11.26
01533 - Travel Clerk III	12.01
01611 - Word Processor I	13.12
01612 - Word Processor II	14.73
01613 - Word Processor III	16.48
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	17.50
05010 - Automotive Electrician	17.94
05040 - Automotive Glass Installer	17.10
05070 - Automotive Worker	17.10
05110 - Mobile Equipment Servicer	15.50
05130 - Motor Equipment Metal Mechanic	18.77
05160 - Motor Equipment Metal Worker	17.10
05190 - Motor Vehicle Mechanic	17.14
05220 - Motor Vehicle Mechanic Helper	13.43
05250 - Motor Vehicle Upholstery Worker	16.32
05280 - Motor Vehicle Wrecker	17.10
05310 - Painter, Automotive	16.39
05340 - Radiator Repair Specialist	17.10
05370 - Tire Repairer	12.75
05400 - Transmission Repair Specialist	18.77
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.84
07041 - Cook I	9.14
07042 - Cook II	10.27
07070 - Dishwasher	7.57
07130 - Food Service Worker	8.09
07210 - Meat Cutter	14.21
07260 - Waiter/Waitress	7.50
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	17.56
09040 - Furniture Handler	13.94

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09080 - Furniture Refinisher	17.56
09090 - Furniture Refinisher Helper	14.41
09110 - Furniture Repairer, Minor	15.98
09130 - Upholsterer	17.56
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.80
11060 - Elevator Operator	9.44
11090 - Gardener	12.11
11122 - Housekeeping Aide	9.44
11150 - Janitor	9.44
11210 - Laborer, Grounds Maintenance	10.00
11240 - Maid or Houseman	7.88
11260 - Pruner	9.28
11270 - Tractor Operator	12.08
11330 - Trail Maintenance Worker	10.00
11360 - Window Cleaner	9.97
12000 - Health Occupations	
12010 - Ambulance Driver	14.41
12011 - Breath Alcohol Technician	14.71
12012 - Certified Occupational Therapist Assistant	21.24
12015 - Certified Physical Therapist Assistant	21.24
12020 - Dental Assistant	15.30
12025 - Dental Hygienist	22.48
12030 - EKG Technician	23.45
12035 - Electroneurodiagnostic Technologist	23.45
12040 - Emergency Medical Technician	14.41
12071 - Licensed Practical Nurse I	14.07
12072 - Licensed Practical Nurse II	15.81
12073 - Licensed Practical Nurse III	17.71
12100 - Medical Assistant	11.87
12130 - Medical Laboratory Technician	14.07
12160 - Medical Record Clerk	12.41
12190 - Medical Record Technician	14.96
12195 - Medical Transcriptionist	13.03
12210 - Nuclear Medicine Technologist	30.65
12221 - Nursing Assistant I	9.43
12222 - Nursing Assistant II	10.61
12223 - Nursing Assistant III	11.57
12224 - Nursing Assistant IV	12.99
12235 - Optical Dispenser	15.05
12236 - Optical Technician	11.42
12250 - Pharmacy Technician	13.36
12280 - Phlebotomist	12.99
12305 - Radiologic Technologist	23.95

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12311 - Registered Nurse I	22.94
12312 - Registered Nurse II	28.08
12313 - Registered Nurse II, Specialist	28.08
12314 - Registered Nurse III	33.97
12315 - Registered Nurse III, Anesthetist	33.97
12316 - Registered Nurse IV	40.70
12317 - Scheduler (Drug and Alcohol Testing)	19.18
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19.07
13012 - Exhibits Specialist II	23.50
13013 - Exhibits Specialist III	28.73
13041 - Illustrator I	19.07
13042 - Illustrator II	23.50
13043 - Illustrator III	28.73
13047 - Librarian	26.02
13050 - Library Aide/Clerk	14.49
13054 - Library Information Technology Systems Administrator	23.50
13058 - Library Technician	16.14
13061 - Media Specialist I	16.95
13062 - Media Specialist II	18.97
13063 - Media Specialist III	21.15
13071 - Photographer I	14.72
13072 - Photographer II	17.00
13073 - Photographer III	20.36
13074 - Photographer IV	24.89
13075 - Photographer V	30.21
13110 - Video Teleconference Technician	16.95
14000 - Information Technology Occupations	
14041 - Computer Operator I	14.73
14042 - Computer Operator II	19.13
14043 - Computer Operator III	20.49
14044 - Computer Operator IV	26.16
14045 - Computer Operator V	27.62
14071 - Computer Programmer I	(see 1) 25.00
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	14.73
14160 - Personal Computer Support Technician	26.16
15000 - Instructional Occupations	

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15010 - Aircrew Training Devices Instructor (Non-Rated)	29.35
15020 - Aircrew Training Devices Instructor (Rated)	35.52
15030 - Air Crew Training Devices Instructor (Pilot)	36.76
15050 - Computer Based Training Specialist / Instructor	30.38
15060 - Educational Technologist	30.12
15070 - Flight Instructor (Pilot)	36.76
15080 - Graphic Artist	21.00
15090 - Technical Instructor	18.91
15095 - Technical Instructor/Course Developer	23.11
15110 - Test Proctor	17.16
15120 - Tutor	17.16
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	7.98
16030 - Counter Attendant	7.98
16040 - Dry Cleaner	10.03
16070 - Finisher, Flatwork, Machine	7.98
16090 - Presser, Hand	7.98
16110 - Presser, Machine, Drycleaning	7.98
16130 - Presser, Machine, Shirts	7.98
16160 - Presser, Machine, Wearing Apparel, Laundry	7.98
16190 - Sewing Machine Operator	10.60
16220 - Tailor	11.18
16250 - Washer, Machine	8.65
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	22.22
19040 - Tool And Die Maker	27.11
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	14.82
21030 - Material Coordinator	19.18
21040 - Material Expediter	19.18
21050 - Material Handling Laborer	10.29
21071 - Order Filler	10.87
21080 - Production Line Worker (Food Processing)	14.82
21110 - Shipping Packer	12.98
21130 - Shipping/Receiving Clerk	12.98
21140 - Store Worker I	11.36
21150 - Stock Clerk	15.41
21210 - Tools And Parts Attendant	14.82
21410 - Warehouse Specialist	14.82
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	20.61
23021 - Aircraft Mechanic I	22.24
23022 - Aircraft Mechanic II	23.35
23023 - Aircraft Mechanic III	24.52

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23040 - Aircraft Mechanic Helper	17.44
23050 - Aircraft, Painter	19.32
23060 - Aircraft Servicer	19.34
23080 - Aircraft Worker	20.27
23110 - Appliance Mechanic	18.04
23120 - Bicycle Repairer	14.66
23125 - Cable Splicer	19.76
23130 - Carpenter, Maintenance	17.56
23140 - Carpet Layer	17.29
23160 - Electrician, Maintenance	23.21
23181 - Electronics Technician Maintenance I	18.65
23182 - Electronics Technician Maintenance II	25.55
23183 - Electronics Technician Maintenance III	26.62
23260 - Fabric Worker	16.54
23290 - Fire Alarm System Mechanic	18.79
23310 - Fire Extinguisher Repairer	15.72
23311 - Fuel Distribution System Mechanic	18.79
23312 - Fuel Distribution System Operator	16.80
23370 - General Maintenance Worker	16.43
23380 - Ground Support Equipment Mechanic	22.24
23381 - Ground Support Equipment Servicer	19.34
23382 - Ground Support Equipment Worker	20.27
23391 - Gunsmith I	15.12
23392 - Gunsmith II	16.67
23393 - Gunsmith III	18.38
23410 - Heating, Ventilation And Air-Conditioning Mechanic	18.38
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	19.30
23430 - Heavy Equipment Mechanic	20.22
23440 - Heavy Equipment Operator	17.87
23460 - Instrument Mechanic	22.82
23465 - Laboratory/Shelter Mechanic	17.58
23470 - Laborer	11.36
23510 - Locksmith	18.04
23530 - Machinery Maintenance Mechanic	23.32
23550 - Machinist, Maintenance	18.59
23580 - Maintenance Trades Helper	14.41
23591 - Metrology Technician I	22.82
23592 - Metrology Technician II	23.80
23593 - Metrology Technician III	24.74
23640 - Millwright	18.79
23710 - Office Appliance Repairer	21.83
23760 - Painter, Maintenance	17.56

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23790 - Pipefitter, Maintenance	18.90
23810 - Plumber, Maintenance	18.06
23820 - Pneudraulic Systems Mechanic	18.79
23850 - Rigger	18.79
23870 - Scale Mechanic	17.29
23890 - Sheet-Metal Worker, Maintenance	18.38
23910 - Small Engine Mechanic	16.75
23931 - Telecommunications Mechanic I	18.89
23932 - Telecommunications Mechanic II	20.21
23950 - Telephone Lineman	19.60
23960 - Welder, Combination, Maintenance	18.38
23965 - Well Driller	18.79
23970 - Woodcraft Worker	18.79
23980 - Woodworker	16.43
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	8.56
24580 - Child Care Center Clerk	10.68
24610 - Chore Aide	9.26
24620 - Family Readiness And Support Services Coordinator	12.61
24630 - Homemaker	13.55
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	18.86
25040 - Sewage Plant Operator	18.07
25070 - Stationary Engineer	18.86
25190 - Ventilation Equipment Tender	14.85
25210 - Water Treatment Plant Operator	18.07
27000 - Protective Service Occupations	
27004 - Alarm Monitor	12.57
27007 - Baggage Inspector	10.85
27008 - Corrections Officer	15.28
27010 - Court Security Officer	16.82
27030 - Detection Dog Handler	13.55
27040 - Detention Officer	15.28
27070 - Firefighter	16.82
27101 - Guard I	10.85
27102 - Guard II	13.55
27131 - Police Officer I	18.35
27132 - Police Officer II	20.41
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	9.52
28042 - Carnival Equipment Repairer	10.00
28043 - Carnival Equipment Worker	7.89
28210 - Gate Attendant/Gate Tender	13.76

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28310 - Lifeguard	12.21
28350 - Park Attendant (Aide)	15.40
28510 - Recreation Aide/Health Facility Attendant	11.24
28515 - Recreation Specialist	16.31
28630 - Sports Official	12.26
28690 - Swimming Pool Operator	15.65
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	17.70
29020 - Hatch Tender	17.70
29030 - Line Handler	17.70
29041 - Stevedore I	16.90
29042 - Stevedore II	18.56
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	35.65
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	24.58
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	27.07
30021 - Archeological Technician I	17.26
30022 - Archeological Technician II	19.32
30023 - Archeological Technician III	23.94
30030 - Cartographic Technician	24.23
30040 - Civil Engineering Technician	22.83
30061 - Drafter/CAD Operator I	17.26
30062 - Drafter/CAD Operator II	19.55
30063 - Drafter/CAD Operator III	21.11
30064 - Drafter/CAD Operator IV	25.97
30081 - Engineering Technician I	14.53
30082 - Engineering Technician II	17.48
30083 - Engineering Technician III	21.00
30084 - Engineering Technician IV	28.62
30085 - Engineering Technician V	33.81
30086 - Engineering Technician VI	40.89
30090 - Environmental Technician	23.45
30210 - Laboratory Technician	18.92
30240 - Mathematical Technician	24.23
30361 - Paralegal/Legal Assistant I	18.54
30362 - Paralegal/Legal Assistant II	22.98
30363 - Paralegal/Legal Assistant III	28.11
30364 - Paralegal/Legal Assistant IV	34.01
30390 - Photo-Optics Technician	24.23
30461 - Technical Writer I	20.96
30462 - Technical Writer II	25.63
30463 - Technical Writer III	31.02
30491 - Unexploded Ordnance (UXO) Technician I	22.65
30492 - Unexploded Ordnance (UXO) Technician II	27.41

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30493 - Unexploded Ordnance (UXO) Technician III	32.85
30494 - Unexploded (UXO) Safety Escort	22.65
30495 - Unexploded (UXO) Sweep Personnel	22.65
30620 - Weather Observer, Combined Upper Air Or (see 3) Surface Programs	21.11
30621 - Weather Observer, Senior (see 3)	23.45
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	10.71
31030 - Bus Driver	13.94
31043 - Driver Courier	14.96
31260 - Parking and Lot Attendant	10.11
31290 - Shuttle Bus Driver	16.25
31310 - Taxi Driver	10.90
31361 - Truckdriver, Light	16.25
31362 - Truckdriver, Medium	16.82
31363 - Truckdriver, Heavy	17.62
31364 - Truckdriver, Tractor-Trailer	17.62
99000 - Miscellaneous Occupations	
99030 - Cashier	9.30
99050 - Desk Clerk	7.94
99095 - Embalmer	22.65
99251 - Laboratory Animal Caretaker I	8.61
99252 - Laboratory Animal Caretaker II	13.46
99310 - Mortician	22.65
99410 - Pest Controller	12.65
99510 - Photofinishing Worker	11.90
99710 - Recycling Laborer	14.15
99711 - Recycling Specialist	16.26
99730 - Refuse Collector	12.79
99810 - Sales Clerk	11.50
99820 - School Crossing Guard	12.71
99830 - Survey Party Chief	17.48
99831 - Surveying Aide	10.77
99832 - Surveying Technician	14.74
99840 - Vending Machine Attendant	12.64
99841 - Vending Machine Repairer	14.48
99842 - Vending Machine Repairer Helper	12.64

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

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contributions costing an average of \$3.35 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 10 years, and 4 after 20 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 PARENTHESSES 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.

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- (1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;
- (2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

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- (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, 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 regarding 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

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that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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

Conformance Process:

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

The process for preparing a conformance request is as follows:

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

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p> <p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p> <p>Wage Determination No.: 2005-2133 Revision No.: 7 Date Of Revision: 10/15/2009</p>
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State: Georgia

Area: Georgia Counties of Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, De Kalb, Douglas, Fannin, Fayette, Floyd, Forsyth, Franklin, Fulton, Gilmer, Gordon, Greene, Gwinnett, Habersham, Hall, Haralson, Henry, Jackson, Lumpkin, Madison, Morgan, Murray, Newton, Oconee, Oglethorpe, Paulding, Pickens, Polk, Rabun, Rockdale, Spalding, Stephens, Towns, Union, Walton, White, Whitfield

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.40
01012 - Accounting Clerk II		15.04
01013 - Accounting Clerk III		16.83
01020 - Administrative Assistant		26.66
01040 - Court Reporter		20.93
01051 - Data Entry Operator I		13.84
01052 - Data Entry Operator II		15.70
01060 - Dispatcher, Motor Vehicle		19.15
01070 - Document Preparation Clerk		13.16
01090 - Duplicating Machine Operator		13.16
01111 - General Clerk I		13.30
01112 - General Clerk II		14.84
01113 - General Clerk III		15.97
01120 - Housing Referral Assistant		21.85
01141 - Messenger Courier		11.70
01191 - Order Clerk I		12.48
01192 - Order Clerk II		14.20

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01261 - Personnel Assistant (Employment) I	15.22
01262 - Personnel Assistant (Employment) II	17.03
01263 - Personnel Assistant (Employment) III	19.00
01270 - Production Control Clerk	20.48
01280 - Receptionist	13.41
01290 - Rental Clerk	14.34
01300 - Scheduler, Maintenance	16.03
01311 - Secretary I	15.08
01312 - Secretary II	17.39
01313 - Secretary III	19.89
01320 - Service Order Dispatcher	15.87
01410 - Supply Technician	26.66
01420 - Survey Worker	16.73
01531 - Travel Clerk I	13.66
01532 - Travel Clerk II	14.92
01533 - Travel Clerk III	16.07
01611 - Word Processor I	13.25
01612 - Word Processor II	14.87
01613 - Word Processor III	16.64
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	22.25
05010 - Automotive Electrician	20.52
05040 - Automotive Glass Installer	19.22
05070 - Automotive Worker	19.22
05110 - Mobile Equipment Servicicer	16.64
05130 - Motor Equipment Metal Mechanic	21.60
05160 - Motor Equipment Metal Worker	19.22
05190 - Motor Vehicle Mechanic	21.60
05220 - Motor Vehicle Mechanic Helper	16.72
05250 - Motor Vehicle Upholstery Worker	18.14
05280 - Motor Vehicle Wrecker	19.22
05310 - Painter, Automotive	20.52
05340 - Radiator Repair Specialist	19.22
05370 - Tire Repairer	13.80
05400 - Transmission Repair Specialist	21.60
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.20
07041 - Cook I	11.95
07042 - Cook II	13.58
07070 - Dishwasher	10.24
07130 - Food Service Worker	10.01
07210 - Meat Cutter	12.57
07260 - Waiter/Waitress	8.17
09000 - Furniture Maintenance And Repair Occupations	

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09010 - Electrostatic Spray Painter	16.64
09040 - Furniture Handler	12.05
09080 - Furniture Refinisher	15.46
09090 - Furniture Refinisher Helper	11.95
09110 - Furniture Repairer, Minor	14.06
09130 - Upholsterer	15.46
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.22
11060 - Elevator Operator	9.22
11090 - Gardener	14.32
11122 - Housekeeping Aide	10.13
11150 - Janitor	10.89
11210 - Laborer, Grounds Maintenance	10.99
11240 - Maid or Houseman	9.15
11260 - Pruner	13.31
11270 - Tractor Operator	13.81
11330 - Trail Maintenance Worker	10.99
11360 - Window Cleaner	12.46
12000 - Health Occupations	
12010 - Ambulance Driver	16.54
12011 - Breath Alcohol Technician	19.89
12012 - Certified Occupational Therapist Assistant	23.17
12015 - Certified Physical Therapist Assistant	22.52
12020 - Dental Assistant	16.11
12025 - Dental Hygienist	31.82
12030 - EKG Technician	20.47
12035 - Electroneurodiagnostic Technologist	20.47
12040 - Emergency Medical Technician	16.75
12071 - Licensed Practical Nurse I	17.72
12072 - Licensed Practical Nurse II	19.89
12073 - Licensed Practical Nurse III	21.97
12100 - Medical Assistant	14.18
12130 - Medical Laboratory Technician	16.93
12160 - Medical Record Clerk	13.71
12190 - Medical Record Technician	15.03
12195 - Medical Transcriptionist	16.01
12210 - Nuclear Medicine Technologist	31.29
12221 - Nursing Assistant I	9.24
12222 - Nursing Assistant II	10.39
12223 - Nursing Assistant III	11.34
12224 - Nursing Assistant IV	13.10
12235 - Optical Dispenser	16.89
12236 - Optical Technician	15.13
12250 - Pharmacy Technician	14.87

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12280 - Phlebotomist		13.10
12305 - Radiologic Technologist		23.94
12311 - Registered Nurse I		24.78
12312 - Registered Nurse II		29.17
12313 - Registered Nurse II, Specialist		29.17
12314 - Registered Nurse III		35.25
12315 - Registered Nurse III, Anesthetist		35.25
12316 - Registered Nurse IV		42.25
12317 - Scheduler (Drug and Alcohol Testing)		18.26
13000 - Information And Arts Occupations		
13011 - Exhibits Specialist I		20.57
13012 - Exhibits Specialist II		23.52
13013 - Exhibits Specialist III		28.34
13041 - Illustrator I		20.89
13042 - Illustrator II		23.52
13043 - Illustrator III		28.34
13047 - Librarian		27.98
13050 - Library Aide/Clerk		12.17
13054 - Library Information Technology Systems Administrator		25.27
13058 - Library Technician		14.50
13061 - Media Specialist I		17.94
13062 - Media Specialist II		20.09
13063 - Media Specialist III		22.37
13071 - Photographer I		14.44
13072 - Photographer II		15.01
13073 - Photographer III		18.59
13074 - Photographer IV		22.40
13075 - Photographer V		23.86
13110 - Video Teleconference Technician		16.40
14000 - Information Technology Occupations		
14041 - Computer Operator I		17.20
14042 - Computer Operator II		19.24
14043 - Computer Operator III		21.45
14044 - Computer Operator IV		23.84
14045 - Computer Operator V		26.40
14071 - Computer Programmer I	(see 1)	25.09
14072 - Computer Programmer II	(see 1)	25.31
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		17.20

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14160 - Personal Computer Support Technician	23.84
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	27.52
15020 - Aircrew Training Devices Instructor (Rated)	34.35
15030 - Air Crew Training Devices Instructor (Pilot)	39.94
15050 - Computer Based Training Specialist / Instructor	28.13
15060 - Educational Technologist	26.30
15070 - Flight Instructor (Pilot)	39.94
15080 - Graphic Artist	24.69
15090 - Technical Instructor	23.15
15095 - Technical Instructor/Course Developer	28.31
15110 - Test Proctor	18.68
15120 - Tutor	18.68
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	9.47
16030 - Counter Attendant	9.47
16040 - Dry Cleaner	12.49
16070 - Finisher, Flatwork, Machine	9.47
16090 - Presser, Hand	9.47
16110 - Presser, Machine, Drycleaning	9.47
16130 - Presser, Machine, Shirts	9.47
16160 - Presser, Machine, Wearing Apparel, Laundry	9.47
16190 - Sewing Machine Operator	13.54
16220 - Tailor	14.57
16250 - Washer, Machine	10.59
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	15.46
19040 - Tool And Die Maker	22.45
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	14.74
21030 - Material Coordinator	19.21
21040 - Material Expediter	19.21
21050 - Material Handling Laborer	13.01
21071 - Order Filler	13.06
21080 - Production Line Worker (Food Processing)	14.74
21110 - Shipping Packer	13.35
21130 - Shipping/Receiving Clerk	13.94
21140 - Store Worker I	11.48
21150 - Stock Clerk	16.17
21210 - Tools And Parts Attendant	14.74
21410 - Warehouse Specialist	14.74
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.60
23021 - Aircraft Mechanic I	24.49

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23022 - Aircraft Mechanic II	25.60
23023 - Aircraft Mechanic III	26.88
23040 - Aircraft Mechanic Helper	17.19
23050 - Aircraft, Painter	21.12
23060 - Aircraft Servicer	19.73
23080 - Aircraft Worker	20.99
23110 - Appliance Mechanic	18.74
23120 - Bicycle Repairer	12.83
23125 - Cable Splicer	20.85
23130 - Carpenter, Maintenance	19.28
23140 - Carpet Layer	16.58
23160 - Electrician, Maintenance	22.60
23181 - Electronics Technician Maintenance I	19.09
23182 - Electronics Technician Maintenance II	24.64
23183 - Electronics Technician Maintenance III	26.34
23260 - Fabric Worker	15.61
23290 - Fire Alarm System Mechanic	17.12
23310 - Fire Extinguisher Repairer	13.98
23311 - Fuel Distribution System Mechanic	20.61
23312 - Fuel Distribution System Operator	16.03
23370 - General Maintenance Worker	17.92
23380 - Ground Support Equipment Mechanic	24.49
23381 - Ground Support Equipment Servicer	19.73
23382 - Ground Support Equipment Worker	20.99
23391 - Gunsmith I	18.65
23392 - Gunsmith II	20.94
23393 - Gunsmith III	21.98
23410 - Heating, Ventilation And Air-Conditioning Mechanic	20.81
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	21.85
23430 - Heavy Equipment Mechanic	21.25
23440 - Heavy Equipment Operator	18.92
23460 - Instrument Mechanic	22.45
23465 - Laboratory/Shelter Mechanic	17.76
23470 - Laborer	11.55
23510 - Locksmith	15.46
23530 - Machinery Maintenance Mechanic	19.72
23550 - Machinist, Maintenance	18.32
23580 - Maintenance Trades Helper	12.53
23591 - Metrology Technician I	22.45
23592 - Metrology Technician II	23.57
23593 - Metrology Technician III	24.75
23640 - Millwright	21.52

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23710 - Office Appliance Repairer	18.91
23760 - Painter, Maintenance	16.35
23790 - Pipefitter, Maintenance	20.30
23810 - Plumber, Maintenance	19.33
23820 - Pneudraulic Systems Mechanic	18.99
23850 - Rigger	21.30
23870 - Scale Mechanic	16.58
23890 - Sheet-Metal Worker, Maintenance	19.19
23910 - Small Engine Mechanic	16.93
23931 - Telecommunications Mechanic I	24.67
23932 - Telecommunications Mechanic II	27.23
23950 - Telephone Lineman	20.19
23960 - Welder, Combination, Maintenance	16.33
23965 - Well Driller	17.53
23970 - Woodcraft Worker	18.99
23980 - Woodworker	13.76
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	10.36
24580 - Child Care Center Clerk	12.39
24610 - Chore Aide	10.93
24620 - Family Readiness And Support Services Coordinator	14.01
24630 - Homemaker	16.76
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21.71
25040 - Sewage Plant Operator	17.06
25070 - Stationary Engineer	21.71
25190 - Ventilation Equipment Tender	13.46
25210 - Water Treatment Plant Operator	17.06
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14.85
27007 - Baggage Inspector	12.47
27008 - Corrections Officer	14.66
27010 - Court Security Officer	17.23
27030 - Detection Dog Handler	16.44
27040 - Detention Officer	15.32
27070 - Firefighter	17.77
27101 - Guard I	12.47
27102 - Guard II	16.44
27131 - Police Officer I	19.25
27132 - Police Officer II	21.40
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	10.53
28042 - Carnival Equipment Repairer	12.24

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28043 - Carnival Equipment Worker	7.90
28210 - Gate Attendant/Gate Tender	14.25
28310 - Lifeguard	11.33
28350 - Park Attendant (Aide)	15.94
28510 - Recreation Aide/Health Facility Attendant	9.22
28515 - Recreation Specialist	12.41
28630 - Sports Official	11.75
28690 - Swimming Pool Operator	18.99
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	18.97
29020 - Hatch Tender	18.97
29030 - Line Handler	18.97
29041 - Stevedore I	17.78
29042 - Stevedore II	20.31
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	36.60
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	25.24
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	27.79
30021 - Archeological Technician I	19.76
30022 - Archeological Technician II	21.21
30023 - Archeological Technician III	27.39
30030 - Cartographic Technician	25.92
30040 - Civil Engineering Technician	19.26
30061 - Drafter/CAD Operator I	19.76
30062 - Drafter/CAD Operator II	21.21
30063 - Drafter/CAD Operator III	23.33
30064 - Drafter/CAD Operator IV	28.80
30081 - Engineering Technician I	16.09
30082 - Engineering Technician II	19.31
30083 - Engineering Technician III	20.68
30084 - Engineering Technician IV	24.58
30085 - Engineering Technician V	30.06
30086 - Engineering Technician VI	33.65
30090 - Environmental Technician	22.75
30210 - Laboratory Technician	17.80
30240 - Mathematical Technician	22.75
30361 - Paralegal/Legal Assistant I	19.41
30362 - Paralegal/Legal Assistant II	24.05
30363 - Paralegal/Legal Assistant III	29.41
30364 - Paralegal/Legal Assistant IV	34.18
30390 - Photo-Optics Technician	26.06
30461 - Technical Writer I	26.07
30462 - Technical Writer II	29.01
30463 - Technical Writer III	34.75

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30491 - Unexploded Ordnance (UXO) Technician I	23.26
30492 - Unexploded Ordnance (UXO) Technician II	28.14
30493 - Unexploded Ordnance (UXO) Technician III	33.73
30494 - Unexploded (UXO) Safety Escort	23.26
30495 - Unexploded (UXO) Sweep Personnel	23.26
30620 - Weather Observer, Combined Upper Air Or Surface Programs	(see 2) 23.33
30621 - Weather Observer, Senior	(see 2) 27.39
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	11.49
31030 - Bus Driver	17.43
31043 - Driver Courier	13.10
31260 - Parking and Lot Attendant	9.40
31290 - Shuttle Bus Driver	14.30
31310 - Taxi Driver	10.70
31361 - Truckdriver, Light	14.30
31362 - Truckdriver, Medium	15.81
31363 - Truckdriver, Heavy	18.97
31364 - Truckdriver, Tractor-Trailer	18.97
99000 - Miscellaneous Occupations	
99030 - Cashier	9.25
99050 - Desk Clerk	10.05
99095 - Embalmer	24.45
99251 - Laboratory Animal Caretaker I	9.12
99252 - Laboratory Animal Caretaker II	10.03
99310 - Mortician	26.90
99410 - Pest Controller	14.59
99510 - Photofinishing Worker	14.95
99710 - Recycling Laborer	14.69
99711 - Recycling Specialist	18.48
99730 - Refuse Collector	12.78
99810 - Sales Clerk	13.50
99820 - School Crossing Guard	13.53
99830 - Survey Party Chief	18.87
99831 - Surveying Aide	11.07
99832 - Surveying Technician	15.59
99840 - Vending Machine Attendant	11.69
99841 - Vending Machine Repairer	14.27
99842 - Vending Machine Repairer Helper	11.69

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$3.35 per hour or \$134.00 per week or \$580.66 per month.

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VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 3 weeks after 8 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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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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 regarding 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

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where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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

Conformance Process:

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

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

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- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

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

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

Attachment J-5

Award Fee

Evaluation Plan

Cargo Mission Contract

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1.0 INTRODUCTION

An Award Fee Evaluation Plan is established to evaluate contractor performance and determine the Award Fee to be earned and payable under this contract. The Award Fee evaluation process is composed of an objective as well as a subjective assessment by the government.

The contractor's performance will be evaluated by the Government, in accordance with the procedures set forth below, at the expiration of each period specified in Clause B.7, Award Fee. The evaluations 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 factors, weightings, procedures, and other provisions set forth below.

2.0 AWARD FEE PROVISIONS

Award Fee provisions have been established to motivate the contractor to strive for excellence in managerial, technical, schedule and cost performance. For each period, the contractor can earn Award Fee from a minimum of zero dollars to the maximum available Award Fee shown in Clause B.7 of this contract. Changes to these Award Fee provisions will be via a bilateral modification, except for evaluation factors and weightings that are established unilaterally by the government. The contractor will be informed of any changes to the evaluation factor or the weightings prior to the affected Award Fee period.

Each Award Fee evaluation rating is considered to be discrete and final. Unearned Award Fee in a given period is lost and cannot be reassessed or moved into subsequent fee evaluation periods for consideration. An overall performance evaluation and fee determination of zero may be made for any evaluation period when there is a major breach of safety or security as defined in NFS 1852.223-75, Major Breach of Safety or Security.

The government shall pay fee to the contractor in accordance with Clause G.2, Award Fee for Service Contracts.

2.1 ORGANIZATIONAL RESPONSIBILITIES**2.1.1 PERFORMANCE EVALUATION BOARD INTEGRATION TEAM (PEB-IT)**

The Performance Evaluation Board Integration Team (PEB-IT) will be composed of selected NASA technical and administrative personnel and headed by the Contracting Officer's Technical Representative (COTR). The COTR will be the focal point for the accumulation and development of Award Fee evaluation reports, reviews, and presentations, as well as discussions with contractor management on Award Fee matters. The PEB-IT will evaluate the Contractor's performance as related to the factors listed in enclosure II.

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The PEB-IT will furnish the contractor interim performance evaluations every three months (after 6 months for the first evaluation period). It shall be the purpose of these communications to discuss any specific areas where the contractor has excelled and areas where future improvement is necessary.

The PEB-IT will prepare a 6-month evaluation report for review by the PEB for each evaluation period. This report will include a recommendation to the PEB as to the adjective rating and numerical score to be assigned for the Contractor's performance for the period evaluated.

2.1.2 PERFORMANCE EVALUATION BOARD (PEB)

The Fee Determination Official (FDO) will appoint the Performance Evaluation Board (PEB). A PEB, comprised of selected technical and administrative personnel of NASA, will assess 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 Board, at the end of each evaluation period, will modify and/or approve the PEB-IT report and prepare a summary of the evaluations for review by the FDO. This summary will include a recommendation to the FDO as to the adjective rating and numerical score to be assigned for the contractor's performance in the preceding evaluation period.

2.1.3 FEE DETERMINATION OFFICIAL (FDO)

The Fee Determination Official (FDO), a senior NASA official, after considering available pertinent information and recommendations, will make a performance determination for each period in accordance with the provisions of this Award Fee Plan and the Clause G.2.

2.2 EVALUATION PROCEDURES

2.2.1 AWARD FEE PERIODS

Each Award Fee period shall be 6 months in length. The contractor's performance will be assessed at the mid-point of each evaluation period (at the end of the sixth month for the first evaluation period). The COTR or the Contracting Officer may communicate contractor performance levels at other times during the evaluation period.

2.2.2 CONTRACTOR PERFORMANCE ASSESSMENT PLAN

No later than 30 calendar days prior to the start of each Award Fee evaluation period, the contractor may submit to the Contracting Officer a Performance Assessment Plan recommending objective performance metrics, weightings, and specific areas of emphasis for consideration by the Government to be used for the ensuing evaluation period.

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Objective performance metrics and specific areas of emphasis (AOE) will be established for each evaluation period by the Government and communicated to the contractor at least 15 calendar days prior to the start of each evaluation period. The Government may unilaterally change the weightings of the criteria from period to period. However, cost control will not fall below 25 percent of 100 percent of the award fee pool.

2.2.3. CONTRACTOR PERFORMANCE ASSESSMENT REPORT

The contractor may furnish a self-evaluation as a Performance Assessment Report for each evaluation period to the Contracting Officer within 7 calendar days of the end of the quarter in the established period. The contractor may present to the PEB an oral summary of its self-evaluation.

2.2.4 AWARD FEE FINDINGS

The contractor will be furnished a copy of the PEB's findings, conclusions, and fee recommendation. The contractor will be afforded the opportunity to submit for consideration of the FDO: (a) proposed evaluations or conclusions, or (b) exceptions to the evaluations, conclusions, or fee recommendations of the PEB, and (c) supporting reasons for such exceptions or proposed evaluations or conclusions. The contractor's submissions must be made in writing and must be submitted through the Contracting Officer to the FDO within 7 calendar days from the date of the contractor's receipt of the PEB findings and fee recommendations.

In the event the FDO has not received a submission from the contractor, the performance determination will not be considered final until expiration of the 7calendar day period prescribed above for contractor submissions unless the contractor has affirmatively indicated, in writing, that no contractor submission will be made.

2.2.5 CORRECTIVE ACTION PLAN

When a weakness is identified during a performance evaluation performed at the end of the award fee period, the contractor may submit to the CO a recommendation on which award fee weaknesses require a Corrective Action Plan (CAP) within 15 calendar days of the final award fee determination for each evaluation period. The CO, with assistance from the COTR, shall make the final determination of when a CAP is required. For any issue requiring corrective action, the CO shall request a CAP from the contractor. Any items not requiring corrective action shall be documented in the file.

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2.3 EVALUATION CRITERIA AND WEIGHTINGS

The Government will use objective, subjective criteria, socioeconomic performance, as well as an assessment of cost control as a basis for arriving at the Award Fee score. Objective metrics will be developed using a tiered approach of increasingly important metrics to measure the contractor's performance and assist the government in the Award Fee evaluation process. The metrics will be divided into three linked categories describing how lower level metrics affect the outcome of upper level metrics. Category I metrics are the most important outcome based metrics, Category II are considered important leading indicator metrics, and Category III are intended to assess trends. The contractor's performance against the objective metrics combined with the government's assessment of subjective criteria and the government's assessment of cost control will be used to arrive at an overall Award Fee score. See DRD C-PM-02 Integrated Management Review Product.

2.3.1 AWARD FEE BASED ON PERFORMANCE METRICS (OBJECTIVE CRITERIA)

The award fee based on performance metrics encourages contractor focus on overall safety, technical, and schedule. The Government will use objective criteria as a basis for arriving at this portion of the award fee score. This portion of the award fee score will be determined from the contractor's performance of the Category I metrics (see Areas of Emphasis of each specific award fee period).

2.3.2 AWARD FEE BASED ON OTHER THAN PERFORMANCE BASED METRICS (SUBJECTIVE CRITERIA)

The award fee portion that is based on other than Performance Based Metrics encourages contractor focus on program management and control and technical performance. The Government will use subjective criteria as a basis for arriving at this portion of the award fee score.

2.3.3 SOCIOECONOMIC CONSIDERATION

The award fee based on performance metrics encourages contractor focus on meeting or exceeding the socioeconomic goals established in the contract for the award fee period.

2.3.4 AWARD FEE BASED ON COST PERFORMANCE

Cost performance will be evaluated using metric status and plan versus actual during the period being evaluated. Other factors and circumstances that are pertinent to contractor performance may be taken into account as they apply to cost performance.

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2.4 EVALUATION PERIODS AND AWARD FEE CALCULATION**2.4.1 MAXIMUM AVAILABLE AWARD FEE**

The maximum available award fee for the base contract period is identified in Clause B.3, Estimated Cost and Award Fee. The available fee for each award fee period is set forth in Clause B.7 Table B-5, Available and Earned Fee.

2.4.2 EVALUATION SCALE AND ADJECTIVE RATING

Award Fee Rating Table, Enclosure I, includes adjective ratings as well as a numerical scoring system from 0 - 100. For this plan, earned award fee dollars are calculated by applying the total numerical score to available dollars. For example, a numerical score of 85 yields 85 percent of available award fee dollars. Notwithstanding the preceding, the Contractor will not earn award fee for any evaluation period when the performance score is "poor/unsatisfactory" (less than 61).

2.5 PROVISIONAL PAYMENT OF AWARD FEE

Pending a determination of the amount of award fee earned for periodic evaluations, a portion of the available award fee for that period will be provisionally paid to the Contractor on a monthly basis, in accordance with contract Clause G.2 .

3.0 LIST OF ENCLOSURES

Enclosure I, Numerical Ranges and Adjective Definitions, sets forth the adjective ratings, definitions, and associated numerical ranges to be used to define the various levels of performance under the contract.

Enclosure II, Award Fee Factors

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ENCLOSURE I**NUMERICAL RANGES AND ADJECTIVE DEFINITIONS**

ADJECTIVE RATING	RANGE OF POINTS	DESCRIPTION
Excellent	100 - 91	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	90 - 76	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	75 - 51	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	No Greater than 50	Contractor has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	0	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

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ENCLOSURE II**Award Fee Factors****A. OBJECTIVE CRITERIA****1. Safety and Health (Weight = 10%)**

Safety and health performance includes safety and health program implementation, adherence to the approved safety and health plan, management of safety incidents and injuries, and environmental compliance. Focus Areas include; safety incidents and injuries in conjunction with reported monthly statistical information on the contractor's safety and health program (JSC Form 288), substantial leadership initiatives taken by management in injury prevention and property damage avoidance and employee awareness programs; proactive programs with measureable impact on injury/mishap reduction; and employee input and management approaches to corrective action and safety and health compliance. Award fee scores may be positively affected by innovations which can be substantiated to reduce injuries, mishaps or overall safety risk to improve safety and health performance on the contract. Details on the evaluation process can be found at:

<http://procurement.jsc.nasa.gov/docs/Safety%20Performance%20Measures%20CSF%20060308.ppt>.

2. Technical and Schedule Control (15%)**B. SUBJECTIVE CRITERIA (40%):**

1. Program Management and Control
2. Technical Performance

C. SOCIOECONOMIC CONSIDERATION (10%)**D. COST CONTROL (25%)**

(b) (4)

(b) (4)

(b) (4)

(b) (4)

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ATTACHMENT J-7

APPLICABLE AND REFERENCE

DOCUMENTS LIST

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Attachment J-7 - Applicable and Reference Document Lists

This attachment contains applicable documents for the contract effort. The contractor shall comply with these requirements in performing SOW requirements. This attachment is structured as follows:

Table J7-1: Applicable Documents List

Table J7-2: Reference Documents List

The documents identified within Table J7-1 are cited within the body of this contract or within a document that is cited in this contract (second tier). Requirements written in these documents have full force and effect as if their text were written in this contract to the extent that the requirements relate to context of the work to be performed within the scope of this contract. When a document is classified as "reference", the document is provided for information about the ISS Program execution and the Cargo Mission's role in the ISS Program.

The general approach for interpreting whether a document impacts the contractor's performance is that if a document is "applicable", then the contractor has requirements that derive from that document. Applicable documents contain additional requirements and are considered binding to the extent specified. Applicable documents shall be cited in the text of the document in a manner that indicates applicability such as follows:

- in accordance with
- as stated in
- as specified in
- as defined in
- per
- in conformance with

When a document is classified as "reference," the document is provided for general context of the ISS Program execution and for influence on the performance of the Cargo Mission Contract in its role of support to the ISS Program. Sample documentation that may be used or produced by the contractor is included as reference documents to allow the contractor to gain insight into the Cargo Mission functions and products. Reference documents shall not contain additional requirements and will not be considered binding. Citations of Reference documents shall clearly indicate that the material is for information or reference only such as follows:

- reference
- using (as a guide)
- for additional information

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Table J7-1: Applicable Documents List

Document Number	Title	Book Coordination Required
ANSI Z136.1	American National Standard for the Safe Use of Lasers	
ASME Y14.100	Engineering Drawing Practices	
ASME Y14.24	Types and Applications of Engineering Drawings	
ASME Y14.34	Associated Lists	
ASME Y14.35	Revision of Engineering Drawings and Associated Documents	
D684-10822-01		
DX12-SLP-014	Neutral Buoyancy Laboratory Mockup and Training Hardware Requirements	
Executive Order 13201		
FED-STD-313	Federal Standard 313	
FIPS PUB 199	Standards for Security Categorization of Federal Information and Information Systems	
FIPS PUB 200	Minimum Security Requirements for Federal Information and Information Systems	
FIPS PUB 201	Personal Identity Verification (PIV) of Federal Employees and Contractors	
HP RTL	Reference Guide (A Handbook for Program Developers)	
IEEE/ASTM SI 10-2002	American National Standard for Use of the International System of Unites (SI): The Modern Metric System	
ITS-SOP-0030	IT System Certification and Accreditation Process for FIPS 199 Moderate and High Systems	
ITS-SOP-0040	Contingency Planning Guidance	
No Number	ISS Management Center Operations Handbook	
JPD 306	Establishment of the Program Risk Management Plan (PRMS)	
J69W-01	Real Property Management	
J69W-02	Facility Space Allocation and Utilization	
J69W-03	Energy Conservation	
JE69W-06	EMS Aspect/Impact Assessment and EMP Process	
JPD 4310.1	National Historic Landmark Preservation	

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Document Number	Title	Book Coordination Required
JPD 8500.1	JSC Environmental Excellence Policy	
JPR 1700.1	JSC Safety and Health Handbook	
JPR 2310.1	JSC Organizational Learning Program	
JPR 8550.1	JSC Environmental Compliance Procedural Requirements	
JPR 8553.1	JSC Environmental Management System Manual	
JSC 17773	Preparing of Hazard Analyses for JSC Ground Operations	
JSC 27260	Decal Processing Document and Catalog	
JSC 27472	Requirements for Submission of Data Needed for Toxicological Assessment of Chemicals and Biologicals to be Flown on Manned Spacecraft	
JSC 28528	NBL Mockup Design and Requirements Document	
JWI 4210.1	JSC Instructions for Control of Program Stock	
MGT-OA-019	On-Orbit Anomaly Resolution Process Work Instruction	
MIL-PRF-28002	Requirements for Raster Graphics Representation in Binary Format	
MIL-STD-129	Military Marking for Shipment and Storage	
MIL-STD-1840	Automated Interchange of Technical Information	
NASA-HDBK-6003	Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques	
NASA-STD-6002	Applying Data Matrix Identification Symbols on Aerospace Parts	
NASDA-SPEC-2587 Part II Vol 3	HTCV Cargo Standard Interface Requirements	
NIST-SP-800-18	Guide for Developing Security Plans for Federal Information Systems	
NIST-SP-800-26	Security Self-Assessment Guide for Information Technology Systems	
NIST-SP-800-30	Risk Management Guide for Information Technology Systems	
NIST-SP-800-34	Contingency Planning Guide for Information Technology Systems	

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Document Number	Title	Book Coordination Required
NIST-SP-800-37	Guide for the Security Certification and Accreditation of Federal Information Systems	
NIST-SP-800-53	Guide for Assessing the Security Controls in Federal Information Systems	
NIST-SP-800-60 Vol 1	Guide for Mapping Types of Information and Information Systems to Security Categories	
NIST-SP-800-60 Vol 2	Appendices to Guide for Mapping Types of Information and Information Systems to Security Categories	
NIST-SP-800-61	Computer Security Incident Handling Guide	
NIST-SP-800-63	Electronic Authentication Guideline	
NITR 2810.12	Contingency Planning	
NITR 2810.15	Continuous Monitoring	
No Number	Energy Policy Act of 2005	
No Number	Freedom of Information Act	
No Number	Railway Labor Act	
No Number	Service Contract Act of 1965	
NPD 1440.6	NASA Records Management	
NPD 8800.14	Policy for Real Property Management	
NPR 1441.1	NASA Records Retention Schedule	
NPR 1600.1	NASA Security Program Procedural Requirements	
NPR 2810.1	Security of Information Technology	
NPR 4100.1	NASA Materials Inventory Management Manual	
NPR 4200.1	NASA Equipment Management Procedural Requirements	
NPR 4300.1	NASA Personal Property Disposal Procedural Requirements	
NPR 6000.1	Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components	
NPR 7120.6	Lessons Learned Process	
NPR 8621.1	NASA Procedures and Guidelines for Mishap Reporting, Investigating and Recordkeeping	
NPR 8715.3	NASA General Safety Program Requirements	
NPR 8000.4	Risk Management Procedures and Guidelines	
NPR 8570.1	Energy Efficiency and Water Conservation	
NPR 8831.2	Facilities Maintenance Management	

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Document Number	Title	Book Coordination Required
NPR 9501.2	NASA Contractor Financial Management Reporting	
OSHA CP 03-01-003	Voluntary Protection Program (VPP): Policies and Procedures Manual	
SAE AS9100	Quality Systems – Aerospace – Model for Quality Assurance in Design, Development, Production, Installation, and Servicing	
Section 508	Section 508 of the Rehabilitation Act of 1974	
SFAS 5	Accounting for Contingencies	
SFAS 13	Accounting for Leases	
SMD 500-15	Security Termination Procedures	
SN-C-0005	Contamination Control Requirements	
SSP 30219	ISS Reference Coordinate Systems Document	
SSP 30223	Problem Reporting and Corrective Action (PRACA) for Space Station	
SSP 30234	Failure Modes and Effects Analysis and Critical Item List (FMEA/CIL) Requirements for Space Station	
SSP 30256:001	EVA Standard Interface Control Document	
SSP 30309	Safety Analysis and Risk Assessment Requirements Document	
SSP 30599	Safety Review Process	
SSP 30695	Acceptance Data Package Requirements Specification	
SSP 41000	System Specification for the International Space Station	
SSP 41170	Configuration Management Requirements	
SSP 41173	Space Station Quality Assurance Requirements	
SSP 50004	Ground Support Equipment Design Requirements	
SSP 50005	ISS Flight Crew Integration Standards	
SSP 50007	Space Station Inventory Management System Label Specification	X
SSP 50010	Standards for ISS Program Documentation	
SSP 50013	ISS Information Systems Plan	
SSP 50021	Safety Requirements Document	
SSP 50108	Certification of Flight Readiness for ISS	
SSP 50123	Configuration Management Handbook	
SSP 50172	Data Management Handbook	
SSP 50175	ISS Risk Management Plan	

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Document Number	Title	Book Coordination Required
SSP 50200-01	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan	
SSP 50200-01-ANXC	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan, ANNEX C: Mission Integration and Operations	
SSP 50200-02	Station Program Implementation Plan (SPIP) Volume 2: Program Planning and Manifesting	
SSP 50200-03	Station Program Implementation Plan (SPIP) Volume 3: Cargo Analytical Integration	X
SSP 50200-06	Station Program Implementation Plan (SPIP) Volume 6: Cargo Physical Processing	X
SSP 50222	ISS Program Capital Investment Process (CIP)	
SSP 50223	ISS Export Control Plan	
SSP 50273	Segment Specification for the H-II Transfer Vehicle	
SSP 50276	Depot/Manufacturing Facility Certification Plan	
SSP 50287	Hardware/Software Acceptance Process	
SSP 50409	Crew Provisioning Management Plan	
SSP 50438	International Space Station to H-II Transfer Vehicle Interface Control Document	
SSP 50465	Return Manifest Dispositioning Plan (RMDP) Blank Book	X
SSP 50465-XXX-XX	Flight Specific RMDP Appendices	X
SSP 50489	Mission Integration Template	
SSP 50492	General ISS On-Orbit Requirements for Non-Pressurized Support Equipment	
SSP 50502	ISS Hardware Preflight Imagery Requirements	
SSP 50647	MIDAS to CIDMT Interface Control Document for ATV	
SSP 50833	International Space Station Cargo Transport Interface Requirements Document	
SSP 50835	ISS Pressurized Volume Common Interface Requirements Document	
SSP 50849	MIDAS to JAXA HTV Cargo Integration System Interface Control Document	

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Document Number	Title	Book Coordination Required
SSP 51700	Payload Safety Policy and Requirements for International Space Station	
SSP 540XX-ANX1	Increment Definition and Requirements Document for Increment XX, Annex 1: Manifesting	
SSP 54100	Increment Definition and Requirements Document Flight Program	
TDH 505-507	Health and Safety Codes	

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Table J7-2: Reference Documents List

Document Number	Title	Book Coordination Required
II32928-103	Requirements for International Partner Cargoes Transported on Russian Progress and Soyuz Vehicles	
ATV-HB-AI-0001	ATV Cargo Accommodations Handbook	
ATV-E-RIBRE-PL-0054	ATV 2 Launch Site Operations Plan	
ESA-ATV-1700.7b	Safety Requirements for Payloads/Cargos On Board the ATV	
ESA-ATV-PR-13830	ATV Pressurized Payload/Cargo Safety Certification Process	
JFX-99102	HTV Cargo Accommodation Handbook	
JFX-20090175	HTV Cargo Integration Plan (CIP)	
JSX 2001015	HTV Cargo Safety Requirements	
JSX-2208041	HTV Cargo Safety Review Process	
NASDA-SPEC 2857 Part I	HTV Cargo Standard Interface Requirements Document Part I	
NPD 2810.1	NASA Information Security Policy	
NPD 9501.1	NASA Contractor Financial Management Reporting System	
NPR 7120.5	NASA Program and Project Management Processes and Requirements	
OPS-IDD-2-200	ATV Cargo Integration Interface Definition Document	
OPS-PL-0-008-ESA	ESA Cargo Integration Plan	
SSP 50124	NASA/CSA Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50125	NASA/ASI Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50126	NASA/JAXA Bilateral Data Exchange Agreements, Lists and Schedules for the JEM	
SSP 50127	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Columbus	
SSP 50137	NASA/RSA Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50284	NASA/ASI Bilateral Data Exchange Agreements, Lists and Schedules for Node 2	
SSP 50301	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Node 2	

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Document Number	Title	Book Coordination Required
SSP 50352	NASA/AEB Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50359	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Node 3	
SSP 50407	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Cupola 1 and 2	
SSP 50611	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for ATV	
SSP 50614	NASA/JAXA Bilateral Data Exchange Agreements, Lists and Schedules for HTV	
SSP 50659	ISS Program Work Breakdown Structure (WBS)	
XA-11-021	EVA Office Sharp Edge Policy for International Space Station Hardware Processed at Cargo Mission Contract Facility	

ATTACHMENT J-8

Data Requirements List (DRL) And Data Requirements Descriptions (DRDs)

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To the extent that data required to be furnished by other provisions of this contract are also identified and described in a DRL or DRD, compliance with the DRL or DRD shall be accepted as compliance with such other provisions.

Nothing contained in this DRL provision shall relieve the contractor from furnishing data not identified and described in the DRL attachment but called for by, or under the authority of, other provisions or as specified elsewhere in this contract. Except as otherwise provided in this contract, the cost of data to be furnished in response to the DRL attached to this contract or data to be delivered under the authority of other sections (clauses/statement of work) are included in the price of this contract.

DRD Categories

CM - Configuration Management II - International Integration IT- Information Technology
 PC - Program Control and Business Package PM - Program Management RP - Re-procurement
 SA - Safety and Mission Assurance CO – Close Out EL - Engineering
 MI - Mission Integration PR - Procurement

DRD Numbers	Type	Page Number	DRD Title
C-CM-01	1	J-A8-6	Configuration Management Plan
C-CO-01	1	J-A8-8	Contract Close-out Plan
C-CO-02	1	J-A8-9	SOW Evidence of Completion Matrix
C-EL-01	1	J-A8-10	New Hardware Interim Design Review Deliverables
C-EV-01	1	J-A8-12	Environmental and Energy Consuming Product Compliance Reports
C-II-01	2	J-A8-15	Export Control Plan (ECP)
C-II-02	2	J-A8-16	Export Control Audit Results
C-IT-01	1	J-A8-17	Information Technology (IT) Security Plan and Reports
C-IT-02	1	J-A8-19	Information Technology (IT) Management Plan
C-MI-01	1	J-A8-21	Certification of Flight Readiness (CoFR) Plan
C-MI-02			Reserved
C-MI-03	2	J-A8-22	Cargo Integration Cargo CAD Models for Launch, Return and On-Orbit Configurations
C-MI-04	3	J-A8-25	ISS Vehicle Engineering Data
C-MI-05	3	J-A8-28	Engineering Drawings and Associated Lists
C-PC-01	3	J-A8-49	NF533 Monthly Cost Reporting
C-PC-02	1	J-A8-60	Annual Work Plans
C-PC-03	3	J-A8-62	Workforce Reports
C-PC-04	1	J-A8-63	Work Breakdown Structure (WBS) and Dictionary
C-PC-05	3	J-A8-65	Program Schedules
C-PC-06	1/2	J-A8-67	Small Business Subcontracting Plan and Reports
C-PM-01	1	J-A8-69	Cargo Mission Management Plan
C-PM-02	3	J-A8-71	Integrated Management Review Product (IMRP)
C-PR-01	2	J-A8-73	Wage/Salary and Fringe Benefits Data

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C-PR-02	2	J-A8-81	Government Property Management Plan
C-PR-03	2	J-A8-83	Financial Reporting Contractor-Held Property
C-RP-01	3	J-A8-85	Re-procurement Data Package
C-SA-01	1	J-A8-88	Mission Assurance and Risk Management (MA&RM) Plan
C-SA-02	1	J-A8-90	Safety and Health (S&H) Plan
C-SA-03	3	J-A8-102	Monthly Safety and Health Metrics
C-SA-04	3	J-A8-104	Safety and Health Program Self-Evaluation
C-SA-05	2	J-A8-106	Safety Analysis and Hazard Reports
C-SA-06	2	J-A8-108	R&M Allocations, Assessments, and Analyses Reports
C-SA-07	2	J-A8-116	Acceptance Data Package (ADP)
C-SA-08	2	J-A8-117	Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)

Subject to the Rights in Data clause, this Data Requirements List (DRL)/Data Requirements Description (DRD) sets forth the data requirements in each DRD and shall govern that data required by the DRL/DRD for this contract. The contractor shall furnish data defined by the DRDs listed on the DRL by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DRL/DRD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DPD, per FAR 52.215.33. NASA-Owned/Contractor-Held records shall be managed by the Contractor in accordance with Title 36 of the code of Federal Regulations, Chapter XII B, Records Management, and NPD 1440.6, NASA Records Management Program. The records shall be organized in accordance with the instructions in NPR 1441.1, NASA Records Retention Schedules, as applicable. The contractor shall disposition records and non-records in accordance with NPR 1441.1, NASA Records Retention Schedules, which has been approved by NASA and the National Archives and Records Administration (NARA). All questions on records management issues shall be directed through the Contracting Officer to the ISS Technical Records Liaison Officer.

Documents included as applicable documents in this DRL/DRD are the issue specified in the Statement of Work, and form a part of the DRL/DRD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DRL/DRD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

DESCRIPTION

This document identifies and defines the requirements and data types for information and data required under this contract.

The DRDs define, by an individual DR, the information and data required for each deliverable document.

The data types are used to identify the approval and control required for each DR. The DRL is an index of all the DRs by category.

Documentation submitted pursuant to this clause may incorporate references to other current approved documentation, provided the references are adequate and include such identification

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elements as title, document number, and approval date (where applicable). However, if the pertinent information is of relatively minor size, the contractor shall incorporate the information itself, in lieu of using a reference. The contractor shall assure that any referenced information is readily available to appropriate users of the submitted document.

DATA TYPES

For the purpose of this clause, the following information/documentation types are applicable:

Type 1 That information and documentation which requires NASA approval prior to release. Approved type 1 information and documentation shall be controlled, and deviations from or changes to the concepts, techniques, and/or requirements stated therein shall require NASA approval prior to implementation. All work under this contract covered by approved type 1 documents shall be performed in accordance with those approved documents. The Contracting Officers Technical Representative will have approval authority and will sign the data prior to its release. Contractually binding documents will not be implemented nor revised without contractual authorization.

Type 2 That information and documentation for which NASA reserves a time-limited right to disapprove, in whole or in part. Type 2 data shall be submitted to JSC for review not less than 30 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not received any comment prior to the released target date, the document may be released for appropriate use. Any NASA comment received shall be appropriately dispositioned before the document is to be used. Type 2 data may be approved by NASA prior to its submittal.

Type 3 That information and documentation which is provided to NASA for surveillance, information, review, and/or management control. This information does not require formal NASA review and approval. Information in this category would include design solutions, status, and cost/schedule reporting; analyses and test results, handbooks; and other designated lists, reports, etc.

Type 1 submissions shall be marked "TYPE 1 PRELIMINARY pending NASA approval or Type I APPROVED BY NASA, as appropriate." Additional special designations and deviations may be required on specific submissions in accordance with configuration management requirements.

Type 2 submissions shall be marked "TYPE 2 PRELIMINARY - RELEASE TARGET DATE, xx/xx/xx" or "TYPE 2 FINAL - NASA COMMENTS INCLUDED" or "TYPE 2 FINAL DOCUMENT," where NASA comments were not received.

NOTE: Documents submitted under this clause, even though directly (Type 1) or implicitly (Type 2) approved by NASA, shall not take precedence over the specifications as set out in Section C, Statement of Work.

The contractor shall normally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 calendar days of receipt of comments.

Type 3 submissions shall be marked "TYPE 3 DOCUMENT - FOR INFORMATION, SURVEILLANCE, REVIEW OR MANAGEMENT CONTROL".

ELECTRONIC FORMAT

Management Information System (MIS) Data Requirements. MIS is a web-based data repository designed to keep ISS Program management and personnel aware of the most current ISS

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Program technical, financial, workforce, schedules, and operational information, including issues and risks. MIS links ISS Program core business issues and goals with the technical aspects of the Program. To accomplish this, ISS Program managers will utilize (from the Contractor) selected financial planning technical costs, workforce data, Program schedules, Program metrics and other status information. This selected information exists in the various DRDs which are requested by the contract. As required, other data and supporting formats should be developed by the Contractor with concurrence from ISS Program Business Management Office.

DRDs shall be maintained electronically in the Contractor's own format, unless a specified format is defined in the DRD. The government may define specific DRD data format to support the utilization of this data in the Management Information System.

SUBMISSION INFORMATION

Wherever in the following DRDs under Block 10 "First Submission Date," or "Frequency of Submission," delivery is specified as at "SRR" or at any other program event, then delivery shall be required at the start or initialization of the event. Similarly when delivery is specified as a discrete amount of time before a program or project event (i.e., SRR minus 60 calendar days) then delivery will be required that discrete amount of time before the start of the program or project event. In addition, whenever delivery is specified as after an event, (i.e., SRR plus 30 calendar days) delivery should be required after the end of the event.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Configuration Management Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-CM-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>Use (Define need for, intended use of, and/or anticipated results of data) Describes the assignment of responsibility organizationally and the procedures used in accomplishment of the specific configuration management requirements as stated in the SOW and SSP 41170.</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) SOW 1.3 SSP 41170</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This Configuration Management plan defines the requirements, responsibilities, and procedures for the contractor’s CM system pursuant to SSP 41170, as it applies to this contract.

8b. CONTENT:

1. Management Organization (including reference documents)

Identification, Relationships and Integration of contractor’s proposed organization and its relationship to the configuration management function. Responsibility and authority for CM including roles in configuration control boards and technical reviews Interfaces between contractor’s CM organization and NASA, Subcontractors, and other contractor’s/contracts. Training plans.

2. Configuration Identification

Selection of CIs (Hardware, CSCIs, and firmware),
Establishment of the functional, allocated and product baselines,
Assignment and application of configuration identifiers including serial numbers, part numbers, lot codes, software and firmware identifiers.

3. Configuration Control

Establishment of internal configuration and contractual baselines,
Implementation of Internal and NASA configuration control,
Establishment of configuration control boards and processes,
Identification of processes to control changes, deviations, and waivers to program baselines (both class I and class II),
Subcontractor and vendor control,
Systems and tools.

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4. Configuration Status Accounting (CSA)

Hardware/Software Configuration Status Accounting processes and provisions for reports and/or access to CSA data.

Description and methods of processes and tools to provide:

Identification of current approved configuration documentation and configuration identifiers associated with each CI,

Status of proposed engineering changes from initiation to implementation

Waiver/deviation status and processing,

Results of configuration audits; status and disposition of discrepancies,

Traceability of changes and confirmation of change incorporation,

Methods of access to information,

Retention of historical data,

Systems and tools (including data elements).

5. Configuration Verification\Audits

Audit conduct, policies, procedures, documentation, access, and support.

Processes, plans, schedules for internal CM audits and subcontractor CM audits.

6. Data Management

Development, approval, release and submittal of configuration data/documentation (including drawings) in relation to program and contractual events (DRDs, technical reviews, FCA/PCA, Acceptance reviews, COFR, etc.).

Plan for subcontractor data management deliveries/control and access,

Establishment and operation of Engineering Release Unit and CM receipt desk, Document Quality Assurance process for Documentation control (i.e., DCNs), retention of historical data, systems and tools.

8c. FORMAT: Format supported by EDMS or successor equivalent system.

9. OPR: OH

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after Contract Award. Final due 75 calendar days after contract award.

Additional Submissions: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

11. MAINTENANCE: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

12. COPIES/DISTRIBUTION:

1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Contract Close-out Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-CO-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) Define contractor close-out activities and cost</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) Clause F.7</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This plan shall provide the details necessary to transition the contract to any follow-on contract and to close out the existing contract.

8b. CONTENT: The content of the deliverables shall include:

- (a) Implementation Strategy
- (b) Task description and schedule
- (c) Staffing profile
- (d) Cost Estimate

8c. FORMAT: Contractor's format is acceptable.

9. OPR: BG

10. FIRST SUBMISSION DATE: 1 year prior to end of contract

Frequency Of Submission: Once

Additional Submissions:

11. MAINTENANCE: This data delivery shall be maintained electronically by the contractor.

12. COPIES/DISTRIBUTION:

1 hard copy to BG/Contracting Officer

1 e-copy to Program Repository via EDMS workflow

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: SOW Evidence of Completion Matrix 1b. Data Type: 1	2. Date of Current Version JANUARY 15, 2010	3a. DRD No. C-CO-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide closure criteria for each paragraph of the Statement of Work			5. DRD Category Technical Administrative
6. References (SOW, Clause, etc.) Clause H.21		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The contractor shall provide a matrix defining completion criteria for each numbered paragraph of the statement of work.

CONTENT: This document shall identify the completion requirements for each numbered statement of work paragraph. Completion requirements shall be identified within the matrix in terms of products, events or time period. Paragraphs within the matrix will be categorized as I&O, DDT&E, OPD and/or Spares. Updates to the Evidence of Completion Matrix will be made in response to approved supplemental agreements compiled and submitted on an annual basis.

FORMAT: The specific format of the document (e.g. Microsoft Word, Excel, etc.) shall be mutually agreed to between the parties and shall be compatible with the Program authorized repository

9. OPR: BG

10. FIRST SUBMISSION DATE: March 30, 2011 for the baseline submission
 Frequency Of Submission: Baseline plus annually on the 1st of September
 Additional Submissions: None.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

Electronic copy: to a Program authorized repository (EDMS or equivalent)
 Contracting Officer/BG
 COTR/OA

13. REMARKS: None

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: New Hardware Interim Design Review Deliverables</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-EL-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) To support each new hardware design review process, the contractor shall deliver all products per expectation agreement.</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.) SOW 5.2</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: When the contractor is developing new hardware for the cargo contract, interim design reviews shall be held for the customer to review the hardware design. The design reviews shall be in accordance with the Interim Design Review Expectation Agreement.

8b. CONTENT:
Interim Design Review Expectation Agreement (NASA provided)
Design review package
Drawing
Analysis documentation
Mass property
Design models

8c. FORMAT:
The Data shall be delivered in the Subcontractor's format and sufficient for electronic delivery.

9. OPR: OB or OM

10. FIRST SUBMISSION DATE: The Interim Design Review Expectation Agreement is required 30 calendar days prior to new hardware design start-up. This agreement is only submitted once for the contract. The rest of the review products are due per the Interim Design Review Expectation Agreement.

Frequency Of Submission:
Additional Submissions:

11. MAINTENANCE: The updates of the products are per the Interim Design Review Expectation Agreement.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Environmental and Energy Consuming Product Compliance Reports 1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-EV-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>Use (Define need for, intended use of, and/or anticipated results of data) Used to complete JSC’s required annual report to NASA HQ on affirmative procurement, waste reduction, energy efficient product procurement, and ozone depleting substances.</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) Clause H.8</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

For Section I and III, where the Contractor does not purchase any designated product during the fiscal year, the report shall be a statement to that effect.

For Section IV, if the Contractor does not purchase, own, operate, maintain, or repair ODS equipment on-site, the report shall be a statement to that effect.

Fiscal year is the Federal Government fiscal year and is defined as October 1 through September 30.

I. Annual Affirmative Procurement Report

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information regarding the purchase by the Contractor (including subcontracts) of all products on the U. S. Environmental Protection Agency's Comprehensive Procurement Guideline list and items on the USDA Farm Bill Biobased list:

- a. The total amount of each item purchased during the previous fiscal year in dollars,
- b. The total amount of each listed item purchased during the previous fiscal year that contained at least the minimum recommended percentages of recycled content or biobased content during the fiscal year in dollars,
- c. The total amount of each listed item purchased during the previous fiscal year that contained some recycled content or biobased content but less than the minimum recommended percentages of recycled content or biobased content during the fiscal year in dollars,
- d. The number of waivers and the name of the item each waiver was requested for submitted to the Environmental Office during the previous fiscal year,
- e. The total amount purchased for each waived item during the previous fiscal year in dollars, and

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- f. A narrative explanation of constraints for purchasing each item that did not meet affirmative procurement or biobased content requirements during the previous fiscal year.

II.a Waste Reduction Activity Report

The Contractor shall track and report each January 15 to the JSC Environmental Office any new process improvements or programs undertaken by the Contractor (or subcontractors) that have contributed to waste reduction during the previous fiscal year. Waste reduction means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products. This may be done through recycling* or waste prevention**. *This may be accomplished through source reduction or by increasing reuse and recycling of items that would normally go to the landfill (trash).* The information will be included in JSC's annual report to NASA HQ on waste reduction activities. Limit responses to one page or less per item. The response should include a description of the activity, the materials or wastes reduced, an estimated volume or weight of reduction, and a contact name and phone number for a person knowledgeable about the reduction activity.

* Recycling means the series of activities, including collection, separation, and processing by which products or other materials are recovered from the solid waste stream for use in the forms of raw materials in the manufacture of products other than fuel for producing heat or power by combustion.

**Waste prevention means any change in the design, manufacturing, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they are discarded. Waste prevention also refers to the reuse of products or materials.

II.b For Construction/Facility Modification Contracts Only:

The Contractor shall track and report to the JSC Environmental Office the total weight in pounds of material sent to the landfill (this does not include shipments managed and paid for by the Environmental Office or their support contractor) and the total number of pounds of material recycled by media (scrap metal, wood, concrete, soil). The report is due within 30 days of completion of all waste generating and recycling activities or of final waste shipments associated with the project and in no case later than completion of the contract.

III. Annual Energy Efficiency Product Procurement Report

The Contractor shall report to the JSC Energy Manager, on January 15 of each year, information on purchases of energy consuming products made by the Contractor (including subcontracts) beginning upon contract start. This includes the purchase of premium efficiency motors and efficiency lighting covered by the Energy Policy Act of 2005. The report shall provide the following:

- a. A list of all energy consuming products purchased during the previous fiscal year.
- b. The total purchase cost of each item on the list.
- c. A designation of which items were Energy Star or Federal Energy Management Program (FEMP)-sanctioned.
- d. For each Energy Star or FEMP-sanctioned product purchased, provide:
 - i. The simple payback value as determined by the contractor's life cycle cost analysis.

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- ii. The annual savings in dollars and British Thermal Units (BTUs) due to the purchase of the item
- e. Metrics which show the effectiveness of the contractor's purchases
 - i. Percentage of purchased products that are Energy Star and FEMP-sanctioned against the total number of energy consuming products purchased.
 - ii. Total dollar value of the purchased products that are Energy Star and FEMP-sanctioned against the total dollar value of all energy consuming products purchased.

IV. Ozone Depleting Substances (ODS) Reports

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information for the previous fiscal year related to ODS equipment that the contractor purchases, owns, operates, maintains, or repairs on-site:

- a. A list of the names of all EPA-Certified service technicians employed and their certification dates
- b. A list of any ODS recovery/recycling equipment that will be used and copy of the 40 CFR 82.162 EPA registration
- c. A list of any refrigeration/air conditioning units with a full charge of more than 50 pounds, not previously reported, including
 - i. any identifying equipment numbers
 - ii. the location of the equipment (building/room)
 - iii. the owning organization or contract name and number
 - iv. a narrative description of the equipment.
 - v. refrigeration or air conditioning equipment with a full charge of > 50 pounds, permanently removed from service during the year.

9. OPR: See Paragraphs above

10. FIRST SUBMISSION DATE: See Paragraphs above

11. MAINTENANCE: See Paragraphs above

12. COPIES/DISTRIBUTION:

1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Export Control Plan (ECP)	2. Date of Current Version January 15, 2010	3a. DRD No. C-II-01	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2	4. Use (Define need for, intended use of, and/or anticipated results of data) Document the contractor's approach for export control.		5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.6 Clause H.15 and NFS 1852.225-70		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe all export control activities related to the performance of contract requirements.

8b. CONTENT: The contractor shall prepare and submit an Export Control Plan (ECP), describing the contractor's planned approach for accomplishing contract functions while adhering to export laws, regulations and directives.

8c. FORMAT: Contractor format is acceptable.

9. OPR: JA

10. FIRST SUBMISSION DATE: Draft Plan with in 30 calendar days after contract award. Final contractor approved Plan with in 120 calendar days after contract award.

Frequency Of Submission: Annually
Additional Submissions: As Requested

11. MAINTENANCE: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: The ECP Plan requires concurrence of the Center Export Administrator (CEA). The plan shall be submitted within 30 calendar days after contract start in draft form and revised to provide a final plan for approval within 120 calendar days after contract start. The plan shall be reviewed at least annually thereafter and updated as required.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Export Control Audit Results	2. Date of Current Version January 15, 2010	3a. DRD No. C-II-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide insight into the Contractor's Export Control processes			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.6 Clause H.15 and NFS 1852.225-70		7. Interrelationships (e.g., with other DRDs) N/A	

8. **PREPARATION INFORMATION:** The contractor shall prepare the data delivery as follows:

8a. **SCOPE:** Audits should include a thorough examination of all export control processes (as outlined in the Contractor's Export Control Plan) associated with this contract, areas for improvement (if any), and corrective action plans for identified areas of improvement. Affected subcontractors are required to do their own self-audits and report the results of the audit to NASA through the Cargo Mission Contract prime contractor. Prior to audit completion, inclusion on the audit process thru informal statuses to the JSC Export Services Team or Center Export Administrator is optional and might prove useful in the success of this effort.

8b. **CONTENT:**

- (a) Define your current audit processes
- (b) Document the export control processes audited and audit findings
- (c) Based on audit findings, the contractor/subcontractor shall include corrective action plans for any processes identified for improvements and notification when the correction of any non-conformances has been completed.

8c. **FORMAT:** a, b, c, and d must be submitted to the Center Export Administrator (CEA) at the end of each fiscal year for review and approval and be in an acceptable format (e.g. Microsoft Word, Excel, etc.) that is compatible with the Program authorized repository

9. **OPR:** JA

10. **FIRST SUBMISSION DATE:** September 30, 2011

Frequency Of Submission: annually, at the end of each fiscal year
Additional Submissions:

11. **MAINTENANCE:** The document shall be maintained electronically.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

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13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Information Technology (IT) Security Plan and Reports</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-IT-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) To meet IT security reporting requirements</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.) SOW 1.4, NPR 2810.1A, NPD 2810.1A, NFS 1852.204-76, FIPS-PUB-199, NIST SP 800-18, 800-30, 800-34, 800-37, 800-53, , SOP-0030C, , SOP-0040,</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The Contractor shall prepare the deliverable as follows:

SCOPE: This DRD applies to all internal and external Information Technology (IT) systems that are managed under this contract and those that contain or process NASA data or information.

CONTENT:

I. Internal Systems

- (a) The Contractor shall update and maintain Certification and Accreditation (C&A) packages and related documentation for ISS Program IT systems as per NPR 2810.1A, ITS-SOP-0030C and NIST 800-37. Major re-certifications of IT Systems requiring C&A occur every three years, and the Contractor must prepare for and support this activity to ensure successful system re-certification.
 - (1) The Contractor shall map types of ISS information and ISS Program IT systems to security categories as per NPR 2810.1A, , FIPS-PUB-199 and NIST 800-60 (Volumes 1 and 2).
 - (2) The Contractor shall update risk assessments for ISS Program IT systems as per NPR 2810.1A and NIST 800-30.
 - (3) The Contractor shall update and maintain a Security Plan and a Plan of Actions and Milestones (POA&M) for ISS Program IT systems as per NPR 2810.1A, and NIST 800-18 Rev 1, assessing security controls as per NIST 800-53.
 - (4) The Contractor shall perform periodic technical assessment, security testing and continuous monitoring of ISS Program IT systems as per NPR 2810.1A and NITR 2810-12.
 - (5) The Contractor shall perform disaster recover, contingency, and continuity of operations planning and testing for ISS Program IT systems as per NPR 2810.1A and NITR 2810-15. The planning and testing shall include support of Center severe-weather annual planning and testing.

II. External Systems

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FORMAT: As defined in NPR 2810.1A and the applicable NIST, NITR and ITS-SOP documents specified above.

9. OPR: OH/ISS Management Systems Office

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award

Frequency of Submission: As defined in NPR 2810.1A

Additional Submissions: As defined in NPR 2810.1A

11. MAINTENANCE: As defined in NPR 2810.1A

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management

Program Authorized Repository Upload Notification: OH/ISS Chief Information Officer

1 electronic copy: Program Authorized Repository

13. REMARKS: None.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: IT Management Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-IT-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) The IT Management Plan is required to manage IT activities within the CMC, to manage interfaces with other ISS Program users/customers and to manage interfaces with institutional IT providers.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.4		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The Contractor shall prepare the deliverable as follows:

SCOPE: The Contractor shall provide plans to coordinate and execute all technical and administrative tasks for all activities required to manage ISS Program IT resources and interface with other ISS Program and institutional IT providers.

CONTENT: The IT Management Plan shall be an umbrella document, which encompasses and integrates all IT management activities. As a minimum, the IT Management Plan shall cover:

- A. The significant policies and plans of all aspects of reportable IT.
- B. Levels of approvals.
- C. Flow of authority.
- D. External interfaces with the Government, other ISS Program Contractors, and institutional IT providers.
- E. The relationship between and integration of IT DRDs to the overall management of the IT content.
- F. IT Metrics will be partnered annually and shall include:

(a) LEVEL 1 METRICS: The Contractor shall calculate and report service delivery, productivity, system availability, problem identification/resolution, and customer satisfaction for each functional area on a monthly basis. The monthly reports shall be available to the government within 2 weeks following monthly closeout. The Contractor shall use the same information to create and report quarterly and annual roll-ups.

(b) LEVEL 2 METRICS: Contractor-specific metrics will augment or provide greater detail than Level 1 metrics and identify key areas of interest (such as the measurement of proactive, vendor-discovered, versus user-discovered, problems). These metrics will be specified by the Contractor and will be used to augment, validate, and ensure the completeness of the Level 1 metrics; however, regular reporting of Contractor-specific metrics to the Government is not required. These metrics shall also be used to ensure the impartiality, effectiveness, and

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consistency of the overall metric gathering and reporting process.

(c) **LEVEL 3 METRICS:** The Contractor shall create a set of metrics, comprised of the previously reported Level 1 and Contractor-specific metrics, which will allow for the evaluation of time-based trends. These metrics will illustrate IOSS service level trends over the previous three-month or greater period.

(d) **DAILY METRICS SUPPORT:** The Contractor shall provide identification of work closures on a daily basis and shall provide for online read access to the detailed information for the closed work for a limited number (not to exceed 5) of individuals identified by the Contracting Officer (CO). These individuals should be able to request online reports, formatted from the available parameters.

FORMAT: Contractor-supplied format, compatible with ISS document standards

9. **OPR:** OH/ISS Management Systems Office

10. **FIRST SUBMISSION DATE:** 30 calendar days after contract award

Frequency of Submission: Once

Additional Submissions: The IT Management Plan shall be updated as required to reflect significant changes that occur after its initial publication.

11. **MAINTENANCE:** The IT Management Plan shall be maintained electronically in the ISS EDMS (or equivalent).

12. **COPIES/DISTRIBUTION:**

Program Authorized Repository Upload Notification: OH2/Data Management

Program Authorized Repository Upload Notification: OH/ ISS Management Systems Office

1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Certification of Flight Readiness (CoFR) Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-MI-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide a management approach and implementation plan for Certification of Flight Readiness (CoFR) endorsement			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW 1.5 SSP 50108		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe the management approach and planned implementation methods for accomplishing the contractor's CoFR responsibilities and requirements of the contract.

8b. CONTENT: Address all contractor responsibilities for preparing the CoFR endorsement in accordance with SSP 50108. The Plan must address the relationship to NASA counterparts and the division of responsibility for the CoFR endorsement activities.

8c. FORMAT: Contractor format is acceptable

9. OPR: OC

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award.
Final/approved due 75 calendar days after contract award.

Review: Provide annual review and update as required. If there are no changes since the last update, the Contractor shall re-certify it's accuracy NLT 1 October of each fiscal year.

11. MAINTENANCE: Changes to the plan shall be incorporated as required by change page or complete reissue. Changes to Flight Readiness Status and Endorsements shall be made as required. The contractor shall maintain a historical file of Flight Readiness Status.

12. COPIES/DISTRIBUTION:

1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Cargo Integration Cargo CAD Models for Launch, Return and On-Orbit Configurations</p> <p>1b. Data Type: 2</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-MI-03</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) The CAD models will be used to insure the integrated assemblies are compatible with ISS visiting vehicles. The CAD models are used to assess clearances for both launch, return and on-orbit operations.</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.) SOW 3.2.4 and 5.4</p>		<p>7. Interrelationships (e.g., with other DRDs)</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Develop and deliver CAD models for the hardware within the scope of this SOW. Models of the hardware will be delivered to the USOS Acceptance and ISS Vehicle Sustaining Contractor. Best Available, As-designed models for planned construction are required and as-built models are required.

8b. CONTENT: CAD models should be 3-D CAD models sufficient detail that the external and internal geometry shows an accurate depiction of the hardware. Two levels of fidelity are expected.

Exterior CAD Models

A low fidelity model is required that shows all hardware external extrusions.

A high fidelity model that shows all hardware external extrusions is required which includes higher fidelity renderings of the following details (but are not limited to): docking aids, debris shields, cables, cable clamps, brackets, antennas, cameras, lights, targets, vents, handrails, EVA aids, sensors, thrusters, and element-to-element interface geometry. The models shall also include surface features that would prohibit the installation of any SVS target and surface features that would obstruct a camera's view of the SVS targets. Visible ORUs planned to be replaced on-orbit should be included in the model and partially visible ORUs that require a crewmember to replace should also be modeled as complete entities.

Launch and on-orbit configurations are required if the "as launched" hardware model is different than the on-orbit model. A description of which files to use for each configuration is required.

INTERIOR CAD MODELS

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Low fidelity CAD models of interior features are required that include the interior pressure shell, standoffs, hatches, stowage compartments, and view ports. Attach

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features for additional details such as vents; lights, and handrails are not specifically required, although models shall be complete with appropriate datum information such that additional details can be appropriately placed as they become available.

High fidelity CAD models of interior features are required that include the following details: internal pressure shell, standoffs, hatches, ports, stowage compartments, rack attachments, vents, lights, handrails, racks, seat track, and emergency equipment. All objects that deploy rotate or otherwise move shall be appropriately documented and modeled with location and limit parameters described.

8c. FORMAT:

Exterior CAD Models

Models shall be full scale in English (inches) units.

Models shall be constructed to nominal dimensions.

Models should be built with respect to element local coordinate system as defined by SSP 30219.

One of the following formats should be provided: CATIA, UG, Pro-E, JT or Microstation.

Translation: STEP AP203 neutral file format acceptable only if none of the above formats are available.

Solid Models Only—Models may be unparameterized “dumb solids” meaning tolerance data; model history, material properties, etc. need not be included. CATIA models must be solid-E.

Model parts should be individual entities and not fused together. This will allow CAD team to update the model based on hardware measurements. Assembly structure, part names and part numbers would be helpful. However, for controlling file size growth and having redundant geometry, all identical components (i.e., handrails, connectors, etc) will be nested in detail/ditto space/assemblies. For example if 20 identical handrails are used, only one detail is required and the rest should be in ditto space/assembly.

Description on movement limits for any articulating items should be included in the model/drawing.

As-designed and As-built (validated and final) models shall be validated to released engineering drawings. Drawings should also be located in the VMDB.

INTERIOR CAD MODELS

Models shall be full scale in English (inches) units.

Models shall be constructed to nominal dimensions.

Models should be built with respect to element local coordinate system as defined by SSP 30219.

Solid models only

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Models may be supplied in CATIA, UG, Pro-E, Parasolid, DGN, SLA, VMRL, JT or Microstation formats

Translation: STEP AP203 neutral file format acceptable only if none of the above formats are available.

Interior models shall be delivered either separate from exterior models, or as an appropriately documented assembly such that interior models can easily be separated leaving both interior and exterior features intact. If supplied as separate models, information to associate interior to exterior shall be provided.

Where interior subassemblies are supplied as separate models, sufficient documentation shall be provided to support correct geometrical integration of each subassembly into its larger interior element.

A model tree shall be provided which documents the element model assembly architecture as well as model and subassembly titles.

Supplied configuration data shall include: 1) Identification of the configuration baseline documented source including approved changes incorporated/not-incorporated, and 2) Configuration description data compared with previously delivered versions of the same models.

Model parts should be individual entities and not fused together.

Models and associated assembly trees and configuration data shall be delivered electronically via FTP site or as Compact Discs.

9. OPR: OM

10. FIRST SUBMISSION DATE:

Frequency of Submission: High fidelity best available CAD model required at L-21 months, Design Review 1 or Preliminary Design Review. (electronically accessible). High fidelity validated CAD model required at L-15 months, Design Review 2 or Critical Design Review (electronically accessible). High fidelity final CAD model required at L-6 months or Acceptance Data Package.

Additional Submissions: The drawings shall be submitted for all remaining flights through Assembly Complete according to agreed to template of best available model at L-21 months, validated model at L-15 and final model at L-6 month.

11. **MAINTENANCE:** Changes and/or updating of models shall be accomplished in accordance with the Contractor's engineering system and the provisions cited through Sustaining Engineering for the as-built configuration. Models must be maintained electronically.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

13. **REMARKS:**

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: ISS Vehicle Engineering Data 1b. Data Type: 3</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-MI-04</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) To describe the overall data requirements to be delivered to the VMDB.</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.) SOW paragraph 5.3</p>		<p>7. Interrelationships (e.g., with other DRDs) DRD C-MI-05 and DRD C-SA-06</p>	

8. **PREPARATION INFORMATION:** The contractor shall prepare the data delivery as follows:

8a. **SCOPE:** This DRD encompasses the capture, storage, loading, integration, sustaining and configuration management of Vehicle engineering data and GFD that will reside in the Vehicle Master Database (VMDB) (a Government Furnished Database).

GFD providers shall be IPs (reference BDEALS) and the manufacturers of GFE. This DR is not intended to generate any data not required in the Statement of Work or other DRDs.

8b. **CONTENT:**

1) The ISS Vehicle, as defined by SSP 41000, System Specification for the International Space Station, and modified by latest revision, engineering and safety Data shall include:

(a) Configuration Data

- Drawings and schematics
- Master Equipment List (MEL) (Indentured Parts List [IPL])
- Identification of as-built configuration (SSAV)

(b) Resource Data

- Mass Properties (weight and c.g.)
- Power and Thermal

(c) Assembly Data

- Assembly Sequence
- Traffic Model

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- (d) Performance and Characteristics Data (Space Station Operations Data Book [SSODB]).
- Constraints and Operational Limits, Design Limits, Hardware Characteristics for the operating envelope
- (e) Electromagnetic and Environment Interference
- (f) Safety and Mission Assurance
- Safety Hazards
- (g) Parts Selection and Control
- Electrical, Electronic, and Electromechanic.
- (h) Component Electrical Power and Thermal Consumption during steady-state, standby, startup, and peak operations
- 2) The GFD engineering and safety data shall include applicable items of:
- (a) Configuration Data
- Drawings and schematics
 - Master Equipment List (MEL)(IPL)
 - Identification of as-built configuration (SSAV)
- (b) Resource Data
- Mass Properties (weight and c.g.)
 - Power and Thermal
- (c) Safety and Mission Assurance
- Safety Hazards
- (d) Electrical Power and Thermal Consumption

8c. FORMAT: Data shall be stored, managed and controlled in VMDB electronic format. The data inventory shall be electronically generated and available as a report from the VMDB. Copy of all GFD hard copy data received for conversion into electronic format shall be retained in EDM provided storage.

9. OPR: OH2, Management Systems Office

10. FIRST SUBMISSION DATE: Data set and inventory updates - Provide data as mutually established by NASA and Contractor.

Frequency Of Submission:

Additional Submissions:

11. MAINTENANCE: The DR shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

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13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Engineering Drawings and Associated Lists</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-MI-05</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>1b. Data Type: 3</p> <p>4. Use (Define need for, intended use of, and/or anticipated results of data) Provide the design data used to manufacture, install, verify, operate, and maintain the products of this contract.</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.)</p> <ul style="list-style-type: none"> a. SOW 3.2.3, 5.3 b. ASME Y14.34M, Drawings, Engineering and Associated Lists c. ASME Y14.100, Engineering Drawing Practices d. MIL-PRF-28002C, Requirements for Raster Graphics Representation in Binary Format e. IEEE/ASTM SI 10-2002, American National Standard for Use of the International System of Units (SI): The Modern Metric System f. SSP 30695 Space Station Quality Assurance Acceptance Data Package Requirements Specification g. Mil-STD-100M, Department of defense standard practice for engineering drawings 		<p>7. Interrelationships (e.g., with other DRDs)</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This DR establishes the content, format, control, delivery requirements and post delivery maintenance of drawings, schematics, and associated lists prepared by the contractors and/or obtained from subcontractors/vendors for products of this contract. Subcontractor/vendor drawings, describing items classified as minor procurements or limited development items, which were not developed on CAD systems, are exempt from the electronic transmission and database requirements herein. These drawings shall be accepted by the Prime Contractor and converted to an electronic format using a file format consistent with the requirements in format paragraph for delivery under this DRD.

8b. CONTENT: Raster Images are to be Group 4 raster images, prepared per MIL-PRF-28002C and applicable documents. The format and quality verification requirements for Raster images of engineering drawing and related documents shall be in conformance with MIL-PRF-28002C, section 6.4.5 (Ordering Data). Ordering data to be used for the interchange of engineering drawings and associated document images are as follows:

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1. The basic requirements for interchange of raster image of engineering drawings and related documents shall be in accordance with Military Specification, Requirements for Raster Graphics Representation in Binary Format, MIL-PRF-28002C.
2. The type of raster graphics being procured is Type 1 (untiled).
3. The delivery medium to be used shall be either by magnetic or an electronic transmission, as determined by the Product Group and Tier 1 Subcontractor organizations involved in the interchange.
4. Proper viewing orientation shall be based on a pixel element path direction of 0 degrees and a line progression direction of 270 degrees, as defined in section 6.4.6, and shown in Figures 1 and 2 of MIL-PRF-28002C.
5. Raster image pixel element spacing shall be 200 dots per inch (dpi) minimum.
6. No over-scanning is required beyond the drawing sizes listed in section 6.4.2; however, over-scanning is encouraged to capture ancillary information that is placed outside the border, such as CAD file name or plot date.
7. Bit ordering shall be MSB to LSB (most significant bit to least significant bit).
8. Coding of background and foreground information. To the extent that a drawing represents lines on paper, the pixel elements representing lines shall be coded as "black" and those pixel elements representing the paper background shall be coded as "white". This coding convention shall hold, regardless of the colors used for display on any particular device, and regardless of the coding as "0" or "1" on any particular system. In this way, white pixel elements (paper) may be processed as background, and black pixel elements (lines) may be processed as foreground.

NOTE: The preceding definition of the convention for coding background and foreground has been provided because a choice of convention has not been defined in MIL-PRF-28002C or CCITT Recommendation T.6. This convention is needed to support processing of drawing images without human interpretation.

8c. FORMAT: Delivery to NASA of drawings and associated lists will be made electronically, to the NASA server bundled into a ". zip" or a ". tar" file, as mutually agreed to by the NASA and Contractor organizations involved in the interchange and consistent with the specific requirements discussed below.

Delivery of drawing, and associated list files will be electronic. The file formats and structures of drawing delivery packages are defined in the attachment.

Drawing deliveries will be in one of the following formats as mutually agreed to between the Prime Contractor and NASA: Raster image format, HPGL plot files, PDF files, or Printerleaf files. "A" size (8.5x11) book form drawings may be delivered in an electronic format other than raster image

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(including PDF files) as mutually agreed to by the NASA and Contractor organizations involved in the interchange.

Other associated lists, including engineering parts list, shall be delivered in one of the following formats as mutually agreed to between the Contractor and NASA: ASCII text files, MS Excel files, HPGL plot files, Printerleaf files, PDF files, or raster image format.

a. Engineering flight drawings shall be in accordance with the intent of ASME Y14.100-2000 (Exceptions to this below). For inseparable, integral items which require no intermediate maintenance activities upon installation and operation, specification of part marking and identification requirements in all applicable product drawings may be considered optional.

Exception:

ASME Y14.100 Engineering Drawing Practices, Section D-9.9 Transferring Design Responsibility to Another Activity.

b. Drawings for Ground Support Equipment (GSE), Functionally Equivalent Units, and Facility Outfitting shall be in accordance with the intent of ASME Y14.34M-1996, Level 2 characteristics, ASME Y14.100-2000, and the specific tailoring shall be as defined by a Product Group-prepared and Prime Contractor-approved GSE/TSE Tailoring Document submitted and maintained under the associated SDRL. Regardless of tailoring, the following requirements shall be met:

Drawings will be provided to the lowest level of assembly subject to replacement during maintenance. Existing drawing or catalog data may be provided for items incorporated without alteration into GSE design.

Processes shall be referenced to military specifications, described in the drawings, or when referenced to company standards, the standards shall be provided as part of the drawing package delivered per this DR.

ANSI standards shall be used for dimensions and tolerance.

Acceptance test requirements shall be identified for replaceable functional components.

Cable diagrams for the GSE unit shall be provided. Connector reference numbers including commercial-off-the-shelf (COTS) receptacles shall be shown. Identify COTS connectors by the vendor's part number, cage code (if available) and manufacturer's name and address.

c. Drawings for Facility Outfitting (Software Verification Facility, SVF) shall be in accordance with the intent of ASME Y14.34M-1996 (Level 1 classification) and ASME Y14.100-2000.

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- d. All design activities shall use the methods designated in IEEE/ASTM SI 10-2002 to convert dimensional units from one system (SI or English) to another, where required for interfaces with International Partners.
- e. All design activities shall use the U.S. convention on third-angle projection in depicting views on drawings.
- f. Where design activity material or process specification numbers are called out, the equivalent Government or industry specification numbers shall accompany them wherever a Government or industry specification is applicable.
- g. Engineering parts list, bill of materials, and note format shall be consistent with ASME Y14.100 and delivered in ASCII format, Raster Image or Printerleaf with each drawing.
- h. Electronic formats shall provide for magnetic, optical media, or electronic transmission exchanges between the Product Group and Prime Contractor computer systems.
- Delivery of drawings, and associated list files will be electronic. The file formats and structures of drawing delivery packages are defined in the C-MI-05 _Attachment.
- Drawing deliveries will be in one of the following formats as mutually agreed to between the Product Group and the Prime Contractor: Raster image format, HPGL plot files, PDF files, or Printerleaf files.
- Other associated lists shall be delivered in one of the following formats as mutually agreed to between the Product Group and the Prime Contractor: ASCII text files, HPGL plot files, Printerleaf files, MS Excel files, PDF files, or raster image format.
- i. See the attachment (C-MI-05 Attachment) that describes the formats for the Headers, Content and Packaging requirements for delivering engineering drawings.

9. OPR: OM or OB**10. FIRST SUBMISSION DATE:**

Frequency Of Submission: Available for major design reviews with electronic data delivery to the Vehicle Master Data Base (VMDB). Drawing delivery provide for each applicable Acceptance Data Packages. CAGE Codes for drawings on the CMC will not be updated until the drawings are required to be updated for technical reasons.

Additional Submissions: The drawings shall be submitted through the end of contract period of performance.

11. MAINTENANCE: The document shall be maintained electronically.

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Changes and/or updating of drawings and list shall be accomplished in accordance with the Contractor's engineering system and the provisions of the cited applicable documents. Drawings shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: See C-MI-05 Attachment that describes the formats for the Headers, Content and Packaging requirements for delivering engineering drawings.

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C-MI-05 Attachment

1.0 INTRODUCTION

This attachment defines the specific requirements for the delivery of engineering drawings and associated lists.

1.1 HOW TO USE THIS ATTACHMENT

This attachment will specify the format in which engineering drawings and associated lists are to be delivered by the contractor. Contractor will deliver as described in this attachment.

	See Section
Drawings	2.1
Change Documents	2.2
Parts Lists	2.3
Other Associated Lists	2.4

1.2 APPLICABLE DOCUMENTS

The following specifications are referenced in this document:

MIL-PRF-28002C, Requirements for Raster Graphics Representations in Binary Formats

MIL-STD-1840A, Automated Interchange of Technical Information

ASME Y14-100-2000*, Engineering Drawings Practices

ASME Y14.34*, Associated List

MIL-STD-100G, Engineering Drawing Practices

HP RTL, Reference Guide (Copyright 1994)

Note: *Drawings on the previous contract were governed by DOD-STD-100C and MIL-D-1000B, but these references have been retired and ASME Y14.100-2000 and ASME Y14.34 are the equivalent documents. The policy of the DoD is to utilize to the maximum degree possible those non-Government standards which satisfy the needs of the military. Accordingly, the MIL-STD-100 is revised periodically to take advantage of those non-Government standards which meet the DoD criterion for technical sufficiency. Similarly, and in keeping with the DoD practice of adopting non-Government standards whenever practicable, Chapters 600 and 700, as contained in previous versions of MIL-STD-100, have been entirely replaced by ASME Y14.35M and ASME Y14.34M respectively, and Chapter 200 is largely based on ASME Y14.24M. An accurate perception of DoD Engineering Drawing Practices therefore necessitates user recognition of MIL-STD-100G, ASME Y14.24M, ASME Y14.34M, ASME Y14.35M, and ASME Y14.100M as being a composite set.

1.3 GLOSSARY OF TERMS

ASCII [American Standard Code for Informational Interchange]
The predominant character set encoding of present day computers. The code includes the 128 upper and lower letters, numerals, and special characters, each encoded in a unique 7 or 8-bit binary number.

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ASCII	Text A subset of ASCII, common to virtually all computer devices, consisting principally of printable characters.
CAGE	[Corporate And Government Entity] The code used to uniquely identify a manufacturer. The CAGE code acronym has replaced former acronym FSCM (Federal Supply Code for Manufacturers).
CCITT	[International Consultative Committee on Telegraphy and Telephony]
Delivery	A delivery, or drawing delivery, is a complete delivery made in accordance with F-PC05. This includes all of the drawings, change documentation, parts lists, associated lists, declaration files, and packaging files for the delivery. A delivery is made-up of multiple drawing packages and packaging files.
HPGL	[Hewlett-Packard Graphics Language] A widely used computer language for communicating with printers and plotters.
ISS Package	[International Space Station] Packages, or drawing packages, are the collection of files that relate specifically to a single drawing. This includes the drawing itself, change documentation, parts lists, associated lists, and declaration files specific to that drawing.
Pixels	Physical picture elements.
PDF	PDF (Portable Document Format) is a universal file format that preserves the fonts, images, graphics, and layout of any source document, regardless of the application and platform used to create it. Adobe PDF files are compact and complete, and can be shared, viewed, and printed by anyone with Adobe Reader software.
Raster	The closely spaced parallel lines produced on a display device. An image is formed by modulating the intensity of the individual pixels. A binary representation, "raster form," of the pixels can be used to digitally represent an image.
Raster Graphics	The presentation or storage of images in raster form.

2.0 DOCUMENTS

This section describes the formats that are to be delivered by the product group. In the tables Describing format, Header refers to the section of this document, which defines the relevant headers for this file format, Content refers to the section of this document, which describes the

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content of this format, and Packaging refers to the section of this document that describes the methods required to package.

2.1 DRAWINGS

Drawing images are to be delivered in one of the following formats, as directed by the SDS

TABLE 2.1-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE_Dwg_CL_DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE_Dwg_CL.IPL
HPGL	3.3	4.4	5.1	CAGE Dwg CL DSI.HPL
PDF	3.6	4.7	5.1	CAGE Dwg CL DSI.PDF

The dstdocid defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 2.1-2

Code	Description	Length (max)	Example(s)
CAGE:	Contractor CAGE Code	6 char	018355
Dwg:	Drawing number	40 char/digits	1F12345
CL: ¹	Change Letter	Up to 10 char as req’d	–, A, AY, A01
DSI: ²	Drawing Sheet Identifier	7 digits/underscore	002_015

¹ Up to 10 characters; initial (first) release shall be indicated by a single dash (“-”). ‘NEW’, ‘N/C’, ‘N/A’, or any other designation is not acceptable for an initial release. Each sheet should be marked with its current revision letter.

² First three digits indicate current sheet number; last three digits indicate total number of sheets for the drawing.

For example, a raster image of the third page (of six) of Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_1F12345_A_003_006.IMG”.

For example, a raster image scanned from a MIL-Std-1840 Condition 4 Aperture Card

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for pages 5 through 8 (of 16 pages total) of a Boeing-Huntington Beach drawing 1F12345, "A" change letter would have the dstdocid of: "018355_1F12345_A_005_016.IMG".

A printerleaf document of the same drawing (all sheets are present in a single printerleaf file) would have the dstdocid: "018355_1F12345_A.IPL".

An Acrobat PDF document of the same drawing would have the dstdocid: "018355_1F12345_A_003_006.PDF."

2.2 CHANGE DOCUMENTS

The change document, otherwise known as: Engineering Order (EO), Engineering Change Notices (ECN), Advanced Design Change Notices (ADCN) (unincorporated), or any other document used to describe the type and scope of changes that differentiate the current drawing from its previous revision. If this information is on the face of the drawing, no separate document need be delivered. The change document must contain: the drawing number affected, change letter, the part number affected, description of change, next assembly part number, and effectivity. Change documents are to be delivered in one of the following formats, as directed by the DRD.

TABLE 2.2-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .IMG
Printerleaf	3.4	4.5	5.1	<i>CAGE_EO_Dwg_CL</i> .IPL
HPGL	3.3	4.4	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .HPL
ASCII Text	3.1	4.1	5.1	<i>CAGE_EO_Dwg_CL</i> .LIS
PDF	3.6	4.7	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .PDF

Note: Where Dwg this can be either the drawing number or the EO/CR number.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore ("_") as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined in Table 2.1-2.

For example, a raster image of the third page (of six) of the EO for Boeing-Huntington Beach drawing 1F12345, "A" change letter would have the dstdocid of: "018355_EO_1F12345_A_003_006.IMG".

A printerleaf document of the same drawing EO (All sheets are present in a single printerleaf file) would have the dstdocid: "018355_EO_1F12345_A.IPL".

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An Adobe PDF document of the same drawing EO would have the dstdocid of:
“018355_EO_1F12345_A_003_006.PDF.”

2.3 PARTS LISTS

The Parts Lists can be delivered as part of a Raster Image, Printerleaf file, MS Excel spreadsheet or file or as an ASCII file. If delivered in ASCII, the file shall be identified by Drawing Number and Change Letter. The Parts List shall contain, as a minimum, the following data elements for each constituent material: Material Code, description, quantity, and unit of measure. The Parts List shall contain, as a minimum, the following data elements for each component part: Part Number, quantity, description, and vendor CAGE Code (if purchased). Parts lists are to be delivered in the following formats defined in Table 2.3–1.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table.. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 2.3–1

Format	Header	Format	Packaging	Dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE PL Dwg CL DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE_PL_Dwg_CL.IPL
HPGL	3.3	4.4	5.1	CAGE PL Dwg CL DSI.HPL
ASCII Text	3.1	4.1	5.1	CAGE PL Dwg CL.LIS
MS Excel	3.5	4.6	5.1	CAGE_PL_Dwg_CL.XLS
PDF	3.6	4.7	5.1	CAGE_PL_Dwg_CL_DSI.PDF

For example, as ASCII text PL for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_PL_1F12345_A.LIS”.

An Adobe PDF document of the same drawing PL would have the dstdocid of:
“018355_PL_1F12345_A_003_006.PDF.”

2.3.1 DELIVERY OF PARTS LISTS ONLY

2.3.1.1 NAMING CONVENTION FOR DATASETS

The naming convention for the dataset of a Parts List only delivery shall be 3a768_PL_YYYYMMDD.tar or .zip (where YYYYMMDD shall be the year, month and day). For Boeing Huntsville’s subcontractor PL only deliveries you would add an “s” after the date such as 3a768_PL_YYYYMMDDs.tar or .zip.

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NAMING CONVENTION FOR ASCII MAP FILE

The naming convention for the ASCII Map File shall be 3a768_PL-Number_-.TXT. (Note: Where PL-Number_- is the PL number and the Revision Letter or a dash.) For example an ASCII map file for the PL for drawing 9008477 would be 3A768_PL9008477_-A.TXT. Each PL can be mapped to only one drawing.

2.3.1.3 ATTACHMENT FILE

Please note the order in which the file names appear within each Parts List package; first the Parts List Declaration File, then the ASCII map file, Parts List files.

Each record shall be a maximum of 80 characters in lengthy, un-padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

10 20 30 40 50 60 70

123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789

- 3A768_20020929.DF
- 3A768_20020929.LET
- 3A768_20020929.ATT
- 3A768_DF_PL9008477_A.LIS
- 3A768_PL9008477_A.TXT
- 3A768_PL_PL9008477_A_001_001.IMG
- 3A768_DF_PL1J01512_-.LIS
- 3A768_PL1J01512_-.TXT
- 3A768_PL_PL1J01512_-_001_002.IMG
- 3A768_PL_PL1J01512_-_002_002.IMG

2.4 OTHER ASSOCIATED LISTS

Other Associated Lists (AL), those documents which are a part of the drawing package and are not otherwise defined in this document, are to be delivered in the following formats as described in Table 2.1-1, or as directed by the DRD.

Other Associated Lists (AL) must reference: the drawing number, change letter, and the part number (if applicable) of its parent drawing.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

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TABLE 2.4-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE_AL_Dwg_CL_DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE AL Dwg CL.IPL
HPGL	3.3	4.4	5.1	CAGE_AL_Dwg_CL_DSI.HPL
ASCII Text	3.1	4.1	5.1	CAGE AL Dwg CL.LIS
PDF	3.6	4.7	5.1	CAGE_AL_Dwg_CL_DSI.PDF

Note: Where Dwg this can be either the drawing number or the AL number.

For example, a raster image of the third page (of six) of the AL for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_AL_1F12345_A_003_006.IMG”.

A printerleaf document of the same drawing AL (All sheets are present in a single printerleaf file) would have the dstdocid: “018355_AL_1F12345_A.IPL”.

An Adobe PDF document of the same drawing AL would have the dstdocid of: “018355_AL_1F12345_A_003_006.PDF.”

3.0 FILE HEADERS

The file headers for drawing delivery files are detailed in this section. File names, types and content for those files used in the delivery of the drawing package are detailed in section 5.0.

3.1 ASCII TEXT FILE HEADER

Reference: MIL-STD-1840A, Paragraph 5.1.4.1

All text files share the same common file header structure.

Example:

```

10    20    30    40    50    60    70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 1234567890

```

srcdocid: 1F02676_A.PL

dstdocid: 018355_PL_1F02676_A.LIS

txtfilid: AW

doccls: Unclass

notes:

Notes: srododid: Original name of file (if none, use name in dstdocid)

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dstdocid: Destination Document ID as defined in sections 2.1–2.5
 txtfilid: Use as directed in the content description of the text file
 doccls: Use as shown
 notes: Use as shown, unless directed otherwise.

3.2 RASTER FILE HEADER

All MIL-PRF-28002(C) raster files share a common header structure. The following information is provided to clarify the values these fields should take for this application. The raster image files are set up so that the first 2048 bytes contain the header information in ASCII code and the residual bytes containing the image data are encoded in raster CCITT Group 4 code. The first 2048 bytes shall be written with 128 byte ANSI type F fixed-length records using ASCII data. The area provided for data in a given record can be computed by subtracting the length of the record tag (the field name with a colon and space at the end, i.e.; “notes:”) from 128. The notes field in the header can store 121 characters of test (128–7).

Rec	Name	Contents
1	srcdocid	Filename used to uniquely identify this drawing in senders system (80 characters of data max.)
2	dstdocid	Destination Document ID as defined in sections 2.1–2.5
3	txtfilid	The text literal “None”
4	figid	The text literal “None”
5	srcgph	The text literal “None”
6	doccls	The text literal “Unclass”
7	rtype	The text literal “1”, describing a type 1 raster per MIL-PRF-28002C ÁÁÁÁ
8	rorient	Two three digit, zero padded character, strings separated by a comma, specifying the integer pel path and line progression, i.e., “000,270:
9	rpelcnt	Two six digit, zero padded character strings separated by a comma, specifying the integer pel count, i.e.; “040800,052800”
10	rdensty	The text literal “0200”, specifying a raster density of 200dpi
11	notes	Free test

Example: The first 90 characters of the first 3 records:

```

10  20  30  40  50  60  70  80
123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789
123456789
srcdocid: DL1F12345 18355 A 000100001U EHN 002
    
```

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dstdocid: 018355_1F12345_A_001_006.IMG
txtfilid: None
figid: None
srcgph: None
doccls: Unclass
rtype: 1
rorient: 000,270
rpelcnt: 040800,052800
rdensty: 0200
Notes: None

3.3 HEWLETT PACKARD GRAPHIC LANGUAGE FILE HEADER

Hewlett Packard Graphic Language (HPGL) files do not support file headers

3.4 PRINTERLEAF FILE HEADER

Do not alter the Printerleaf file headers.

3.5 MS EXCEL FILE HEADER

MS Excel does not require a header.

3.6 **Adobe Acrobat PDF FILE HEADER**

Do not alter the PDF file headers.

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4.0 DATA FILE FORMAT

The file formats for drawing delivery files are detailed in this section. File names, types, and content for those files used in the delivery of the drawing package are detailed in section 5.0.

4.1 ASCII DATA FILE FORMAT

Files shall be 80 (Portrait) or 132 (Landscape) characters wide, blank padded, followed by a Carriage Return Line Feed (CRLF) [ASCII 13 followed by ASCII 10] terminator. Only 7 bit ASCII characters shall be used in ASCII data files

4.2 DRAWING INFORMATION FILE FORMAT

The drawing information file is an ASCII text file contained variable length records, terminated by a CRLF [ASCII 13 followed by ASCII 10] sequence. See section 2.4 for specific formatting requirements relating to the content of the document.

4.3 RASTER IMAGE FILE FORMAT

Raster images are to be Group 4 raster images, prepared per MIL-PRF-28002C and applicable documents. The format and quality verification requirements for Raster images of engineering drawings and related documents shall be in conformance with MIL-PRF-28002C, section 6.4.5 (Ordering Data). Ordering data to be used for the interchange of engineering drawing and associated document images are as follows:

- a. The basic requirements for interchange of raster image of engineering drawings and related documents shall be in accordance with Military Specification, Requirements for Raster Graphics Representation in Binary Format, MIL-PRF-28002C.
- b. The type of raster graphics being procured is Type 1 (untiled).
- c. The delivery medium to be used shall be either by magnetic or an electronic transmission, as determined by the organizations involved in the interchange.
- d. Proper viewing orientation for single page per raster fin engineering documents shall be based on a pel path direction of 0 degrees and a line progression direction of 270 degrees, as defined in section 6.4.6, and shown in Figures 1 and 2 of MIL-PRF-28002C. Multi sheet per raster file engineering documents (i.e., documents scanned from MIL-STD-1840 condition 4 aperture cars) may use one of the other sets of values defined in section 6.4.6 and shown in Figures 1 and 2 of MIL-PRF-28002C, if said values represent the normal viewing orientation.
- e. Raster image pel (pixel element) spacing shall be 200 dpi (dots per inch) minimum.
- f. No overscanning is required beyond the drawing sizes listed in section 6.4.2; however, overscanning is encouraged to capture ancillary information that is placed outside the border, such as CAD file name or plot date.
- g. Bit ordering shall be MSB to LSB (most significant bit to least significant bit).
- h. Coding of background and foreground information. To the extent that a drawing represents lines on paper, the picture elements (pels) representing lines shall be coded as "black" and those pels representing the paper background shall be coded as "white". This coding convention shall hold, regardless of the colors used for display on any particular device, and regardless of the coding as "0" or "1" on any particular system. In this way, white pels (paper) may be processed as background, and black pels (lines) may be processed as foreground.

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NOTE: The preceding definition of the convention for coding background and foreground has been provided because a choice of convention has not been defined in MIL-PRF-28002C or CCITT Recommendation T.6. This convention is needed to support processing of drawing images without human interpretation.

4.4 HEWLETT PACKARD GRAPHIC LANGUAGE DATA FILE FORMAT

Hewlett Packard Graphic Language (HPGL) files are to be compliant with HPGL/2 as defined in "The HP-GL/2 and HP RTL Reference Guide [A Handbook for Program Developers]", Hewlett Packard, 1994. (HP part number 5959-9733).

4.5 PRINTERLEAF DATA FILE FORMAT

Printerleaf files shall be compatible with those produced by Interleaf version 5.x.

4.6 MS EXCEL DATA FILE FORMAT

Ms excel files shall be compatible with Windows 97, 2000 or any succeeding version.

4.7 Adobe Acrobat PDF FILE FORMAT

Adobe Acrobat PDF files shall be compatible with Adobe Acrobat Reader version 4.0 or higher.

5.0 PACKAGING OF DOCUMENTS FOR DELIVERY

This section details file names, types, and content for those files used in the delivery of drawing packages. Regardless of the methods and formats used, each drawing package must be complete within a submittal when delivered.

Drawings packages split across submittals or incomplete drawing packages will not be accepted. All pages belonging to a multiple-page drawing must be accounted for and included within the drawing submittal and must be delivered in the same submittal

The Drawing Declaration file must include all images files, change document files, associated lists, and parts list files submitted electronically.

Copies of the transmittal letter (5.1.2) and its attachment (5.1.3) are to accompany the electronic portion of the delivery.

5.1 PACKAGING OF ELECTRONIC DOCUMENTS FOR DELIVERY

This section details file names, types, and content for those files used in the delivery of electronic documents in drawing packages. A delivery package consists of one delivery declaration file, one transmittal letter, one attachment file, and one or more drawing packages. Each drawing package may contain from one to 999 drawings and be organized as follows:

Delivery Declaration file

Transmittal Letter

Attachment (Electronic)

Drawing declaration file #1

One or more data files

Drawing declaration file #2

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One or more data files

5.1.1 DELIVERY DECLARATION FILES

The delivery declaration file is an ASCII file, providing information about the source, destination of the delivery as a whole and specifically the transmittal letter and its attachment.

The destination document ID (dstdocid) for the delivery declaration file shall be a concatenation of the Contractor's six digit CAGE code, an underscore ("_"), the date of the delivery package's transmittal in the format YYYYMMDD, and the extension ".DF". For example, the dstdocid for a transmittal made on 17 March, 2002 by Boeing-Huntington Beach would be: "018355_20020317.DF". The file name of the delivery declaration file is to be the file's destination document ID (dstdocid).

The Delivery Declaration File contains 15 records. Each record shall be 80 characters in length, blank padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator. Use the format in the example below. Clarification of data fields is provided in the notes after the example. Where "None" or "Unclass" appears, use as shown. Each line in this file consists of a code starting in column 1, followed by a colon, followed by a space, followed by a data field pertinent to the delivery package. These codes are defined in MIL-STD-1840A.

The example below shows the formatting of a typical line srcdocid: "XMIT20020228".

Example of Delivery Declaration File (Do not include ruler):

```

10   20   30   40   50   60   70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 1234567890

```

```

srcsys: Boeing-Huntington Beach 5301 Bolsa Ave, HB CA 92647
srcdocid: XMIT20020123
srcrelid: NONE
chglvl: 20020123
dteisu: 20020123
dstsys: The Boeing Company: 13100 Space Center Blvd, Houston, TX 77059
dstdocid: 18355_20020123.DF
dstrelid: NONE
dtetrn: 20020123
dlvacc: F-PC-05
filent: T3
ttlcls: Unclass
doccls: Unclass
doctyp: NONE
docttl: NONE

```

Notes:

```

srcsys:      Name and address of subcontractor
srcdocid:    Name of Transmittal Letter file on source system

```


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chglvl: Date of original document formatted YYYYMMDD
 dteisu: Date of issue of the latest change to this document
 dstsys: Name and address of receiving system
 dstdocid: Destination document ID as defined above
 dtetrn: Date of transmission or mailing date formatted YYYYMMDD
 dl vacc: Contract – use as shown
 filcnt: Number of files – use as shown.

5.1.2 TRANSMITTAL LETTER

The transmittal letter is an ASCII text document with no header. The file name and destination document ID (for use in the attachment) for the transmittal letter shall be a concatenation of the subcontractor's six-digit CAGE code, an underscore ("_"), the date of the delivery package's transmittal in the format YYYYMMDD and the extension ".LET". Please note that with the exception of the extension, the file names of the transmittal letter and the delivery declaration file are identical. For example the dstdocid for a transmittal made on 17 March, 2002 by Boeing-Huntington Beach would be "018355_20020317.LET".

Use the template below for the format of the Transmittal Letter. Note that it is not a formal contract letter. Formal contract transmittal letters are to be sent by contract administrator.

10 20 30 40 50 60 70
 123456789 193456789 123456789 123456789 123456789 123456789 123456789 1934567890

Date: 23-Jan-02

Subject: Space Station Data submittal

1. This is an electronic transmittal of Your Company Name Here drawings enumerated on the enclosed attachment
2. Distribution of the electronic drawing information has been sent to the computer database system at **Computer DescriptionHere** on January 23, 2002.
3. The number of drawing(s) transmitted: 3
4. A formal contract transmittal letter will follow under separate cover.

Each record shall be 80 characters in length, blank padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

5.1.3 ATTACHMENT

The attachment lists all of the destination document IDs for all of the files in a delivery package. The files are the Delivery Declaration File, the Transmittal Letter, the Attachment, and the filenames in each drawing package. The destination document ID for the attachment shall be a concatenation of the subcontractor's six digit CAGE code, an underscore ("_"), the date of the delivery package's transmittal in the format YYYYMMDD and the extension ".ATT".

Please note the order in which the file names appear within each drawing package; first the Drawing Declaration File, then the image file(s), Change Document files, Parts List files, and any other associated lists. Note also that the drawing title follows only the first image file for each drawing number.

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Each record shall be a maximum of 80 characters in length, un-padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

10 20 30 40 50 60 70

123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789

018355_20020123.DF
 018355_20020123.LET
 018355_20020123.ATT
 018355_DF_1F04087_B.LIS
 018355_1F04087_B_001_003.IMG FRAME ASSY, SLING-FLIGHT ELEMENT
 018355_1F04087_B_002_003.IMG
 018355_1F04087_B_003_003.IMG
 018355_EO_993344_-.LIS
 018355_PL_1F04087_B.LIS
 018355_DF_1F65085_-.LIS
 018355_1F65085_-_001_002.HPL BAR, SPREADER – FLIGHT ELEMENT SLING
 018355_1F65085_-_002_002.HPL
 018355_EO_993344_-.LIS
 018355_PL_1F65085_-.LIS
 018355_AL_SP-M-512_B.LIS
 018355_DF_1F65555_-.LIS
 018355_1F65555_-_001_002.IMG BRACKET ASSEMBLY-FLIGHT ELEMENT SLING
 018355_1F65555_-_002_002.IMG
 018355_EO_1F65555_-.LIS
 018355_PL_1F65555_-.LIS
 018355_AL_1F65555_-_001_002.IMG
 018355_AL_1F65555_-_002_002.IMG

5.1.4 DRAWING DECLARATION FILE

The drawing declaration file is, in itself, a header for the drawing package, and consists of only header information. The file name and destination document ID (dstdocid) of the drawing declaration file is “CAGE_DF_DWG_CL.LIS”.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes applied to the file names above are explained in the following table. Static codes are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 5.1.4-1

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Code	Description	Length (max.)	Example(s)
CAGE	Contractor CAGE Code	6 char	018355
Dwg	Drawing number	40 char/digits	1F12345
CL ¹	Change Letter	Up to 10 char as req'd	-, A, AY, A01

1. One or two characters; initial (first) release shall be indicated by a single dash (“-”). ‘NEW’, ‘N/C’, ‘N/A’, or any other designation is not acceptable for an initial release.
Reference: MIL-STD-1840A, Paragraph 5.1.1.2

For example, the drawing file for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_DF_1F12345_A.LIS”.

Example:

```

10  20  30  40  50  60  70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789
srcsys: Boeing-Huntington Beach 5301 Bolsa Ave, HB CA 92647
srcdocid: 1F04087
srcrelid: NONE
chglvl: B
dteisu: 20020123
dstsys: The Boeing Company: 13100 Space Center Blvd, Houston, TX 77059
dstdocid: 018355_DF_1F04087_B.LIS
dstrelid: NONE
dtetrn: 20020123
dlvacc: F-PC-05
filent: R01, T01
ttlcls: Unclass
doccls: Unclass
doctyp: PD
docttl: FRAME ASSY, SLING-FLIGHT ELEMENT
    
```

Notes:

```

srcsys: Name and address of subcontractor (80 char max.)
srcdocid: Drawing number (35 char max.)
srcrelid: Use as shown
chglvl: Change Letter (use single "-" if new)(2 char max.)
dteisu: Date of issue of the latest change to this document (YYYYMMDD format)
dstsys: Name and address of receiving system
dstdocid: Cage Code, Drawing number and Change letter (use single "-" if new)
dtetrn: Date of transmission or mailing date formatted YYYYMMDD
dlvacc: Contract - use as shown
    
```

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filcnt: Number of files R01 means one raster file. T4 means four text files, X07 means seven Printerleaf files, and L05 means five HPGL files, E01 means one MS Excel file, and P01 means one PDF file. (Comma separated)

ttlcls: Use as shown

doccls: Use as shown

doctyp: Use as shown

docttl: Drawing title

The filcnt document types are as follows:

Type	Code
Group 4 Raster Image	R
ASCII Text File	T
Printerleaf File	X
HPGL/2 File	L
MS Excel File	E
PDF	P

5.1.5 DATA FILE NAMES

The file name for data files shall be the file's description document ID (dstdocid), as defined in the relevant sections of this document.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: NF533 Monthly Cost Reporting 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide summary level cost reporting to the International Space Station Program Office for the evaluation of the contractor’s actual cost and fee for the planning, monitoring, and controlling of project and program resources, and for accruing cost.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) NPD 9501.1G, NPR 9501.2D SOW 1.2.1		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: Overall instructions and guidance are provided in NPR 9501.2D.

8a. SCOPE: The monthly/quarterly report shall provide a report for projecting costs and equivalent personnel (EPs), for evaluating contractors’ actual cost and fee, for the planning, monitoring, and controlling of project and program resources, and for accruing cost.

8b. CONTENT: Instructions for content are in Attachment 1. Content shall also include adding EPs associated with direct labor and EPs associated with subcontracts to the list of cost elements in NPR 9501.2D. Also added to the cost elements is a separate line for major subcontractor’s costs. Major subcontractors are defined as contracts with \$1M annually. All content shall be mapped and reported at the ISS Program WBS level provided in Attachment 2. All content of C-PC-01 shall reconcile to C-PC-03, and C-PM-02.

8c. FORMAT: C-PC-01 shall be uploaded into EDMS as an Excel file, with the exception of the signature page, which shall be a .pdf format.

In addition to Attachments 1 and 2, the following modifications shall be made to the monthly format. A column shall be added in front of section 7a to provide for “Prior Years Costs” (this column shall remain blank until the beginning of FY12). For section 8 add 4 columns to provide for four months of forecast; also under section 8, a column shall be added to provide for “Balance of Current Year (forecast).”

The report shall be in three parts:

C-PC-01A shall be an executive summary narrative with variance explanations at each WBS level provided in attachment 2. Variance explanations shall be required when a +/- 5% and +/- \$10,000 variance occurs between the monthly forecasted cost and the actual cost for that month. The computation is (Monthly Forecasted Cost –Monthly Actual Cost/ Monthly Forecasted Cost). The variance explanation shall identify the lowest level WBS contributing to the variance. In addition, variance explanations need to detail what caused the variance (i.e., ISS Program change in direction, unexpected problems, and discrepancy due to a change order.) Also addressed will

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be any impact to delivery and, or schedule and the contractor's plan for resolving the affect of the variance. The forecast plan shall be adjusted to reflect a change in baseline plan. The executive summary shall also explain (listing and amount) any contract value changes and any changes between the types of contract.

C-PC-01B shall be a top level summary listing by contract cost elements (see NPR 9501.2D) including EPs and major subcontractors. The top level summary shall also include a cost rollup at the WBS 1 level.

C-PC-01C shall be by the WBS level in Attachment 2. Detail for rollup and additional contractor requirements also are included in attachment 2. In addition, cost elements reported in C-PC-01A shall be reported in each section of the WBS designated as a rollup.

9. OPR: LO

- 10. FIRST SUBMISSION DATE:** NF533Q (initial baseline) shall be submitted 30 calendar days after authorization to proceed.

Frequency of Submission: 533M

- a. **533M** hardcopy due not later than 12 working days following the close of the contractor's monthly accounting period.
- b. **533M EDMS** due not later than 10 working days following the close of the contractor's monthly accounting period.

Frequency Submission: 533Q

- a. An annual 533Q is due 15 working days before the start of the new fiscal year.

- 11. MAINTENANCE:** The contractor shall provide a revised NF533M to correct errors when deemed necessary by the Financial Management Division. The revised NF533M shall be delivered prior to closure of the current JSC accounting system for the month. The reports shall be maintained electronically by the contractor

12. COPIES/DISTRIBUTION:

1 e-copy to Program Repository via EDMS workflow.

1 hardcopy to BG/Contracting Officer

Program Authorized Repository Upload Notification: LO, LF6, COTR, BG, OH/Assessment Office, OH/Data Management, DCMA

- 13. REMARKS:** None

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C-PC-01 ATTACHMENT 1**The NASA Form 533 (NF533) reports provide data necessary for the following:**

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, 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 Contractor Financial Management Reporting, NPR 9501.2D, or its most current revision, identifies the cost reporting requirements for a contract.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment. Examples of accrual accounting for common cost elements reported on the NF533 follow:

Cost Element

Labor: Reported to NASA as hours are incurred.

Equipment and Materials (commercial off the shelf): Generally reported to NASA when received and accepted by the contractor.

Manufactured Equipment: Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs or the use of supplemental information obtained from the vendor are acceptable methods used to calculate the cost accrual amount.

Leases: Reported to NASA using a proration over the life of the lease.

Travel: Reported to NASA as costs are incurred.

Subcontracts: Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material (significant), 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

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fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub-divisions of work. Data submitted by the subcontractor should be structured similar to the prime contractor's 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 sub-contractor costs reported and provide this information to the Contracting Officer and Center Deputy Chief Financial Officer (Finance).

Unfilled Orders: Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.

Fee: Should be accrued as earned using a consistent and auditable method to determine the amount. For example: an acceptable method would be to use historical data to determine the amount to accrue each month. Fee should be reported on the 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 the 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. Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533.

The due dates for the NF533M and NF533Q reports are outlined in NPR 9501.2D, Chapter 3. The following is a summary of the NF533 due date requirements.

NF533 Report Due Date

NF533M: 533M hardcopy due not later than 12 working days following the close of the contractor's monthly accounting period. 533M EDMS due not later than 10 working days following the close of the contractor's monthly accounting period.

NF533Q: Due not later than the 15th day of the month preceding the quarter being reported.

The due dates reflect the date the NF533 reports are loaded into EDMS, 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.

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Uncompensated overtime hours worked should be reported on NF533 reports as a separate line item or in the footnotes.

For contracts which have multiple schedules, a summary NF533 is required to provide a cumulative from inception cost for the contract, regardless of schedule.

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 NF533M 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 and column 7a of the NF533Q 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.

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SECTION J
Attachment J-8

CARGO MISSION CONTRACT

NASA Monthly Contractor Financial Management Report National Aeronautics and Space Administration				Form Approved OMB No. 2700-0003		2. REPORT FOR MONTH ENDING AND NUMBER OF WORKING DAYS				
TO:			FROM:			3. CONTRACT VALUE		a. COST \$		b. FEE \$
1. DESCRIPTION OF CONTRACT	a. TYPE		b. CONTRACT NO. & LATEST DEFINITIZED MODIFICATION NO.			4. FUND LIMITATION \$				
	c. SCOPE OF WORK		d. AUTH. CONTR. REP. (Signature)		DATE	5. BILLING				
						a. INVOICE AMTS. BILLED \$		b. TOTAL PYTS. REC'D \$		
6. REPORTING CATEGORY	7. COST INCURRED/HOURS WORKED				8. ESTIMATED COST/HOURS TO COMPLETE		9. ESTIMATED FINAL		10. UN-	
	DURING MONTH		CUM TO DATE		DETAIL		BALANCE OF CONTRACT	COST/HOURS		FILLED ORDERS OUTSTANDING
	ACTUAL a.	PLANNE D b.	ACTUAL c.	PLANNE D d.	a.	b.	c.	a.	CONTRACT VALUE b.	

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CARGO MISSION CONTRACT

Baseline Plan Identification (Col. 7b & 7d): Revision No. _____, Dated _____

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Quarterly Contractor Financial Management Report													Form Approved O.M.B. No. 2700-0003			2. REPORT FOR QUARTER BEGINNING				
To:						From :						3. CONTRACT VALUE								
												a. COST \$			b. FEE \$					
1. DESCRIPTION OF CONTRACT	a. TYPE						b. CONTRACT NO. AND LATEST DEFINITIZED MOD. NO.						4. FUND LIMITATION \$							
	c. SCOPE OF WORK						d. AUTH. CONTR. REP. (Signature)			DATE			5. BILLING			a. INVOICE AMTS. BILLED \$			b. TOTAL PYTS. RECD. \$	
6. REPORTING CATEGORY	7. COST INCURRED/ HOURS WORKED			8. ESTIMATED COST/HOURS TO COMPLETE										9. ESTIMATED FINAL COST/HOURS		10. ESTI- MATE D COM- PLETIO N DATE	11. UN- FILLED ORDER S OUT- STAND- ING			
	CUMU- LATIVE ACTUA L THROU GH PRIOR MONTH a.	CUR- RENT MON TH ESTI- MAT E b.	CUM U- LATI VE ESTI- MAT E TO DATE c.	MON TH a.	MON TH b.	MON TH c.	QUAR TER d.	QUAR TER e.	QUAR TER f.	BALA NCE OF FY- g.	NEX T FY- h.	BALA NCE OF CON- TRACT i.	TOTA L TO COM- PLET E j.	CON- TRACTO R ESTIMA TE a.	CONTRA CT VALUE b.					

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SECTION J
Attachment J-8

CARGO MISSION CONTRACT

NASA FORM 533Q AUG 96 PREVIOUS EDITIONS ARE OBSOLETE.

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C-PC-01 ATTACHMENT 2

Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
Rollup	1 Management Integration and Control	1.0	MANAGEMENT INTEGRATION AND CONTROL	N/A
Rollup, Variance Explanation	1.1 Program Mgmt	1.1	Cargo Mission Management and Administration	N/A
	1.1.1 Program Mgmt and Administrative Staff	1.1.1	Performance Management Reviews	N/A
	1.1.2 Internal/External Program Review Support	1.1.2	External and Internal Reviews	N/A
Rollup; Variance Explanation	1.2 Business Mgmt	1.2	Business Management	N/A
	1.2.3 Resources Mgmt	1.2.1	Contract Financial System	N/A
	1.2.3 Resources Mgmt	1.2.2	Contract Work Breakdown Structure	N/A
	1.2.3 Resources Mgmt	1.2.3	Workforce Reports	N/A
Rollup; Variance Explanation	1.3 Configuration Management/Data Integration	1.3	Configuration and Data Management and Integration	N/A
Rollup; Variance Explanation	1.4 Program Information Technology	1.4	Information Technology	N/A
	4.1.1.1 General Mgmt	1.5	Certification of Flight Readiness	N/A
	1.5.2.5 Export Control	1.6	Export Management	N/A
Rollup	6.0 S&MA	2	SAFETY AND MISSION ASSURANCE (S&MA)	N/A
Rollup; Variance Explanation	6.1 Mgmt & Admin	2.1	S&MA Management	N/A
	6.1 Mgmt & Admin	2.1.1	Safety and Health	N/A
	6.1 Mgmt & Admin	2.1.2	Lesson learned	N/A
Variance Explanation	6.3 Risk Management	2.3	Risk Management	N/A

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
Rollup; Variance Explanation	6.4 Safety	2.4	ISS Safety Program	N/A
Rollup; Variance Explanation	6.5 Reliability and Maintainability (R&M)	2.5	Reliability and Maintainability	N/A
Rollup; Variance Explanation	6.6 Quality Assurance	2.6	Quality Assurance	N/A
	3.5.1.2 FCS Sustaining	3.0	Hardware Sustaining	
	3.5.1.2 FCS Sustaining	3.1	Maintenance and Operations (M&O)	
	3.5.1.2 FCS Sustaining	3.1.1	Storage	
	3.5.1.2 FCS Sustaining	3.1.2	Inventory Management	
	3.5.1.2 FCS Sustaining	3.1.3	Crew Provisioning	
	3.5.1.2 FCS Sustaining	3.1.4	Maintenance and Repair	
	3.5.1.2 FCS Sustaining	3.1.5	Processing of Hardware	
	3.5.1.2 FCS Sustaining	3.1.6	M&O Schedules	
	3.5.1.2 FCS Sustaining	3.2	Sustaining Engineering	
	3.5.1.2 FCS Sustaining	3.2.1	Hardware Performance Analysis	
	3.5.1.2 FCS Sustaining	3.2.2	Anomaly Resolution	
	3.5.1.2 FCS Sustaining	3.2.3	Engineering Drawings/Data	
	3.5.1.2 FCS Sustaining	3.2.4	Computer-Aided Design (CAD) Models	
	3.5.1.2 FCS Sustaining	3.2.5	Obsolescence Management	
	3.5.1.2 FCS Sustaining	3.2.6	Standard Repair Procedures	
	3.5.1.2 FCS Sustaining	3.2.7	Sustaining Engineering Schedules	
	4.1.3 Pressurized Cargo Integration	4.0	Pressurized Cargo Integration	

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
	4.1.3.1 Cargo Integration & Analysis	4.1	Cargo Mission Planning	
	4.1.3.1 Cargo Integration & Analysis	4.1.1	Manifest Assessments	
	4.1.3.1 Cargo Integration & Analysis	4.1.2	Launch Package Team Support	
	4.1.3.1 Cargo Integration & Analysis	4.1.3	NASA Cargo Integration Office Support	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2	Cargo Coordination	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.1	Cargo Integration Planning	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.2	Cargo De-Integration Planning	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.3	IMS Bar Code Tracking	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.4	IMS Containment Data	
	4.1.3.1 Cargo Integration & Analysis	4.3	Stowage Integration	
	4.1.3.1 Cargo Integration & Analysis	4.3.1	Cargo Layouts	
	4.1.3.1 Cargo Integration & Analysis	4.3.2	Mass Properties Analysis	
	4.1.3.1 Cargo Integration & Analysis	4.3.3	On-Orbit Operations Support	
	4.1.3.4 Physical Processing	4.4	Physical Cargo Processing	
	4.1.3.4 Physical Processing	4.4.1	Facilities Requirements	
	4.1.3.4 Physical Processing	4.4.2	Inventory Control	
	4.1.3.4 Physical Processing	4.4.3	Hardware Verification	
	4.1.3.4 Physical Processing	4.4.4	Labeling	
	4.1.3.4 Physical Processing	4.4.5	Cargo Imagery	

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
	4.1.3.4 Physical Processing	4.4.6	Foam Cutting Services	
	4.1.3.4 Physical Processing	4.4.7	Cargo Packing	
	4.1.3.4 Physical Processing	4.4.8	Cargo Review	
	4.1.3.4 Physical Processing	4.4.9	As-Built Data Delivery	
	4.1.3.4 Physical Processing	4.4.10	Hardware Shipment	
	4.1.3.4 Physical Processing	4.4.11	Return Cargo Processing	
	3.5.1.2 FCS Sustaining	4.5	Decals, Placards and Graphics	
	3.5.1.2 FCS Sustaining	4.5.1	Flight and non-flight Decals, Placards and Graphics	
	3.5.1.2 FCS Sustaining	4.5.2	Product Delivery Schedule	
	3.5.1.2 FCS Sustaining	4.5.3	Delivery Report	
	3.5.1.1 FCS Development and Support	5.0	Hardware Development and Manufacturing	
	3.5.1.1 FCS Development and Support	5.1	Design and Manufacturing Requirements	
	3.5.1.1 FCS Development and Support	5.2	Hardware/Data Deliveries	
	3.5.1.1 FCS Development and Support	5.3	Engineering Drawings/Data	
	3.5.1.1 FCS Development and Support	5.4	CAD Models	
	3.5.1.1 FCS Development and Support	5.5	Safety & Reliability Assessments	
	3.5.1.1 FCS Development and Support	5.6	Development Schedules	

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Annual Work Plans</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version Modification 03</p>	<p>3a. DRD No. C-PC-02</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>Use (Define need for, intended use of, and/or anticipated results of data) These products will be utilized by Government and contractor personnel to manage the fiscal year baseline work.</p>			<p>5. DRD Category PC</p>
<p>6. References (SOW, Clause, etc.) 1.1</p>		<p>7. Interrelationships (e.g., with other DRDs) C-PC-01 C-PC-05</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Yearly Work Plan: The plan will document the content and estimated resources/cost for authorized work projected to be performed in the subsequent fiscal year. Projected work content will be jointly developed by the Government and the Contractor and approved by the Government. The workplan will be the basis of the initial BCWS and EAC provided in the Performance Management Review (PMR).

8b. CONTENT: For the purposes of this DRD, the Work Plan is defined as the summary of all tasks projected to be worked during the FY. There is to be one work plan per NASA CAM with work and resources defined at the lowest level WBS, consistent with the agreed to cost reporting structure.

For each task or function defined in the work plan:

Describe the work to be performed at the 3rd level WBS level including:

Task Description

SOW associated with the task

Groundrules and assumptions

- a. Parameters for performance describing limitations of performance scope (as negotiated in contract),

Summary of required resources (i.e. EPs, materials, ODC)

Products delivered including DRDs and/or major milestones or events

Provide a high level schedule of the work including flight, project and non-flight specific deliveries and milestones.

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Identify monthly spread of resource requirements by element of cost at the 3rd level WBS and at the NASA CAM level.

8c. FORMAT: Contractor format

9. OPR: OA/COTR

10. SUBMISSION: Initial: two weeks prior to GFY12. Annual Updates: NLT 1 month prior to GFY start for the remainder of the period of performance following GFY12.

11. MAINTENANCE: All deliverables shall be maintained electronically. Government approved adjustments to individual Work Packages as a result of added or deleted or modified tasks shall be maintained in the monthly PMR. The current Work Plan shall be available as a “read-only” file.

12. COPIES/DISTRIBUTION: 1 copy distributed to each of the following:

- (a) BG/Contracting Officer
- (b) NASA CAM, their responsible work only
- (c) OA/COTR, entire contract
- (d) Program-authorized electronic repository (EDMS or equivalent)

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Workforce Reports 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-03	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides workforce information by geographic location to NASA for use in congressional inquiries.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.2.3		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The reports provide workforce data by geographic location. There are two types of reports: 1) a Yearly Workforce Report by location, and 2) an As Requested Workforce Report.

8b. CONTENT: The yearly workforce report should provide Equivalent Personnel (EPs) by location, specifically on or near site (JSC), and by State for workforce outside of the Clear Lake area. The data should be reconcilable to other financial deliverables. The content of the As Requested Workforce Report will vary based on specific direction provided by NASA Headquarters to support congressional inquiries. Its most common form is an annual request to provide workforce by Zip Code.

8c. FORMAT: Specific formatting to be tailored by LO/Contractor.

9. OPR: LO

10. FIRST SUBMISSION DATE: Thirty (30) calendar days prior to the end of the Government Fiscal Year (GFY).

Frequency Of Submission: Yearly for the Monthly Workforce Report, and as directed for the As Requested Workforce Report.

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Work Breakdown Structure (WBS) and Dictionary</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-PC-04</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) Provides framework to define work and to establish financial reporting levels and to correlate schedules.</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) SOW 1.2.2 SSP 50659 International Space Station Work Breakdown Structure</p>		<p>7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Contains the contractual Work Breakdown Structure (WBS), the WBS Dictionary, and a map to the ISS Program WBS.

8b. CONTENT: Contains the contractual WBS, its dictionary, and Program map as follows:

1. WBS: The WBS shall subdivide the total contracted effort into elements that serve as the basis for detailed planning and control of the project, and permit collection of cost and schedule data at element level. These elements include hardware, software, services, tasks, etc. It shall include all subcontracting and major procurement effort at the proper level. It shall be product oriented and structured so that key SOW tasks are at an appropriately high level.

2. WBS Dictionary: The WBS Dictionary shall define the scope of each WBS element and narratively describe the tasks included in each element

3. Program WBS Map: The contractor shall provide a mapping of the contract WBS to the ISS Program WBS.

8c. FORMAT: Per JSC instructions and in a format supported by the program-authorized electronic library. The WBS shall be in a chart format showing element relationships. The WBS Dictionary shall be ordered in consonance with the WBS and shall reference each WBS element by its identifier and name. Specific formatting for the map to the Program WBS will be done by LO/contractor.

9. OPR: OH

10. FIRST SUBMISSION DATE: Draft to be submitted with contract proposal. A final submittal is due 60 calendar days after contract award.

Frequency Of Submission: Draft submitted with initial contract proposal, final submittal 60 calendar days after contract award.

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Additional Submissions:

11. **MAINTENANCE:** The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.
12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
13. **REMARKS:** N/A

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Cargo Mission Contract Program Schedules 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-05	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide Program schedules using established standard processes, data structures and reporting conventions to plan, manage, and report the assigned work for the ISS Program Manager, International Partners Element Integration Managers, System Engineering and Integration Managers, Program Schedules Manager, and the Space Station Program Office			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 3.1.6, 3.2.8, 4.1.3, 5.6		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Top level and lower level schedules for the Cargo Mission Contract to include, as a minimum, flight hardware status and interface schedules for analytical products, ground and flight support equipment, and government furnished equipment with linkages to ISS Program schedules..

8b. CONTENT:

a. The contractor shall provide top level and lower level schedules which clearly depict the interrelationships and constraints among related tasks. The contractor is encouraged to utilize modern manufacturing resource planning, industrial engineering techniques and other approaches to ensure schedule stability, accuracy, reliability, predictability, and achievability.

b. The schedules shall be developed, maintained (updated), and provided monthly to ensure a consistent, accurate, and stable scheduling approach that provides for the identification, coordination, sequencing, control, implementation and tracking of all ISS Program activities.

c. The approach shall provide the ability to fully identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical activities; and allow its users to easily measure the progress towards achieving the intended plan.

d. The approach shall not only represent the scheduled work, but also the requirements commitment from all interfacing organizations.

e. The contractor shall represent the ISS Program Office on issues, status analyses and special agenda topics to the Integrated Program Schedule Panel weekly.

f. *Schedule consistency* as used in this DRD is defined as the degree to which the contractor utilized standardized scheduling approaches between similar processing activities and flows. *Accurate scheduling* as used in this DRD is defined as the accurate representation of work content and tasks duration (predicted vs. actuals). A *stable schedule* as used in this DRD refers to the degree to which daily schedule changes are minimized and limited to unforeseen hardware/software problems or NASA-directed changes.

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- g. Scheduling approaches shall address the following information as a minimum
- I. Scheduling symbology that is consistent Project Management Institute general guidelines.
 - II. Predicted task duration/labor standards derived from accurate and objective prediction methodologies
 - III. Indications of activities by appropriate nomenclature that clearly delineates the task to be performed
 - IV. Identification of who is responsible for doing the actual work
 - V. Required supporting activities or support from other contractors, outside organizations, agencies, or NASA centers.
 - VI. Identification of critical resource requirements.
 - VII. Clear depiction of the interrelationships and constraints among related tasks
 - VIII. Identification of priorities, high risk activities and other significant activities
 - IX. Special test activities or requirements.

h. Cargo Mission schedules (Data type 3) shall cover, as a minimum, the following activities in addition to the above information:

Name	Required by	Frequency
Performance to Plan	Daily Space Station Review (DSSR)	1 day per week starting at L-12
Team Level schedules	Team Lead	Weekly

8c. **FORMAT:** Excel based file.

9. **OPR:** OB, OC

10. **FIRST SUBMISSION DATE:** One month after contract start, on the first Monday of the next month.

Frequency Of Submission: Monthly no more than 5 working days after last day of previous month.

Additional Submissions: Informal updates in accordance with 8h above.

11. **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue. The contractor is encouraged to minimize documentation.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

13. **REMARKS:** None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Small Business Subcontracting Plan and Reports 1b. Data Type: Plan -1 Report - 2</p>	<p>2. Date of Current Version Modification 5</p>	<p>3a. DRD No. C-PC-06</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>Use (Define need for, intended use of, and/or anticipated results of data) To describe the Contractor's planned approach to Small Business Subcontracting and their reporting against this plan.</p>			<p>5. DRD Category PC</p>
<p>6. References (SOW, Clause, etc.) a. FAR 19.702, Statutory requirements b. FAR 52.219-8, Utilization of Small Business Concerns c. FAR 52.219-9, Small Business Subcontracting Plan d. NFS 1852.219-75, Small Business Subcontracting Reporting</p>		<p>7. Interrelationships (e.g., with other DRDs) Section H, H.7 and H.12 Section J, Attachment J-6</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The Small Business Subcontracting Plan shall be in compliance with FAR 52.219-9. The Small Business Subcontracting Reporting shall be in compliance with NFS 1852.219-75.

8b. CONTENT: The Subcontracting plan must include the approach that the Contractor intends to use in meeting the subcontracting goals. Subcontractors whose bid is part of this proposal should be identified. For each subcontractor, the percentage of the proposal and any small or small business subcategory classification should be identified. For areas of potential future subcontracting, the Contractor should identify the area of work, the percentage of contract that this is expected to encompass, potential subcontractors and their small business or small business subcategory classification. Describe the management approach to subcontracting with small, small disadvantaged 8(a), Women-owned, HUBZoned, Veteran owned, and Service disabled veteran owned companies and HBCU/MIs.

8c. FORMAT: Contractor format is acceptable for the plan; reporting shall be in compliance with NFS 1852.219-75.

9. OPR: BG/Contracting Officer

10. SUBMISSION:

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i. Subcontracting Plan:

1. Initial – Due with proposal.
2. Approval – Prior to contract award.
3. Frequency – Subcontracting Plan to be updated in accordance with FAR 19.702.

ii. Reports:

1. All reports shall be submitted in accordance with FAR 52.219-9 and NFS 1852.219-75.
2. In lieu of submitting a paper copy of the SF 294 and SF 295 Subcontracting Report for Individual Contracts. The contractor shall submit semi-annually and at contract completion to the NASA/JSC Contracting Officer electronically version of this data.
3. Contractors are required to submit subcontracting data in the Electronic Subcontracting Reporting System (eSRS) which has replaced the paper Standard Form 294 and SF 295 Summary Subcontracting Reports.
4. All contractors are required to register and file both types of subcontracting reports using the eSRS system. The website to register is www.esrs.gov.

11. MAINTENANCE: Revisions shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: 1 copy distributed to each of the following:

- (a) BG/Contracting Officer
- (b) Program-authorized electronic repository (EDMS or equivalent)

13. REMARKS:

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Cargo Mission Management Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-PM-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) The Cargo Mission Management Plan will describe the systems to provide overall coordination of activities under this contract and will integrate these activities into the broader NASA operational plans which utilize other government agencies and contractors.</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) SOW 1.1</p>		<p>7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe the contractor’s organization, approach and systems for accomplishing required activities including the management systems to be used and the interface relationships required.

8b. CONTENT: The plan shall be in consonance with the performance-based Statement of Work. The plan shall include but not be limited to, the following:

Narrative descriptions of the management, technical, and business approaches used to accomplish and monitor contractual tasks and the methods the contractor will employ to provide government insight, data accessibility, and deliverables.

Interfaces between the contractor, the government, customers, and other contractors or entities that are necessary and pertinent to the accomplishment of contractual tasks.

Assessment of risks inherent in the management, technical, and business approaches.

Narrative description of the contractor’s management approach to defining processes, plans and procedures including government approval of first time/high risk operations, out of family activities, and critical processes, plans and procedures.

Planned reporting to the government of performance to plan in preparation for major milestone reviews and regularly scheduled daily/weekly/monthly reviews.

Narrative description of contractor controls applicable to any tasks, activities and projects exceeding established cost or schedule plans including requirements for providing recovery plans.

Narrative description of the contractor’s proposed scope and approach implementing Associate Contractor Agreements.

8c. FORMAT: The contractor’s format is acceptable. The plan shall identify contract title and contract number and shall contain a table of contents. Descriptive material (sketches, flow charts,

CARGO MISSION CONTRACT

drawings, photographs, tables, forms, graphs, worksheets, charts, etc.) may be included if needed to clarify or explain matters in the text.

9. OPR: OA

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award. Final/approved due 75 calendar days after contract award.

Frequency Of Submission: The plan shall be reviewed at least annually thereafter and updated as required. If there are no changes since the last update, the contractor shall re-certify its accuracy no later than 1 October of each year.

Additional Submissions: Within 45 calendar days after the addition/deletion of major content to the contract or to describe and justify major changes in the contractor's management organization, approach and/or systems.

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Integrated Management Review Product (IMRP)</p> <p>1b. Data Type: 3</p>	<p>2. Date of Current Version Modification 05</p>	<p>3a. DRD No. C-PM-02</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) These products support the monthly management reviews of costs, schedule, and technical performance. The format provides a standardized approach for review materials.</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) SOW 1.1.1 NPR 7120.5 NPR 9501.2</p>		<p>7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This DRD must be reconcilable to DRD C-PC-01. These data packages document the integrated management reviews of the cost, schedule, and technical performance on the contract. The package supports the quarterly management review of cost, schedule, and technical performance; however, the contractor shall provide monthly integrated management review products to the Government. These review packages shall document the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this statement of work or elsewhere in this contract. Packages presented for program review, including insight into the contractor's, subcontractors', and vendors' overall technical, schedule, and cost performance and status metrics and management responsiveness to the performance indicated by the metrics.

8b. CONTENT: The presentations shall depict award fee period metrics, performance measurements, accomplishments, issues, corrective actions, and contract financial status including rates and other data necessary to demonstrate performance levels. The cost baseline is the Performance Measurement Baseline (PMB). The format provides a standardized approach for review materials.

The package includes:

Program Overview and Component Sections (by organization):

Cost and Schedule performance (monthly, government fiscal year (GFY), and cum to date). Includes forecasts and variance explanations.

Baseline comparison trace (original contract value, negotiated changes, authorized unpriced work, and pending changes).

GFY contract headcount plan and actuals by Cost Account Manager (CAM). Note: Included in summary package only.

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- Highlights and accomplishments.
- Issues/risks
- Status on Award Fee Corrective Action Plans (CAPs).
- Metrics
- Status on action Items
- Undistributed budget
- Management reserves

8c. **FORMAT:** Specific formatting to be tailored by LO/contractor

9. OPR: OH

10. **FIRST SUBMISSION DATE:** The first Monthly review shall be within 20 working days after the initial financial month end. All subsequent Monthly reviews shall be within 25 working days after the contractor's accounting month end.

Frequency Of Submission: Monthly

Additional Submissions:

11. **MAINTENANCE:** Changes shall be incorporated as required by change page or complete reissue.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Wage/Salary and Fringe Benefit Data 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PR-01	3b. RFP/Contract No. NNJ10GA35C
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) e-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 <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) FAR 52.222-41, Service Contract Act of 1965, As Amended		7. Interrelationships (e.g., with other DRDs) FAR 52.222-41	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

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 of 1965, to the Contracting Federal Agency. This requirement is in accordance with FAR regulations 22.1007 and 22.1008.

CONTENTS: The Wage/Salary and Fringe Benefit Data should contain the data included in the enclosed DRD forms, titled "Wage/Salary Rate Information," "Fringe Benefit for Service Employees," and "Fringe Benefits per Collective Bargaining Agreement." The Wage/Salary Rate Information shall contain a listing of all exempt and nonexempt labor classifications working on the contract. Separate forms should be utilized for classifications working in different geographic areas and for each subcontractor. Wage determination numbers, appropriation labor organization names, and subcontractor names, must be reflected. All nonexempt labor classifications must be matched to wage determination classes or to Collective Bargaining Agreement (CBA) classifications if union represented employees are working on the contract. 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 non-represented classifications and for each separate CBA, if applicable. A separate form must be completed for the prime and each subcontractor. Three hardcopies and one electronic copy of each Collective Bargaining Agreement are required if organized labor is represented on your contract.

FORMAT: The Wage/Salary and Fringe Benefit Data should be in a format substantially the same as enclosed with this DRD (Forms 2, 3A, 3B, 3C and 4).

9. OPR: BA

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award.

Frequency of Submission: Annually, 90 calendar days prior to the anniversary date of the contract.

Additional Submission: N/A

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management, CO, COTR, and BA2/Contract Labor Relations Officer

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1 Hardcopy: BA2/Contract Labor Relations Officer

13. REMARKS: Sample Work Sheet

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**Attachment to C-PR-01
FORM 2
PAGE 1 OF 1**

WORK SHEET FOR SF-98 DATA					
WAGE RATE INFORMATION					
CONTRACTORS LABOR CLASSIFICATION	WAGE DETERMINATION CLASSIFICATION	EXEMPT OR NON EXEMPT	UNION OR NON UNION	CURRENT HOURLY RATE	MYE NO OF EMPLOYEES
Illustration of required data:					
Project Manager	Not Required	E	N	\$40.00	1
Supervisor	Not Required	E	N	\$32.00	1
Electrical Engineer	Not Required	E	N	\$26.50 - \$30.00	3
Engineer Technician, Jr	Engineering Tech, I	N	N	\$16.59 - \$18.00	12
Engineer Technician, Sr	Elect Tech Main II	N	U	\$23.28 - \$24.00	4
Secretary	Secretary I	N	N	\$15.92 - \$17.50	2
File Clerk	General Clerk II	N	N	\$12.97	1
Clerical Data Entry	Word Processor I	N	N	\$12.27 - \$12.90	3

Submit data in the above illustrated format for all labor classifications used, or planned to be used, on this contract.

All nonexempt labor classifications must be matched to wage determination classes listed in the area wage determination or applicable collective bargaining agreement.

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3A
Page 1 of 1

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 and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

Service Requirement Days per Year

- a. Vacation
- b. Holidays
- c. Sick Leave
- d. Jury Leave
- e. Funeral Leave
- f. Military Leave
- g. Other (Describe)

Signature of Company Representative

Date

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3B
Page 1 of 1

FRINGE BENEFITS FOR EXEMPT EMPLOYEES

For Period from _____ to _____

Contractor:

Number of exempt 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 and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

Service Requirement Days per Year

- a. Vacation
- b. Holidays
- c. Sick Leave
- d. Jury Leave
- e. Funeral Leave
- f. Military Leave
- g. Other (Describe)

Signature of Company Representative

Date

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3C
Page 1 of 2

FRINGE BENEFITS PER COLLECTIVE BARGAINING AGREEMENT

For period from _____ to _____

Contractor:

Contract Number:

Number of employees in bargaining unit _____

Total number of employees on contract _____

1. Shift Differential: (Describe any pay over and above base rates for 2nd, 3rd, weekend, or other shifts.)

2. Health and Welfare Items and Other Fringe Items: (Indicate whether or not coverage is provided to employees and state current average hourly cost per employee covered by a Collective Bargaining Agreement.)

Item	Coverage Provided (Yes or No)	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition		
j. Other (Describe)		

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3C
Page 2 of 2

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

(Continue on a blank page if necessary)

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FORM 4

Page 1 of 1

DESCRIPTION OF FRINGE BENEFITS			
			FORM 4
<input type="checkbox"/> Prime Contractor: <input type="checkbox"/> Major Subcontractor:			
DESCRIPTION	EXEMPT	NON-EXEMPT	Ref.
Insurance (Life)			
Insurance (Health) (Employee/Company Share)			
Insurance (Dental, Disability, Etc.)			
Retirement			
Severance Pay			
Personal Leave			
Sick Leave			
Vacation			
Holidays			
Special Workweek			
Overtime Policy			
Uncompensated Overtime			
Pension Portability			
Pay Differentials Policy			
Shift			
Off-site			
Compensatory Leave Policy			
Award Policy			
Suggestion			
Other			
Bonus Plan			
Training			
Employee Morale			

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Government Property Management Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-PR-02</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) To describe the method of administering Government personal property</p>			<p>5. DRD Category Administrative</p>
<p>6. References (SOW, Clause, etc.) Clause 52.245-1</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

DISTRIBUTION: Formatting and electronic distribution per Contracting Officer's letter.

INITIAL SUBMISSION:

- A. Initial – Due with proposal
- B. Final – Due 30 days after contract award

SUBMISSION FREQUENCY: Initial, with updates as required.

SCOPE: The Government Property Management plan defines the contractor's use, maintenance, repair, protection, and preservation of Government personal property. It shall describe the contractor's approach to receiving, handling, stocking, maintaining, protecting, and issuing Government property. The plan should include interaction and Departmental or Office responsibilities. The delegated Property Administrator will request detailed procedures after contract start.

APPLICABLE DOCUMENTS: FAR 52.245-1 and NFS Part 1845.

CONTENTS: This plan shall reference those policies and procedures, which constitutes the contractor's Property Management Manual and shall include at a minimum the following categories:

- Property Management Acquisition
- Identification Records
- Storage Physical Inventories
- Consumption Utilization
- Subcontractor Control Disposition
- Reconcile Contractor Records with Financial Records
- Center-Unique Considerations
- Receiving Movement Reports Maintenance
- Contractor Closeout

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FORMAT: Contractor format is acceptable, electronic format and availability as required by the Contracting Officer's letter.

MAINTENANCE: Changes shall be incorporated by change pages or complete reissue.

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Financial Reporting of Contractor-Held Property	2. Date of Current Version January 15, 2010	3a. DRD No. C-PR-03	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) Report NASA property in the custody of contractors on both a monthly and annual basis			5. DRD Category Administrative
6. References (SOW, Clause, etc.) NFS Subpart 1845.7101		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

SUBMISSION:

The due date for the Monthly Property Financial Reporting submission is on the 21st day after the close of the month, beginning at the first month after contract start. Example due dates for the monthly submission are as follows:

- August 21st for the month ending July 31st
- September 21st for the month ending August 31st
- October 21st for the month ending September 30th

The due date for the Annual Property Reporting via NASA form (NF) 1018 is November 30th. All reports shall be submitted electronically

DATA PREPARATION INFORMATION:

Monthly Property Financial Reports are required to be submitted using the format located at the URL referenced in paragraph below. Monthly Financial Report will be submitted in accordance with Procurement Information Circular (PIC) 04-12.

Annual Property NF 1018 reports shall be submitted using the NF 1018 Electronic Submission System (NESS). The NF 1018 report provides annual summary level property management and financial data on Government-furnished and contractor acquired NASA property.

MONTHLY PROPERTY FINANCIAL REPORTS:

Monthly property financial reports are required with item level supporting data. This data shall be submitted for all items with an acquisition cost of \$100,000 or more, in the contractor's and its subcontractor's possession, in the following classifications: real property, equipment, special test equipment, and special tooling. Monthly reporting is not required for property in the above classifications of materials and contract work in process (WIP). Itemized monthly data is required for materials and WIP line items of \$100,000 and over. Summary monthly data is required for materials and WIP line items under \$100,000. The monthly reports shall be

CARGO MISSION CONTRACT

electronically submitted using the Contractor-Held Asset Tracking System (CHATS) (<http://nasachats.gsfc.nasa.gov/>) using the format described in the CHATS user's manual.

Acquisition costs shall be developed using actual costs to the greatest extent possible, especially costs directly related to fabrication such as labor and materials. Supporting documentation shall be maintained and available for all amounts of reported, including any amounts developed using estimating techniques.

All adjustments shall be thoroughly explained and directly related to a specific fiscal year. If the fiscal year cannot be determined the default shall be the previous fiscal year.

Work Breakdown Structures (WBS) shall be provided for all Contractor Acquired Property (CAP), WIP, and any new materials acquired.

The contractor is required to gain access to NASA's CHATS at the following website following instructions on the website: <http://nasachats.gsfc.nasa.gov/>

NF 1018 REPORTS:

Contractors shall report all NASA-owned property in US dollars, regardless of location.

Negative reports are required

This reporting shall be completed in accordance with the NFS subpart 1845.7101 and any supplemental guidance provided by the Contracting Officer, delegated Property Administrator or procuring center Industrial Property Officer.

The contractor is required to gain access to NASA's NESS at the following website following instructions on the website: <http://ness.gsfc.nasa.gov/>

DISTRIBUTION:

The monthly reports shall be electronically submitted using CHATS using the format described in the CHATS manual.

NF 1018 reports shall be submitted using NESS.

MAINTENANCE:

Revisions shall be incorporated by change page or complete reissue.

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Reprocurement Data Package 1b. Data Type: 2</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-RP-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use (Define need for, intended use of, and/or anticipated results of data) Provide content and format requirements for delivery to NASA of all analytical models, tools, supporting documentation, equipment and resource/cost information used to perform future reprocurement activities Note: This data may be disclosed to competing offerors in the future.</p>			<p>5. DRD Category Technical</p>
<p>6. References (SOW, Clause, etc.) Clause H.17</p>		<p>7. Interrelationships (e.g., with other DRDs) N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Analytical models, unique tools, supporting documentation, equipment and resource/cost information shall be submitted in accordance with this DR.

8b. CONTENT:

A catalog of models and tools provided according to any DR on this contract shall be developed which contains the following:

Unique name of item

Version number, revision number, or release date as appropriate

Abstract which describes purpose or use of item

Location of electronic copy (i.e. VMDB)

Models and tools to be submitted include:

Models which are delivered per requirements contained in any other DR on this contract shall not be redelivered for this DR. However, each shall still be documented appropriately in the model catalog required in 8.2.1.

Supporting documentation for the use of each item, including those submitted per other DRDs on this contract where that DRD doesn't require it, shall be submitted. The documentation shall include, at a minimum, the following information:

Purpose of the model or tool

Inputs required

Governing assumptions or constraints, including definition of the Vehicle configuration if pertinent to the model definition or its use

Model or tool certification history, including description of validation methods used and results of correlation activities

Association with other models, such as connection between an integrated ISS model and a supporting element model

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For models, necessary tools such as a specific software modeling environment required to operate the model

For tools, necessary platforms such as computer processor requirements or operating system limitations

Data package containing the following:

Labor resources:

List of all direct labor skills by labor category segregated by current Work Breakdown Structure (WBS)

An estimate of the number of indirect labor skills such as business or computer support normally charged through an indirect expense pool or through a service center expense

Current annual average wage rates for each labor category and when these wages were last adjusted for escalation. Also indicate whether any adjustments are projected to be made prior to contract expiration

The number of FTEs (Full Time Equivalents) and the estimated number of productive hours for each labor category currently on contract, segregated by current WBS

Seniority level of all skills on the current contract

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.

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.

Equipment (additional information to that listed in #2, a., above):

List of all contractor-owned equipment (at the time of delivery of this DRD) being used in the performance of the contract. The list 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

8c. FORMAT: Electronic format of all submissions shall be compatible with VMDB per DRD C-MI-05. Organizational format of the supporting documentation shall be the contractor's.

9. OPR: OA

10. FIRST SUBMISSION DATE: 1 year prior to contract end or at Contracting Officer's discretion

Frequency Of Submission: No periodic submissions required per this DR (this does not relieve the requirement for periodic or incremental deliveries per other DRs)

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Additional Submissions: End of period of performance: submission of current version of all models, tools, and supporting documentation which have been updated since first submission

11. MAINTENANCE: All models/tools shall be maintained electronically. All documentation developed to support the use of each model/tool shall also be maintained electronically. Both the models and the supporting documentation shall be updated as necessary to perform the assessments for which they were developed.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: It is only intended that unique models and tools developed for the ISS Program be delivered per this DR. Unmodified commercially available tools should not be delivered, but must be referenced in the supporting documentation.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Mission Assurance and Risk Management (MA&RM) Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-SA-01</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use The plan is used to identify, evaluate, and eliminate or control risks related to safety, health and mission assurance.</p>			<p>5. DRD Category S&MA/PR</p>
<p>6. References SOW 2.1.4</p>	<p>7. Interrelationships N/A</p>		

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Applicable to all contractor sites where the contractor is operational including on-site NASA facilities.

8b. CONTENT: The plan shall demonstrate the contractor’s compliance with Section 2.0 of the SOW. In addition, the plan shall address:

- A. S&MA Management (SOW 2.1, 2.2, 2.3).
- B. Risk Management (SOW 2.1.1).
- C. ISS Safety Program (SOW 2.1.2).
- D. Reliability and Maintainability (SOW 2.1.3).
- E. Quality Assurance (SOW 2.1.4).

8c. FORMAT: MS Word

9. OPR: OE

10. FIRST SUBMISSION DATE: Draft MA&RM plan by the end of the phase-in period. Final MA&RM plan within 90 calendar days after contract start.

Frequency Of Submission: The MA&RM plan shall be reviewed at least annually thereafter and updated as required. If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT 1 October of each year.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

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12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
13. **REMARKS:** The MA&RM plan requires approval of the Manager, Safety and Mission Assurance (S&MA)/Program Risk Office.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: Safety and Health (S&H) Plan</p> <p>1b. Data Type: 1</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. <u>C-SA-02</u></p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use Establishes Safety and Health Compliance Plan for Contractors providing support to JSC organizations.</p>			<p>5. DRD Category S&MA/PR</p>
<p>6. References SOW 2.2 OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual JSC 17773, Instructions for Preparation of Hazard Analysis for JSC Ground Operations JPR 1700.1 JSC Safety and Health Handbook</p>		<p>7. Interrelationships C-SA-04</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Applicable to safety and health activity at all NASA Centers and sites where the contractor is operational under this contract.

8b. FORMAT:

- A. Cover page - to include as a minimum, blocks for the signatures of Contractor's project manager and designated safety official; NASA COTR; JSC Safety and Test Operations Division; JSC Occupational Health Officer; and the NASA Contracting Officer. Other signatures may be required at the discretion of the Government. Once approved by NASA, signatures will be collected and the plan placed on the contract.
- B. Table of Contents. See content below.
- C. Body of plan - as required. Contractor's format is acceptable but should be aligned with the elements of the content below.
- D. When preparing its plan, the Offeror/Contractor is expected to review all the items below and tailor its plan accordingly. The plan will clearly identify those resources to be provided by the Contractor and proposed resources to be provided by the Government. This review and supporting rationale is to be made available to the Government as part of this plan. It can be documented as a checklist or outline, inserted directly in the body of the plan, or in any format developed by the Contractor that clearly conveys the results of this review including the basis for any underlying assumptions.

CONTENT AND DETAIL:

1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION

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1.1 Policy: Provide the Contractor's safety and health compliance policy statement with the plan. Compare the Contractor's policy statement with those of NASA and OSHA and discuss any differences.

1.2 Goals and Objectives. Describe your approach to the following:

1.2.1 Specific annual safety and health goals and objectives to be met.

1.2.2 Methods to be used, if any, to improve on the Days Away Case Rate (DACR), the Total Recordable Injury Rate (TRIR), and the total Days Away plus Restricted Duty plus Job Transfer (DART).

1.3 Management Leadership. Describe management's procedures for implementing its sustaining commitment to safety and health compliance through visible management activities and initiatives including a commitment to exercise management prerogatives to ensure workplace safety and health. Describe processes and procedures to making this visible in all Contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

1.4 Employee Involvement. Describe procedures to promote, implement, and sustain employee (e.g., non-supervisory) involvement in safety and health compliance program development, implementation and decision-making. Describe the scope and breadth of employee participation to be achieved so that approximate safety and health risk areas of the Contract are equitably represented. Describe methods to be used to obtain employee buy in and address the behavioral aspects of safety.

1.5 Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other Contractors, or other 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 and fire protection concerns and goals, and who will participate in meetings and other activities related to the JSC Safety and Health program.

1.5.2 Company Physician/Occupational Injury/illness case manager - identify a point of contact who is responsible for the transfer or receipt of company medical data and who will be the primary contact for the company in the event any employee suffers a work related injury or illness (such as the company physician) by name, address, and telephone number to the JSC Occupational Medicine Clinic, mail code SD32. This will facilitate communication of medical

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data to Contractor management. Prompt notification to the JSC Occupational Medicine Clinic shall be given of any changes that occur in the identity of the point of contact.

1.5.3 Building Fire Wardens - provide a roster of fire wardens at the start of each Contract year (their names, telephone numbers and pagers, and mail codes). Contractor fire wardens are needed to facilitate the JSC fire safety program, including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives. Fire wardens will be trained in accordance with JPR 1700.1. The Roster shall be maintained by letter to the JSC Safety and Test Operations Division, mail code NS2, with copies to the Contracting Officer and the Contracting Officers Technical Representative. The initial letter shall be received by the Government not later than 15 days after contract start.

1.5.4 Designated Safety Official - identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.

1.6 Provision of Authority. Describe consistency of the plan for compliance with applicable NASA and JSC requirements and contractual direction as well as applicable Federal, State, and Local regulations and how compliance will be maintained throughout the life of the contract.

1.7 Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe, healthful, and environmentally compliant manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.

1.8 Program Evaluation. Describe your approach to safety and health program evaluation. The program evaluation consists of:

1.8.1 [RESERVED]

1.8.2 A written self-evaluation report to be delivered once per year. The self evaluation shall be provided for the Contractor performance evaluation. The self-evaluation shall follow the VPP program evaluation report format found in OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual, Appendix C, "Format for Annual Submissions," as mandated by the cognizant OSHA regional office. Contractors who have submitted a written self evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self evaluation provided that all action plans and status are updated. The self-evaluation shall as a minimum cover the elements of the approved safety and health plan.

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

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

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- a. Date of report, Contractor identity, and Contract number.
- b. For each person listed, provide name, social security number, and date of termination.
- c. Name, address, and telephone number of Contractor representative to be contacted for questions or other information.

1.9.2 Material Safety Data Sheets (MSDS). The Contractor shall prepare and/or deliver MSDS for hazardous materials brought onto Government property or included in products delivered to the Government. This data is required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication," EPA "Emergency Planning and Community Right-to-Know (EPCRA, ref. 40 CFR 302, 311, 312); and the Texas Department of Health (TDH, ref. Chapters 505-507 of the Health and Safety Code), and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities," as revised. This inventory is also required by JPR 1700.1, JSC Safety and Health Handbook, as revised. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central MSDS Repository, maintained by the JSC Occupational Medicine Occupational Health contractor, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrive with the material and is needed for immediate use, the MSDS shall be delivered to the Central MSDS Repository by close of business of the next working day after it enters the site.

1.9.3 Hazardous Materials Inventory. The Contractor shall compile an inventory report of all hazardous materials it has located on Government property quarterly, and which is within the scope of 29 CFR 1910.1200, Hazard Communication; and Federal Standard 313 (or FED-STD-313), Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities, as revised. This inventory is also required by JPR 1700.1, JSC Safety and Health Handbook, as revised. The call for this inventory and instructions for delivery will be issued by the JSC Occupational Medicine Occupational Health contractor, mail code SD33. This information shall use the format used by JSC for chemical inventory compilation to provide the following:

- a. The identity of the material (product number, chemical, manufacturer, and NSN as available).
- b. The location of the material by building, room and area/cabinet number.
- c. The quantity of each material normally kept at each location (number of containers, container size, type container, unit of measure, conversion factor, storage temp and pressure, physical state/form, specific gravity, total pounds).
- d. Peak quantity stored.

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e. Actual or estimated rate of annual usage of each chemical.

1.10 Government Access to Safety and Health Program Documentation. The Contractor shall recognize, in its plan, that all safety and health documentation (including relevant personnel records) be available for inspection or audit at the Government's request. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For Contractor activities conducted on NASA property, the Contractor will identify what records will be made available to the Government in accordance with the criteria of OSHA as implemented in JPR 1700.1, JSC Safety and Health Handbook, as revised. For the purpose of this plan, safety and health documentation includes but is not limited to: logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, or emergency preparedness.

1.11 Review and Modification of Safety Requirements. The Contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative (COTR) in accordance with established contractual procedures.

1.12 Procurement. Identify procedures used to assure that procurements are reviewed for safety and health compliance considerations and that the specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.

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

2. WORKSITE ANALYSIS

2.1 Analysis of Worksite Hazards. Contractor worksite 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, facilities related incidents related to partial or full loss of systems functions; etc. Describe how hazards identified by any of the techniques identified below shall be ranked, processed, and mitigated in accordance with JPR 1700.1. All hazards on NASA property, which are immediately dangerous to life or health, shall be reported immediately to the Safety and Test Operations Division. All safety engineering products that address operations, equipment, etc., on NASA property will be subject to JSC Safety and Test Operations Division review and concurrence unless otherwise waived by the JSC Safety and Test Operations Division.

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2.2 Industrial Hygiene. Describe your industrial hygiene program and how it will be coordinated with the JSC Government provided resources for industrial hygiene. In the event corporate resources are used to determine workplace exposures, copies of all monitoring data shall be provided to JSC Occupational Medicine Occupational Health contractor within 15 days of receipt of results.

2.3 Hazard Identification. Describe the procedures and techniques to be utilized to compile an inventory of hazards associated with the work to be performed on this Contract. This inventory of hazards shall address the work specified in this Contract as well as operations and work environments in the vicinity or in close proximity to Contract operations. The results will be reported to the Government in a manner suitable for inclusion in facilities baseline documentation as a permanent record of the facility. Specific techniques to be considered include:

2.3.1 Comprehensive Survey - A “wall to wall” engineering assessment of the Contractor’s worksite, which includes the Government furnished facilities to be used by the contractor and the immediate vicinity in which contractual work or tasks will be performed. This assessment encompasses facilities, equipment, materials, and processes.

2.3.2 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.

2.3.3 Hazard Analysis - May address facilities, systems/subsystems, operations, processes, materials (including waste), and specific tasks or jobs. Analyses and report formats will be in accordance with JSC 17773, Preparing of Hazard Analyses for JSC Ground Operations.

2.3.4 The Contractors safety plan will describe the flow of the findings of the comprehensive survey of hazards into hazard analyses and job hazard analyses and subsequently into controls such as design, operations, processes, procedures, performance standards, and training. The contractor will discuss its approach to notify NASA and other parties external to the contract work of its identified hazards and subsequent analyses and controls.

2.4 Inspections. Include assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The Contractor will describe administrative requirements and procedures for control of regularly scheduled inspections for fire and explosion hazards. The Contractor has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify:

- a. Discrepancies between observed conditions and current requirements, and,
- b. New (not previously identified) or modified hazards.

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c. Use of JSC's Hazard Abatement Tracking System to manage hazards onsite at JSC (see paragraph 3.12 below).

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

2.6 Employee Reports of Hazards - Identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The Contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation/awareness activities.

2.7 Accident and Record Analysis

2.7.1 Mishap Investigation – identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The Contractor will describe the methods to be used to report and investigate mishaps on NASA property and on Contractor or third party property. The Contractor will describe its procedures for implementing immediate notification of NASA using the call tree in 2.7.1.a below. The use of the quick incident reports found at the lower center of the home page of the NASA Incident Reporting Information System (IRIS) at <https://nasa.ex3host.com/iris/newmenu/login.asp> and use of NASA forms as specified in JPR1700.1 or any alternate forms used by Contractor. The contingency plan will emphasize timely notification of NASA; preliminary and formal investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; preparation and submission of a formal report to NASA; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The Contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The Contractor will include appropriate details to address the following: Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form is NOT available from JSC or NASA forms management; it can be obtained from the following link: <http://jschandbook.jsc.nasa.gov/>.

a. The Contractor will include a mishap contingency plan as part of the Safety and Health Plan which meets the requirements of NPR 8621.1, NASA Procedural Requirement for Mishap and Close Call Reporting, Investigating, and Recordkeeping, and JPR 1700.1, JSC Safety and Health Handbook. The plan will identify the method of immediately notifying NASA in the advent of a type A or B mishap or C property damage mishap and close call with equivalent potential so NASA may take custody of the mishap scene and initiate its investigation as soon as it is safe following the mishap. The Contractor will immediately contact the JSC Safety and Test Operations Division at 281-483-1935 for guidance when a Type A or B mishap or Type C property damage mishap occurs in the course of performing work on a NASA Contract in whole or in part. The contingency

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plan will clearly identify the Government investigation as taking precedence over any contractor investigation.

b. For Type C injuries and all lower level mishaps, the Contractor will perform its own investigation and submit a report to NASA in accordance with the requirements of NPR 8621.1. The Contractor will ensure that NASA is promptly notified of any Type D mishap so that NASA provides a civil servant to oversee the investigation in an ex officio capacity prior to start of any formal investigation. All initial reports and selected follow up reporting will be accomplished using IRIS.

c. When a NASA investigation is required, witnesses will be identified and their names and contact information provided to NASA investigator but witness statement must be requested and collected by NASA. Such statements will be retained by the Government as part of the mishap file in accordance with NPR 8621.1.

d. The Contractor will deliver to NASA mishap reports which shall include the data specified in NPR 8621.1 for the level of mishap. NASA approval and endorsements will be required as specified in NPR 8621.1 and included in the approved Safety and Health Plan.

2.7.2 Trend Analysis – Describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.). Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the Contractor will discuss method of providing data as follows.

a. Accident/Incident Summary Report - The Contractor shall prepare and deliver Accident/Incident Summary Reports as specified on JSC Form 288, “Accident/Incident Statistics” as revised. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and close calls shall be described in summary form along with current status. Negative reports are also required monthly. Report frequency is monthly; date due is the 10th days of the month following each month reported. Report to be delivered to the JSC S&MA Directorate through the Safety and Test Operations Division, mail code NS2, by fax to 281-244-0426 or by attaching to an e-mail and transmitting to JSC-Safety-Report-Submittals@mail.nasa.gov.

b. Log of Occupational Injuries/Illnesses

i. For each establishment on and off NASA property that performs work on this Contract, the Contractor shall deliver, to the Government, a copy of its annual summary of occupational injuries and illnesses (OSHA 300 and OSHA 300A or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5. If the Contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in Contractor’s format is acceptable (such as loss runs from insurance carrier) which contains the data required by JSC Form 288.

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ii. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g. not later than February 15 of the year following).

3. HAZARD PREVENTION AND CONTROL

3.1 Identified hazards must be eliminated or controlled. In the multiple employer environment of the Center, it is required that hazards including discrepancies and corrective actions be collected in a Center wide information system Hazard Abatement Tracking System (HATS) for risk management purposes. Describe your approach to implementing this requirement.

3.2 Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence (see JPR 1700.1). Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, energies, etc.). Discuss need for coordination with safety, health, and emergency authorities at NASA.

3.3 Hazardous Operations and Processes. Establish methods for notification of personnel when hazardous operations and processes are to be performed in their facilities or when hazardous conditions are found to exist during the course of this Contract. JPR 1700.1 will serve as a guide for defining, classifying, and prioritizing hazardous operations; 29 CFR 1910.119 will be the guide for hazardous processes when the material or process meets the requirements therein.

Develop and maintain a list of hazardous operations and processes to be performed during the life of this Contract. The list of hazardous operations and processes will be provided to JSC as part of the plan for review and approval. JSC and the Contractor will decide jointly which operations and processes are to be considered hazardous, with JSC as the final authority. Before hazardous operations or processes commence, the Contractor will develop a schedule to develop written procedures with particular emphasis on identifying the job safety steps required. NASA will have access on request to any Contractor data necessary to verify implementation. For all identified operations or processes that may have safety or health implications outside Contract operations, the Contractor shall identify such circumstances to the JSC Safety and Test Operations Division and Occupational Health Officer who will provide additional instructions for further NASA management review and approval.

3.4 Written Procedures. Identification of methods to assure that the relevant hazardous situations and proper controls are identified in documentation such as inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.

3.5 Hazardous Operations Permits. Identify facilities, operations and/or tasks where hazardous operations permits will be required as specified in JPR 1700.1 such as confined space entry, hot

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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.

3.6 Operations Involving Potential Asbestos Exposures. Set forth method by which compliance is assured with JSC Asbestos Control Program as established in JPR 1700.1, as revised.

3.7 Operations Involving Exposures to Toxic or Unhealthful Materials. Such operations must be evaluated by the JSC Occupational Health Office and must be properly controlled as advised by same. JSC Occupational Medicine must be notified prior to initiation of any new or modified operation potentially hazardous to health.

3.8 [RESERVED]

3.9 Baseline Documentation. Discuss the Contractor's responsibilities for maintaining facilities baseline documentation in accordance with JSC requirements. The Contractor will implement any facilities baseline documentation tasks (including safety engineering) as provided in the Contractor's plan approved by NASA or as required by Government direction.

3.10 Preventive Maintenance. Discuss approach to preventive maintenance. Describe scope, frequency, and supporting rationale for your preventive maintenance program including facilities and/or equipment to be emphasized or de-emphasized. Discuss methods to promote awareness in the NASA community (such as alerts, safety flashes, etc.) when preventive maintenance reveals design or operational concerns in facilities and equipment (and related processes where applicable).

3.11 Medical (Occupational Healthcare) Program. Discuss the Contractor's medical surveillance program and injury/illness case management to evaluate personnel and workplace conditions to identify specific health issues and prevent degradation of personnel health as a result of occupational exposures. Discuss approach to Cardiopulmonary Resuscitation (CPR), first aid, and, return to work policies and the use of Government provided medical and emergency facilities for the initial treatment of occupational injuries/illnesses.

3.12. Hazard Correction and Tracking. Discuss your system for correcting and tracking safety, health, and environmental hazards with particular emphasis on integration with JSC's Hazard Abatement Process (found on line @ <http://www.srqa.jsc.nasa.gov/HATS/>). (The scope is restricted to establishments at JSC, Sonny Carter Training Facility, and Ellington Field.) This includes the following:

3.12.1 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.

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3.12.2 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 HATS for all hazards within Contractor-occupied facilities that are not finally abated (all interim and final abatement actions completed) within 30 days of discovery. Discuss your approach to posting such plans using JSC Form 1240, JSC Notice of Safety or Health and Action Plan, or equivalent. Discuss compatibility of your system with JSC's role of facility managers in abatement planning, implementation, and verification.

3.13 Disciplinary System. Describe your system for ensuring safety and health discipline in your personnel (including subcontractors). Describe your approach to modifying personnel behaviors when personnel are exhibiting discrepant safety and health performance.

3.14 Emergency Preparedness. Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, etc. Discuss compliance with 29 CFR 1910.120 (HAZWOPER) and role in JSC Incident Command System (see JPR 1700.1 for details). Discuss methods to be used for notification of JSC emergency forces including emergency dispatcher, safety hotline, director's safety hotline, etc. Discuss establishment of pre-planning strategies through procedures, training, drills, etc. Discuss methods to verify emergency readiness.

4. SAFETY AND HEALTH TRAINING

Discuss the following:

4.1 Describe the Contractor's training program including identification of responsibility for training employees to assure understanding of safe work practices, hazard recognition, and appropriate responses for protective and/or emergency countermeasures, including training to meet Federal, State, and Local regulatory requirements.

4.2 Describe approach to identifying training needs including traceability to exercises such as job safety analyses, performance evaluation profiles, hazard analyses, mishap investigations, trend analyses, etc.

4.3 Describe approach to training personnel in the proper use and care of personal protective equipment (PPE).

4.4 Discuss tailoring of training towards specific audiences (management, supervisors, and employees) and topics (safety orientation for new hires, specific training for certain tasks or operations).

4.5 Discuss approach to ensure that training is retained and practiced. Discuss personnel certification programs. Certifications should include documentation that training requirements and physical conditions have been satisfied (examples include physical examination, testing, and on-the-job performance).

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4.6 Address utilization of JSC safety and health training resources (such as asbestos worker training/certification, hazard communication, confined space entry, lockout/tagout, etc.) as appropriate with particular emphasis on programs designed for the multiple employer work environment on NASA property. If the Contractor wishes to train their personnel in any regulatory mandated training, an agreement will be secured with JSC Occupational Safety Branch and Occupational Health and Test Operations Division and the JSC Occupational Health Officer Support office prior to beginning training. The agreement will ensure that safety and health training resources available from NASA are utilized where appropriate.

4.7 Discuss approach to making all training materials and training records available to NASA, and other Federal, state, and local agencies for their review upon request.

9. OPR: OE

10. FREQUENCY OF SUBMISSION: Initial submission with the proposal. Upon NASA approval, the Contractor's Safety and Health Compliance Plan becomes a contractual requirement.

Subsequent Revisions to the Plan: Review the plan annually or as directed by the Contracting Officer (CO). The plan shall be updated to meet the latest OSHA, JSC and VPP requirements. Provide a copy of the updated plan with changes highlighted to the distribution list at the start of each contract year. If no changes are required after the annual review, notify the individuals in the distribution list in writing to that affect.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

1 electronic copy: to a Program authorized repository (EDMS or equivalent)

After the plan is approved by NASA, the contractor will send additional copies to each of the following:

NS /Safety and Test Operations Division (2 hard copies)

JSC occupational Health Officer (1 hard copy)

JSC Emergency Preparedness Office (1hard copy)

13. REMARKS: The Safety and Health Plan requires approval of the Manager, S&MA/Program Risk Office.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Monthly Safety and Health Metrics	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-03	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 3			
4. Use Establishes selected Safety and Health Program metrics in accordance with OSHA Requirements.			5. DRD Category S&MA/PR
6. References SOW 2.2		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: The scope of the information required is limited to the JSC-administered establishments of Houston Texas at NASA Road One, the Sonny Carter Training Facility, and Ellington Field; MSFC and KSC facilities.

DEFINITIONS: Refer to JPR 1700.1 and OSHA requirements for definitions of terms below.

8b. 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 JPR 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
Total												

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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

8c. FORMAT: electronic to NS2, SD13; hard copy to COTR. Send as Excel spreadsheet or in tables compatible with MS Word.

9. OPR: OE

10. FIRST SUBMISSION DATE: 10th day of the first full month after contract start

Frequency Of Submission: Monthly the by the 10th of the month following month being reported.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: None

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Safety and Health Program Self-Evaluation 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-04	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide Self-Evaluation of Contractor's safety and health program performance.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.2		7. Interrelationships (e.g., with other DRDs) C-SA-02	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: The scope of the information required is limited to NASA Centers and sites where the Contractor is operational under this contract.

8b. CONTENT: The Contractor shall conduct an annual self-evaluation of its safety and health program as required by its safety and health plan.

Information required:

1. The internal assessment of safety and health program effectiveness during the report period (i.e., the previous year) indicating the status of goals or objectives previously established and areas of strength and weakness in Contractor safety program performance.
2. Safety and health concerns and resolutions relating to JSC operations which may have been identified during the report period.
3. Unresolved safety and health concerns relating to JSC operations which the Contractor feels merit attention of JSC safety and health management.
4. The goals and objectives of the Contractor safety and health program for the next report period.
5. An analysis of the contractor's performance at JSC-administered establishments in each of the 32 Voluntary Protection Program sub-elements found in the Federal Register Notice 65:45649-45663, July 24, 2000.
6. Attach action plans for identified problem areas. Action plans must include schedule for periodic progress reports to the Government on a frequency agreed to by the Government and the Contractor for each problem area.

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8c. FORMAT: 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.

9. OPR: OE

10. FIRST SUBMISSION DATE: September 30, 2011

Frequency Of Submission: Annually on September 30th of each year.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Safety Analysis and Hazard Reports	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-05	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2 4. Use (Define need for, intended use of, and/or anticipated results of data) The ISS Safety Review Panel (SRP) will use the Safety Analysis and Hazard Reports to assess the ground and flight safety.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.1.2, 5.5		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Submittals shall consist of a safety analysis and hazard reports for all packed bags, and hardware sustained, and, or developed on this contract. This includes ground and flight safety assessments. The safety assessment shall include recommendations and constraints on co-location of NASA pre-packed bags in the respective launch vehicle racks and sub-racks to ensure no damage to hardware contained within the bags.

8b. CONTENT: Hazard Reports shall be provided that are commensurate with the level of maturity of the design in accordance with SSP 30309.

System Description: The Contractor shall provide a description of the launch and on-orbit configuration of the hardware and software in accordance with SSP 30599, Safety Review Process. Functional diagrams shall be submitted and supplemented with descriptions of interfaces and operations.

Hazard Report: Hazard Reports shall include the following data fields:

1. Hazard Report Number
2. Hazard Title
3. Review Level
4. Revision Date
5. Scope
6. Hazard Description
7. Cause Summary
8. Program Stage
9. Interfaces
10. Status of Work
11. Remarks
12. Submittal Concurrence
13. Approval
14. Mission Phase
15. Severity Category
16. Likelihood of Occurrence

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17. Controls
18. Method for Verification of Controls
19. Safety Requirements
20. Detection and Warning Method
21. Cause Remarks
22. CIL Reference
23. Point of Contact.

For Phase I maturity, Hazard Reports shall reflect the preliminary design and define hazards causes. Additionally, provide the preliminary hazard controls and verification methods when available. For Phase II maturity, the Hazard Reports shall be updated to reflect the critical design and define the finalized hazard controls and verification methods. For Phase III maturity, the Hazard Reports shall be updated to reflect the as-built contractor design and document completion of verification.

8c. FORMAT: These deliverables shall be in the format described in SSP 30599.

9. OPR: OE

10. FIRST SUBMISSION DATE: 45 calendar days prior to formal review by SRP/Payload Safety Review Panel (PSRP).

Frequency Of Submission: As required.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: The Safety Analysis and Hazard Reports shall be prepared in accordance with SSP 30599 in support of the safety review process.

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

<p>1a. DRD Title: R&M Allocations, Assessments, and Analyses Reports</p> <p>1b. Data Type: 3</p>	<p>2. Date of Current Version January 15, 2010</p>	<p>3a. DRD No. C-SA-06</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>4. Use The R&M Allocations, Assessments, and Analysis Report shall be used to status quantitative and qualitative R&M performance characteristics of pressurized cargo equipment and flight crew equipment. The Report shall include an electronic file that includes the data elements as levied herein.</p>			<p>5. DRD Category S&MA/PR</p>
<p>6. References SOW 2.1.3</p>		<p>7. Interrelationships N/A</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: This report shall provide R&M predictions and analyses for the pressurized cargo equipment and flight crew equipment. Predicted and/or experienced R&M performance shall be documented according to equipment, function and repairable item.

8b. CONTENT: The R&M Allocations, Assessments, and Analysis Report shall document the equipment predicted and/or actual performance and provide R&M data as specified in Table 1. The report shall contain the following:

- (1) R&M Quantitative Predictions and Analyses
 - (a) Define the approach/process used, including prediction techniques, methodologies, and tools.
 - (b) Identify associated ground rules and assumptions used in making predictions and performing analyses.
 - (c) Identity source data used in analysis.
 - (d) Provide reliability block diagrams and associated data used in any quantitative analyses required by ISS Program.
- (2) Limited Life and Preventive Maintenance
 - (a) Identify any limited life items and preventive maintenance items and/or perform reassessments as needed to reflect technical findings. Preventive maintenance analyses shall be performed in accordance with Figure 1, PM Decision Matrix.
 - (b) Identify ground rules and assumptions used in making predictions and performing analyses. Provide rationale for items assessed for preventive maintenance.
- (3) Provide R&M source data in accordance with Table 1, R&M Source Data Field Definition Table.

8c. FORMAT: Reports shall be delivered electronically in a format supported by MS Word. Data required in accordance with Table 1 shall be provided electronically in a format support by MS Excel

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9. OPR: OE

10. FIRST SUBMISSION DATE: First report due March 31 of the first contract year (annually thereafter)

Frequency Of Submission: Report submitted annually, including data required by Table 1. Data updates made once approved by NASA S&MA.

Additional Submissions: Table 1 updates are required to maintain accuracy and completeness of the R&M data. Updates to the table are required within 30 calendar days of NASA/Contractor validation of need to make an update.

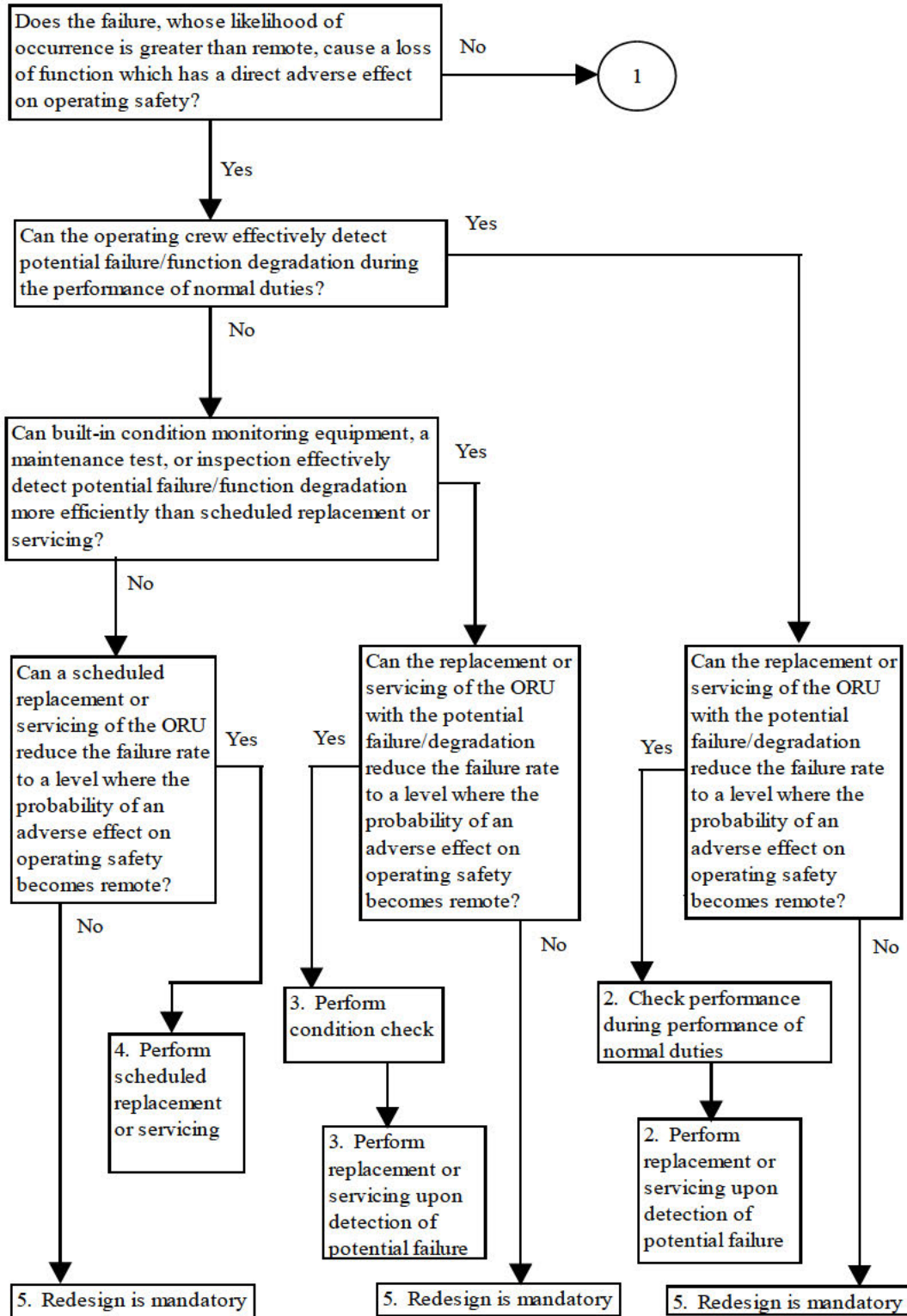
11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

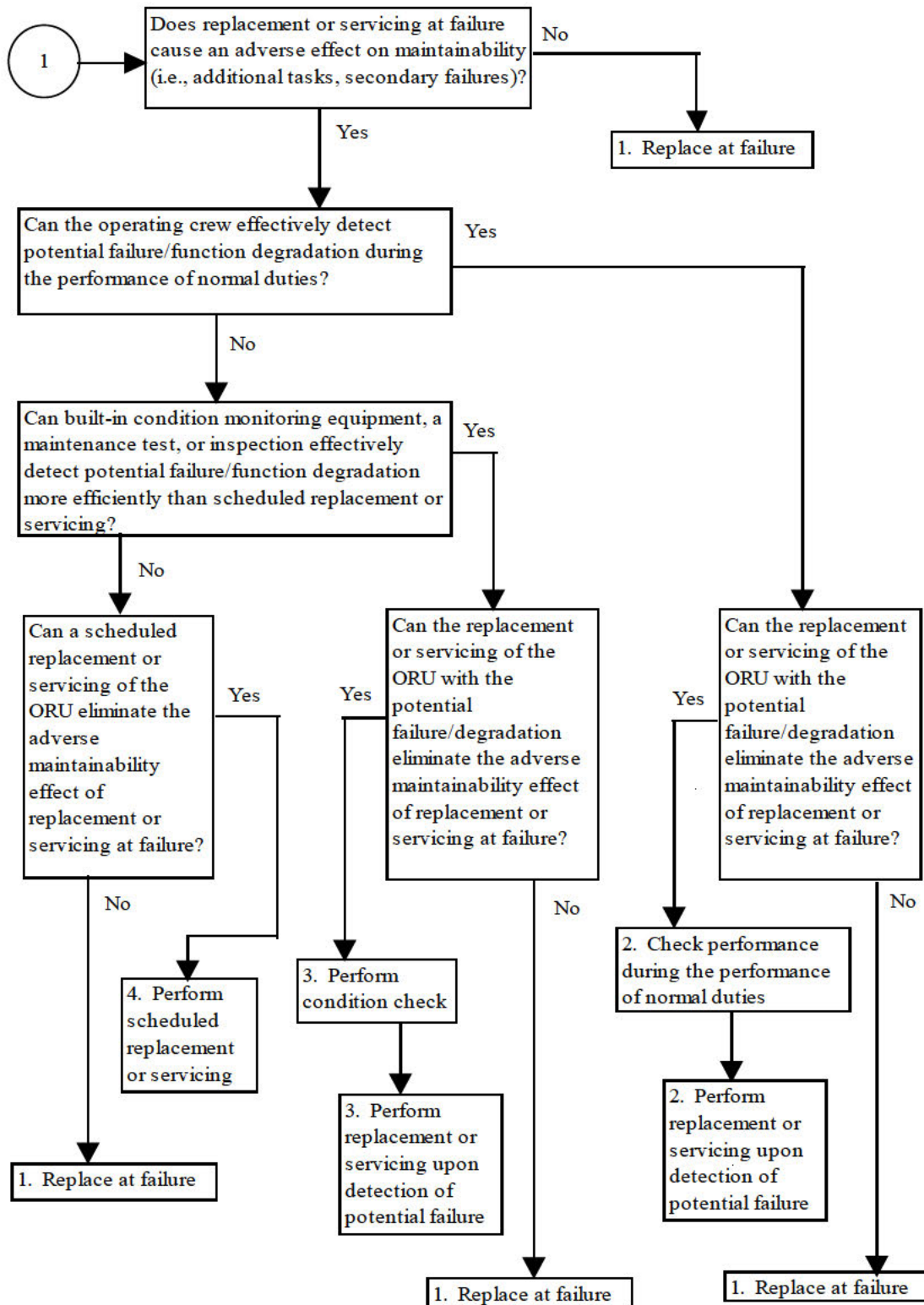
13. REMARKS: None

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Figure 1 PM Decision Matrix



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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE

Col	DESCRIPTION
A.	<p>Item Name –R&M attributes shall be entered for each item that is to be maintained on orbit. The Vehicle Master Data Base (VMDB) nomenclature shall be used for all R&M reporting. R&M is not responsible to develop the Item Name but shall use it as a reference for reporting R&M parameters.</p> <p>Field specification: Defined by Engineering.</p>
B.	<p>Drawing/Part Number – R&M attributes shall be referenced to the Drawing/Part number in the VMDB. R&M is not responsible to develop the Drawing/Part number but shall use it as a reference for reporting R&M parameters.</p> <p>Field specification: Defined by Engineering.</p>
C.	<p>Occurrence Number – R&M attributes shall be referenced to a unique Identifying number for each different record of an item that has the same Drawing/Part Number with multiple entries in the VMDB. R&M is not responsible to develop a serial or occurrence number but shall use it, if available, as a reference for reporting R&M parameters.</p> <p>Field Specification: Defined by Engineering.</p>
D.	<p>Distributed System Name – The distributed system or subsystem that contains the item in the distributed systems breakdown (i.e., C&DH, EPS, GN&C, etc.). R&M is not responsible to develop a System name but shall use it, if available, as a reference for reporting R&M parameters.</p> <p>Field specification: Defined by Engineering.</p>
E.	<p>Subsystem Name – The name assigned to the subsystem of a given distributed system in which an equipment item is located. R&M is not responsible to develop a Subsystem name but shall use it, if available, as a reference for reporting R&M parameters.</p> <p>Field specification: Defined by Engineering.</p>

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)**Col DESCRIPTION**

F. Reliability Class – Reliability classification. This is used to assign the K-factor values of Table 4
Field specification: II. The six reliability class codes are as follows:

CODE	DESCRIPTION
1	Electronic – equipment that primarily contains digital or low power analog electronics. Moving parts and high power electrical equipment normally constitute less than 5% of the item failure rate in the classification. Electronic types will typically have a fairly high level of Built-In-Testing (BIT).
2	Electrical – equipment that performs electrical power distribution, power storage, signal distribution, and/or radio frequency radiation functions. Moving parts or low power electronics normally constitute less than 5% of the item failure rate in this classification. Electrical types will typically have a low level of BIT.
3	Electro-Mechanical – equipment which contains electrical/electronic and mechanical parts, including devices which use electrical power to produce mechanical motion, and devices which use mechanical motion to produce electrical power or signals. Electro-mechanical items should contain more than 5% electrical/electronic and more than 5% mechanical parts by failure rate contribution in this classification.
4	Mechanical – equipment that primarily consists of moving parts, fluid handling equipment (including thermal systems), and/or seals. High power electrical equipment or low power electronics normally constitute less than 5% of the failure rate in this classification.
5	Structural with Crew Contact – equipment that is primarily structural but encounters planned crew contact or provides equipment protection. This type specifically includes doors, covers, panels, hatches, micrometeoroid/debris shields, and thermal blankets.
6	Structural with No Crew Contact – equipment that is load bearing. Moving parts, electronics, and electrical equipment normally constitute less than 5% of the failure rate in this classification. Structural items should not normally encounter planned crew contact.

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)

Col DESCRIPTION

G. IVA/EVA/Robotics Code – The code that describes the level of robotic compatibility of the equipment.

Field specification: II. The codes are as follows:

CODE	DESCRIPTION
0	Equipment located in pressurized area.
1	Equipment can be maintained only by EVA crew member. No robotic support is required or intended.
2	Equipment can be maintained using SPDM without EVA. Equipment is SPDM compatible. Compatibility consists of Equipment to SPDM interface. EVA can provide maintenance support in a backup role.
3	Equipment can be maintained using SSRMS without EVA. Equipment is SSRMS compatible. Compatibility consists of Equipment to SSRMS interface. Equipment must be equipped with SSRMS grapple fixture. EVA can provide maintenance support in a backup role.
4	Equipment requires combined SPDM/EVA operations for maintenance
5	Equipment requires EVA crew member to be positioned on SSRMS for access to the worksite. Equipment requires no robotic compatibility.
6	Equipment requires the Mobile Servicing System/SSRMS for transportation to the EVA worksite. Dimensions or mass of equipment to be replaced are not compatible with EVA/CETA translation. Equipment must be equipped with SSRMS grapple fixture.

H. Average Duty Cycle Prior to PHC – Fraction of time an equipment item’s operating (hot) MTBF is applicable. Format is a number from 0.0 to 1.0. Based on the sum of total operating and test hours per year for the given part number divided by the product of 8760 hours per year times the quantity of items with that part number. Cyclic failure rates shall be converted to time-based failure rates and the duty cycle of the parent equipment shall be reported and used to make that correlation. Items having different operating times for various lower-level components may report a duty cycle of 1 and the operating (hot) MTBF shall be adjusted for those different duty cycles accordingly. A duty cycle of 1.0 shall be reported for items with failure rates independent of active operation time such as fluid filled or pressurized containers, lines, and static seals, structure, and static wiring harnesses.

Field specification: R7.5

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)

Col	DESCRIPTION
I.	<p>Average Duty Cycle after PHC – Fraction of time an equipment item’s Operating MTBF is applicable. Field specification: R7.5</p>
J.	<p>MTBF – Mean Time Between Failures (“Hot” or “operating” MTBF). The estimated average time in hours between failures due to random effects under nominal operating conditions at the maintainable equipment level. Redundancy within the maintainable equipment item that is not necessary to meet failure tolerance requirements (e.g., component redundancy used for reducing maintenance demand) shall be modeled so as to improve the reported MTBF. Worst case estimates shall not be used. Failures of components that are used only during installation or removal (such as deployment motors and mechanisms) shall be excluded where maintenance would not be caused by the component’s failure. Failures of components that cause degradation of the equipment within the specified limit shall also be excluded. For complex items having components operating at different duty cycles, the operating MTBF may be adjusted to a duty cycle of 1.0 if the duty cycle is reported as 1.0. MTBF does not include failures due to Micrometeoroid/Orbital Debris (MM/OD). Field specification: R14.2</p>
K.	Deleted
L.	<p>Wearout Life – Expected time to failure (in calendar years at the stated average duty cycles) due to wear-out, degradation, or fatigue conditions in the absence of random failures for age or cycle life limited items. wearout life shall be used as an estimate of characteristic life (L Char) in the algorithms (Table3). Best available data and engineering judgment should be used to estimate wearout life as the time when 63 percent of a population would have failed due to wearout/aging conditions alone. Minimum design life shall not be reported as the wearout life. No life limit should be reported if the expected wearout life is 15 years or greater. Field specification: R4.2</p>
M.	<p>MTBPM: Removal/Replacement – Mean Time Between Preventive Maintenance for Removal and Replacement – The average time in calendar hours (at the stated duty cycles) between all preventive maintenance (PM) replacements. Care should be given when determining if preventive maintenance replacements should be performed in place of waiting until maintenance is required due to gradual performance degradation and eventual wearout (life limits). The ability of the system to effectively accommodate wearout without adverse system function impacts may allow maintenance to be performed on an as required basis instead of at specific time intervals. Field specification: R4.2</p>
N.	<p>MTBPM – Inspect/Service – Mean Time Between Preventive Maintenance for Inspection – The average time between PM inspections and/or servicing expressed in calendar hours. A single MTBPM – Inspect/Service parameter shall be developed for any equipment items requiring multiple servicing and/or inspection actions. Field specification: R4.2</p>

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Acceptance Data Package (ADP)	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-07	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide baseline documentation defining the CIs.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.1.4 SSP 30695 ISS Acceptance Data Package Requirements Specification SSP 41170 ISS CM Requirements Document		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: The Acceptance Data Package (ADP) is an accumulation of documentation that provides a verified, complete, and current status of deliverable hardware needed by the procuring and, or using organization to enable the continuation of required activities.

8b. CONTENT: The ADP contents shall be in accordance with current revision of SSP 30695.

8c. FORMAT: The ADP shall be delivered in the Contractor's format in accordance with SSP 30695.

9. OPR: OE

10. FIRST SUBMISSION DATE: Submitted with initial shipment and, or transfer of hardware item or software delivery.

Frequency Of Submission: Required with each delivery of hardware from a manufacturer and, or developer to a using site or deliveries between using sites.

11. MAINTENANCE: In accordance with the current version of SSP 30695.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: For CMC developed/sustained hardware, not pass through as documented in SOW paragraph 2.1.4.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-08	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 1 4. Use The FMEA serves as a source that documents the systematic evaluation of credible failure modes and effects to hardware functionality, system performance, and personnel and crew. Each credible failure mode is assessed in order that appropriate corrective action(s) may be taken to eliminate or control the root cause of the failure. The CIL documents reliability risk item's that meet criteria of SSP 30234, Paragraph 6.1. These items require additional disposition to communicate risk from failure and request program acceptance of its use.			5. DRD Category S&MA/PR
6. References SOW 2.1.3, 5.5		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: The FMEA and CIL assessment are performed on pressurized cargo equipment and flight crew equipment as specified in SSP 30234.

8b. CONTENT: The FMEA and CIL Report and worksheet contents are specified by SSP 30234.

8c. FORMAT: The data element format is specified in SSP 30234. The reports shall be delivered electronically in a MS Word compatible format that can be edited and made accessible in the VMDB.

9. OPR: OE

10. FIRST SUBMISSION DATE: First report due March 31 of the first contract year (annually thereafter)

Frequency Of Submission: FMEA/CIL Report: FMEA/CIL worksheets: Submitted in accordance with the project schedule for delivery, review, and approval of programmatic deliverables.

Critical Items: Submitted for Program Management approval in accordance with SSP 30234 and no later than 60 calendar days prior to first flight of the hardware to support CoFR for that flight.

Additional Submissions: FMEA/CIL worksheets and Critical Items: Updates are required to maintain accuracy and completeness of individual FMEA/CIL worksheets. FMEA/CIL worksheets for hardware transitioned to the CMC have been accepted with existing formatting. Modifications of existing FMEA/CIL worksheets required to maintain technical accuracy and completeness will be performed in accordance with SSP 30234. Only the areas of the FMEA/CIL worksheets that are affected by the modifications will be updated to meet SSP 30234. Updates are required within 30 calendar days of NASA/Contractor validation of need to make an update.

11. MAINTENANCE: The document shall be maintained electronically.

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12. **COPIES/DISTRIBUTION:** 1 electronic copy to a Program authorized repository (EDMS or equivalent)
13. **REMARKS:** None

Attachment J-9

Hardware List

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TABLE 1.1-A STOWAGE ACCOMMODATIONS

Item Number	Description	Part Number	Sustain
	M01, M02 and M03Bags		
1	M01 Bag	SEG33111805-301	Yes
2	M02 Bag	SEG33111806-301	Yes
3	M03 Bag	SEG33117683-301	Yes
	RSP/BMRRM Bag		
4	RSP BMRRM Bag	SDG33113985-701	Yes
5	BMRRM Bag Extension Strap	SDG33113986-701	Yes
	Cargo Transfer Bags (CTBs)		
6	Cargo Transfer Bag, Half Size	SEG33111836-301' -303	Yes
7	Cargo Transfer Bag, Full Size, With Windows	SEG33111837-301' -303' -305' -307	Yes
8	Cargo Transfer Bag, Full Size, Without Windows	SEG33111838-301' -303' -305' -307	Yes
9	Cargo Transfer Bag, Double Size	SEG33111839-301' -303	Yes
10	Cargo Transfer Bag, Triple Size	SEG33111840-301' -303	Yes
	Cargo Transfer Bag Accessories		
11	Divider Assembly, Cargo Transfer Bag	SEG33111841-301'-303'-305'-307' -309'-311'-313'-315'-317'-319'-321' -323'-325'-327'-329'-331	Yes
12	Pocket Assembly, Cargo Transfer Bag	SEG33111842-301	Yes

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TABLE 1.1-B BATTERIES

Item Number	Description	Part Number	Sustain
1	AN/PRC-112 Battery Pack	528-20623-3	Yes
2	Wing Leading Edge (WLE) Battery Pack	528-21404	Yes
3	Wing Leading Edge (WLE) Battery Pack	528-21404-1	Yes
4	Wing Leading Edge (WLE) Battery Pack	528-21404-2	Yes
5	AA Lithium Iron Disulfide	528-43100	Yes
6	Lithium BCX "D" Cell	3B3750	Yes
7	Lithium BCX "D" Cell	3B3750-XA	Yes
8	Lithium BCX "D" Cell	3B3750-XA-D	Yes
9	Lithium BCX "C" Cell	3B4250	Yes
10	Lithium BCX "C" Cell	3B4250-ST	Yes
11	Lithium BCX "C" Cell	3B4250-ST-B	Yes
12	Alkaline Batteries	528-41350	Yes
13	"N" Cell	528-41350-1	Yes
14	AAAA Cell	528-41350-10	Yes
15	AAA Cell	528-41350-2	Yes
16	AA Cell	528-41350-3	Yes
17	C Cell	528-41350-4	Yes
18	D Cell	528-41350-5	Yes
19	9V Cell	528-41350-6	Yes
20	9V Cell	528-41350-7	Yes
21	Silver Oxide Battery	528-41875	Yes
22	1.5V, 38 mAH	528-41875-2	Yes
23	1.5V, 38 mAH	528-41875-3	Yes
24	6V, 170 mAH	528-41875-4	Yes
25	1.5V, 180 mAH	528-41875-5	Yes
26	1.5V, 180 mAH	528-41875-6	Yes
27	Battery, LI-CF	BR3032	Yes
28	3.0V Waffer Cell	CR2016	Yes
29	3.0V Waffer Cell	CR2025	Yes
30	Battery Lithium 3.0V	CR2032	Yes
31	Battery Lithium 3.0V	CR2320	Yes
32	Battery, Frezzi	DT105-0009	Yes
33	PGT/EHIP Charger Adapter Cable	PGT-1001	Yes
34	Battery Pack Charger	QC-1004	Yes
35	Battery Pack Assembly, XL - 1 Digital Camcorder same as Canon BP-930	SED33111486-303	Yes
36	PGT Battery Pack (NIMH)	SEG3310979-305	Yes
37	Battery Assy, Button (CR2025)	SEZ33111316-301	Yes
38	Battery Assy (544)	SEZ33111322-301	Yes
39	Battery Assy (EL1-CR2)	SEZ33111323-301	Yes

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Item Number	Description	Part Number	Sustain
40	EN-EL4a Li-Ion Rechargeable (For Nikon D2XS Digital Camera)	SEZ33120535-302	Yes
41	Wireless Crew Communication System (WCCS) Crew Remote Unit (CRU) Battery Pack	SED16102307	Yes
42	SARSAT Beacon Battery Pack	PS-002957-002	Yes
43	Silver Zinc Battery Charger	528-20769	Yes

TABLE 1.1-C CABLES

Item Number	Description	Part Number	Sustain
1	Communication Cable Assy	10108-10079	Yes
2	Cable Assy, DC Harness	10108-10082	Yes
3	Pigtail Connector DC Harness	10108-10098	Yes
4	Shielded DC Harness Power Cable Assy	528-20990	Yes
5	Express Payload Connector Pigtail Assy	528-21123	Yes
6	Cable Assembly - SSV TO PDIP / CIP	SED16103246	Yes
7	PCMCIA TO WIB-Remote Cable	SED16103249-301	Yes
8	W' Accessory Cable	SED33108816	Yes
9	ICP Power/Video Cable Assembly	SEG16103296	Yes
10	ESC Power Adapter Cable Assy	SEG33111365	Yes
11	Power Cable Assy, 28 VDC, 20AMP-10 FT and 20 ft	SEG33112266	Yes
12	RS232 Cable Assy	SEZ33113437	Yes
13	Cable Assembly, 28 VDC Y - Cable (2 ft)	SEZ39134173	Yes
14	Cable Assembly, Russian Adapter	SEZ39134178	Yes
15	Cable Assembly, Russian Chassis Ground	SEZ39134181	Yes

TABLE 1.1-D LAPTOPS

Item Number	Description	Part Number	Sustain
1	Laptop Computer Assy, IBM A31P	SEG33115360	Yes
2	Laptop Computer Assy, IBM A31P Altered Item DWG	SEG33115360-301	Yes
3	Laptop Computer Assy, IBM A31P Altered Item DWG	SEG33115360-302	Yes
4	Laptop Computer Assy, IBM A31P Altered Item DWG	SEG33115360-303	Yes
5	A31p Docking Station (OCA)	SEZ33120584-301	Yes
6	A31P Docking Station (PCMMU)	SEZ33120585-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
7	16' RJ45 Cable	1F15940-1	Yes
8	32' RJ45 Cable	1F15940-501	Yes
9	49' RJ45 Cable	1F15940-503	Yes
10	Access Point	1F15938-1	Yes
11	10' Power Supply Cable	1F15985-1	Yes
12	10' Power Cable	1F15985-501	Yes
13	Wireless RF Network Card	1F15983-1	Yes
14	Stand-By Battery NIMH	29H9497	Yes
15	Back-Up Battery Lith-ion (WAIFER)	29H9506	Yes
16	Cable Assy DC "Y" Power PGSC	528-21016	Yes
17	Programming Cable, RS-422, Pistol Grip Tool	528-21137	Yes
18	IWIS Power Cable Assembly	528-21376-1	Yes
19	Cable Assembly, 120 VDC Power Supply	SDG38117717-301	Yes
20	Cable Assembly, 28 VDC Power	SDG38117718-301	Yes
21	Cable Assembly, 16VDC Output Adapter	SDG38117719-301	Yes
22	MIL-STD 1553 PCMCIA Card/Cable	SDG39129273-301	Yes
23	MDM Serial Interface Card	SDIO-PCM2-1/TYPE II	Yes
24	1553 PCMCIA Card	SDZ33119900-301	Yes
25	1553 PCMCIA Cable	SDZ33119901-301	Yes
26	Flash Memory PC Card	SDZ39121200	Yes
27	3-COM Ethernet Card/Cable	SDZ39129269-301	Yes
28	QUATECH RS-422 Card Cable	SDZ39129284-301	Yes
29	Cable Assy, RS-232-C, 9 PIN, PGSC	SED33103348	Yes
30	Cable Assy, RS-232-C, 9 PIN, PGSC	SED33103348-307	Yes
31	Cable Assy, RS-232-C, 9 PIN, PGSC	SED33103348-309	Yes
32	Adapter DC Power (486)	SED39126010	Yes
33	Adapter DC Power (486)	SED39126010-301	Yes
34	Adapter DC Power (486)	SED39126010-305	Yes
35	Adapter DC Power (486)	SED39126010-307	Yes
36	Cable Assembly, RS-422-, PGSC 486	SED39126965	Yes
37	P.W. Board Assy Two Port Isolated	SED39126966-301	Yes
38	120V Power Supply	SED39129272-303	Yes
39	Network, 3 Ft. PGSC Cable Assy.	SED39129316	Yes
40	Network, 25 Ft. PGSC Assy.	SED39129317	Yes
41	Network, 25 Ft. PGSC Assy.	SED39129317-301	Yes
42	BNC T-Adapter	SED39129318-801	Yes
43	Terminator 50 OHM	SED39129319-801	Yes
44	Cap Assy., Connector, Protective	SED39135896-301	Yes
45	W - Cable Assy Power Extension	SED46117063	Yes
46	W - Cable Assy Power Extension	SED46117063-301	Yes

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Item Number	Description	Part Number	Sustain
47	Audio/Video Cable Assy	SEG12100475-301	Yes
48	Battery Pack Assembly, A31P	SEG33115356-301	Yes
49	DVD/CDRW Drive Assembly, A31P	SEG33115357-301	Yes
50	Floppy Drive Assembly, A31P	SEG33115358-301	Yes
51	60GB Hard Drive Assembly, A31P	SEG33115359-301	Yes
52	Cable Assembly, PCS Power Supply To A31P	SEG33115361-301	Yes
53	Ultrabay Adapter Assembly, A31P	SEG33115362-301	Yes
54	Cable, A31P Audio/Video	SEG33115370	Yes
55	Cable, A31P Audio/Video	SEG33115370-301	Yes
56	Cable, A31P Audio/Video	SEG33115370-302	Yes
57	Ultraport Camera	SEG33115371-301	Yes
58	Ultraport Camera Kit, Minus Camera	528-43107-2	Yes
59	S-Video Adapter Cable	SEG33115372-301	Yes
60	Power Supply Assembly	SEG33116412	Yes
61	Power Supply Assembly-120 VDC Power Supply, A31P	SEG33116412-301	Yes
62	A31P 120VDC Power Supply	SEG33116412-302	Yes
63	Power Supply, 120VDC Power Supply	SEG33116412-303	Yes
64	Power Supply Assembly - 28VDC Power Supply	SEG33116428-301	Yes
65	Cable A31P 16VDC Power Cable	SEG33115459-301	Yes
66	T61p Laptop Computer	SEG33120761-301	Yes
66a	T61p Laptop Computer	SEG33120761-302	Yes
67	T61p 160GB Hard Disk Drive	SEG33120738-301	Yes
68	T61p Li-On 9-Cell Internal Battery	SEG33120739-301	Yes
69	T61p 2GB Memory Module	SDG33120740-301	Yes
70	T61p Ultrabay Adapter	SEG33120741-301	Yes
71	T61p USB 120GB Hard Disk Drive	SEG33120742-301	Yes
72	T61p USB DVD-RW Dual Layer Multi-burner Drive	SEG33120743-301	Yes
73	T61p USB QuickCam Pro Camera	SEG33120744-301	Yes
73a	T61p USB QuickCam Pro Camera	SEG33120744-302	Yes
74	T61p USB To Serial Interface Converter Cable	SEG33120745-301	Yes
75	T61p USB to Parallel Interface Converter Cable	SEG33120746-301	Yes
75a	T61p USB to Parallel Interface Converter Cable	SEG33120746-302	Yes
76	T61p 160GB Hard Disk Drive Rubber Shock Rails	SEG33120747-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
77	T61p Internal DVD Multi-burner Drive	SEG33120748-301	Yes
78	Backup Battery	02K6572	Yes
79	Trackpoint Cap	91P8421	Yes
80	DC Power (Shuttle Orbiter) 28 VDC PCS/PGSC	SEG38114834	Yes
81	DC Power (Shuttle Orbiter) 28 VDC PCS/PGSC, 6'	SEG38114834-301	Yes
82	DC Power (Shuttle Orbiter) 28 VDC PCS/PGSC, 10'	SEG38114834-303	Yes
83	DC Power (Shuttle Orbiter) 28 VDC PCS/PGSC, 25'	SEG38114834-305	Yes
84	Power Cable	SEG38116215-301	Yes
85	Cable Assembly - PCS/DC Power (20VDC) PCS/PGSC	SEG39129263	Yes
86	20V POWER CABLE (10 FT)	SEG39129263-301	Yes
87	20 VDC POWER CABLE (25 FT)	SEG39129263-303	Yes
88	28 VDC Power (Space Station)	SEG39129264	Yes
89	28 VDC Power (Space Station)	SEG39129264-301	Yes
90	CABLE ASSEMBLY, 28VDC POWER	SEG39129264-303	Yes
91	CABLE ASSEMBLY, 28VDC POWER	SEG39129264-305	Yes
92	Power Supply, DC, 120VDC/16VDC, PCS	SEG39129272	Yes
93	Power Supply, DC, 120VDC/16VDC, PCS	SEG39129272-301	Yes
94	Power Supply, DC, 120VDC/16VDC, PCS	SEG2921272-303	Yes
95	UOP Power/Data Cables (Vehicle PWR)	SEG39129274	Yes
96	Power Cable, PCS-UOP 28 VDC (Space Station)	SEG39129280	Yes
97	Data Cable Assy, PCS To PDIP 1553 (8 Ft)	SEG39129282	Yes
98	Floppy Disk Drive	SEG39129288-301	Yes
99	Power Cable, Date/120 VDC (Space Station)	SEG39131206	Yes
100	Power Cable, Date/120 VDC (Space Station)	SEG39131206-301	Yes
101	Power Cable, Date/120 VDC (Space Station)	SEG39131206-303	Yes
102	Power Supply	SEG39134698-301	Yes
103	W-Cable Assembly (Vehicle PWR)	SEG46117140	Yes
104	SHORT 'W' CABLE	SEG46117140-301	Yes
105	5 FT EXTENSION 'W' CABLE	SEG46117140-302	Yes

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Item Number	Description	Part Number	Sustain
106	10 FT EXTENSION 'W' CABLE	SEG46117140-303	Yes
107	15 FT EXTENSION 'W' CABLE	SEG46117140-304	Yes
108	20 FT EXTENSION 'W' CABLE	SEG46117140-305	Yes
109	SHORT "W" CABLE	SEG46117140-306	Yes
110	PCMCIA Micro Drive Assembly	SEZ33112992	Yes
111	PCMCIA Adapter Assy	SEZ33113155-801	Yes
112	Cable Assembly, Power Supply Output	SEZ38116320-301	Yes
113	Adapter, RS-422	SEZ39121212-301	Yes
114	Power Cable, PCS-UOP 120 VDC (Space Station)	SEZ39129260	Yes
115	Cable Assy, PCS-UOP 120VDC, 6'	SEZ39129260-301	Yes
116	Cable Assy, PCS-UOP 120VDC	SEZ39129260-303	Yes
117	Cable Assy, PCS-UOP 120VDC, 25'	SEZ39129260-305	Yes
118	Cable Assy, PCS-UOP 120VDC, 6'	SEZ39129260-307	Yes
119	Cable Assy, PCS-UOP 120VDC, 10'	SEZ39129260-309	Yes
120	Cable Assy, PCS-UOP 120VDC, 25'	SEZ39129260-311	Yes
121	Pwr. Cbl., UOP 1553 Data/120 VDC (Space Station)	SEZ39129268	Yes
122	Pwr. Cbl., UOP 1553 Data/120 VDC (Space Station), 10'	SEZ39129268-301	Yes
123	Pwr. Cbl., UOP 1553 Data/120 VDC (Space Station), 25'	SEZ39129268-303	Yes
124	Cable Assembly, Video	SEZ39131213-301	Yes
125	Assembly, Writable CD-ROM, PCS	SEZ39131210	Yes
126	Assembly, Writable CD-ROM, PCS	SEZ39131210-303	Yes
127	Assembly, Writable CD-ROM, PCS	SEZ39131210-305	Yes
128	Assembly, Writable CD-ROM, PCS	SEZ39131210-307	Yes
129	Assembly, Writable CD-ROM, PCS	SEZ39131210-309	Yes
130	RS232 Y-Cable Assembly	SED39124826	Yes
131	RS232 Y-Cable Assembly	SED39124826-305	Yes
132	RS232 Y-Cable Assembly	SED39124826-307	Yes
133	1553 Node 1 Cable Assembly	SEG39135897	Yes
134	1553 Node 1 Cable Assembly	SEG39135897-301	Yes
135	1553 Node 1 Cable Assembly	SEG39135897-303	Yes
136	Color Printer	SEZ39134666	Yes
137	Color Printer (DTO)	SEZ39134666-301	Yes
138	Color Printer (Station)	SEZ39134666-303	Yes
139	Color Printer Assy (Station and Orbiter)	SEZ39134666-306	Yes
140	Printer, Color Station W Upgraded Firmware	SEZ39134666-307	Yes
141	Input Paper Tray (Exp.)	SEZ39134666-701	Yes

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Item Number	Description	Part Number	Sustain
142	Output Paper Tray (Exp.)	SEZ39134666-702	Yes
143	Parallel Data Cable	SEZ39131220	Yes
144	PARALLEL DATA CABLE (6')	SEZ39131220-301	Yes
145	PARALLEL DATA CABLE (10')	SEZ39131220-303	Yes
146	PARALLEL DATA CABLE (15')	SEZ39131220-305	Yes
147	PARALLEL DATA CABLE (20')	SEZ39131220-307	Yes
148	PARALLEL DATA CABLE (25')	SEZ39131220-309	Yes
149	Color Printer Paper (6 Hole, 1/4" Dia.)	528-43093-3	Yes
150	2 GB LIGHTING FLASHDRIVES	SM-OAC-FD	Yes
151	Cable Assembly, A31P 16V DC Power	SDG33115374-301	Yes
152	Cable Assembly, A31P Enhanced 16VDC Power	SEG33116459-301	Yes
153	Track Point Cap, A31p	26P9198	Yes
154	Track Point Cap, A31p	84G6536	Yes
155	Track Point Cap, A31p	26P9212	Yes
156	A31p Docking Station	SEZ33119826-801	Yes
157	Orbiter Communications Adapter, Rev. 2A	SEZ16103933-301	Yes
158	Sealevel Serial I/O Card (i.e., PCMMU card)	SED33119854-301	Yes
159	A31p Docking Station Power Cable	SEZ33119834-301	Yes
160	Orbiter Communications Adapter (SSP) Cable Assembly	SED16103948-301	Yes
161	Assembly, Writable DVD, PCS	SEZ39136155	Yes
162	Assembly, Writable DVD, PCS	SEZ39136155-301	Yes
163	Assembly, Writable DVD, PCS	SEZ39136155-302	Yes
164	Assembly, Writable DVD, PCS	SEZ39136155-303	Yes
165	Assembly, Writable DVD, PCS	SEZ39136155-304	Yes
166	Assembly, Writable DVD, PCS	SEZ39136155-305	Yes
167	T61p Expresscard Parallel Adapter	SEG33120748-302	Yes
168	T61p 16V Power Cable	SEG33121547-301	Yes
169	USB Video Adapter	SEG33121544-801	Yes
170	USB Video Dongle	SEG33121545-801	Yes

TABLE 1.1-E Photo and TV

Item Number	Description	Part Number	Sustain
1	Lens 24-120mm f/3.5-3.6 "D" AF	1975 NCP	Yes
2	Nikon To C-Mount Adapter	DL06612P	Yes
3	Wrist Strap Nikon	FC-51	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
4	Haze Filter, 39MM	L-37C	Yes
5	RCA Gender Changer	PRO-GFF/2	Yes
6	Bumper Ring, Bayonet Mount - 70mm	SDD33111380-001	Yes
7	Bumper Ring	SDD33111381	Yes
8	Bumper Ring, Threaded Mount - 93mm	SDD33111381-001	Yes
9	Bumper Ring, Threaded Mount - 77mm	SDD33111381-003	Yes
10	Bumper Ring, Threaded Mount - 72mm	SDD33111381-005	Yes
11	Bumper Ring, Threaded Mount - 62mm	SDD33111381-007	Yes
12	Bumper Ring, Threaded Mount - 52mm	SDD33111381-009	Yes
13	Compact Flash to PC Card Adapter Assy	SDZ12100650-301	Yes
14	DTV IEEE 1394 Cable	SDZ16103649	Yes
15	DTV IEEE 1394 4-Pin to Male CIRC Cable	SDZ16103649-801	Yes
16	DTV IEEE 1394 4-Pin to Male CIRC Cable	SDZ16103649-803	Yes
17	DTV IEEE 1394 4-Pin to Female CIRC Cable	SDZ16103651-801	Yes
18	IEEE 1394 4-4 Pin Firewall Cable	SDZ16103652-801	Yes
19	Lens, 55mm f/1.2 Visible	SEB33100009-301	Yes
20	Lens, 55mm f/1.2 Visible	SEB33100773-301	Yes
21	Lens, 55MM 5/2 UV Assembly	SEB33100774	Yes
22	Filter, Wratten No. 12, Nikon	SEC33101011	Yes
23	Lens, 28MM F2.8D (EVA)	SED22105019-301	Yes
24	Flash Card Assy	SED32103455	Yes
25	Flash Card Assy	SED32103455-302	Yes
26	Flash Card Assy	SED32103455-303	Yes
27	Extension Ring, PK13, Nikon	SED33101581-002	Yes
28	Lens 105mm f/2.8	SED33101582	Yes
29	Lens 105mm f/2.8	SED33101582-301	Yes
30	Lens 105mm f/2.8	SED33101582-302	Yes
31	Bracket Adapter (1/4-20), Multi-Use	SED33102474	Yes
32	Bracket Adapter (1/4-20), Multi-Use	SED33102474-301	Yes
33	Bracket Adapter (1/4-20), Multi-Use	SED33102474-302	Yes
34	Mount Assy, 35MM	SED33102475	Yes
35	Mount Assy, 35MM	SED33102475-301	Yes
36	Mount Assy, 35MM	SED33102475--306	Yes
37	Mounting Bracket Clamp	SED33102476-330	Yes
38	Filter Assy, UV Lens	SED33102477-301	Yes
39	Lens/Window Cleaning Kit Assy	SED33102528	Yes
40	Lens/Window Cleaning Kit Assy	SED33102528-304	Yes
41	Lens/Window Cleaning Kit Assy	SED33102528-307	Yes

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Item Number	Description	Part Number	Sustain
42	Lens/Window Cleaning Kit Assy	SED33102528-311	Yes
43	DRY Wipe Bag Assy	SED33102528-330	Yes
44	Divider/Holder/Insert Assy	SED33102534	Yes
45	Bag, Camera STWG Assy	SED33102534-310	Yes
46	Bag, Camera STWG Assy	SED33102534-311	Yes
47	Bag, Camera STWG Assy	SED33102534-312	Yes
48	Bag, Camera STWG Assy	SED33102534-313	Yes
49	Bag, Camera STWG Assy	SED33102534-314	Yes
50	Bag, Camera STWG Assy	SED33102534-315	Yes
51	Bag, Camera STWG Assy	SED33102534-316	Yes
52	Bag, Camera STWG Assy	SED33102534-317	Yes
53	Bag, Camera STWG Assy	SED33102534-318	Yes
54	Divider/Holder/Insert Assy	SED33102534-321	Yes
55	Divider/Holder/Insert Assy	SED33102534-322	Yes
56	Divider/Holder/Insert Assy	SED33102534-323	Yes
57	Divider/Holder/Insert Assy	SED33102534-324	Yes
58	Divider/Holder/Insert Assy	SED33102534-325	Yes
59	Divider/Holder/Insert Assy	SED33102534-326	Yes
60	Divider/Holder/Insert Assy	SED33102534-327	Yes
61	Divider/Holder/Insert Assy	SED33102534-328	Yes
62	Divider/Holder/Insert Assy	SED33102534-329	Yes
63	Divider/Holder/Insert Assy	SED33102534-330	Yes
64	Divider/Holder/Insert Assy	SED33102534-331	Yes
65	Divider/Holder/Insert Assy	SED33102534-332	Yes
66	Divider/Holder/Insert Assy	SED33102534-333	Yes
67	Divider/Holder/Insert Assy	SED33102534-334	Yes
68	Divider/Holder/Insert Assy	SED33102534-335	Yes
69	Divider/Holder/Insert Assy	SED33102534-336	Yes
70	Divider/Holder/Insert Assy	SED33102534-337	Yes
71	Divider/Holder/Insert Assy	SED33102534-338	Yes
72	Divider/Holder/Insert Assy	SED33102534-342	Yes
73	Divider/Holder/Insert Assy	SED33102534-343	Yes
74	Divider/Holder/Insert Assy	SED33102534-344	Yes
75	Divider/Holder/Insert Assy	SED33102534-345	Yes
76	Divider/Holder/Insert Assy	SED33102534-346	Yes
77	Divider/Holder/Insert Assy	SED33102534-347	Yes
78	Divider/Holder/Insert Assy	SED33102534-348	Yes
79	Divider/Holder/Insert Assy	SED33102534-349	Yes
80	Divider/Holder/Insert Assy	SED33102534-350	Yes
81	Divider/Holder/Insert Assy	SED33102534-351	Yes
82	Divider/Holder/Insert Assy	SED33102534-352	Yes

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Item Number	Description	Part Number	Sustain
83	Filter Assy	SED33102535	Yes
84	Filter Assy, OF Lens, ORN Wratten 21	SED33102535-334	Yes
85	Lens, 85mm f/1.4 AI	SED33102541	Yes
86	Lens, 85mm f/1.4 AI	SED33102541-301	Yes
87	Lens, 85mm f/1.4 D AF	SED33102541-302	Yes
88	Bracket, Dual Camera	SED33102545-301	Yes
89	Lens 16mm f/2.8 AF "D"	SED33103387	Yes
90	Lens 16mm f/2.8 AF "D"	SED33103387-301	Yes
91	Lens 16mm f/2.8 AF "D"	SED33103387-302	Yes
92	Lens 15mm f/3.5	SED33103429-301	Yes
93	Filter Assy, Wratten 12, Nikon	SED33103869-301	Yes
94	Lens, 180mm f/2.8 AF	SED33104057-302	Yes
95	Lens, 35-70mm f/2.8 AF	SED33104059-302	Yes
96	Lens, 20mm f/2/8 AF	SED33104060-301	Yes
97	Lens, 60mm f/1.2 AF	SED33104062-301	Yes
98	Flash Assy, Nikon	SED33104064	Yes
99	Loc Line Mounting Bracket	SED33104070-301	Yes
100	52MM IR Filter Assy	SED33104373	Yes
101	52MM IR Filter Assy	SED33104373-301	Yes
102	52MM IR Filter Assy	SED33104373-303	Yes
103	Filter Ring Assy - Lens, Camera Nikon	SED33104374	Yes
104	Filter Ring Assy - Lens, Camera Nikon	SED33104374-302	Yes
105	Filter Ring Assy - Lens, Camera Nikon	SED33104374-303	Yes
106	Kit Assy, Fuse	SED33104381-302	Yes
107	Lens Nikkor 24-50mm f/3.3-4.5 D AF Zoom	SED33104495	Yes
108	Lens Nikkor 24-50mm f/3.3-4.5 D AF Zoom	SED33104495-301	Yes
109	Lens Nikkor 24-50mm f/3.3-4.5 D AF Zoom	SED33104495-302	Yes
110	Extension Ring, PK12, Nikon	SED33104497-301	Yes
111	Filter Assy, Polarizing, 62mm	SED33104498	Yes
112	Filter Assy, Polarizing, 62mm	SED33104498-301	Yes
113	Filter Assy, Polarizing, 62mm	SED33104498-303	Yes
114	Filter Assy, Orange, 62MM	SED33104529-301	Yes
115	Teleconverter, 2X (TC-301)	SED33104530	Yes
116	Teleconverter, 2X (TC-301)	SED33104530-301	Yes
117	Teleconverter, 2X (TC-301)	SED33104530-303	Yes
118	Teleconverter, 1/4 (TC 14 A)	SED33104535	Yes
119	Teleconverter, 1/4 (TC 14 A)	SED33104535-301	Yes
120	Teleconverter, 1/4 (TC 14 A)	SED33104535-302	Yes

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Item Number	Description	Part Number	Sustain
121	Converter Assy, Scope, Lens	SED33104536-301	Yes
122	Flash Card Assy	SED33104786	Yes
123	Flash Card Assy	SED33104786-301	Yes
124	Flash Card Assy	SED33104786-302	Yes
125	Bumper Ring, 50-300MM Zoom	SED33104787-001	Yes
126	Bracket Clamp Assy, Multi-Use	SED33104844-303	Yes
127	Bumper Ring Assy, 62mm	SED33104881-303	Yes
128	Bumper Ring Assy, 72 MM	SED33104882	Yes
129	Bumper Ring Assy, 72 MM	SED33104882-301	Yes
130	Bumper Ring Assy, 72 MM	SED33104882-303	Yes
131	Filter Assy, Wratten 12, 95MM	SED33104884-301	Yes
132	Lens Assy, 1000MM F/11	SED33104885-302	Yes
133	Filter Assy, Type H3 (620-690NM/Center WL 651 NM)	SED33104904	Yes
134	Filter Assy, Type H3 (620-690NM/Center WL 651 NM)	SED33104904-301	Yes
135	Filter Assy, Type H3 (620-690NM/Center WL 651 NM)	SED33104904-302	Yes
136	Filter Assy, Type H4 (730-810NM/Center WL 762 NM)	SED33104905	Yes
137	Filter Assy, Type H4 (730-810NM/Center WL 762 NM)	SED33104905-301	Yes
138	Filter Assy, Type H4 (730-810NM/Center WL 762 NM)	SED33104905-303	Yes
139	Filter Assy, Type H9 (540-580NM/Center WL 566 NM)	SED33104906	Yes
140	Filter Assy, Type H9 (540-580NM/Center WL 566 NM)	SED33104906-301	Yes
141	Filter Assy, Type H9 (540-580NM/Center WL 566 NM)	SED33104906-302	Yes
142	Filter Assy, Type H6, Image Intensifier	SED33104907-301	Yes
143	Filter Assy, Polarizing, 39MM	SED33104908-301	Yes
144	Lens Assy, 105MM, F/2.8 AF, Nikon	SED33104909-301	Yes
145	CC/CPL Power Interface (CCPI)	SED33104920	Yes
146	CC/CPL Power Interface (CCPI)	SED33104920-301	Yes
147	CC/CPL Power Interface (CCPI)	SED33104920-303	Yes
148	CCPI PWR I/F Cable (28VDC)	SED33104922-301	Yes
149	Blanket Assy, Thermal, Nikon F5 EVA	SED33105013-301	Yes
150	Lens, 35-70mm f/2.8 AF	SED33105059-301	Yes
151	Lens, 80-200mm f/2.8 AF	SED33105099-301	Yes
152	CCPI Fuse Kit	SED33105384-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
153	Cable Assy, Shutter Release, 10' (F4)	SED33105450-301	Yes
154	Lens, 58mm f/1.2 NOCT	SED33105453-301	Yes
155	Binoculars, GYRO STAB, 10 X 40	SED33105454-301	Yes
156	Binoculars, 16 X 70	SED33105455-301	Yes
157	Binoculars, 20 X 60S	SED33105456-301	Yes
158	Binoculars, 8 X 20	SED33105457-301	Yes
159	Linear Polar Filter	SED33105632-002	Yes
160	Lens, 20-35mm AF	SED33105676-301	Yes
161	52MM Bumper Ring Assy	SED33105740	Yes
162	Balanced Video Cable	SED33105778-301	Yes
163	BNC Video Cable	SED33105779-301	Yes
164	Lens Assy, 400MM	SED33105842	Yes
165	Lens Assy, 400MM	SED33105842-301	Yes
166	Lens Assy, 400MM	SED33105842-302	Yes
167	RCA-BNC Adapter	SED33106400-301	Yes
168	77MM Bumper Ring Assy	SED33107850-302	Yes
169	Lens, Nikkor, 28MM F1.4 D AF	SED33110609-301	Yes
170	Advanced Video Interface Unit	SED33111493	Yes
171	Advanced Video Interface Unit	SED33111493-301	Yes
172	Advanced Video Interface Unit	SED33111493-303	Yes
173	Cable Assy, Shutter Release	SED33112525	Yes
174	Cable Assy, Shutter Release	SED33112525-301	Yes
175	Cable Assy, Shutter Release	SED33112525-302	Yes
176	Extension Cord Assy	SED33112526	Yes
177	Stereo-To-Mono Audio Adapter	SED33113649-301	Yes
178	Lens, Nikkor 50mm f/1.4 D AF	SED33114372	Yes
179	Lens, Nikkor 50mm f/1.4 D AF	SED33114372-302	Yes
180	Lens, Nikkor 50mm f/1.4 D AF	SED33114372-303	Yes
181	Bracket Assy	SED33117404-301	Yes
182	Bracket, Thermal Blanket	SED33117416-301	Yes
183	Blanket, Thermal, Camera Mount	SED33117417-301	Yes
184	NIKON D2XS CAMERA BODY	SEZ33120534-302	Yes
185	NIKON 12-24MM LENS (For Nikon D2XS)	SEZ33120536-301	Yes
186	NIKON 10.5MM LENS (For Nikon D2XS)	SEZ33120537-301	Yes
187	NIKON SB 800 SPEEDLIGHTS (For Nikon D2XS)	SEZ33117229-303	Yes
188	STEC 4 GB FLASH MEMORY CARDS (For Nikon D2XS)	SEZ33120539-301	Yes
189	D2XS BLANKET (For Nikon D2XS)	SEZ33120543-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
190	D2XS BLANKET TETHER (For Nikon D2XS)	SEZ33120556-302	Yes
191	DIFFUSER DOME (For Nikon D2XS)	SEZ33120540-301	Yes
192	EYEPIECE ASSEMBLY (For Nikon D2XS)	SEZ33120546-301	Yes
193	NIKON BATTERY DOOR (For Nikon D2XS)	SEZ33120538-302	Yes
194	SIMPLETECH FLASH CARD (For Nikon D2XS)	SEZ33118356-303	Yes
195	Flash Cord Assy, Nikon SC-17	SED33104796	Yes
196	Teleconference Camera Video/Power Cable Assembly	SED33109713	Yes
197	VIU/CM-CC Video Cable (15 ft)	SED39122260	Yes
198	Cable Assy, VTR/VIU	SED39122270-003	Yes
199	Cable Assembly, 25 ft DC Power PGSC II	SED39126013	Yes
200	Cable Assembly, RS-422-, PGSC 486	SED39126965	Yes
201	PPOV VSU TEE Cable Assys PPOV-CAM	SED39127624	Yes
202	Minicam Power Video Cable	SED39127625-301	Yes
203	Cable Assembly - PPOV/MINI-CAM	SED39127626	Yes
204	Audio/Video Cable Assy, Altered Item Drawing	SEZ16103275	Yes
205	Microphone Extension Cable Assy - XL - 1 Digital Camcorder	SEZ16103285	Yes
206	Cable Assembly, Audio RCA	SEZ16103286	Yes
207	Headphone-Camcorder Interface Cable Assembly	SEZ16103287	Yes
208	PD1 Camcorder Remote Altered Item Drawing	SEZ16103291	Yes
209	RCA Video Cable Assembly	SEZ16103292	Yes
210	RCA Video Cable	SEZ1613284-301	Yes
211	70mm Dual Bracket Cable	SEZ33113435	Yes
212	Canon XH-G1 High Definition Video Camcorder	SEZ33120850	Yes
213	Canon XH-G1 High Definition Video Camcorder	SEZ33120850-801	Yes
214	Canon XH-G1 High Definition Video Camcorder	SEZ33120850-802	Yes
215	ST to ST Optical Cable	SEZ33120840	Yes
216	ST to ST Optical Cable	SEZ33120840-801	Yes
217	ST to ST Optical Cable	SEZ33120840-802	Yes
218	ST to ST Optical Cable	SEZ33120840-803	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
219	Multi-Protocol Converter (MPC)	SEZ33120841-801	Yes
220	Canon WD-H72 Wide Angle Lens	SEZ33120851-801	Yes
221	Dual Canon Lithium-Ion Battery Charger	SEZ16103626-302	Yes
222	FLASH CARD ADAPTER	SEZ33118356-302	Yes
223	LENS, 16mm f/2.8 D AF	SED33103387-303	Yes
224	FLASH MEMORY STORAGE DEVICE (EVA)	SEZ33118356-301	Yes
225	AVIU	SED33111493	Yes
226	AVIU -302 model	SED33111493-302	Yes
227	AVIU -302/3 model	SED33111493-303	Yes
228	AVIU LCD CABLE (20ft)	SED39122260-320	Yes
229	CLEANING SOLUTION ASSY	SED33102528	Yes
230	CLEANING SOLUTION ASSY	SED33102528-329	Yes
231	DRY WIPE ASSEMBLY (LENS CLOTH KIT)	SED33102528-330	Yes
232	LENS, 17-35mm f/2.8 D AF	SEZ33112987-301	Yes
233	BRACKET, EVA CAMERA (LONG)	10159-10009-03	Yes
234	FILTER	SEZ33114460	Yes
235	FILTER, NIKON 52mm CIRCULAR POLAR for Bumper	SEZ33114460-301	Yes
236	FILTER, MODIFIED ASSEMBLY	SEZ33114460-304	Yes
237	LENS, 35mm f/2 D AF	SED33111975-301	Yes
238	EVA FLASH ASSEMBLY	SEZ33117230-302	Yes
239	EVA FLASH BLANKET	SEZ33117228-301	Yes
240	SYNC CABLE ASSEMBLY	SEZ33117231-301	Yes
241	Lens Cap Assembly, 28mm, 35mm, 50mm	SEZ33113449-303	Yes
242	EVA DIGITAL CAMERA MOUNT	SED33113695-302	Yes
243	LENS, NIKKOR (EVA) 85mm f/1.4 D AF	SEZ33113442-301	Yes
244	LENS SLEEVE ASSEMBLY	SEZ33113449	Yes
245	LENS SLEEVE ASSEMBLY 85MM	SEZ33113449-304	Yes
246	LENS, NIKKOR MICRO (EVA) 105mm f/2.8 D AF	SEZ33113443-301	Yes
247	LENS SLEEVE ASSEMBLY 180MM	SEZ33113449-311	Yes
248	CABLE ROUTE COVER ASSEMBLY	SEZ33113449-313	Yes
249	DC POWER ADAPTER CABLE 28VDC (6')	SEZ33112998-301	Yes
250	DCS POWER CABLE (7.2V SUPPLY TO DCS)	SEZ33112997-301	Yes
251	DCS POWER SUPPLY/CHARGER	SEZ33112994-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
252	FIREWIRE CABLE ASSEMBLY (6-4 PIN)	SEZ33112995-303	Yes
253	LENS, 28-70mm f/2.8 D IF-ED	SEZ33112999-301	Yes
254	MICRO DRIVE ASSY, PCMCIA 1GB	SEZ33112992-301	Yes
255	PCMCIA ADAPTER CARD ASSY	SED33107706-303	Yes
256	NIKON BATTERY CHARGER	SEG33121059-302	Yes
257	CANON G1 CAMCORDER	SEZ33120850-801	Yes
258	G1 LENS HOOD	D52-0320-000	Yes
259	CANON WIDE CONVERTER	SEZ33120851-801	Yes
260	DIGITAL CC VIDEO/POWER CABLE ASSY.	SED33111490-303	Yes
261	DV CLEANING CASSETTE	SED33111489-307	Yes
262	MPC TO DC POWER SUPPLY (White Brick)	SED39126010-307	Yes
263	MULTI-PROTOCOL CONVERTER	SEZ33120841-801	Yes
264	PGSC POWER CABLE (6 FT)	SED39122875-301	Yes
265	UOP 120V POWER CABLE ASSEMBLY (10')	SEZ39129260-309	Yes
266	UOP 120V POWER CABLE ASSEMBLY (25')	SEZ39129260-311	Yes
267	SHURE MICROPHONE	SM58SE	Yes
268	SONY HEADPHONE	MDR-14L	Yes
269	SONY DSR PD1 CAMCORDER (PAL)	SEZ16103281-303	Yes
270	VIDEO IN/OUT CABLE	SEZ39131213-301	Yes
271	VIU/CM -CC CABLE (CAMCORDER VIDEO) (15ft)	SED39122269-301	Yes
272	XLR MICROPHONE CABLE	ECO5	Yes
273	90 Degree Camera, Autotrac (Minicam)	528-20946-5	Yes
274	LENS, 12MM MINICAM	VCL-12S12XM	Yes
275	LENS, 3.5MM MINICAM	VCL-03S12XM	Yes
276	LENS, 6MM MINICAM	VCL-06S12XM	Yes
277	MINICAM / AVIU ADAPTER CABLE	528-21088-1	Yes
278	3 AMP FUSE (12V BATT CHARGER)	272003	Yes
279	BALANCE-UNBALANCED TRANSFORMER	SED39124190-301	Yes
280	BNC STRAIGHT ADAPTER	528-43087-1	Yes
281	BNC TO PHONO ADAPTER	SED39122368-001	Yes
282	BRACKET CLAMP ASSY, MULTIUSE (IP CLAMP)	SEG33111394-301	Yes
283	BRACKET, FLEXIBLE	SEG3107630-301	Yes
284	BRACKET, MULTI-USE	SEG33107631-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
285	CLAMP ASSY, HANDRAIL	SEG33107633-301	Yes
286	CABLE ASSY, S-VIDEO ADAPTER, A31P	SEG33115372-301	Yes
287	COSS AUDIO/VIDEO CABLE	SEG12100475-301	Yes
288	VTR BYPASS CABLE ASSEMBLY	SEG16103295-301	Yes
289	VTR BYPASS CABLE ASSY	SEG16103295-303	Yes
290	VTR BYPASS CABLE ASSY	SEG16103295-305	Yes
291	OCA DATA CABLE VER 2	SEG16103950-301	Yes
292	SONY 750 POWER/VIDEO CABLE	SEG33118995-301	Yes
293	50 FOOT VIDEO CABLE	528-21389-1	Yes
294	LAVILIER MICROPHONE	SED33104330-303	Yes

TABLE 1.1-F Flight Crew Systems (FCS)

Item Number	Description	Part Number	Sustain
1	Shampoo, No-Rinse 00100 (8 oz), 00100-N (8 oz), 00120 (2 oz), 00120-N (2 oz)	00100 (8 oz), 00100-N (8 oz), 00120 (2 oz), 00120-N (2 oz)	Yes
2	TOWEL ID CLIP	0769	Yes
3	Crew Pref, Cotton	26094	Yes
4	Fabric Knee Board, Paper	49511	Yes
5	PERSONAL HYGIENE KIT ASSY	10103-10003	Yes
6	PERSONAL HYGIENE KIT	10103-10003-05	Yes
7	Razor, Gillette Twin	10103-20001-01	Yes
8	Container, PHK (Personal Hygiene Kit Containers)	10103-80001	Yes
9	Container, PHK (Personal Hygiene Kit Containers)	10103-80001-04	Yes
10	Container, PHK	10103-80001-06	Yes
11	TOOTHBRUSH	10103-80002	Yes
12	TOOTHBRUSH, ORAL B-40 (SOFT)	10103-80002-01	Yes
13	TOOTHBRUSH, ORAL B-40 (MED)	10103-80002-02	Yes
14	TOOTHBRUSH, TEK HARD BRISTLE	10103-80002-04	Yes
15	SOAP AND ZIPLOCK BAG	10103-80003-03	Yes
16	Gloves, Disposable	10103-80004-01	Yes
17	Temporary Stowage Bag	10104-20002	Yes
18	Trash Container	10104-20003	Yes
19	Velcro	10104-20004	Yes
20	Velcro Kit, 1"	10104-20004-04	Yes
21	Velcro Kit, 2"	10104-20004-05	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
22	VELCOIN KIT	10104-20004-06	Yes
23	VELCRO KIT (2")	10104-20004-07	Yes
24	VELCRO KIT (1")	10104-20004-08	Yes
25	TISSUE DISPENSER ASSY	10104-20005	Yes
26	CREWMEMBER, SCISSORS	10104-20006-03	Yes
27	Wet Wipe Dispenser	10104-20019	Yes
28	SLEEP KIT	10104-20024	Yes
29	Sleep Kit Assy	10104-20024-02	Yes
30	Trash Container Liner	10104-20027	Yes
31	Stowage Container, Large Assy	10105-10001	Yes
32	Stowage Container Medium Assy	10105-10002	Yes
33	Stowage Container, Small Assy	10105-10003	Yes
34	STOWAGE CONTAINER, SMALL ASSY (Container, Sm Stowage)	10105-10003-01	Yes
35	Strap-Utility Short Assy	10105-10004	Yes
36	Strap-Utility Long Assy	10105-10005	Yes
37	Bungee Snap Assy	10105-10007	Yes
38	BUNGEE, RETENTION STOWAGE ASSY	10105-10008	Yes
39	Retention Net Assy	10105-10025	Yes
40	STRAP, VELCRO CABLE RESTRAINT	10105-10059	Yes
41	HYGIENE, STATION MIRROR ASSY	10108-10001-01	Yes
42	FLIGHT MIRROR ASSY	10108-10002	Yes
43	AMERICAN FLAG	10108-10023	Yes
44	FECAL COLLECTION ASSY	10108-10045	Yes
45	WET WASH ASSY	10108-10048	Yes
46	PEN, DATA RECORDING	10108-10059	Yes
47	FLIGHT, PEN DATA RECORDER	10108-10059-01	Yes
48	FLIGHT, PEN DATA RECORDER	10108-10059-03	Yes
49	MARKER PEN	10108-10060	Yes
50	FLIGHT, PEN MARKER	10108-10060-01	Yes
51	Transfer Pouch, Mission Specialist	10108-10063	Yes
52	STOWED CLOTHING TRAY ASSY	10108-10068	Yes
53	INFLIGHT STOWAGE RESTRAINT BAG	10108-10075	Yes
54	IN-FLIGHT STOWAGE RESTRAINT BAGS	10108-10075-03	Yes
55	IN-FLIGHT STOWAGE RESTRAINT BAGS	10108-10075-04	Yes
56	CONTINGENCY URINE COLLECTION DEVICE ASSY	10108-10076	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
57	CUCD, Disposable	10108-10076-05	Yes
58	EMESIS BAG ASSY	10108-10083	Yes
59	EMESIS, BAG ASSEMBLY	10108-10083-02	Yes
60	ZIPLOCK BAG/HYGIENE	10108-10091	Yes
61	Ziplock Bag/Hygiene	10108-10091-01	Yes
62	Multimeter Kit Assembly [Fluke 87]	10118-10018	Yes
63	KNEEBOARD ASSY	10123-10023	Yes
64	KneeBoard modified	10123-10023-07	Yes
65	KneeBoard Assy	10123-10023-08	Yes
66	MECHANICAL PENCIL ASSY KNEEBOARD ASSY	10123-20001	Yes
67	FLIGHT DATA FILE CONTAINER ASSY	10125-10025	Yes
68	FOAM APPLICATOR KIT	10127-10027-11	Yes
69	Minimag Spare Bulbs	107-000-003	Yes
70	Spotlight Spare Bulbs	107-000-019	Yes
71	Personal Hygiene Station Mirror Assy	10808-10001	Yes
72	TWEEZERS	2332-10	Yes
73	Lichtenberg Clamp (Paper Clip)	30A90528-105	Yes
74	Eyewear, Sunglasses w/Case (Sunglasses W/Case)	8465-01-114-1488	Yes
75	TAMPON BAG ASSEMBLY	528-20058	Yes
76	CREW MEMBER FLASHLIGHT [Maglite]	528-20084	Yes
77	CREW MEMBER FLASHLIGHT (Clear Lens) [Maglite]	528-20084-3	Yes
78	CREW MEMBER FLASHLIGHT (Red Lens) [Maglite]	528-20084-4	Yes
79	CREW MEMBER FLASHLIGHT (Clear Lens w/Lanyard) (Maglite)	528-20084-5	Yes
80	CREW MEMBER FLASHLIGHT (Red Lens w/Lanyard) [Maglite]	528-20084-6	Yes
81	CREWMEMBER, TETHER ACCESSORY	528-20144-1	Yes
82	USA Cable Cutters	528-20145-30	Yes
83	Duxseal Assembly	528-20157-1	Yes
84	Speed Handle Assembly	528-20169-1	Yes
85	CREWMEMBER, SPOTLIGHT (4D MAGLITE FLASHLIGHT)	528-20184-1	Yes
86	Temporary In-flight Stowage Container	528-20269	Yes
87	CREW PREFERENCE/CLOTHING	528-20308	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	BAG ASSY		
			Yes
88	BLUSH COMPACT ASSY	528-20357	
89	Makeup, Blush, Bronze Rose, 0.2 oz.	528-20357-1	Yes
90	ADHESIVE REMOVER WIPE ASSY	528-20591	Yes
91	GLOVES ASSY, POLYETHYLENE DISPOSABLE	528-20621	Yes
92	SHOES ASSY, CYCLING	528-20627	Yes
93	Athletic, Shoe Cycling, Black Cleat (Cycling Shoes W/Black Cleats)	528-20627-1	Yes
94	Athletic, Shoe Cycling, Red Cleat (Cycling Shoes W/Red Cleats-Rotate)	528-20627-2	Yes
95	COTTON SWAB ASSY	528-20693	Yes
96	Cotton Swabs Assy (Cotton Swabs Assy)	528-20693-1	Yes
97	Launch/Return Stowage Bag	528-20707	Yes
98	CREW PREFERENCE MAKE-UP KIT ASSY	528-20728	Yes
99	Makeup, Alcohol-free Clarifier	528-20728-11	Yes
100	Makeup, Skin Texture Lotion	528-20728-21	Yes
101	MAKE-UP KIT ASSY	528-20729	Yes
102	CREW TIMER/STOP WATCH ASSY [Egg Timer]	528-20760	Yes
103	CREW PREF, TIMER/STOP WATCH	528-20760-2	Yes
104	G-SHOCK DIGITAL WATCH ASSY	528-20776	Yes
105	CREW PREF, WATCH G-SHOCK	528-20776-1	Yes
106	COMPACT DISC STOWAGE CONTAINER	528-20888	Yes
107	Compact Disc Stowage Container	528-20888-1	Yes
108	COMPACT DISC STOWAGE CONTAINER	528-20888-2	Yes
109	COMPACT DISC STOWAGE CONTAINER	528-20888-3	Yes
110	F-D-F MESSAGE FOLDER ASSEMBLY	528-20944	Yes
111	Lens adapter for Minicam	528-20946-1	Yes
112	CHRONOGRAPH, SPACE AVIATION WATCH	528-20991	Yes
113	CREW PREF, WATCH CHRON. (OMEGA)	528-20991-2	Yes
114	ZIPLOCK BAG W/VELCRO	528-21039	Yes
115	ZIPLOCK BAG w/Velcro (2X2)	528-21039-1	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
116	Bag, Slidder Grip	528-21039-12	Yes
117	Bag, Slidder Grip	528-21039-13	Yes
118	Bag, Slidder Grip	528-21039-14	Yes
119	Bag, Slidder Grip	528-21039-15	Yes
120	Bag, Slidder Grip	528-21039-16	Yes
121	Bag, Slidder Grip	528-21039-17	Yes
122	ZIPLOCK BAG w/Velcro (4X4)	528-21039-2	Yes
123	ZIPLOCK BAG w/Velcro (6X6)	528-21039-3	Yes
124	Ziplock Bag w/ Velcro 8" X 8"	528-21039-4	Yes
125	ZIPLOCK BAG w/Velcro (1 qt)	528-21039-5	Yes
126	Ziplock Bag w/ Velcro 10" X 10"	528-21039-6	Yes
127	ZIPLOCK BAG w/Velcro (1 gal)	528-21039-7	Yes
128	ZIPLOCK BAG w/ Velcro (12X12)	528-21039-8	Yes
129	Ziplock Bag w/ Velcro 13" x 18"	528-21039-9	Yes
130	Node Barcode Location Label Kit	528-21046	Yes
131	SPARE BULB KIT	528-21064	Yes
132	SPARE BULB KIT, SPOTLIGHT	528-21064-1	Yes
133	SPARE BULB KIT, MINIMAG	528-21064-2	Yes
134	Snakelight Bulb Kit Assy	528-21064-3	Yes
135	SPARE BULB KIT	528-21064-XX	Yes
136	Crew Identifier Label Kit	528-21075	Yes
137	COLOR DOT LABEL KIT	528-21075-1	Yes
138	FLAG ASSY	528-21136	Yes
139	LICHTENBERG CLAMP TOOL	528-21140	Yes
140	LITCHENBURG CLAMP	528-21140-1	Yes
141	ATHLETIC EXERCISE BAND	528-21166	Yes
142	Athletic Exercise Band [DYNA BAND]	528-21166-1	Yes
143	Croakie, 10" [S]	528-21224-1	Yes
144	Crew Pref, Croakie	528-21224-1 [XX]	Yes
145	NAME TAG	528-21268	Yes
146	JAXA Name Tag	528-21268-55	Yes
147	FLIGHT NAME TAG	528-21268-XX	Yes
148	CREW PREF, CARGO PANTS	528-21457-XX	Yes
149	MARKING PEN	528-40674	Yes
150	MARKING,PEN SHARPIE,BLACK FINE	528-40674-1	Yes
151	FLIGHT, PEN LIME RETRACTABLE	528-40674-12	Yes
152	FLIGHT, PEN RED RETRACTABLE	528-40674-13	Yes
153	FLIGHT, PEN BLUE RETRACTABLE	528-40674-15	Yes
154	FLIGHT, PEN GREEN RETRACTABLE	528-40674-16	Yes
155	FLIGHT, PEN ORANGE	528-40674-17	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	RETRACTABLE		
156	FLIGHT, PEN TURQUOISE RETRACTABLE	528-40674-18	Yes
157	FLIGHT, PEN BERRY RETRACTABLE	528-40674-19	Yes
158	MARKING,PEN SHARPIE,BLUE,FINE	528-40674-2	Yes
159	FLIGHT, PEN BLACK RETRACTABLE	528-40674-20	Yes
160	MARKING,PEN SHARPIE,RED,FINE	528-40674-3	Yes
161	MARKING,PEN SHARPIE, Black ,X- FINE	528-40674-4	Yes
162	FLIGHT, PEN Sharpie, Yellow, Fine	528-40674-5	Yes
163	MARKING,PEN SHARPIE,RED,X- FINE	528-40674-6	Yes
164	MARKING,PEN SHARPIE,BLACK,ULTRA FINE	528-40674-7	Yes
165	MARKING,PEN SHARPIE,GREEN,FINE	528-40674-8	Yes
166	2" x 3" Flag [2x3 Flag]	528-40718-4	Yes
167	Jockey Briefs	528-40800	Yes
168	Crew Preference, Shorts Briefs (Shorts, Jockey)	528-40800-1	Yes
169	Crew Preference, Shorts Boxer Briefs	528-40800-2	Yes
170	CREW PREFERENCE, Shirt-T	528-40801	Yes
171	Crew Preference, Shirt-T (Shirt, T)	528-40801-1	Yes
172	SOCKS	528-40802	Yes
173	Crew Preference, Sock, Tube (Socks, Pr, (Tube))	528-40802-1	Yes
174	Crew Preference, Sock, Crew (Socks, Pr (Crew))	528-40802-2	Yes
175	CREW PREF, SOCKS	528-40802-3	Yes
176	TOWEL	528-40805	Yes
177	HYGIENE, TOWEL	528-40805-1	Yes
178	HYGIENE, TOWEL, LINTLESS	528-40805-2	Yes
179	HYGIENE, TOWEL, LINTLESS	528-40805-3	Yes
180	CLOTH, WASH	528-40806	Yes
181	Hygiene, Towel, Washcloth (Wash Cloth)	528-40806-1	Yes
182	KNIFE, SWISS ARMY	528-40807	Yes
183	Crewmember, Swiss Army, Knife (Knife, Swiss Army)	528-40807-1	Yes
184	LIPSTICK, ANTICHAP	528-40808	Yes
185	Lipstick, Antichap (Lipstick, Antichap)	528-40808-1	Yes
186	LIPSTICK, ANTICHAP	528-40808-2	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
187	Velcro, Loop, 2", Yellow	528-40818-27	Yes
188	Velcro, Hook, 2", Yellow	528-40819-12	Yes
189	EAR PLUGS	528-40824	Yes
190	Sleep Kit, Ear Plug (Deciamp) (Ear Plugs, Pair (White))	528-40824-1	Yes
191	Sleep Kit, Ear Plugs Cord (Ear Plugs, Pair (Orange))	528-40824-2	Yes
192	EYE COVER	528-40825	Yes
193	Sleep Kit, Eye Cover (Cover, Eye)	528-40825-1	Yes
194	Sleep Kit, Eye Mask	528-40825-2	Yes
195	Crew Pref, Soap	528-40826-2	Yes
196	NAME TAG	528-40836	Yes
197	Flight, Name Tag (Name Tags)	528-40836-1	Yes
198	BRASSIERE	528-40853	Yes
199	CREW PREF, BRASSIERE	528-40853-XX	Yes
200	PANTIES	528-40854	Yes
201	CREW PREF, PANTIES	528-40854-XX	Yes
202	CREW PREFERENCE, SHORTS, Boxer	528-40861	Yes
203	Crew Preference, Shorts Boxer (Shorts, Boxer)	528-40861-1	Yes
204	GLOVES, FLIGHT	528-40865	Yes
205	FLIGHT, GLOVES, SUMMER [Summer Flight Gloves]	528-40865-1	Yes
206	TAPE, GENERAL PURPOSE	528-40878	Yes
207	TAPE, 3M, 2" X 60 YDS (ALUMINUM)	528-41020-3	Yes
208	TAMPONS, PLAYTEX	528-41027	Yes
209	PADS, FEMININE, TAMPON, SUPER DEODORANT	528-41027-1	Yes
210	PADS, FEMININE, TAMPON REG NON-DEODORANT	528-41027-2	Yes
211	PADS, FEMININE, TAMPON, SUPER, NON-DEODORANT	528-41027-4	Yes
212	Tampons, Crew Preference	528-41027-5	Yes
213	TAMPONS, CREW PREFERENCE	528-41027-XX	Yes
214	SKIN CREAM	528-41042	Yes
215	Hand Cream, Nivea (Nivea Skin Cream)	528-41042-1	Yes
216	HAND CREAM, VASELINE INTENSIVE CARE LOTION	528-41042-3	Yes
217	DEODORANT, BAN UNSCENTED	528-41079-1	Yes
218	ALLIGATOR CLIP	528-41316-3	Yes
219	TAPE Kapton, 1"	528-41353-1	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
220	SLIPPER SOCKS	528-41369	Yes
221	Crew Preference, Socks, Slipper (Crew Pref., Socks, Slipper)	528-41369-1	Yes
222	Crew Preference, Socks, Polartec (Socks, (Polartec) Pair)	528-41369-2	Yes
223	DEERSKIN GLOVES	528-41514	Yes
224	DEERSKIN GLOVES (MALE/FEMALE)	528-41514-1	Yes
225	DEERSKIN GLOVES (MALE/FEMALE)	528-41514-2	Yes
226	Gloves	528-41517	Yes
227	Gloves, Deerskin Female	528-41517-1	Yes
228	Gloves, Deerskin Male	528-41517-2	Yes
229	Razor, Sensor Excel (Gillette Sensor Razor)	528-41526-3	Yes
230	RAZOR BLADES	528-41527	Yes
231	RAZOR, Twin Blade CARTRIDGES	528-41527-2	Yes
232	Razor, Cartridges Sensor (Gillette Sensor Razor Cartridge)	528-41527-4	Yes
233	Hair Restraint	528-41572-XX	Yes
234	CREW PREFERENCE, Shirt, Sleep	528-41585	Yes
235	Crew Preference, Shirt, Sleep (Crew Pref., Shirt, Sleep)	528-41585-1	Yes
236	CREW PREF, SHIRT, SLEEP	528-41585-2	Yes
237	CREW PREF, SHIRT, SLEEP	528-41585-3	Yes
238	CREW PREF, SHIRT, SLEEP	528-41585-4	Yes
239	SHAVE CREAM, EDGE, TUBE	528-41595	Yes
240	Shave Cream, Edge Gel (Shaving Cream)	528-41595-1	Yes
241	Shave Cream, Edge Gel	528-41595-2	Yes
242	DEERSKIN GLOVES, MEN'S	528-41637	Yes
243	DEERSKIN GLOVES (MALE/FEMALE)	528-41637-1	Yes
244	DEERSKIN GLOVES (MALE/FEMALE)	528-41637-2	Yes
245	ATHLETIC, HEADBANDS	528-41655-1	Yes
246	ATHLETIC, WRISTBANDS	528-41655-2	Yes
247	ELECTRIC RAZOR, RECHARGEABLE	528-41666	Yes
248	Razor, Norelco (Razor, Norelco)	528-41666-3	Yes
249	DEODORANT	528-41759	Yes
250	DEODORANT, SPEED STICK	528-41759-1	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
251	DEODORANT, CREW PREF	528-41759-2	Yes
252	DEODORANT, LADY SPEED STICK	528-41759-3	Yes
253	DEODORANT, SECRET PLATINUM	528-41759-4	Yes
254	DEODORANT, SURE SOLID	528-41759-5	Yes
255	Deodorant, Gillette Power Stripe	528-41759-6	Yes
256	DEODORANT, RIGHT GUARD	528-41759-7	Yes
257	DEODORANT, ARRID XX	528-41759-8	Yes
258	TOOTHPASTE CAPS	528-41788	Yes
259	GENERAL PURPOSE TAPE	528-41798	Yes
260	GENERAL PURPOSE TAPE (1")	528-41798-5	Yes
261	GENERAL PURPOSE TAPE (2")	528-41798-6	Yes
262	REMINGTON ELECTRIC SHAVER	528-41815	Yes
263	Razor, Remington (Remington Razor)	528-41815-3	Yes
264	EYEGLASS RETENTION STRAP	528-41822	Yes
265	Eyewear, Croakie Accessory (Eyeglass Strap (Croakie))	528-41822-1	Yes
266	EYEWEAR, CROAKIE ACCESSORY	528-41822-1 [L]	Yes
267	EYEWEAR, CROAKIE ACCESSORY	528-41822-1 [M]	Yes
268	EYEWEAR, CROAKIE ACCESSORY	528-41822-1 [S]	Yes
269	EYEWEAR, CROAKIE ACCESSORY	528-41822-1 [XL]	Yes
270	Crew Pref, Croakie	528-41822-1 [XX]	Yes
271	PADLOCK	528-41845	Yes
272	FEMINE NAPKIN PADS MAXITHINS	528-42033	Yes
273	PADS, FEMININE, PANTY SHIELDS	528-42033-1	Yes
274	PADS, FEMININE, NON-DEODORANT	528-42033-3	Yes
275	CREW PREFERENCE, Shirt, IVA Short	528-43012	Yes
276	Crew Preference, Shirt, Short Sleeve (Shirt, IVA Short)	528-43012-1	Yes
277	CREW PREF, SHIRT, LONG SLEEVE	528-43012-2	Yes
278	CREW PREFERENCE, Shirt, IVA Long	528-43013	Yes
279	Crew Pref, Shirt, Long Sleeve	528-43013-01	Yes
280	Crew Preference, Shirt, Long Sleeve (Shirt, IVA Long)	528-43013-1	Yes
281	CREW PREF, SHIRT, LONG SLEEVE	528-43013-2	Yes
282	HANDKERCHIEF	528-43015	Yes
283	Crew Preference, Handkerchief (Handkerchief)	528-43015-1	Yes
284	ATHLETIC SUPPORTER	528-43019	Yes
285	Athletic, Supporter, Small (Athletic Supporter)	528-43019-1	Yes
286	Athletic, Supporter, Medium (Athletic	528-43019-2	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	Supporter)		
287	Athletic, Supporter, Large (Athletic Supporter)	528-43019-3	Yes
288	HAND CREAM	528-43025	Yes
289	Hand Cream, Aloe Gel (0.75 oz.) (Aloe Gel (Skin Emollien	528-43025-1	Yes
290	HAND CREAM, ALOE GEL, 12 OZ.	528-43025-2	Yes
291	Hand Cream, Aloe Gel (12 oz)	528-43025-3	Yes
292	TOOTHBRUSH	528-43026	Yes
293	DISPOSABLE ABSORPTION GARMENT	528-43027	Yes
294	DISPOSABLE ABSORPTION GARMENT	528-43027-1	Yes
295	DISPOSABLE ABSORPTION GARMENT	528-43027-2	Yes
296	HAIR RESTRAINT DEVICE	528-43032	Yes
297	Hair Restraint, Clip, 3-3/4" (Hair Clip)	528-43032-1	Yes
298	HAIR RESTRAINT, TERRY PONYTAIL HOLDER	528-43032-2	Yes
299	HAIR RESTRAINT, BARRETTE, 3-3/4"	528-43032-3	Yes
300	HAIR RESTRAINT, CREW PREF	528-43032-4	Yes
301	FLIGHT, HIGHLIGHTER	528-43033	Yes
302	FLIGHT, HIGHLIGHTER, YELLOW	528-43033-1	Yes
303	FLIGHT PEN, RETR BLUE HIGHLIGHTER	528-43033-2	Yes
304	FLIGHT PEN, RETR GREEN HIGHLIGHTER	528-43033-3	Yes
305	FLIGHT PEN, RETR ORANGE HIGHLIGHTER	528-43033-4	Yes
306	FLIGHT PEN, RETR PINK HIGHLIGHTER	528-43033-5	Yes
307	FLIGHT PEN, RETR YELLOW HIGHLIGHTER	528-43033-6	Yes
308	Crewmember, Headphone Cable (Recorder/Headset Extension Cable, 20')	528-43040-1	Yes
309	Running Shorts	528-43058	Yes
310	Athletic, Shorts Nylon (Running) (Athletic Shorts, Nylon (Running))	528-43058-1	Yes
311	SHOES, ATHLETIC	528-43059	Yes
312	Athletic, Shoes, ASICS (Athletic Shoes (Running))	528-43059-1	Yes
313	Athletic, Shoes, Adidas (Athletic Shoes	528-43059-2	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	(Running))		
314	Athletic, Shoes, New Balance (Athletic Shoes)	528-43059-3	Yes
315	Athletic, Shoes, Nike (Athletic Shoes (Running))	528-43059-4	Yes
316	Athletic, Shoes, Reebok (Athletic Shoes)	528-43059-5	Yes
317	ATHLETIC SHOES, Running, Crew Pref	528-43059-TBD	Yes
318	BITE-A-LITE FLASHLIGHT HOLDER	528-43061	Yes
319	CREWMEMBER, FLASHLIGHT, HOLDER (BITE-A-LITE)	528-43061-1	Yes
320	SHOES, CYCLING	528-43063	Yes
321	BRUSH, HAIR [HAIR BRUSH/COMB]	528-43064	Yes
322	Brush, Hair Goody (Club) (Club Brush)	528-43064-1	Yes
323	Brush, Hair Goody (Vented) (Vented Brush)	528-43064-2	Yes
324	Brush, Hair Boars (Bristle) (Boar Bristle Club Brush)	528-43064-3	Yes
325	JAKSTRAP	528-43065	Yes
326	CREWMEMBER, JAKSTRAP (HEADBAND)	528-43065-1	Yes
327	SWEATERS	528-43066	Yes
328	CREW PREF, SWEATER	528-43066-1	Yes
329	CREW PREF, SWEATER	528-43066-2	Yes
330	Crew Preference, Sweater (Cotton Sweater)	528-43066-3	Yes
331	CREW PREF, SWEATER	528-43066-4	Yes
332	MAKEUP	528-43067	Yes
333	Makeup, Facial Soap, Mild (large)	528-43067-1	Yes
334	Makeup, Pencil, Charcoal/Brown	528-43067-10	Yes
335	Makeup, Sharpener (Lidstick)	528-43067-11	Yes
336	Makeup, Lotion, Moisturizing	528-43067-12	Yes
337	Makeup, Base, Porcelain Beige	528-43067-13	Yes
338	Makeup, Base, True Pecan	528-43067-14	Yes
339	Makeup, Lipgloss, Plum Brandy	528-43067-16	Yes
340	Makeup, Mascara, Black	528-43067-17	Yes
341	Makeup, Eye Pencil, Black	528-43067-18	Yes
342	Makeup, Hand Repair	528-43067-2	Yes
343	make-Up, Quick Liner	528-43067-23	Yes
344	make-Up, Quick Liner	528-43067-24	Yes
345	make-Up, Quick Liner	528-43067-25	Yes
346	make-Up, Quick Liner	528-43067-26	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
347	make-Up, Quick Liner	528-43067-27	Yes
348	Makeup, Touch Liner, Soft Black	528-43067-3	Yes
349	Makeup, Eye Makeup Remover	528-43067-4	Yes
350	Makeup, Moisture Surge	528-43067-5	Yes
351	Makeup, Lipgloss	528-43067-6	Yes
352	Makeup, Eye Shadow (Violet)	528-43067-7	Yes
353	Makeup, Eye Shadow (Quartz)	528-43067-8	Yes
354	Makeup, Mascara	528-43067-9	Yes
355	Makeup, Touch Liner	528-43067-TBD	Yes
356	TOOTHPASTE	528-43069	Yes
357	Toothpaste, Crest Fresh Mint Gel (Toothpaste, Crest Mint Gel)	528-43069-1	Yes
358	Toothpaste, Colgate (Tartar) (Toothbrush, Colgate)	528-43069-2	Yes
359	TOOTHPASTE, Crew Pref	528-43069-3	Yes
360	Bag, Static Dissipative	528-43072	Yes
361	Bag, Static Dissipative	528-43072-1	Yes
362	Bag, Static Dissipative	528-43072-5	Yes
363	Bag, Static Dissipative	528-43072-6	Yes
364	Bag, Static Dissipative	528-43072-7	Yes
365	CABLE STRAP, ONE WRAP (BLACK CABLE TIE)	528-43074-1	Yes
366	GLIDE DENTAL FLOSS	528-43079	Yes
367	Floss, Dental, Glide (Floss, Glide)	528-43079-1	Yes
368	LEATHER GLOVES	528-43086	Yes
369	CREW PREFERENCE, CARGO SHORTS	528-43108	Yes
370	FLIGHT, CREW PREF CARGO SHORTS	528-43108-1	Yes
371	Crew Preference, Cargo Shorts [FLIGHT, CREW PREF CARGO SHORTS]	528-43108-2	Yes
372	FLIGHT, CREW PREF CARGO SHORTS	528-43108-XX	Yes
373	CREW PREF, CARGO PANTS	528-43117-XX	Yes
374	Brush, Hair	528-43064	Yes
375	Ziplock Bag	528-50000	Yes
376	ZIPLOCK BAG (4X4)	528-50000-1	Yes
377	ZIPLOCK BAG, Slide Lock (1 qt)	528-50000-10	Yes
378	ZIPLOCK BAG Slide Lock (1 gal)	528-50000-11	Yes
379	Bag, Slidder Grip	528-50000-12	Yes
380	Bag, Slidder Grip	528-50000-13	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
381	Bag, Slidder Grip	528-50000-14	Yes
382	Bag, Slidder Grip	528-50000-15	Yes
383	Bag, Slidder Grip	528-50000-16	Yes
384	Bag, Slidder Grip	528-50000-17	Yes
385	ZIPLOCK BAG (6X6)	528-50000-2	Yes
386	ZIPLOCK BAG (8X8)	528-50000-3	Yes
387	ZIPLOCK BAG (10X10)	528-50000-4	Yes
388	ZIPLOCK BAG (12X12)	528-50000-5	Yes
389	ZIPLOCK BAG (13X18)	528-50000-6	Yes
390	ZIPLOCK BAG (9X15)	528-50000-7	Yes
391	ZIPLOCK BAGS (24X24)	528-50000-8	Yes
392	ZIPLOCK BAG (2X2)	528-50000-9	Yes
393	Black Record Book	7530-00-274-5494	Yes
394	COMB, HAIR (PIK)	6485-60-0311	Yes
395	Seat Track - 69"	683-50222-1	Yes
396	Seat Track - 74"	683-50222-3	Yes
397	SpaceHab Trash Container	9062250-1	Yes
398	SpaceHab Trash Container Liner	9062251-1	Yes
399	CHARTAPE, RED	BG5002M	Yes
400	CHARTAPE,BLUE	BG5003M	Yes
401	CHARTAPE, GREEN	BG5004M	Yes
402	CHARTAPE, YELLOW	BG5011M	Yes
403	CREW PREF, WATCH	CP-2-TBD	Yes
404	EYEWEAR, CLEAR PRESCRIPTION	CP-3-CP-TBD	Yes
405	EYEWEAR, CLEAR PRESCRIPTION	CP-3-CP-XX	Yes
406	EYEWEAR, CLEAR PRESCRIPTION	CP-3-CP-XX-XXX	Yes
407	EYEWEAR, SUNGLASSES - NON-PRES.	CP-3-SNP-TBD	Yes
408	EYEWEAR, SUNGLASSES - NON-PRES.	CP-3-SNP-XX-XXXX	Yes
409	EYEWEAR, SUNGLASSES-PRES.	CP-3-SP-TBD	Yes
410	EYEWEAR, SUNGLASSES-PRES.	CP-3-SP-XX-XXXX	Yes
411	Equipment Bag Assembly (EBA)	G11F5160-1	Yes
412	DICTIONARY, ENGLISH TO RUSSIAN	ISBN0-471-01707-8	Yes
413	Sling Back Chair, Back-Up	JEV-01	Yes
414	CREWMEMBER MICROCASSETTE TAPE SPARE	MC-60	Yes
415	SONY HEADPHONE	MDR-14L	Yes
416	POST-IT NOTES, YELLOW (1.5X2)	MMM 653-YW	Yes
417	PADS, SELF-STICK NOTE PADS 3X3	MMM 654-YW	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
418	POST-IT-NOTES, YELLOW (3"X5")	MMM 655-YW	Yes
419	MASKING TAPE (1")	MMM202-BX-1	Yes
420	POST-IT-TAPE FLAGS (MMM 680-X)	MMM680	Yes
421	POST-IT-TAPE FLAGS, RED	MMM680-1	Yes
422	POST-IT-TAPE FLAGS, BLUE	MMM680-2	Yes
423	POST-IT-TAPE-FLAGS, GREEN	MMM680-3	Yes
424	POST-IT-TAPE FLAGS, ORANGE	MMM680-4	Yes
425	POST-IT-TAPE FLAGS, YELLOW	MMM680-5	Yes
426	POST-IT-TAPE FLAGS, WHITE	MMM680-6	Yes
427	POST-IT-TAPE FLAGS, PURPLE	MMM680-8	Yes
428	POST-IT-TAPE FLAGS	MMM680-X	Yes
429	Official Flight Kit	OFK-XX	Yes
430	Personal Preference Kit	PPK-XX	Yes
431	Athletic, Dyna Band (Dyna band Exercise Device)	PUC-16	Yes
432	Retractable Tether	RT2-0010	Yes
433	Cartridge, Ink, Tri-Color, Epson 600	S020089	Yes
434	Black Ink Cartridge	S020108	Yes
435	Black, Cartridge	S189108	Yes
436	Color, Cartridge	S191089	Yes
437	PERSONAL PREFERENCE KIT ASSEMBLY	SDD12100370	Yes
438	IV/EV TIEWRAP [Zip Ties]	SDD13101649	Yes
439	MULTI-USE BRACKET Knob Cover (Bogen Arm)	SDD33105352	Yes
440	STIFFENER	SDD33105628	Yes
441	FOAM BALL	SDD33111961	Yes
442	Foam Ball, Yellow	SDD33111961-001	Yes
443	Foam Ball, Green	SDD33111961-003	Yes
444	EGGSERCIZER	SDD33111962	Yes
445	EGGSERCIZER	SDD33111962-001	Yes
446	Finger Exerciser	SDD33111963-001	Yes
447	Power Web	SDD33111964-001	Yes
448	Pinch Guage	SDD33111965-001	Yes
449	Power Stick	SDD33111966-001	Yes
450	GRIP MASTER	SDD33111967	Yes
451	GRIPMASTER, RED	SDD33111967-001	Yes
452	GRIPMASTER, BLACK	SDD33111967-003	Yes
453	Grip Strength Dynameter	SDD33111968-001	Yes
454	CABLE RESTRAINT	SDG33107627-001	Yes
455	RACK SEAT TRACK STUD	SDG33110621	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
456	RACK SEAT TRACK STUD	SDG33110621-001	Yes
457	RACK SEAT TRACK STUD (modified for ZSR Seat Track)	SDG33110621-003	Yes
458	Slim Taper File, Large	SDG33114300-011	Yes
459	HEPA FILTER RECEPTACLE	SDG33115755-001	Yes
460	HEPA FILTER	SDG33115756-801	Yes
461	Pouch Assy, Gloves Dispenser	SDG33116808-301	Yes
462	ENGINEERING PAD, 8 1/2 X 11, WHITE (R2 MODS)	SDZ33112275	Yes
463	ENGINEERING PAD, WHITE - ALTERED ITEM DRAWING	SDZ33112275-801	Yes
464	Bag, Dry Vacuum	SDZ33113693-801	Yes
465	HIGH TORQUE LOCKER TOOL	SDZ33114002-001	Yes
466	WATCHBAND ASSY	SEB12100030	Yes
467	CREW PREF, WATCH Band	SEB12100030-210	Yes
468	FLIGHT, PENCIL MECHANICAL	SEB12100081	Yes
469	FLIGHT, PENCIL MECHANICAL	SEB12100081-301	Yes
470	JETTISON STOWAGE BAG	SEB13100134	Yes
471	JETTISON STOWAGE BAG	SEB13100134-304	Yes
472	JETTISON STOWAGE BAG	SEB13100134-305	Yes
473	Book Tether Assembly	SEC32100180	Yes
474	BOOK, TETHER ASSY (12")	SEC32100180-313	Yes
475	BOOK, TETHER ASSY (24")	SEC32100180-314	Yes
476	BOOK, TETHER ASSY (36")	SEC32100180-315	Yes
477	CREW PREF, WATCH CHRONOGRAPH	SED12100312	Yes
478	CREW PREF, WATCH CHRON.	SED12100312-301	Yes
479	UAS	SED12100316	Yes
480	ADAPTATION GOGGLES	SED12100317	Yes
481	PERSONAL HYGIENE CONTAINER	SED12100619-301	Yes
482	EMESIS, Bag Assy	SED12100656-301	Yes
483	FANNY PACK, WALLET	SED12100665	Yes
484	FANNY PACK, WALLET	SED12100665-301	Yes
485	FANNY PACK, WALLET, MODIFIED	SED12100665-302	Yes
486	FANNY PACK, LODE	SED12100665-701	Yes
487	FANNY PACK, LODE, MODIFIED	SED12100665-702	Yes
488	FLIGHT, CREW PREF JACKET LINER	SED13101629	Yes
489	Flight CREW PREF, Jacket	SED13101629-301	Yes
490	FLIGHT, CREW PREF TROUSERS	SED13101630	Yes
491	FLIGHT, CREW PREF TROUSERS	SED13101630-302	Yes
492	REMOVABLE POCKET ASSY	SED13101631	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
493	FLIGHT, CREW PREF REMOVABLE POCKET	SED13101631-301	Yes
494	FLIGHT, CREW PREF REMOVABLE POCKET	SED13101631-303	Yes
495	FLIGHT, CREW PREF REMOVABLE POCKET	SED13101631-305	Yes
496	FLIGHT, CREW PREF REMOVABLE POCKET (-303 & -305)	SED13101631-307	Yes
497	Flight Crew Pref, Sleep Shorts	SED13101632-302	Yes
498	FLIGHT, CREW PREF JACKET	SED13101638	Yes
499	Flight CREW PREF, Jacket	SED13101638-302	Yes
500	TAPE DISPENSER W/TAPE	SED32100289-301	Yes
501	RUBBER ERASER	SED32100353-301	Yes
502	BOOK CLIP, ASSY	SED32100356-302	Yes
503	Book, Clamps, Large	SED32102143-302	Yes
504	NO RINSE BODY BATH POUCH ASSEMBLY	SED32103194	Yes
505	NO RINSE BODY BATH POUCH ASSY	SED32103194-302	Yes
506	SOAP, NON RINSE, BODY BATH POUCH	SED32103194-303	Yes
507	ADJUSTABLE BUNGEE	SED32103198-302	Yes
508	CREWMEMBER, FANNY PACK	SED32103453	Yes
509	STOWAGE, FANNY PACK	SED32103453-302	Yes
510	CREW PREF, HAND GRIP ASSY	SED32105205	Yes
511	CREW PREF, HAND GRIP ASSY	SED32105205-301	Yes
512	Crew Pref, Exercise Putty	SED32105206-301	Yes
513	CREWMEMBER MICROCASSETTE, RECORDER	SED33101837-302	Yes
514	PENCIL ASSY, FDF	SED33102093	Yes
515	Flight, MECHANICAL PENCIL ASSY	SED33102093-303	Yes
516	Flight, Pen, Kneeboard, Assembly	SED33102093-304	Yes
517	MECHANICAL PENCIL ASSY	SED33102093-309	Yes
518	MECHANICAL PENCIL ASSY (W/LANYARD)	SED33102093-310	Yes
519	RUBBER BAND ASSY	SED33102094-301	Yes
520	Book, Clamps, Large (Clamp, Large Book)	SED33102143	Yes
521	Book, Clamps, Large (Clamp, Large Book) [included in Flight Data File SED33105806/SKD32100380]	SED33102143-301	Yes
522	BOOK, CLAMPS, LARGE	SED33102143-302	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
523	PAYLOAD BAY OPS CABLE	SED33102180	Yes
524	ADAPTER ASSEMBLY, MULTIUSE BRACKET	SED33102474	Yes
525	Dry Wipe (Fiber Optics Cleaning Kit)	SED33102528-010	Yes
526	CONTACT LENS KIT	SED33102991	Yes
527	CONTACT LENS KIT	SED33102991-301	Yes
528	CONTACT LENS KIT	SED33102991-303	Yes
529	CONTACT LENS KIT	SED33102991-305	Yes
530	CONTACT LENS KIT	SED33102991-307	Yes
531	CASSETTE PLAYER	SED33103266	Yes
532	Crewmember, Cassette Player	SED33103266-302	Yes
533	VOL "F" WET TRASH LINER BAG ASSY	SED33103746	Yes
534	CREWMEMBER MINI MAG LIGHT ASSEMBLY	SED33104075	Yes
535	EAR PHONES ASSY, CD, SONY	SED33104082	Yes
536	BAG ASSY, COMPACT DISC, SONY	SED33104084	Yes
537	CD Kit Assy	SED33104183	Yes
538	CD Kit Assy	SED33104183-305	Yes
539	CALCULATOR, KIT ASSY (HP-48GX)	SED33104385-302	Yes
540	KNEE BOARD ASSY	SED33104423	Yes
541	Fabric Knee Board	SED33104423-307	Yes
542	CLIPBOARD, KNEEBOARD-CREW ESCAPE EQUIPMENT	SED33104499	Yes
543	PERSONAL ACCOMMODATION PLATE ASSY	SED33104945	Yes
544	Wrist Band Extension	SED33105589-707	Yes
545	DC POWER DISTRIBUTION BOX	SED33105618-301	Yes
546	SOUND PROTECTION HEADSET ASSY	SED33108572	Yes
547	Sound Protective Headset Assy	SED33108572-301	Yes
548	Snakelight Assembly	SED33111320-301	Yes
549	SPEAKER KIT	SED33114461-301	Yes
550	RAZOR, MACH III TURBO ASSY	SED33115495-301	Yes
551	RAZOR, CARTRIDGES	SED33115496	Yes
552	RAZOR, CARTRIDGES MACH III	SED33115496-301	Yes
553	Mach 3 Turbo CARTRIDGES	SED33115496-302	Yes
554	TRASH CONTAINER	SED33117566-301	Yes
555	VOLUME E BAG ASSY	SED33117573-801	Yes
556	FOAM APPLICATOR ASSEMBLY	SED33119859	Yes
557	FOAM APPLICATOR ASSEMBLY	SED33119859-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
558	FOAM APPLICATOR Cartridge ASSEMBLY	SED33119859-701	Yes
559	SEAT CUSHION, EXTENDED	SED39116647	Yes
560	RATCHET ASSEMBLY - DRIVE SYSTEM TRASH COMPACTOR, EDO	SED39119031	Yes
561	DISPOSABLE ABSORPTION PAD	SED39121519	Yes
562	Wet Trash Bag Assy	SED39122459	Yes
563	Contingency Wet Trash Bag Assy	SED39125070	Yes
564	WMS Airvent Hose	SED39120596	Yes
565	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445	Yes
566	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445-309	Yes
567	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445-310	Yes
568	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445-311	Yes
569	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445-312	Yes
570	CREW PREF, WATCH IRONMAN	SEG12100476-803	Yes
571	Multimeter Kit Assy, Fluke 87 [Kit Assy, Multimeter]	SEG33104532-301	Yes
572	MULTI-USE BRACKET Knob Assy (Bogen Arm)	SEG33105465	Yes
573	WIPE ASSEMBLY - SURFACE WIPES	SEG33107170	Yes
574	Utensil Detergent Wipe Assy	SEG33107170-301	Yes
575	Detergent Wipe Assy	SEG33107170-302	Yes
576	Utensil Rinse Wipe Assy	SEG33107170-303	Yes
577	Disfectant Wipe	SEG33107170-304	Yes
578	Durable Wipe	SEG33107170-305	Yes
579	Dry Wipe	SEG33107170-306	Yes
580	Utensil Detergent Wipe Assy	SEG33107170-311	Yes
581	Detergent Wipe Assy	SEG33107170-312	Yes
582	DURABLE WIPE	SEG33107170-315	Yes
583	DRY WIPE	SEG33107170-316	Yes
584	RACK RETENTION NET	SEG33107623-301	Yes
585	LARGE NON-ADJUSTABLE BUNGEE	SEG33107625	Yes
586	SMALL NON-ADJUSTABLE BUNGEEES [8"]	SEG33107625-305	Yes
587	LARGE NON-ADJUSTABLE BUNGEE [14"]	SEG33107625-306	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
588	SMALL NON-ADJUSTABLE BUNGEEES [8"] [PMA Cert]	SEG33107625-307	Yes
589	LARGE NON-ADJUSTABLE BUNGEE [14"] [PMA Cert]	SEG33107625-308	Yes
590	SMALL ADJUSTABLE BUNGEE	SEG33107626	Yes
591	SMALL ADJUSTABLE BUNGEE [18"-36"]	SEG33107626-305	Yes
592	LARGE ADJUSTABLE BUNGEE [36"-72"] (MPLM BUNGEE KIT (36"-72")) [Bungee Jail]	SEG33107626-306	Yes
593	SMALL ADJUSTABLE BUNGEE [18"-36"] [PMA Cert]	SEG33107626-307	Yes
594	LARGE ADJUSTABLE BUNGEE [36"-72"] [PMA Cert]	SEG33107626-308	Yes
595	PILE FASTENER RESTRAINT	SEG33107628-301	Yes
596	Hand Loop Assy	SEG33107629-301	Yes
597	FLEXIBLE BRACKET	SEG33107630-301	Yes
598	MULTI-USE BRACKET (Bogen Arm)	SEG33107631-301	Yes
599	CLAMP ASSY, ISSA HANDRAIL	SEG33107633-301	Yes
600	PANEL COVERS	SEG33107639-301	Yes
601	MULTI-USE BRACKET Arm Assy (Bogen Arm)	SEG33107661	Yes
602	PGSC Desktop Plate [TeSS]	SEG33108703	Yes
603	Fiber-optic Penlight Adapter Assy	SEG33109827-301	Yes
604	3 - INCH BUNDLING WRAP ASSEMBLY	SEG33109828-301	Yes
605	Printer Paper, A4	SEG33110070-301	Yes
606	Seat Track Stud (MPLM BUNGEE KIT (36"-72")) [Bungee Jail]	SEG33110621-003	Yes
607	Ring Clip Assy	SEG33111332-301	Yes
608	CLAMP ASSY, HEAVY DUTY, MULTI USE BRACKET [ALTERED ITEM DRAWING CLAMP ASSY, HEAVY DUTY, MULTI USE BRACKET] [IP Clamp] [Multiuse Bracket Clamp Assy]	SEG33111394-301	Yes
609	WIRE MOUNT SELF CLOSING CLIP ASSEMBLY	SEG33112400-301	Yes
610	WIRE MOUNT CLIP ASSEMBLY	SEG33112401-301	Yes
611	QUICK TWIST WIRE MOUNT ASSEMBLY	SEG33112402-301	Yes
612	8 - INCH BUNDLING WRAP ASSEMBLY	SEG33112403-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
613	PMA RETENTION NET	SEG33113429-301	Yes
614	SLEEVE ASSY, FOOT RESTRAINT	SEG33113617	Yes
615	CABLE TRAY ASSY (1.5" TRAY)	SEG33113708-301	Yes
616	CABLE TRAY ASSY (2.0" TRAY)	SEG33113708-303	Yes
617	SHARP CALCULATOR	SEG33113711	Yes
618	CALCULATOR, SHARP SCIENTIFIC	SEG33113711-301	Yes
619	Trash Container Liner	SEG33114033-301	Yes
620	3-Hole Punch	SEG33114110-301	Yes
621	Aluminum Clipboard	SEG33114111	Yes
622	Aluminum Clipboard	SEG33114111-301	Yes
623	EVA Transfer Bag (ISS EVA ORU TRANSFER BAG ASSEMBLY)	SEG33114494	Yes
624	Electronic Keyboard Assy	SEG33114632-301	Yes
625	RACK FRONT RESTRAINT ASSY (SPIDER STRAP)	SEG33115135-301	Yes
626	HUGGIES WIPES ASSY	SEG33115639	Yes
627	HUGGIES WIPES ASSY	SEG33115639-301	Yes
628	HUGGIES WIPE ASSY(40 PER CONT)	SEG33115639-302	Yes
629	Nitrile Gloves Assy	SEG33116807-301	Yes
630	GLOVES DISPENSER ASSY(100 PK)	SEG33117162-301	Yes
631	Disinfectant Wipes Assy	SEG33117799-301	Yes
632	bag, Wet/ Dry Vacuum	SEG39123308-302	Yes
633	SURFACTANT LIQUID (CLEANING AGENT POUCHES)	SEG39123711-301	Yes
634	PORTABLE WET/DRY VACUUM CLEANER	SEG39125637	Yes
635	PORTABLE WET/DRY VACUUM CLEANER	SEG39125637-301	Yes
636	PORTABLE WET/DRY VACUUM CLEANER	SEG39125637-302	Yes
637	VACUUM CLEANER TOOL POUCH ASSEMBLY	SEG39126290-301	Yes
638	Crew Pref Custom Ear Plugs	SEG46117216	Yes
639	Crew Pref Custom Ear Plugs	SEG46117216-001	Yes
640	Crew Pref Custom Ear Plugs	SEG46117216-002	Yes
641	DVD PLAYER ASSY	SEZ12100606	Yes
642	DVD PLAYER ASSY (TEFLON ON CABLE)	SEZ12100606-301	Yes
643	Crewmember, DVD Player	SEZ12100606-303	Yes
644	RAZOR, PANASONIC ELECTRIC	SEZ12100621-301	Yes
645	LED HEADLAMP ASSEMBLY	SEZ33103989	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
646	PETZL LIGHT	SEZ33103989-301	Yes
647	PETZL LIGHT	SEZ33103989-303	Yes
648	Engineering Pad Assembly	SEZ33112273	Yes
649	LEGAL PAD, WHITE	SEZ33112273-001	Yes
650	ENGINEERING PAD, 8 1/2 X 11, GREEN	SEZ33112273-003	Yes
651	Metric Pad Assembly, Green (R2 MODS)	SEZ33112274	Yes
652	ENGINEERING PAD, GREEN	SEZ33112274-003	Yes
653	Metric Pad Assembly, green	SEZ33112274-301	Yes
654	Flag Assembly	SEZ33112278	Yes
655	FLAG ASSEMBLY	SEZ33112278-301	Yes
656	Flag, Germany	SEZ33112278-311	Yes
657	Flag, United States	SEZ33112278-321	Yes
658	FLAG ASSEMBLY, Canada	SEZ33112278-323	Yes
659	FLAG ASSEMBLY, Belgium	SEZ33112278-325	Yes
660	FLAG ASSEMBLY, Denmark	SEZ33112278-327	Yes
661	FLAG ASSEMBLY, France	SEZ33112278-329	Yes
662	FLAG ASSEMBLY, Germany	SEZ33112278-331	Yes
663	FLAG ASSEMBLY, Italy	SEZ33112278-333	Yes
664	Flag, Netherlands	SEZ33112278-335	Yes
665	Flag, Norway	SEZ33112278-337	Yes
666	Flag, Spain	SEZ33112278-339	Yes
667	Flag, Sweden	SEZ33112278-341	Yes
668	Flag, Switzerland	SEZ33112278-343	Yes
669	Flag, United Kingdom	SEZ33112278-345	Yes
670	FLAG ASSEMBLY, japan	SEZ33112278-347	Yes
671	Flag, Russia	SEZ33112278-349	Yes
672	FLAG ASSEMBLY, Brazil	SEZ33112278-351	Yes
673	Cord Assy, Vectran	SEZ33112279-301	Yes
674	THREAD	SEZ33112281	Yes
675	Nomex Thread, #3, Natural Bonded	SEZ33112281-301	Yes
676	No. 6 Thread Spool Assembly	SEZ33112281-303	Yes
677	Nomex Cord 1970, natural bonded	SEZ33112281-305	Yes
678	Exercise Tubing Assembly (5 PC)	SEZ33112286	Yes
679	Exercise Tubing Assy	SEZ33112286-301	Yes
680	Color Pencil Set Assembly	SEZ33112287	Yes
681	COLOR PENCILS	SEZ33112287-001	Yes
682	Pencil Sharpener	SEZ33112287-003	Yes
683	COLOR PENCIL SET ASSEMBLY (W/2 SHARPENERS)	SEZ33112287-301	Yes
684	Pencil Sharpener	SEZ33112287-303	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
685	Sail Palms	SEZ33112288	Yes
686	Sail Palms	SEZ33112288-001	Yes
687	Sail Palm (Right Handed)	SEZ33112288-002	Yes
688	Sail Palms	SEZ33112288-003	Yes
689	SEWING ASSEMBLY	SEZ33112288-301	Yes
690	Needle #1	SEZ33112291	Yes
691	Needle #1	SEZ33112291-001	Yes
692	Needle #2	SEZ33112291-003	Yes
693	Needle #3	SEZ33112291-005	Yes
694	Needle #4	SEZ33112291-007	Yes
695	Needle Pouch Assy	SEZ33112291-301	Yes
696	Upholstery Needle, Small	SEZ33112291-505	Yes
697	Upholstery Needle, Large	SEZ33112291-506	Yes
698	AUDIO CABLE ASSY, 1/8" PLUG	SEZ33113217-301	Yes
699	CD PLAYER ASSY, PANASONIC	SEZ33113218	Yes
700	CD Player Assy	SEZ33113218-301	Yes
701	Ziplock Bag, FR w/Velcro	SEZ33113225	Yes
702	Ziplock Bag, FR w/Velcro 12"x12"	SEZ33113225-301	Yes
703	Ziplock Bag, FR w/Velcro 13"x18" ?	SEZ33113225-303	Yes
704	Ziplock Bag, FR w/Velcro, 23"x24"	SEZ33113225-305	Yes
705	HYGIENE DISPOSAL BAG	SEZ33113458	Yes
706	HYGIENE, DISPOSAL BAG HOTEL	SEZ33113458-001	Yes
707	HYGIENE, DISPOSAL BAG 6" X 6"	SEZ33113458-301	Yes
708	HYGIENE, DISPOSAL BAG 12" X 12"	SEZ33113458-303	Yes
709	Headlamp Light Assy	SEZ33114010-301	Yes
710	TRASH CONTAINER LINER ASSY	SEZ33114033-301	Yes
711	Shampoo Assy	SEZ33114283	Yes
712	Shampoo Assy	SEZ33114283-301	Yes
713	No-Rinse	SEZ33114283-302	Yes
714	No-Rinse	SEZ33114283-311	Yes
715	No-Rinse	SEZ33114283-312	Yes
716	Pert Plus, Shampoo	SEZ33114285-301	Yes
717	SHAMPOO, NO RINSE (8oz)	SEZ33114865	Yes
718	SHAMPOO, NO RINSE (8oz)	SEZ33114865-301	Yes
719	SHAMPOO, NO RINSE (8oz)	SEZ33114865-302	Yes
720	SHAMPOO, NO RINSE (8oz)	SEZ33114865-311	Yes
721	SHAMPOO, NO RINSE (8oz)	SEZ33114865-312	Yes
722	MULTIPURPOSE DRY WIPE ASSY	SEZ33114924	Yes
723	MULTIPURPOSE DRY WIPE ASSY	SEZ33114924-001	Yes
724	MULTIPURPOSE DRY WIPE ASSY	SEZ33114924-301	Yes
725	COMBINATION LIGHT ASSEMBLY	SEZ33115753	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
726	CREWMEMBER, FLASHLIGHT ARC WHITE LITE	SEZ33115753-301	Yes
727	CREWMEMBER, FLASHLIGHT ARC WHITE LITE	SEZ33115753-303	Yes
728	BINDER ASSY	SEZ33118969-301	Yes
729	FACIAL CLEANSING WIPES ASSY	SEZ42104610-301	Yes
730	LIQUID FERTILIZER CONTAINER ASSY	SEZ46118520-301	Yes
731	EYE GLASS KIT	SJD13100428	Yes
732	HAIR CLIPPER ASSY KIT	SJG33115164	Yes
733	HAIR CLIPPER ASSY KIT	SJG33115164-302	Yes
734	HAIR CLIPPER ASSY KIT	SJG33115164-303	Yes
735	SPARE BULB KIT Assy	SJZ33114014-301	Yes
736	STOWAGE, HELMET BAG	SKD13101494	Yes
737	BAG, HELMET STOWAGE	SKD13101494-305	Yes
738	PENCIL, STYPTIC	SLC42100171	Yes
739	STYPTIC PENCIL	SLC42100171-001	Yes
740	NAIL CLIPPERS	SLC42100172	Yes
741	NAIL CLIPPERS	SLC42100172-001	Yes
742	COMB, HAIR CREW PREF	SLC42100174	Yes
743	COMB, HAIR	SLC42100174-001	Yes
744	FLOSS, DENTAL	SLC42100606	Yes
745	FLOSS, DENTAL UNWAXED	SLC42100606-001	Yes
746	FLOSS, DENTAL WAXED	SLC42100606-002	Yes
747	FLOSS, DENTAL WAXED	SLC42100606-003	Yes
748	Deodorant, Mitchum	SLC42100620-001	Yes
749	Hygiene Wet Wipe Assembly (64 count)	SLD48100161-001	Yes
750	TOOTHPASTE, CREST	SLF42100786-001	Yes
751	GUITAR ASSY	SLG12100618-301	Yes
752	Utility Knife	SLG33113712-001	Yes
753	DOUBLE-SIDED FOAM TAPE	SLG33114216	Yes
754	TAPE ROLL, 4106 DOUBLE-SIDED (1")	SLG33114216-005	Yes
755	DOUBLE-SIDED FOAM TAPE, 4016-1/4"	SLG33114216-301	Yes
756	DOUBLE-SIDED FOAM TAPE, 4016-3	SLG33114216-303	Yes
757	DOUBLE-SIDED FOAM TAPE, 4016-1/2"	SLG33114216-305	Yes
758	DOUBLE-SIDED FOAM TAPE, 4016-3/4"	SLG33114216-307	Yes
759	DOUBLE-SIDED FOAM TAPE, 4016-1"	SLG33114216-309	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
760	DOUBLE-SIDED FOAM TAPE, 4016-1 ½"	SLG33114216-311	Yes
761	DOUBLE-SIDED FOAM TAPE, 4016-2"	SLG33114216-313	Yes
762	X-STATIC SOCKS	SLG33114899	Yes
763	X-STATIC SOCKS, CREW, GRAY	SLG33114899-001	Yes
764	X-STATIC SOCKS, CREW NAVY	SLG33114899-003	Yes
765	X-STATIC SOCKS, TUBE GRAY	SLG33114899-005	Yes
766	X-STATIC SOCKS, TUBE, NAVY	SLG33114899-007	Yes
767	X-STATIC T-SHIRT, MEN'S	SLG33114900	Yes
768	X-STATIC T-SHIRT, MEN'S	SLG33114900-001	Yes
769	X-STATIC T-SHIRT, MEN'S	SLG33114900-003	Yes
770	X-STATIC T-SHIRT, MEN'S GRAY	SLG33114900-005	Yes
771	X-STATIC T-SHIRT, MEN'S NAVY	SLG33114900-007	Yes
772	REMOVABLE MOUNTING SQUARES	SLZ33111325-001	Yes
773	SCISSORS	SLZ33112267	Yes
774	SCISSORS (HAIR CUTTING)	SLZ33112267-001	Yes
775	CAN OPENER	SLZ33112268	Yes
776	LEATHERMAN TOOL	SLZ33112269	Yes
777	LEATHERMAN TOOL ASSY	SLZ33112269-001	Yes
778	LEATHERMAN (SHEATH)	SLZ33112269-002	Yes
779	LEATHERMAN TOOL, ORIGINAL	SLZ33112269-003	Yes
780	LEATHERMAN (WAVE)	SLZ33112269-004	Yes
781	LEATHERMAN TOOL, SHEATH ORIGINAL	SLZ33112269-005	Yes
782	LEATHERMAN TOOL, MICRA	SLZ33112269-007	Yes
783	LEATHERMAN TOOL, WAVE	SLZ33112269-009	Yes
784	LEATHERMAN TOOL, SHEATH FLASHLIGHT COMBO	SLZ33112269-011	Yes
785	LEATHERMAN TOOL SHEATH WAVE	SLZ33112269-013	Yes
786	410 DOUBLE SIDED TAPE ROLL	SLZ33112270	Yes
787	TAPE ROLL, 410 DOUBLE-SIDED (1")	SLZ33112270-001	Yes
788	RUSSIAN-ENGLISH TECHNICAL DICTIONARY	SLZ33112271-001	Yes
789	Green Record Book 8 X 10.5 Lined	SLZ33112272	Yes
790	GREEN RECORD BOOK, 8 X 10.5, LINED	SLZ33112272-001	Yes
791	METRIC PAD ASSEMBLY, GREEN	SLZ33112274-301	Yes
792	DRAWING PAPER, 14X17, WHITE	SLZ33112277-001	Yes
793	SUNBLOCK, BANANA BOAT	SLZ33112280	Yes
794	SUNBLOCK, BANANA BOAT	SLZ33112280-001	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
795	BINDER	SLZ33112283	Yes
796	3-RING BINDER	SLZ33112283-001	Yes
797	BINDER,BRITE, WHITE	SLZ33112283-003	Yes
798	BINDER,GREEN	SLZ33112283-005	Yes
799	BINDER, RED	SLZ33112283-007	Yes
800	BINDER, YELLOW	SLZ33112283-009	Yes
801	Bag, Hefty Cinch Sak, 39 Gal.	SLZ33112284	Yes
802	BAG, HEFTY CINCH SAK, 39 GAL.	SLZ33112284-001	Yes
803	Bag, Black Polyliner, 20-30 GAL	SLZ33112285	Yes
804	BAG, BLACK POLYLINER, 20-30 GAL	SLZ33112285-001	Yes
805	SLEEP HAT	SLZ33113457	Yes
806	SLEEP HAT	SLZ33113457-001	Yes
807	SLEEP HAT	SLZ33113457-003	Yes
808	SLEEP HAT	SLZ33113457-005	Yes
809	BIKE SHORTS	SLZ33114222	Yes
810	TOILET TISSUE, 5"X8 1/2" KAYDRY WIPERS (100)	ST10P804	Yes
811	JOHNSON'S BABY WASH CLOTHS	ST10W1532	Yes
812	BINDER CLIPS, MED BLACK	UNV-10210	Yes
813	HYGIENE, Wet Trash Disp.	V669-000704-009	Yes
814	Odor/Bacteria Filter	WCS1134	Yes
815	WCS Canister Assy	WCS1347	Yes
816	Hose Assy	WCS1355	Yes
817	NOMEX WEBBING	528-40868	Yes
818	Fabric, Nomex 40.5"W	528-41198	Yes
819	TAPE Kapton, 2"	528-41353-2	Yes
820	Pyrell Foam	528-41396	Yes
821	Mini-Cell Foam	528-41484	Yes
822	Armalon Stiffener	528-41926	Yes
823	Resin	FK-800	Yes
824	Desktop Plate Assy	SED33108703	Yes
825	Ultrasonic Leak Detector	40659G-01	Yes
826	Audio Dosimeter	SED39122643	Yes
827	Audio Dosimeter	SED39122643-301	Yes
828	Audio Dosimeter	SED39122643-303	Yes
829	CREWMEMBER,TETHER ACCESSORY	528-20144-3	Yes
830	BOOK, CLIP, ASSEMBLY	SED32100356-303	Yes
831	A4 PRINTER PAPER	SEG33110070-302	Yes
832	LABEL MAKER	SEG33120486-302	Yes
833	1/2" LABELING TAPE	SEG33120486-305	Yes
834	3/4" LABELING TAPE	SEG33120486-306	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
835	FLIGHT,THERMAL BOTTOM MEN	SKD33103540-301	Yes
836	FLIGHT,THERMAL BOTTOM WOMEN'S	SKD33103540-302	Yes
837	THERMAL BOTTOMS,MEN'S,EXPEDITION WT	SKD33103540-303	Yes
838	FLIGHT,THERMAL BOTTOM MEN LIGHTWEIGHT	SKD33103540-304	Yes
839	FLIGHT,THERMAL BOTTOM WOMEN LIGHTWEIGHT	SKD33103540-305	Yes
840	BOTTOMS, THERMAL FLIGHT MEN LIGHTWEIGHT	SKD33103540-306	Yes
841	BOTTOMS, THERMAL MENS EXPEDITION WEIGHT	SKD33103540-307	Yes
842	FLIGHT,THERMAL TOP	SKD33103541-301	Yes
843	FLIGHT,THERMAL TOP LIGHTWEIGHT	SKD33103541-302	Yes
844	FLIGHT,THERMAL SOCKS	SKD33103542-301	Yes

TABLE 1.1-G CONSTELLATION CREW SURVIVAL

Item Number	Description	Part Number	Sustain
1	Survival Pack	SED39119393	Yes
2	Survival Pack A	SED39119393-311	Yes
3	Firefly II Rescue Strobe	3995	Yes
4	MK 124 MOD0 Smoke& Illumination Flare	MARK124MOD0 (NSN 1370-01-030-8330)	Yes
5	MK79 MOD 2 Pen Gun Flare kit	MK79 MOD 2	Yes
6	Cyalume Lightstick 9-527403	SED39119213	Yes
7	Cyalume Lightstick	SED39119213-301	Yes
8	Cyalume Lightstick	SED39119213-302	Yes
9	Cyalume Lightstick	SED39119213-303	Yes
10	Cyalume Lightstick	SED39119213-304	Yes
11	Cyalume Lightstick	SED39119213-305	Yes
12	Cyalume Lightstick	SED39119213-306	Yes
13	Cyalume Lightstick	SED39119213-307	Yes
14	Survival Pack B	SED39119393-309	Yes
15	Motion Sickness Pills	TBD	Yes
16	Emergency Signal Mirror Kit	NSN 6350-00-150-1252	Yes
17	AN/PRC-112 Radio	SED39121945	Yes
18	AN/PRC-112 Radio	SED39121945-301	Yes
19	AN/PRC-112 Radio	SED39121945-303	Yes
20	Survival Pack B	SED39119393-315	Yes
21	Motion Sickness Pills	TBD	Yes
22	Emergency Signal Mirror Kit	NSN 6350-00-150-1252	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
23	AN/PRC-112 Radio	SED39121945	Yes
24	AN/PRC-112 Radio	SED39121945-301	Yes
25	AN/PRC-112 Radio	SED39121945-303	Yes
26	Exposure Mittens	16874G	Yes
27	Exposure Mittens	16874G-02	Yes
28	Exposure Mittens	16874G-04ALSDL/R	Yes

TABLE 1.1-H ADDED NON SPOC ITEMS

Item Number	Description	Part Number	Sustain
1	BNC JACK-PLUG-JACK TEE ADAPTER	31-208-1051	Yes
2	BNC PLUG-PLUG STRAIGHT ADAPTER	31-218-RFX	Yes
3	MANUAL ELECTRICAL CABLE TESTER CARD ASSEMBLY	SEG33115457-301	Yes
4	TEST LEAD CABLE ASSY, MECT	SEG33115458-301	Yes
5	MECT POUCH ASSEMBLY	SEG33115459-302	Yes
6	MECT KIT ASSEMBLY	SJG33115460-302	Yes
7	SPACE STATION LAB INTERFACE BOX (SLIB)	SEG16103299-301	Yes
8	DSR V10 DIGITAL VIDEO RECORDER	SEZ16103294-301	Yes
9	DSR-V10 DIGITAL RECORDER W/EDITOR ASSY	SEZ16103294-307	Yes
10	BATTERY CHARGER NIKON D2X	SEG33121059-301	Yes
11	CANON CB900 12V LITHIUM ION BATTERY CHARGER	SED33111491-303	Yes
56	CREW CONTAMINATION PROTECTIVE KIT (CCPK)	SEG42103702	Yes
57	CREW CONTAMINATION PROTECTIVE KIT	SEG42103702-303	Yes
58	CREW CONTAMINATION PROTECTIVE KIT	SEG42103702-304	Yes
59	AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)	SEG52101600-301	Yes
60	AED BATTERY	SEG52101601-301	Yes
63	BOSE ACTIVE NOISE CANCELING (ANC) HEADSET ASSEMBLY	SEG16103501-801	Yes
64	CBCS CAMERA ASSEMBLY	SEG33112576-301	Yes
65	CBCS CAMERA CASE ASSEMBLY	SEG33112759-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
66	LED CONTROL UNIT	SEG33112643-301	Yes
67	CBCS VIDEO INTERFACE UNIT	SEG33112646	Yes
68	CBCS VIDEO INTERFACE UNIT	SEG33112646-301	Yes
69	CBCS VIDEO INTERFACE UNIT	SEG33112646-302	Yes
70	CBCS ELECTRONICS CABLE	SEG33112638-301	Yes
71	CBCS ELECTRONICS EXTENSION CABLE	SEG33112639-301	Yes
72	CBCS CAMERA CABLE	SEG33112641-301	Yes
73	CBCS PMA TARGET ASSEMBLY COVER	SEG33112769-301	Yes
74	CBCS HATCH DECAL TARGET ASSEMBLY	SEG33112764-301	Yes
75	PMA TARGET ASSEMBLY	1F92502-1	Yes
76	PMA TARGET ASSEMBLY	1F92502-1	Yes
77	PMA TARGET ASSEMBLY	1F92502-503	Yes
78	UOP POWER, RPCM PIGTAIL POWER SUPPLY CABLE	SEG46116761-302	Yes
79	POWER UOP/ EXTERNAL POWER SUPPLY CABLE	SEG46116745-301	Yes
80	EXTERNAL POWER SUPPLY ASSEMBLY, MACE	SEG46116711-302	Yes
81	BOSE HEADPHONES INTEGRATED CABLE (BHIC)	SEG12100700-301	Yes

TABLE 1.1-I ADDED NON SPOC FLIGHT CREW SYSTEMS (FCS) ITEMS

Item Number	Description	Part Number	Sustain
1	3-Prong Grasper Forceps Extraction Tool	SEG33117345-304	Yes
2	4-Wire Basket Extraction Tool	SEG33117345-303	Yes
3	AC/DC current probe	SEG39130242-301	Yes
4	Acoustic Meter	SEG33108707-301	Yes
5	Battery Tester Assy	SEG33114630-301	Yes
6	Fiber Optics Cleaning Kit	SJG32110464-301	Yes
7	Lens Cloth Sub Assembly (Fiber Optics Cleaning Kit)	SJG32110464-601	Yes
8	Cleaning Swab Sub Assembly, 1.25mm	SJG32110464-602	Yes

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Item Number	Description	Part Number	Sustain
	Fiber Optic Sleeve (Fiber Optics Cleaning Kit)		
9	Fiber Optic Swab (Fiber Optics Cleaning Kit)	CO25123X	Yes
10	Impact Driver Kit	SJG33110640-301	Yes
11	IVA Hand Tools	SEG33109820-301	Yes
12	Large Guage Pin Kit	SJG33115400-301	Yes
13	ESD carrier	SEG33111779-301	Yes
14	ESD carrier	SEG33111780-301	Yes
15	Card Puller Assembly	SEG33111774-301	Yes
16	Card Puller Assembly	SEG33111774-303	Yes
17	Extractor Adapter	SLG33114631-301	Yes
18	Driver/Drill Bit Pouch Kit	SJG33114294-301	Yes
19	Torque Analyzer Kit Phase I	SJG33115179-301	Yes
20	FIBERSCOPE KIT	SJG33116129-301	Yes
21	Fiberscope Pouch Assy	SDG33117913-301	Yes
22	Fiberscope Layer Foam Assy	SDG33117343-301	Yes
23	Power System Foam Assy	SDG33117343-302	Yes
24	Light Source Power System Assy	SDG33117342-301	Yes
25	Fiberscope Assy	SDG33117344-301	Yes
26	Light Source Assy	SDG33117346-301	Yes
27	Lens Adaptor Assy	SDG33117902-301	Yes
28	Viewing Tips Kit	SDG33117927-301	Yes
29	Viewing Tips Pouch Assy	SDG33117925-301	Yes
30	AT60S/NF	1150020	Yes
31	AT100D/NF	1150047	Yes
32	AT60D/NF	1150045	Yes
33	AT60S/FF	1150021	Yes
34	AT100D/FF	1150048	Yes
35	AT60D/FF	1150046	Yes
36	Light Bulb (Fiberscope Kit)	3030733AC	Yes
37	Light Bulb (Fiberscope Kit)	JCRM12V50W	Yes
38	Extraction Tools Kit	SJG33117926-301	Yes
39	Extraction Tool Album Assy	SDG33117926-301	Yes
40	Guide Tube Tips Assy	SEG33117345-307	Yes
41	Guide Tube Kit-Extraction Tool	SEG33117345-306	Yes
42	Snare Loop Extraction Tool	SEG33117345-305	Yes
43	3-Prong Grasper Forceps Extraction Tool	SEG33117345-304	Yes
44	4-Wire Basket Extraction Tool	SEG33117345-303	Yes
45	Magnet Extraction Tool	SEG33117345-302	Yes
46	Alligator Jaw Forceps Extraction Tool	SEG33117345-301	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
47	SCOPEMETER KIT	SJG33115340-301	Yes
48	Fluke Scopemeter (with Alkaline Batteries)	SEG39129678-301	Yes
49	Fluke Scopemeter (with Fluke rechargeable battery pack) [Ni-Cd, Ni-Cad]	SEG39129678-303	Yes
50	SCOPEMETER KIT, Diagnostic Caddy (Ni-Cd) [Ni-Cad]	SEG39130246-303	Yes
51	SCOPEMETER TEMPERATURE PROBE ASSY, DIAGNOSTIC CADDY	SEG39130249-303	Yes
52	Scopemeter Kit, Diagnostic (Altered Item) (w/Alkaline Battery Pack) [Batteries] [Scopemeter Assy]	SEG39129678-301	Yes
53	Scopemeter Assy, Diagnostic (Altered Item) (w/Ni-CAD Battery Pack) [Batteries]	SEG39129678-303	Yes
54	Scopemeter Assy, Diagnostic (Altered Item) Pouch Assy	SEG33114064-301	Yes
55	Scopemeter Assy, Diagnostic (Altered Item) Pouch Assy	SEG33111784-301	Yes
56	Scopemeter Assy, Diagnostic (Altered Item) Probe Assy	SEG39129679-301	Yes
57	Scopemeter Assy, Diagnostic (Altered Item) Probe Assy (Black)	SEG39129680-301	Yes
58	Scopemeter Assy, Diagnostic (Altered Item) Probe Assy (Red)	SEG39129680-302	Yes
59	Ni-CAD Battery Pack	PM9086/011	Yes
60	SCOPEMETER LOAD AND CONNECTOR KIT (SLaCK)	SJG33120108-301	Yes
61	SCOPEMETER TEMPERATURE PROBE KIT	SEG39130249-301	Yes
62	Scopemeter Surface Temperature Probe	SEG39130243-301	Yes
63	SCOPEMETER TEMPERATURE PROBE ASSY, DIAGNOSTIC CADDY	SEG39130249-303	Yes
64	SCOPEMETER CURRENT PROBE KIT	SEG39130250-301	Yes
65	AC/DC current probe	SEG39130242-301	Yes
66	SCOPEMETER PRESSURE / DOWNLINK KIT	SEG39130251-301	Yes
67	Scopemeter Downlink Cable	SEG33111952-301	Yes
68	Scopemeter Pressure Probe	SEG39130244-301	Yes
69	Scopemeter Pressure Probe (with female	SEG39130244-302	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	QD removed)		
70	SCOPEMETER POWER ADAPTER (SMPA) / BATTERY CHARGER KIT		Yes
71	SCOPEMETER POWER ADAPTER (SMPA) / BATTERY CHARGER KIT	SJG33111349-303	Yes
72	SCOPEMETER POWER ADAPTER (SMPA) / BATTERY CHARGER KIT	SEG33111349-303	Yes
73	Scopemeter Adapter Cable [SCOPEMETER POWER ADAPTER]	SEG33113009-301	Yes
74	Tool Battery Charging Adapter [SCOPEMETER POWER ADAPTER]	SEG33110639-302	Yes
75	SMPA Charger (blue box) [SCOPEMETER POWER ADAPTER]	SEG33110643-303	Yes
76	TORQUE WRENCH ASSY, 5-35 IN LBS, 1/4" DRIVE	SEG33117289-301	Yes
77	TORQUE WRENCH ASSY, 40-200 IN LBS, 3/8" DRIVE	SEG33117289-302	Yes
78	TORQUE WRENCH ASSY, 200-1000 IN LBS, 3/8" DRIVE	SEG33117289-303	Yes
79	Eye Cup	MB-99400	Yes
80	Power Supply (120 VDC) [Xantrex] [Diagnostic Power Supply]	SEG33110150-301	Yes
81	Power Supply Accessory Kit [Xantrex] [Diagnostic Power Supply]	SJG33110142-301	Yes
82	Tool Battery Charging Adapter [SCOPEMETER POWER ADAPTER]	SEG33110639-302	Yes
83	SMPA Charger (blue box) [SCOPEMETER POWER ADAPTER]	SEG33110643-303	Yes
84	HIGH TORQUE LOCKER TOOL	SDZ33114002-001	Yes
85	CAPTURE/CENTERING DEVICE ASSY	SEG33108573-301	Yes
86	IVA DRIVER/DRILL KIT	SJG33109829-303	Yes
87	TAP AND DIE SET (KIT M)	SJG33109850-301	Yes
88	IVA 12V NIMH BATTERY (MAKITA BATTERY) (2.2AH)	SEG33111376-301	Yes
89	IVA 12V NIMH BATTERY (MAKITA BATTERY) (3.0AH)	SEG33111376-303	Yes
90	CABLE CUTTER/POUCH ASSY	SEG33113153-301	Yes
91	ISS Food Warmer	SED39114053	Yes
92	Moisture Removal Kit	SEG11100311-305	Yes
93	Desiccant Bag Assembly	SEG11100311-301	Yes

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Item Number	Description	Part Number	Sustain
94	Portable Fan Assembly	SEG11100291-705	Yes
95	IVA Connector Cleaner Tool kit	SJG33114991-303	Yes
96	Maintenance Work Area [MWA] Drawing Tree	SIG33110300	Yes
97	Maintenance Work Area Work Surface [MWA]	SEG33110270	Yes
98	Rack Mounting Hardware, Left [MWA]	SEG33110280-301	Yes
99	Rack Mounting Hardware, Right [MWA]	SEG33110280-302	Yes
100	Utility Strip [MWA]	SEG33108463-301	Yes
101	Utility Kit [MWA]	SJG33110310-301	Yes
102	Debris Containment System [MWA]	SEG33110290-301	Yes
103	Bungee Loaded Rod Kit [MWA]	SJG33110307-301	Yes
104	ARIS TOOLS	SEG33109848-301	Yes
105	FOLDING HONE KIT	SEG33112396-301	Yes
106	POCKET MAGNIFIER ASSEMBLY	SEG33112397-301	Yes
107	MAGNIFYING VISOR ASSY	SEG33112398-301	Yes
108	USA Cable Cutters	528-20145-30	Yes
109	Nomex pouch	SEG33113152-301	Yes
110	CROWFOOT WRENCHES, 7/16", FC14B	SEG33114112-003	Yes
111	CROWFOOT WRENCHES, 1-3/16", FC38A	SEG33114112-305	Yes
112	CROWFOOT WRENCHES, 1", FC32B	SEG33114112-307	Yes
113	WISE ASSY. PANAVISE	SEG33114312-301	Yes
114	SMALL GAUGE CRIMP TOOL	SEG33116078-301	Yes
115	COMBINATION WRENCH ASSEMBLY (1-1/4")	SEG33116079-301	Yes
116	COMBINATION WRENCH ASSEMBLY (1-5/8")	SEG33116079-303	Yes
117	Power Supply Probes Kit [Xantrex] [Diagnostic Power Supply]	SJG33110149-301	Yes
118	Jaw Clamp Assy, MWA [Xantrex] [Diagnostic Power Supply]	SEG33110172-301	Yes
119	Cable Assy, Power Supply [Xantrex] [Diagnostic Power Supply]	SEG33111384-301	Yes
120	Cable Assy, UOP [Xantrex] [Diagnostic Power Supply]	SEG33108825-303	Yes
121	Handle Assy [Xantrex] [Diagnostic Power Supply]	SEG33110146-701	Yes
122	SOLDERING IRON KIT	SJG33110598-301	Yes
123	ETHERNET REPAIR KIT	SJG33110638-301	Yes

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Item Number	Description	Part Number	Sustain
124	SEWING KIT	SJG33110642-301	Yes
125	ISS PIN KIT	SJG33110644-301	Yes
126	Spade Terminals - #6 Hole 16Ga [ISS PIN KIT]	7-52935-1	Yes
127	Spade Terminals - #10 Hole 16Ga [ISS Pin Kit]	7-52937-1	Yes
128	Ring Terminals - #8 Hole 20-22Ga [ISS Pin Kit]	8-31890-1	Yes
129	Ring Terminals - #8 Hole 16Ga [ISS Pin Kit]	8-320565-1	Yes
130	Ring Terminals - #6 Hole 16Ga [ISS Pin Kit]	8-320619-1	Yes
131	Ring Terminals - #8 Hole 10-12Ga [ISS Pin Kit]	8-35108-1	Yes
132	Ring Terminals - #6 Hole 10-12 Ga [ISS Pin Kit]	8-35149-2	Yes
133	Ring Terminals - #6 Hole 20-22 Ga [ISS Pin Kit]	8-36152-1	Yes
134	Ring Terminals - #10 Hole 20-22 Ga [ISS Pin Kit]	8-36154-1	Yes
135	Ring Terminals - #10 Hole 16Ga [ISS Pin Kit]	8-36160-1	Yes
136	Spade Terminals - #6 Hole 20-22 Ga [ISS Pin Kit]	8-52929-1	Yes
137	Spade Terminals - #8 Hole 20-22 Ga [ISS Pin Kit]	8-52930-1	Yes
138	Spade Terminals - #10 Hole 20-22 Ga [ISS Pin Kit]	8-52931-1	Yes
139	Ring Terminals - #10 Hole 10-12Ga [ISS Pin Kit]	8-35109-1	Yes
140	Spade Terminals - #8 Hole 16Ga [ISS Pin Kit]	8-52936-1	Yes
141	Spade Terminals - #6 Hole 10-12 Ga [ISS Pin Kit]	8-52941-2	Yes
142	Spade Terminals - #8 Hole 10-12 Ga [ISS Pin Kit]	8-52942-1	Yes
143	Spade Terminals - #10 Hole 10-12 Ga [ISS Pin Kit]	8-52943-1	Yes
144	Butt Splices - 12 Ga [ISS Pin Kit]	FVC1210	Yes
145	Butt Splices - 14-16 Ga [ISS Pin Kit]	FVC1614	Yes
146	Butt Splices - 20-22 Ga [ISS Pin Kit]	FVC2216	Yes
147	Test Adapter - 20 Ga Pin [ISS Pin Kit]	3561-2	Yes

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Item Number	Description	Part Number	Sustain
148	Test Adapter - 16 Ga Socket [ISS Pin Kit]	3562-0	Yes
149	Test Adapter - 16 Ga Pin [ISS Pin Kit]	3563-2	Yes
150	Test Adapter - 12 Ga Socket [ISS Pin Kit]	3564-0	Yes
151	Test Adapter - 12 Ga Pin [ISS Pin Kit]	3565-2	Yes
152	Test Adapter - 22 Ga Socket [ISS Pin Kit]	4690-0	Yes
153	Test Adapter - 22 Ga Pin [ISS Pin Kit]	4691-2	Yes
154	Test Connectors - Minigrabber 24" [ISS Pin Kit]	SEG33114372-301	Yes
155	Test Connectors - Minigrabber 48" [ISS Pin Kit]	SEG33114372-303	Yes
156	Alligator Clips [ISS Pin Kit]	1437-2	Yes
157	Insulation Tubing - 5" 22 Ga [ISS Pin Kit]	M23053/11-201-C	Yes
158	Insulation Tubing - 5" 20 Ga [ISS Pin Kit]	M23053/11-202-C	Yes
159	Insulation Tubing - 5" 12-16 Ga [ISS Pin Kit]	M23053/11-109-C	Yes
160	24" Pin/Socket -12GA [ISS Pin Kit]	SEG33112714-301	Yes
161	24" Pin/Socket -16GA [ISS Pin Kit]	SEG33112714-303	Yes
162	24" Pin/Socket -20GA [ISS Pin Kit]	SEG33112714-305	Yes
163	24" Pin/Socket -22GA [ISS Pin Kit]	SEG33112714-307	Yes
164	5" Pin/Pin -12GA [ISS Pin Kit]	SEG33112715-301	Yes
165	5" Pin/Pin -16GA [ISS Pin Kit]	SEG33112715-303	Yes
166	5" Pin/Pin -20GA [ISS Pin Kit]	SEG33112715-305	Yes
167	5" Pin/Pin -22GA [ISS Pin Kit]	SEG33112715-307	Yes
168	5" Pin/Socket -12GA [ISS Pin Kit]	SEG33112716-301	Yes
169	5" Pin/Socket -16GA [ISS Pin Kit]	SEG33112716-303	Yes
170	5" Pin/Socket -20GA [ISS Pin Kit]	SEG33112716-305	Yes
171	5" Pin/Socket -22GA [ISS Pin Kit]	SEG33112716-307	Yes
172	5" Socket/Socket -12GA [ISS Pin Kit]	SEG33112717-301	Yes
173	5" Socket/Socket -16GA [ISS Pin Kit]	SEG33112717-303	Yes
174	5" Socket/Socket -20GA [ISS Pin Kit]	SEG33112717-305	Yes
175	5" Socket/Socket -22GA [ISS Pin Kit]	SEG33112717-307	Yes
176	Pin/3Socket -22GA [ISS Pin Kit]	SEG33112718-301	Yes
177	Pin/3Socket -20GA [ISS Pin Kit]	SEG33112718-303	Yes
178	Pin/4Socket -22GA [ISS Pin Kit]	SEG33112719-301	Yes
179	Pin/4Socket -20GA [ISS Pin Kit]	SEG33112719-303	Yes
180	Pin/5Socket -22GA [ISS Pin Kit]	SEG33112720-301	Yes
181	Pin/5Socket -20GA [ISS Pin Kit]	SEG33112720-303	Yes
182	22GA socket [ISS Pin Kit]	M39029/56-350	Yes
183	12GA socket [ISS Pin Kit]	M39029/56-353	Yes
184	20GA socket [ISS Pin Kit]	M39029/57-357	Yes
185	16GA socket [ISS Pin Kit]	M39029/57-358	Yes

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Item Number	Description	Part Number	Sustain
186	22GA pin [ISS Pin Kit]	M39029/58-360	Yes
187	20GA pin [ISS Pin Kit]	M39029/58-363	Yes
188	16GA pin [ISS Pin Kit]	M39029/58-364	Yes
189	12GA pin [ISS Pin Kit]	M39029/58-365	Yes
190	22 Ga wire [ISS Pin Kit]	M22759/11-22-9	Yes
191	20 Ga wire [ISS Pin Kit]	M22759/11-20-9	Yes
192	16 Ga wire [ISS Pin Kit]	M22759/11-16-9	Yes
193	12 Ga wire [ISS Pin Kit]	M22759/11-12-9	Yes
194	LOGIC ANALYZER KIT	SJG33110645-301	Yes
195	Shielded Cable Assy	SEG33111954-301	Yes
196	Daqcard / Adapter Cable Assemblies	SEG33111951-301	Yes
197	Test Lead Assemblies	SEG33111955-301	Yes
198	COLDPLATE WIREWAY KIT ASSY	SJG33111361-301	Yes
199	COLDPLATE WIREWAY Covers ASSY (small)	SDG33111763-301	Yes
200	COLDPLATE WIREWAY Covers ASSY (large)	SDG33111763-303	Yes
201	COLDPLATE WIREWAY Cover Softgoods Assy	SDG33111377-301	Yes
202	LOCKER TOOL KIT	SJG33111363-301	Yes
203	MDM Replacement CARD KIT	SJG33111778-301	Yes
204	CLAMP & BRACKET KIT	SJG33112385-301	Yes
205	¼" Pop Rivet, .125" dia, Assy [Clamp & Bracket Kit]	SEG33113014-301	Yes
206	3/8" Pop Rivet, .125" dia, Assy [Clamp & Bracket Kit]	SEG33113014-303	Yes
207	4-40 Screw Assy [Clamp & Bracket Kit]	SEG33113014-305	Yes
208	6-32 Screw Assy [Clamp & Bracket Kit]	SEG33113014-307	Yes
209	8-32 Screw Assy [Clamp & Bracket Kit]	SEG33113014-309	Yes
210	10-24 Screw Assy [Clamp & Bracket Kit]	SEG33113014-311	Yes
211	¼-20 Screw Assy [Clamp & Bracket Kit]	SEG33113014-313	Yes
212	4-40 Hex Nut Assy [Clamp & Bracket Kit]	SEG33113014-315	Yes
213	6-32 Hex Nut Assy [Clamp & Bracket Kit]	SEG33113014-317	Yes
214	8-32 Hex Nut Assy [Clamp & Bracket Kit]	SEG33113014-319	Yes
215	10-24 Hex Nut Assy [Clamp & Bracket Kit]	SEG33113014-321	Yes
216	¼-20 Hex Nut Assy [Clamp & Bracket Kit]	SEG33113014-323	Yes

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Item Number	Description	Part Number	Sustain
217	4-40 Washer Assy [Clamp & Bracket Kit]	SEG33113014-325	Yes
218	6-32 Washer Assy [Clamp & Bracket Kit]	SEG33113014-327	Yes
219	8-32 Washer Assy [Clamp & Bracket Kit]	SEG33113014-329	Yes
220	10-24 Washer Assy [Clamp & Bracket Kit]	SEG33113014-331	Yes
221	1/4-20 Washer Assy [Clamp & Bracket Kit]	SEG33113014-333	Yes
222	Aluminum Angle Stock [Clamp & Bracket Kit]	SDG33112988-001	Yes
223	Aluminum Sheet Stock .030" x 2.0" x 12.0" [Clamp & Bracket Kit]	SDG33112988-3	Yes
224	Aluminum Sheet Stock .030" x 4.0" x 12.0" [Clamp & Bracket Kit]	SDG33112988-5	Yes
225	Aluminum Sheet Stock .030" x 6.0" x 12.0" [Clamp & Bracket Kit]	SDG33112988-7	Yes
226	Aluminum Sheet Stock .030" x 1.0" x 15.0" [Clamp & Bracket Kit]	SDG33112988-9	Yes
227	Cres Wire, .025 dia [Clamp & Bracket Kit]	SJG3311285-501	Yes
228	TA Handheld Assy (2 ea) [TAK]	SEG33115176-301	Yes
229	Torque Analyzer Assy (2 ea) [TAK]	SEG33115180-301	Yes
230	Pouch Assy. (2 ea) [TAK]	SDG33115175-301	Yes
231	Foam Block Assy [TAK]	SDG33115177-701	Yes
232	Run down Adapter (2 ea) [TAK]	62974	Yes
233	Cable (2 ea) [TAK]	065145-WD5	Yes
234	Kapton Tape	7648A713	Yes
235	SCREW EXTRACTOR MASTER KIT	SJG33116581-301	Yes
236	Crowfoot, 3/8" Drive, 19mm	FCOM19A	Yes
237	Crowfoot, 3/8" Drive, 17mm	FCOM17A	Yes
238	Crowfoot, 3/8" Drive, 1-5/16"	SEG33112391-301	Yes
239	8 MM SOCKET, 3/8" DRIVE	FSM81	Yes
240	Extension, 3/8" Drive, 4" Long	FXK4	Yes
241	Adaptor, 3/8" Female to 1/4" Male	TM1	Yes
242	Adaptor, 3/8" Female to 1/2" Male	A2A	Yes
243	Adaptor, 1/4" Female to 3/8" Male	TA3	Yes
244	Hex Head Driver, 1/4" Drive, 3/32"	TMA3E	Yes
245	Hex Head Driver, 1/4" Drive, 1/4"	SKG33117562-745	Yes
246	.050" Hex Bit, 1/4" Hex Size	CRA.050A	Yes
247	1/16" Hex Bit, 1/4" Hex Size	CRA2A	Yes
248	5/64" Hex Bit, 1/4" Hex Size	CRA2.5A	Yes
249	3/32" Hex Bit, 1/4" Hex Size	CRA3A	Yes

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Item Number	Description	Part Number	Sustain
250	7/64" Hex Bit, 1/4" Hex Size	CRA3.5A	Yes
251	1/8" Hex Bit, 1/4" Hex Size	CRA4A	Yes
252	9/64" Hex Bit, 5/16" Hex Size	CRA4.5A	Yes
253	5/32" Hex Bit, 5/16" Hex Size	CRA5A	Yes
254	3/16" Hex Bit, 5/16" Hex Size	CRA6A	Yes
255	7/32" Hex Bit, 1/4" Hex Size	CRA7A	Yes
256	1/4" Hex Bit, 1/4" Hex Size	CRA8A	Yes
257	5/16" Hex Bit, 5/16" Hex Size	CRA10A	Yes
258	1/4" Square Bit, 1/4" Hex Size	CRD8B	Yes
259	#1 Phillips Bit, 1/4" Hex Size	CRP1D	Yes
260	#2 Phillips Bit, 1/4" Hex Size	CRP2D	Yes
261	Flat Tip Bit, .036"x5/16", 1/4 Hex Size	CRS8B	Yes
262	Flat Tip Bit, .051"x13/32", 5/16 Hex Size	CRS12B	Yes
263	#1 Posidriv Bit, 1/4" Hex Size	CRZ1A	Yes
264	#2 Posidriv Bit, 1/4" Hex Size	CRZ2A	Yes
265	Jewelers Screwdriver Kit	SJG33114299-301	Yes
266	1/4" Hex Adapter, 3/8" Drive	N/A	Yes
267	Folding L-Wrench Set, 3/16"-3/8"	SKG33117562-790	Yes
268	Locator for PN MS27490-20	86-5	Yes
269	Locator for PN MS24308/12-1	86-7	Yes
270	Wire Cutters	184CCP	Yes
271	File Handle	HB100	Yes
272	Feeler Gauge	SKG33117562-909	Yes
273	Chisel, 1/2" Point Edge, 6" Long	SKG33117562-935	Yes
274	Hand File, Large	HB100	Yes
275	Torque Wrench, 1/4" Drive, 10-50 in-lb	QC1R50	Yes
276	KIT K ASSEMBLY - HAMMER, CHISEL, PUNCH, PRY BAR	SJG33109844-301	Yes
277	HEADBAND PENLIGHT HOLDER ASSEMBLY	SEG33112399-301	Yes
278	Extraction Tools Kit	SJG33117928-301	Yes
279	Power Supply Accessory Kit	SJG633110142-301	Yes
280	LONG DURATION CREW MEMBER RESTRAINT	SEG33107621-301	Yes
281	IVA PORTABLE UTILITY LIGHT ASSEMBLY (PUL)	SEG33107306	Yes
282	IVA PORTABLE UTILITY LIGHT ASSEMBLY (PUL)	SEG33107306-301	Yes
283	IVA PORTABLE UTILITY LIGHT ASSEMBLY (PUL)	SEG33107306-303	Yes
284	IVA PORTABLE UTILITY LIGHT	SEG33111358	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	Lamp ASSEMBLY (PUL Bulb)		
285	DIAL TORQUE WRENCH ASSY	SEG33116504-301	Yes
286	ULD AUDIO CABLE ASSY	SEG33117591-301	Yes
288	INNER HATCH WINDOW SHIELD KIT	SJD33117564-301	Yes
289	TVIS GYRO REPAIR TOOL KIT	SJG33116475-301	Yes
290	TVIS MAINTENANCE TOOLS KIT	SJG33117580-301	Yes
291	Two Part Epoxy, 2 oz	SEG33121357-302	Yes
292	Two Part Epoxy, 4 oz	SEG33121357-301	Yes
293	Green laser pointer	SEG33121108-301	Yes
294	Work light	SEG33120784-301	Yes
295	Work light	SEG33120784-302	Yes
296	JSL Data Cable	SEG33120875-301	Yes
297	Power Interface Cable	SEG33120873-301	Yes
298	Secondary Power Interface Cable	SEG33120874-301	Yes
299	CDH Interface Cable	SEG33120876-301	Yes
300	ATU Interface Cable	SEG33120878-301	Yes
301	Pin insertion/extraction tool Assembly	SEG33121512-301	Yes
302	Inflatable Globe	SEG33121804-301	Yes
303	Bolt, 9/16 Hex (for ECLSS)	SDG52102486-301	Yes
304	Glue Assembly	SEG33121321-301	Yes
305	Vacuum Cleaner cable	SEG39130245-306	Yes
306	Vacuum Cleaner cable	SEG39130245-307	Yes
307	Fiber Optic Diagnostic Kit	SJG32110465-301	Yes
308	Suction Hose, Wet/Dry Vacuum Cleaner	SEG39123305-301	Yes
309	Vacuum Bag Assembly, Wet/Dry Vacuum Cleaner	SEG39123308-301	Yes
310	Wet/Dry Vacuum Cleaner Assy	SEG39125637-303	Yes
311	Cleaner Assy - Hose, Rod Push Type, Vacuum Cleaner, Extendable	SEG39125638-301	Yes
312	Tool Pouch Assembly, Wet/Dry Vacuum Cleaner	SEG39126290-301	Yes
313	Cable Assy, WeVDry Vacuum Cleaner, 120VDC	SEG39130245-307	Yes
314	PGT TORQUE ANALYZER KIT PHASE 2 (TAK2)	SJG33115454-301	Yes

CARGO MISSION CONTRACT

TABLE 1.1-J ADDED NON SPOC Flight Crew Systems (FCS) TOOLBOX

Item Number	Description	Part Number	Sustain
1	IVA TOOLBOX ASSEMBLY	SEG33113668-301	Yes
2	Wedge Assemblies	SEG33113669-301	Yes
3	Wedge Assemblies	SEG33113669-303	Yes
4	Tray Assembly - Tray #1	SEG33113668-321	Yes
5	Tray Assembly - Tray #1 (Empty)	SEG33114130-301	Yes
6	Tray Assembly - Tray #2	SEG33113668-323	Yes
7	Tray Assembly - Tray #2 (Empty)	SEG33114131-301	Yes
8	Tray Assembly - Tray #3	SEG33113668-325	Yes
9	Tray Assembly - Tray #3 (Empty)	SEG33114132-301	Yes
10	Tray Assembly - Tray #4	SEG33113668-327	Yes
11	Tray Assembly - Tray #4 (Empty)	SEG33114133-301	Yes
12	Tray Assembly - Tray #5	SEG33113668-329	Yes
13	Tray Assembly - Tray #5 (Empty)	SEG33114134-301	Yes
14	Wedge Assemblies	SEG33113669-301	Yes
15	Wedge Assemblies	SEG33113669-303	Yes
16	Tray Soft Cover	SEG33113670-301	Yes
17	<u>TRAY 1: Combination, Crowfoot, Wrenches</u>	SEG33113668-321	Yes
18	Adjustable Wrench, 10" Long	SKG33117562-913	Yes
19	11/16" Open End Wrench, Offset (modified)	SKG33117562-904	Yes
20	Wrench, 15 Deg Offset 3/4"-13/16", Low Torque	SKG33117562-337	Yes
21	Metric Combination Wrench, 6 Point, 7 mm	SKG33117562-315	Yes
22	Metric Combination Wrench, 12 Point, 8 mm	SKG33117562-316	Yes
23	Metric Combination Wrench, 12 Point, 9 mm	SKG33117562-317	Yes
24	Metric Combination Wrench, 12 Point, 10 mm	SKG33117562-301	Yes
25	Metric Combination Wrench, 12 Point, 11 mm	SKG33117562-302	Yes
26	Metric Combination Wrench, 12 Point, 12 mm	SKG33117562-303	Yes
27	Metric Combination Wrench, 12 Point, 13 mm	SKG33117562-304	Yes
28	Metric Combination Wrench, 12 Point, 14 mm	SKG33117562-308	Yes
29	Metric Combination Wrench, 12 Point, 15 mm	SKG33117562-309	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
30	Metric Combination Wrench, 12 Point, 16 mm	SKG33117562-310	Yes
31	Metric Combination Wrench, 12 Point, 17 mm	SKG33117562-311	Yes
32	Metric Combination Wrench, 12 Point, 18 mm	SKG33117562-312	Yes
33	Metric Combination Wrench, 12 Point, 19 mm	SKG33117562-313	Yes
34	Metric Combination Wrench, 22 mm	SKG33117562-314	Yes
35	Metric Combination Wrench, 24 mm	SKG33117562-305	Yes
36	Crowfoot, 3/8" Drive, 19 mm	SEG33114495-303	Yes
37	Crowfoot, 3/8" Drive, 17 mm	SEG33114495-301	Yes
38	Crowfoot, 3/8" Drive, 15 mm	SKG33117562-752	Yes
39	Crowfoot, 3/8" Drive, 14 mm	SKG33117562-755	Yes
40	Crowfoot, 3/8" Drive, 13 mm	SKG33117562-756	Yes
41	Crowfoot, 3/8" Drive, 12 mm	SKG33117562-001	Yes
42	Crowfoot, 3/8" Drive, 10 mm	SKG33117562-002	Yes
43	Miniature Wrench, 12 Point, 3/8" X 7/16"	SKG33117562-510	Yes
44	Miniature Wrench, 12 Point, 11/32" X 3/8"	SKG33117562-509	Yes
45	Miniature Wrench, 12 Point, 5/16" X 11/32"	SKG33117562-508	Yes
46	Miniature Wrench, 12 Point, 9/32" X 5/16"	SKG33117562-507	Yes
47	Miniature Wrench, 12 Point, 1/4" X 9/32"	SKG33117562-506	Yes
48	Miniature Wrench, 12 Point, 15/64" X 1/4"	SKG33117562-505	Yes
49	Miniature Wrench, 12 Point, 7/32" X 15/64"	SKG33117562-504	Yes
50	Miniature Wrench, 12 Point, 13/64" X 7/32"	SKG33117562-503	Yes
51	Miniature Wrench, 6 Point, 3/16" X 5/32"	SKG33117562-502	Yes
52	Miniature Wrench, 6 Point, 5/32" X 3/16"	SKG33117562-501	Yes
53	Combination Wrench, 12 Point, 1"	SKG33117562-318	Yes
54	Combination Wrench, 12 Point, 15/16"	SKG33117562-319	Yes
55	Combination Wrench, 12 Point, 7/8"	SKG33117562-320	Yes
56	Combination Wrench, 12 Point, 13/16"	SKG33117562-321	Yes
57	Combination Wrench, 12 Point, 3/4"	SKG33117562-322	Yes
58	Combination Wrench, 12 Point, 11/16"	SKG33117562-323	Yes
59	Combination Wrench, 12 Point, 5/8"	SKG33117562-324	Yes
60	Combination Wrench, 12 Point, 9/16"	SKG33117562-306	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
61	Combination Wrench, 12 Point, 1/2"	SKG33117562-307	Yes
62	Combination Wrench, 12 Point, 7/16"	SKG33117562-325	Yes
63	Combination Wrench, 12 Point, 3/8"	SKG33117562-326	Yes
64	Combination Wrench, 12 Point, 11/32"	SKG33117562-327	Yes
65	Combination Wrench, 12 Point, 5/16"	SKG33117562-328	Yes
66	Combination Wrench, 12 Point, 1/4"	SKG33117562-329	Yes
67	Crowfoot 11/16" (modified)	SKG33117562-946	Yes
68	Crowfoot, 3/8" Drive, 1 5/16"	SEG33112392-301	Yes
69	Crowfoot, 3/8" Drive, 3/4"	SKG33117562-757	Yes
70	Crowfoot, 3/8" Drive, 13/16"	SKG33117562-758	Yes
71	Crowfoot, 3/8" Drive, 7/8"	SKG33117562-759	Yes
72	Crowfoot, 3/8" Drive, 1"	SKG33117562-307	Yes
73	Crowfoot, 3/8" Drive, 1 3/16"	SKG33117562-305	Yes
74	Crowfoot, 3/8" Drive, 7/16"	SKG33117562-003	Yes
75	Crowfoot, 3/8" Drive, 3/8"	SKG33117562-760	Yes
76	Crowfoot, 3/8" Drive, 9/16"	SKG33117562-761	Yes
77	Crowfoot, 3/8" Drive, 5/8"	SEG33112392-301	Yes
78	Crowfoot, 3/8" Drive, 11/16"	SKG33117562-762	Yes
79	Crowfoot, 1/4" Drive, 5/16"	SEG33114112-001	Yes
80	<u>TRAY 2: Sockets, Drivers, Torque Wrenches, and Ratchets</u>	SEG33113668-323	Yes
81	Metric Standard Hex Head Driver, 3/8" Drive, 4 mm	SKG33117562-608	Yes
82	Metric Standard Hex Head Driver, 3/8" Drive, 5 mm	SKG33117562-609	Yes
83	Metric Standard Hex Head Driver, 3/8" Drive, 6 mm	SKG33117562-610	Yes
84	Metric Standard Hex Head Driver, 3/8" Drive, 7 mm	SKG33117562-611	Yes
85	Metric Standard Hex Head Driver, 3/8" Drive, 8 mm	SKG33117562-612	Yes
86	Metric Standard Hex Head Driver, 3/8" Drive, 9 mm	SKG33117562-601	Yes
87	Metric Standard Hex Head Driver, 3/8" Drive, 10 mm	SKG33117562-602	Yes
88	Metric Standard Hex Head Driver, 1/4" Drive, 2 mm	SKG33117562-603	Yes
89	Metric Standard Hex Head Driver, 1/4" Drive, 2.5 mm	SKG33117562-604	Yes
90	Metric Standard Hex Head Driver, 1/4" Drive, 3 mm	SKG33117562-613	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
91	Metric Standard Hex Head Driver, 1/4" Drive, 4 mm	SKG33117562-614	Yes
92	Metric Standard Hex Head Driver, 1/4" Drive, 5 mm	SKG33117562-615	Yes
93	Metric Standard Hex Head Driver, 1/4" Drive, 6 mm	SKG33117562-616	Yes
94	Metric Deep Socket, 1/4" Drive, 6 Point, 4 mm	SKG33117562-617	Yes
95	Metric Deep Socket, 1/4" Drive, 6 Point, 5 mm	SKG33117562-618	Yes
96	Metric Deep Socket, 1/4" Drive, 6 Point, 5.5 mm	SKG33117562-619	Yes
97	Metric Deep Socket, 1/4" Drive, 6 Point, 6 mm	SKG33117562-620	Yes
98	Metric Deep Socket, 1/4" Drive, 6 Point, 7 mm	SKG33117562-621	Yes
99	Metric Deep Socket, 1/4" Drive, 6 Point, 8 mm	SKG33117562-622	Yes
100	Metric Deep Socket, 1/4" Drive, 6 Point, 9 mm	SKG33117562-623	Yes
101	Metric Deep Socket, 1/4" Drive, 6 Point, 10 mm	SKG33117562-624	Yes
102	Metric Deep Socket, 1/4" Drive, 6 Point, 11 mm	SKG33117562-606	Yes
103	Metric Deep Socket, 1/4" Drive, 6 Point, 12 mm	SKG33117562-607	Yes
104	Metric Deep Socket, 1/4" Drive, 6 Point, 13 mm	SKG33117562-647	Yes
105	Metric Deep Socket, 1/4" Drive, 6 Point, 14 mm	SKG33117562-648	Yes
106	Metric Shallow Socket, 1/4" Drive, 6 Point, 4 mm	SKG33117562-640	Yes
107	Metric Shallow Socket, 1/4" Drive, 6 Point, 5 mm	SKG33117562-641	Yes
108	Metric Shallow Socket, 1/4" Drive, 6 Point, 5.5 mm	SKG33117562-642	Yes
109	Metric Shallow Socket, 1/4" Drive, 6 Point, 6 mm	SKG33117562-643	Yes
110	Metric Shallow Socket, 1/4" Drive, 6 Point, 7 mm	SKG33117562-644	Yes
111	Metric Shallow Socket, 1/4" Drive, 6 Point, 8 mm	SKG33117562-645	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
112	Metric Shallow Socket, 1/4" Drive, 6 Point, 9 mm	SKG33117562-646	Yes
113	Metric Shallow Socket, 1/4" Drive, 6 Point, 10 mm	SKG33117562-657	Yes
114	Metric Shallow Socket, 1/4" Drive, 6 Point, 11 mm	SKG33117562-658	Yes
115	Metric Shallow Socket, 1/4" Drive, 6 Point, 12 mm	SKG33117562-659	Yes
116	Metric Shallow Socket, 1/4" Drive, 6 Point, 13 mm	SKG33117562-660	Yes
117	Metric Shallow Socket, 1/4" Drive, 6 Point, 14 mm	SKG33117562-637	Yes
118	Metric Standard Socket, 3/8" Drive, 12 Point, 6 mm	SKG33117562-638	Yes
119	Metric Standard Socket, 3/8" Drive, 12 Point, 7 mm	SKG33117562-639	Yes
120	Metric Standard Socket, 3/8" Drive, 12 Point, 8 mm	SKG33117562-693	Yes
121	Metric Standard Socket, 3/8" Drive, 12 Point, 9 mm	SKG33117562-694	Yes
122	Metric Standard Socket, 3/8" Drive, 12 Point, 10 mm	SKG33117562-695	Yes
123	Metric Deep Socket, 3/8" Drive, 6 Point, 8 mm	SKG33117562-625	Yes
124	Metric Deep Socket, 3/8" Drive, 6 Point, 9 mm	SKG33117562-626	Yes
125	Metric Deep Socket, 3/8" Drive, 6 Point, 10 mm	SKG33117562-627	Yes
126	Metric Deep Socket, 3/8" Drive, 6 Point, 11 mm	SKG33117562-628	Yes
127	Metric Deep Socket, 3/8" Drive, 6 Point, 12 mm	SKG33117562-629	Yes
128	Metric Deep Socket, 3/8" Drive, 6 Point, 13 mm	SKG33117562-630	Yes
129	Metric Deep Socket, 3/8" Drive, 6 Point, 14 mm	SKG33117562-631	Yes
130	Metric Deep Socket, 3/8" Drive, 6 Point, 15 mm	SKG33117562-632	Yes
131	Metric Deep Socket, 3/8" Drive, 6 Point, 16 mm	SKG33117562-633	Yes
132	Metric Deep Socket, 3/8" Drive, 6 Point, 17 mm	SKG33117562-634	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
133	Metric Deep Socket, 3/8" Drive, 6 Point, 18 mm	SKG33117562-635	Yes
134	Metric Deep Socket, 3/8" Drive, 6 Point, 19 mm	SKG33117562-636	Yes
135	Deep Socket, 3/8" Drive, 12 Point, 1/4"	SKG33117562-705	Yes
136	Deep Socket, 3/8" Drive, 12 Point, 5/16"	SKG33117562-706	Yes
137	Deep Socket, 3/8" Drive, 6 Point, 11/32"	SKG33117562-707	Yes
138	Deep Socket, 3/8" Drive, 12 Point, 3/8"	SKG33117562-708	Yes
139	Deep Socket, 3/8" Drive, 12 Point, 7/16"	SKG33117562-709	Yes
140	Deep Socket, 3/8" Drive, 12 Point, 1/2"	SKG33117562-685	Yes
141	Deep Socket, 3/8" Drive, 12 Point, 9/16"	SKG33117562-686	Yes
142	Deep Socket, 3/8" Drive, 12 Point, 19/32"	SKG33117562-687	Yes
143	Deep Socket, 3/8" Drive, 12 Point, 5/8"	SKG33117562-688	Yes
144	Deep Socket, 3/8" Drive, 12 Point, 11/16"	SKG33117562-689	Yes
145	Deep Socket, 3/8" Drive, 12 Point, 3/4"	SKG33117562-690	Yes
146	Deep Socket, 3/8" Drive, 12 Point, 13/16"	SKG33117562-691	Yes
147	Deep Socket, 3/8" Drive, 12 Point, 7/8"	SKG33117562-692	Yes
148	Deep Socket, 3/8" Drive, 12 Point, 15/16"	SKG33117562-714	Yes
149	Deep Socket, 3/8" Drive, 12 Point, 1"	SKG33117562-715	Yes
150	Metric Shallow Socket, 3/8" Drive, 6 Point, 8 mm	SKG33117562-605	Yes
151	Metric Shallow Socket, 3/8" Drive, 6 Point, 9 mm	SKG33117562-649	Yes
152	Metric Shallow Socket, 3/8" Drive, 6 Point, 10 mm	SKG33117562-650	Yes
153	Metric Shallow Socket, 3/8" Drive, 6 Point, 11 mm	SKG33117562-651	Yes
154	Metric Shallow Socket, 3/8" Drive, 6 Point, 12 mm	SKG33117562-652	Yes
155	Metric Shallow Socket, 3/8" Drive, 6 Point, 13 mm	SKG33117562-653	Yes
156	Metric Shallow Socket, 3/8" Drive, 6 Point, 14 mm	SKG33117562-654	Yes
157	Metric Shallow Socket, 3/8" Drive, 6 Point, 15 mm	SKG33117562-655	Yes
158	Metric Shallow Socket, 3/8" Drive, 6 Point, 16 mm	SKG33117562-656	Yes
159	Metric Shallow Socket, 3/8" Drive, 6 Point, 17 mm	SKG33117562-661	Yes
160	Metric Shallow Socket, 3/8" Drive, 6 Point, 18 mm	SKG33117562-662	Yes
161	Metric Shallow Socket, 3/8" Drive, 6	SKG33117562-663	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	Point, 19 mm		
162	Metric Shallow Socket, 3/8" Drive, 22 mm	SKG33117562-664	Yes
163	Metric Shallow Socket, 3/8" Drive, 24 mm	SKG33117562-665	Yes
164	Standard Socket, 3/8" Drive, 12 Point, 1/4"	SKG33117562-725	Yes
165	Standard Socket, 3/8" Drive, 12 Point, 5/16"	SKG33117562-726	Yes
166	Standard Socket, 3/8" Drive, 12 Point, 11/32"	SKG33117562-727	Yes
167	Standard Socket, 3/8" Drive, 12 Point, 3/8"	SKG33117562-728	Yes
168	Standard Socket, 3/8" Drive, 12 Point, 7/16"	SKG33117562-729	Yes
169	Standard Socket, 3/8" Drive, 12 Point, 1/2"	SKG33117562-730	Yes
170	Standard Socket, 3/8" Drive, 12 Point, 9/16"	SKG33117562-731	Yes
171	Standard Socket, 3/8" Drive, 12 Point, 19/32"	SKG33117562-732	Yes
172	Standard Socket, 3/8" Drive, 12 Point, 5/8"	SKG33117562-733	Yes
173	Standard Socket, 3/8" Drive, 12 Point, 11/16"	SKG33117562-710	Yes
174	Standard Socket, 3/8" Drive, 12 Point, 3/4"	SKG33117562-711	Yes
175	Standard Socket, 3/8" Drive, 12 Point, 13/16"	SKG33117562-712	Yes
176	Standard Socket, 3/8" Drive, 12 Point, 7/8"	SKG33117562-713	Yes
177	Standard Socket, 3/8" Drive, 12 Point, 15/16"	SKG33117562-734	Yes
178	Standard Socket, 3/8" Drive, 12 Point, 1"	SKG33117562-735	Yes
179	Extension, 3/8" Drive, 4" Long	SKG33117562-773	Yes
180	Extension, 3/8" Drive, 6" Long	SKG33117562-774	Yes
181	Extension, 3/8" Drive, 11" Long	SKG33117562-775	Yes
182	Driver Handle, 3/8" Drive	SKG33117562-942	Yes
183	EVA Socket, 3/8" Drive, 7/16"	SEG33106931-301	Yes
184	6" Flex Extension, 1/4" Drive	SKG33117562-772	Yes
185	Torque Wrench, 3/8" Drive 30-200 In-lbs	SEG33117289-302	Yes
186	Hex Head Driver, 3/8" Drive, 1/8"	SKG33117562-722	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
187	Hex Head Driver, 3/8" Drive, 9/64"	SKG33117562-723	Yes
188	Hex Head Driver, 3/8" Drive, 5/32"	SKG33117562-767	Yes
189	Hex Head Driver, 3/8" Drive, 3/16"	SKG33117562-746	Yes
190	Hex Head Driver, 3/8" Drive, 7/32"	SKG33117562-747	Yes
191	Hex Head Driver, 3/8" Drive, 1/4"	SKG33117562-748	Yes
192	Hex Head Driver, 3/8" Drive, 5/16"	SKG33117562-749	Yes
193	Hex Head Driver, 3/8" Drive, 3/8"	SKG33117562-750	Yes
194	Driver Handle, 1/4" Drive	SKG33117562-941	Yes
195	Ratchet, 3/8" Drive, 7-3/8" Long, Sealed	SKG33117562-938	Yes
196	Ratchet, 1/4" Drive, 4-1/2" Long, Sealed	SKG33117562-939	Yes
197	Ratchet, 1/4" Drive, 6" Long, Flex Handle	SKG33117562-940	Yes
198	Ratchet, 3/8" Drive, 6" Long, Flex Handle	SKG33117562-336	Yes
199	Adaptor, 3/8" Female to 1/4" Male	SEG33117595-301	Yes
200	Adaptor, 3/8" Female to 1/2" Male	SEG33117595-302	Yes
201	Torque Limiting Driver, 1/4" Drive, 5-35 In-lbs	SEG33117289-301	Yes
202	Torque Wrench, 1/4" Drive, 40-200 In-lbs	SEG33112394-301	Yes
203	Torque Wrench, 1/4" Drive, 10-50 In-lbs	SEG33112395-301	Yes
204	Universal Joint, 3/8" Drive	SKG33117562-905	Yes
205	Extension, 1/4" Drive, 2" Long	SKG33117562-763	Yes
206	Extension, 1/4" Drive, 4" Long	SKG33117562-764	Yes
207	Extension, 1/4" Drive, 6" Long	SKG33117562-765	Yes
208	Extension, 1/4" Drive, 10" Long	SKG33117562-766	Yes
209	Hex Shank - 1/4" Drive	SKG33117562-008	Yes
210	Hex Shank - 3/8" Drive	SKG33117562-009	Yes
211	Universal Joint, 1/4" Drive	SKG33117562-010	Yes
212	Ball Tip Hex Head Driver, 1/4" Drive, 1/8"	SKG33117562-666	Yes
213	Adaptor, 1/4" Female to 3/8" Male	SEG33117595-303	Yes
214	Hex Head Driver, 1/4" Drive, 1/16"	SKG33117562-736	Yes
215	Hex Head Driver, 1/4" Drive, 5/64"	SKG33117562-737	Yes
216	Hex Head Driver, 1/4" Drive, 3/32"	SKG33117562-738	Yes
217	Hex Head Driver, 1/4" Drive, 7/64"	SKG33117562-739	Yes
218	Hex Head Driver, 1/4" Drive, 1/8"	SKG33117562-740	Yes
219	Hex Head Driver, 1/4" Drive, 9/64"	SKG33117562-741	Yes
220	Hex Head Driver, 1/4" Drive, 5/32"	SKG33117562-742	Yes
221	Hex Head Driver, 1/4" Drive, 3/16"	SKG33117562-743	Yes
222	Hex Head Driver, 1/4" Drive, 7/32"	SKG33117562-744	Yes
223	Hex Head Driver, 1/4" Drive, 1/4"	SKG33117562-748	Yes
224	Deep Socket, 1/4" Drive, 6 Point, 1/8"	SKG33117562-696	Yes
225	Deep Socket, 1/4" Drive, 6 Point, 5/32"	SKG33117562-673	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
226	Deep Socket, 1/4" Drive, 12 Point, 3/16"	SKG33117562-674	Yes
227	Deep Socket, 1/4" Drive, 12 Point, 7/32"	SKG33117562-675	Yes
228	Deep Socket, 1/4" Drive, 12 Point, 1/4"	SKG33117562-676	Yes
229	Deep Socket, 1/4" Drive, 12 Point, 9/32"	SKG33117562-677	Yes
230	Deep Socket, 1/4" Drive, 12 Point, 5/16"	SKG33117562-678	Yes
231	Deep Socket, 1/4" Drive, 12 Point, 11/32"	SKG33117562-679	Yes
232	Deep Socket, 1/4" Drive, 12 Point, 3/8"	SKG33117562-680	Yes
233	Deep Socket, 1/4" Drive, 12 Point, 7/16"	SKG33117562-681	Yes
234	Deep Socket, 1/4" Drive, 12 Point, 1/2"	SKG33117562-682	Yes
235	Deep Socket, 1/4" Drive, 12 Point, 9/16"	SKG33117562-704	Yes
236	Standard Socket, 1/4" Drive, 6 Point, 1/8"	SKG33117562-716	Yes
237	Standard Socket, 1/4" Drive, 6 Point, 5/32"	SKG33117562-717	Yes
238	Standard Socket, 1/4" Drive, 12 Point, 3/16"	SKG33117562-718	Yes
239	Standard Socket, 1/4" Drive, 12 Point, 7/32"	SKG33117562-719	Yes
240	Standard Socket, 1/4" Drive, 12 Point, 1/4"	SKG33117562-720	Yes
241	Standard Socket, 1/4" Drive, 12 Point, 9/32"	SKG33117562-721	Yes
242	Standard Socket, 1/4" Drive, 12 Point, 5/16"	SKG33117562-697	Yes
243	Standard Socket, 1/4" Drive, 12 Point, 11/32"	SKG33117562-698	Yes
244	Standard Socket, 1/4" Drive, 12 Point, 3/8"	SKG33117562-699	Yes
245	Standard Socket, 1/4" Drive, 12 Point, 7/16"	SKG33117562-701	Yes
246	Standard Socket, 1/4" Drive, 12 Point, 1/2"	SKG33117562-702	Yes
247	Standard Socket, 1/4" Drive, 12 Point, 9/16"	SKG33117562-703	Yes
248	Standard Socket, 1/4" Drive, 6 Point, 5/8"	SKG33117562-724	Yes
249	<u>TRAY 3: Screwdrivers, Bits, Crowsfeet, Transfer Net</u>	SEG33113668-325	Yes
250	Phillips Head Driver, 3/8" Drive, #3, 4-1/32" Long	SKG33117562-915	Yes
251	Speed Handle Assembly	528-20169-1	Yes
252	Steel Rule, 12"/300 mm	SKG33117562-911	Yes
253	Adjustable Wrench, 6" Long	SKG33117562-912	Yes
254	Torque Wrench, 3/8" Drive, 200-1000 In-	SEG33117289-303	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
	lbs		
255	Inspection Mirror	SKG33117562-923	Yes
256	Mechanical Finger, 17-1/2" Long	SKG33117562-931	Yes
257	Crowfoot, 3/8" Drive, 1-1/4"	SEG33114127-301	Yes
258	Crowfoot, 3/8" Drive, 1-3/8"	SEG33114218-301	Yes
259	Crowfoot, 3/8" Drive, 1-5/8"	SEG33113226-301	Yes
260	Crowfoot, 3/8" Drive, 1 3/4"	SEG33114112-303	Yes
261	Crowfoot, 3/8" Drive, 2"	SEG33114127-303	Yes
262	Crowfoot, 3/8" Drive, 2 1/2"	SEG33114112-301	Yes
263	Ratcheting Bit Set	SJG33114298-301	Yes
264	Hex Head Driver, 3/8" Drive, 3/8", 6" Long	SKG33117562-751	Yes
265	Hex Head Driver, 3/8" Drive, 5/32", 6" Long	SKG33117562-768	Yes
266	3/16" Hex Driver - 6"	SKG33117562-917	Yes
267	5/32" Hex Driver	SKG33117562-918	Yes
268	Jewelers Screwdriver Set, Flat Tip (6 Piece Set)	641948	Yes
269	Phillips Head Driver, 3/8" Drive, #2, 4-1/32" Long	SKG33117562-914	Yes
270	Phillips Head Driver, 3/8" Drive, #4, 2-9/16" Long	SKG33117562-784	Yes
271	Flat Tip Head Driver, 3/8" Drive, 1/4" X 1/32"	SKG33117562-785	Yes
272	Flat Tip Head Driver, 3/8" Drive, 3/8" X 1/16"	SKG33117562-786	Yes
273	Hex Head Driver, 1/2" Drive, 7/16"	SKG33117562-919	Yes
274	Torq Set, Apex Bit, #2 long	SKG33117562-330	Yes
275	Torq Set, Apex Bit, #4 long	SKG33117562-331	Yes
276	Torq Set, Apex Bit, #6 long	SKG33117562-332	Yes
277	Torq Set, Apex Bit, #8 long	SKG33117562-333	Yes
278	Torq Set, Apex Bit, #10 long	SKG33117562-334	Yes
279	Phillips Head Screwdriver, #0, 3" Long Blade	SKG33117562-792	Yes
280	Phillips Head Screwdriver, #1, 6" Long Blade	SKG33117562-901	Yes
281	Common Tip Screwdriver, Short, 0.018" X 1/8" X 3"	SKG33117562-902	Yes
282	Common Tip Screwdriver, Long, 0.037" X 1/4" X 4"	SKG33117562-903	Yes
283	3/8" Ball Tip Hex Head, 3/8" Drive, 5" Long [ARIS Tools Assembly]	SEG33109848-309	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
284	5/32" Ball Tip Hex Head, 3/8" Drive, 5" Long [ARIS Tools Assembly]	SEG33109848-321	Yes
285	Spanner Wrench	683-13419	Yes
286	TRAY 4: L-Wrenches, Pliers, Crimp Tools, Wire Cutters	SEG33113668-327	Yes
287	L-Wrench, .028 "	SKG33117562-776	Yes
288	L-Wrench, .035 "	SKG33117562-777	Yes
289	L-Wrench, .05 "	SKG33117562-778	Yes
290	L-Wrench, 1/16 "	SKG33117562-779	Yes
291	L-Wrench, 5/64 "	SKG33117562-780	Yes
292	L-Wrench, 3/32 "	SKG33117562-781	Yes
293	L-Wrench, 7/64 "	SKG33117562-782	Yes
294	L-Wrench, 1/8 "	SKG33117562-783	Yes
295	L-Wrench, 9/64 "	SKG33117562-753	Yes
296	L-Wrench, 5/32 "	SKG33117562-754	Yes
297	L-Wrench, 3/16 "	SKG33117562-007	Yes
298	L-Wrench, 7/32 "	SKG33117562-793	Yes
299	L-Wrench, 1/4 "	SKG33117562-794	Yes
300	L-Wrench, 5/16 "	SKG33117562-795	Yes
301	L-Wrench, 3/8 "	SKG33117562-796	Yes
302	L-Wrench, 7/16 "	SKG33117562-797	Yes
303	L-Wrench, 1/2 "	SKG33117562-798	Yes
304	L-Wrench, 9/16 "	SKG33117562-799	Yes
305	L-Wrench, 5/32" Modified	SEG33113213-301	Yes
306	Folding L-Wrench Set; (.05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 1/4", 5/16", and 3/8")	SKG33117562-789	Yes
307	Metric Folding Hex Key Set (2 X 51, 2.5 X 57, 3 X 62, 4 X 66, 5 X 57, 6 X 97, and 8 X 104 mm)	SKG33117562-791	Yes
308	Connector Pilers	SKG33117562-930	Yes
309	Vise Grips	SKG33117562-947	Yes
310	Strap Wrench	SKG33117562-925	Yes
311	Mini-Pliers, Straight, 6" Long	SKG33117562-943	Yes
312	Splice Crimp Tool	SKG33117562-929	Yes
313	Adjustable Joint Pliers, Curved	SKG33117562-944	Yes
314	Crimp Tool	SKG33117562-769	Yes
315	Crimp Tool locator for MS27490-16	SKG33117562-003	Yes
316	Crimp Tool locator for MS27490-20	SKG33117562-004	Yes
317	Crimp Tool locator for M24308/12-1	SKG33117562-005	Yes
318	Wire Stripper	SKG33117562-927	Yes

CARGO MISSION CONTRACT

Item Number	Description	Part Number	Sustain
319	Adjustable Joint Pliers, 7" Straight Jaw	SKG33117562-945	Yes
320	Retaining Ring Tool, Straight	SKG33117562-936	Yes
321	Needle Nose Pliers, Small	SKG33117562-770	Yes
322	Needle Nose Pliers, Large	SKG33117562-771	Yes
323	Combination Pliers	SKG33117562-928	Yes
324	Wire Cutters	SKG33117562-926	Yes
325	Retaining Ring Tool, 90 Degrees	SKG33117562-937	Yes
326	<u>TRAY 5: Wrenches, Files, Saws, Tethers, Punches</u>	SEG33113668-329	Yes
327	Combination Wrench, 12 Point, 1 5/16"	SKG33117562-338	Yes
328	Pipe Wrench	SKG33117562-933	Yes
329	Caliper, Dial Type	SKG33117562-922	Yes
330	File Handle, Large	SDG33114300-013	Yes
331	Feeler Gauge	FB335	Yes
332	Hacksaw	SKG33117562-787	Yes
333	Snap-On or HSBM1024B Replacement Blades	SKG33117562-006	Yes
334	Saw Hand, Finger Grip (Bone Saw)	SKG33117562-788	Yes
335	Tape Measure, 10 Feet Long (English/Metric)	SKG33117562-920	Yes
336	Breaker Bar, 3/8" Drive	SKG33117562-916	Yes
337	Thread Gauge	SKG33117562-921	Yes
338	Feeler Gauge, nonmetallic	SKG33117562-910	Yes
339	File Set, Small (Round, Half-Round, Flat, Crossing, Knife, Square, 3-Square, Equaling, Barrette, Joint, Slitting, Marking, and Handle)	SJG33114296-301	Yes
340	Static Wrist Tether	SKG33117562-335	Yes
341	Magnifying Glass (7X)	SKG33117562-924	Yes
342	Scissors, 2" Cut Length, 8-1/4" Long	SKG33117562-934	Yes
343	Dead Blow, Ball Peen Hammer	SKG33117562-932	Yes
344	Chisel, 1/2" Point Edge, 6" Long	SKG33117562-907	Yes
345	Pry Bar	SKG33117562-908	Yes
346	Center Punch	SKG33117562-906	Yes
347	Long Tapered Punch, 6" Long	SKG33117562-907	Yes
348	Hand File, Large	SDG33114300-001	Yes
349	Warding File, Large	SDG33114300-003	Yes
350	Half-round File, Large	SDG33114300-005	Yes
351	Square File, Large	SDG33114300-007	Yes
352	Round File, Large	SDG33114300-009	Yes
353	Slim Taper File, Large	SDG33114300-011	Yes

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SECTION J
Attachment J-9

CARGO MISSION CONTRACT

Attachment J-10

Government Provided Software

CARGO MISSION CONTRACT

Government will provide access to the applications show in Table 5-A.

TABLE 5-A Government Owned – Contractor Accessible Applications

Application Name	Description
Action Tracking Application (ATA)	ATA is an online, interactive tool for tracking, reviewing and reporting program actions from their identification until their closure.
Configuration Status Management Operating System (COSMOS)	COSMOS supports configuration management processes for the ISS Program. It is used to document, track and manage ISS Program Change Requests (associated directives, actions, etc.), Program Directives, and Deviations & Waivers.
Digital Imagery Management Systems (DIMS)	DIMS is the ISS Program's repository for still photo and video imagery of NASA hardware and activities recorded during ground and on-orbit operations.
Electronic Document Management System (EDMS)	EDMS is the ISS Program's repository for official program documentation.
Enhanced Automated Graphical Logistics Environment (EAGLE)	EAGLE is the official ISS Logistics Support Analysis Record (LSAR) Master Database. It integrates all LSAR data for USOS hardware and IP Element ORUs.
Government On-Line Database (GOLD)	The Government On-Line Database (GOLD) is an application which can be used to do tagged property/asset tracking and reporting, inventory management, spares replenishment reporting, calibration tracking and reporting, and maintenance/repairs job orders and reporting.
Hardware History Retrieval System (HHRS)	The Hardware History Retrieval System (HHRS) provides access to historical documents used for fabrication, test and operation of each piece of Space Station flight hardware.
Integrated Checkout Assembly and Management System (ICAMS)	ICAMS is a fully functional Configuration Status Accounting System (NASA owned, Boeing Configuration Management operated/maintained) designed to receive Engineering Configuration Lists (ECLs), create

CARGO MISSION CONTRACT

Application Name	Description
	and maintain As-Built Configuration Lists (ABCLs), perform electronic comparison (ECL to ABCL and ABCL to ECL), and provide reporting capabilities.
Integrated Risk Management Application (IRMA)	The Integrated Risk Management Application (IRMA) is used by the ISS Program to status and track technical concerns and risks, as well as, cost issues and threats. The application integrates the risk management approach for the Program (key information and rating scale) with information on cost by fiscal year for each risk or concern.
Mission Integration Database for Assembly Sequence (MIDAS)	The Mission Integration Database for Assembly Sequence (MIDAS) is an ORACLE database application used to support Cargo Planning. It provides functionality in support of all aspects of cargo processing including the creation of new ISS Program requirements, development of ISS manifests, processing of manifested cargo, and collection of inventory data for use by on-board ISS systems.
NASA Equipment Management System (NEMS)	The NASA Equipment Management System (NEMS) is a NASA provided database for tracking government owned equipment that includes location and estimated replacement value.
Problem Analysis Reporting Tool (PART)	PART is the ISS Program's database tool used to track and monitor hardware or system anomalies.
Problem Reporting and Corrective Action (PRACA)	The Problem Reporting and Corrective Action (PRACA) is used for problem reporting and disposition.
Vehicle Master Database (VMDB)	The Vehicle Master Database (VMDB) is the ISS Program's authoritative source of engineering data containing drawings, documents, relational data and images.

The software applications available as government provided software applications and maintained by the Cargo Mission Contractor are show in Table 5-B

CARGO MISSION CONTRACT

TABLE 5-B Government Provided Software Applications

Application Name	Description
Single Application Resource for Aerospace Hardware (SARAH)	A database tool used to manage the inventory of Flight Crew Equipment hardware.

ATTACHMENT J-11

Government Furnished Property

**(See Excel File provided on the CD for the CMC
Consolidated Property List)**

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ATTACHMENT J-15

Surveillance Plan

**Will be incorporated in the contract after contract
award**

ATTACHMENT J-16

Deliverable Items List

NNJ10GA35C
Modification 9

SECTION J
Attachment J-16

CARGO MISSION CONTRACT

NO	CHANGE NUMBER	PART NUMBER	SERIAL NUMBER	LM ID NO*	NOMENCLATURE	QTY	UNIT	DD250 DATE	ACTUAL DELIVERY DATE	REMARKS
1	12846	SJG33121409-603	1001		WPS PS PSIP01 Kit	1	Each	8/24/11		
2	12396	WCS1184-02			Urinal, Female Oblong	20	Each	9/30/11		
3	12396	199C3102P2			Urinal, Female Oblong	10	Each	9/30/11		

*LM ID Number is assigned with actual DD250 delivery date.

ATTACHMENT J-17

Underlimit Pool Changes

CARGO MISSION CONTRACT

Modification #	SSCN	Mod Date	Description	Cost
8	12465		Tasks, Hardware and Cost Impacts Associated with the Move of STS-335 Launch-On-Need (LON) to June 2011	(b) (4)
9	12846		Deliver a Progress Stowage Interface Platform for the Water Processing Assembly Pump Separator (PS) Orbital Replacement Unit (ORU) launch on 45P	
6	12396		Shuttle Urine Funnel Adapter for the Waste and Hygiene Compartment (WHC)	
Underlimit Changes Cost: (04/01/11 thru 03/31/12)				

CARGO MISSION CONTRACT

Cargo Mission Contract

Dictionary

Attachment J-1

CARGO MISSION CONTRACT

Dictionary

Acceptance Testing	Tests to determine that a part, component, subsystem, or system is capable of meeting performance requirements prescribed in purchase specifications or other documents specifying what constitutes the adequate performance capability for an item in question.
Analytical Integration (Pressurized Cargo)	The development of stowage products (layouts and mass properties) and hazards analysis required to ensure all hardware item packing requirements are met.
Anomaly	An unexpected event, hardware damage, a departure from past experience, established procedures or performance, or a deviation of system, subsystem, and/or hardware/software performance outside certified design/performance specification limits.
Applicable (context of documents)	Documentation that has been identified, in which the contractor has requirements that derive from that document
As-Built Packing List	A list of the current as-built configuration of packed hardware items.
As-Flown	The final configuration of the flight item as it was delivered to the NLI.
Audit	A systematic and independent examination to determine whether activities and related results comply with planned arrangements, whether these arrangements are implemented effectively, and are suitable to achieve objectives.
Barcode Inventory Tracking System (BITS)	BITS is the program team, including CMC Contractor representatives, responsible for generating, tracking and maintaining the MITR data in the MIDAS system and coordinating with the Mission Operations Directorate for upload of the IMS database.
Bench Stock	Low cost, repetitively used, consumption-type supplies and repair parts, established at or near points of consumption/use to ensure continuous and uninterrupted operations.
Benchmarking	The continuous process of measuring a product, service, or process against the best practices of recognized leaders in the field to achieve superior performance.
Bi-lateral	Any action involving two (2) parties.
Blank Book	A document that shows the format and provides an explanation for the contents of each section of other documents. Used for defining the contents of flight, increment or planning period specific documentation (example the IDRDR blank book defines the contents and format to be used for the IDRDR Increment 1, 2, 3 etc specific documents)

CARGO MISSION CONTRACT

Dictionary

Book Coordinator	A function that provides for developing new documents or updates to existing documents. Tasks include the following: integrating inputs from technical experts, submitters and reviewers; maintaining the technical consistency of the document; updating the document using CM CR process; interfacing with CM and DQA; coordinating IP inputs and IP issue resolution; developing NDCs for documents that affect RSC-E; coordinating translations as required; coordinating and conducting TCMs; production, distribution and resolution of minutes and actions from TCMs; and developing and presenting presentations to the appropriate control boards as required for CR and document approvals.
Budget	A formal estimate of future revenues, obligations to be incurred, and outlays to be made during a definite period of time and, when determined to be appropriate, upon the basis of accrued expenditures and costs to be incurred.
Calendar Day	The period from one midnight to the following midnight. For example, there are 31 calendar days in October.
Calibration	Comparison of a standard or unit of test equipment of unknown accuracy with standard of known accuracy to detect, correlate, report, or eliminate by adjustment any deviation in the accuracy of the unit being compared.
Cargo	The combined flight complement of manifested hardware items to be packed and turned over for loading into an ISS visiting vehicle.
Certification	The responsible official formal written act that attests to the satisfactory accomplishment of specified activities and authorizes the specified hardware/software, procedures, facilities, and/or personnel for program usage.
Change	Modification requested to reflect an operational characteristic, correct a potentially hazardous condition, meet new operational requirement, improve efficiency, make a system work for a longer duration, or another requirement.
Change Request (CR)	Document used to request a change to a program baseline, including hardware, software, documents, configuration, and drawings.
Checkout Systems	Systems specifically designed to assist in testing space flight systems prior to flight. Currently such systems include extensive system software and test oriented application software along with extensive features to capture and process significant amounts of test data.
Close Call	An unplanned occurrence in which there is no injury/damage but under similar circumstances could have resulted in a reportable mishap.

CARGO MISSION CONTRACT

Dictionary

Closed Loop Requirement Traceability /Tracking	A cross-reference between OMRS and any other mission requirements and the implementing Work Authorization Document (WAD) number and step or exception/waiver reference that records completion.
Closeout Photo	Images retained by the use of conventional film or digital electronics and stored or viewed for the express purpose of scientific evaluation and comparison against the as-built configuration of flight systems and payloads.
Commercial Off-the-Shelf (COTS)	A product, such as an item, material, component, subsystem, or system, sold or traded to general public in the course of normal business operations at established catalog or market prices.
Compliance	Completion or within constraints of documented requirements
Component	A part or assembly of parts, subassemblies and assemblies, and assemblies mounted together and normally capable of independent operation in a variety of situations.
Computer Aided Design (CAD)	Computer software that enables creation of drawings that are stored in the computer and that may be printed or displayed on a computer monitor.
Computer Aided Engineering (CAE)	Computer software designed to aid various engineering functions.
Condition Assessment	The inspection and documentation of the material condition of facilities and equipment, as measured against the applicable maintenance standards.
Configuration Control	The task of ensuring that each proposed change, waiver, or deviation is properly defined, coordinated, evaluated and dispositioned by the appropriate authority prior to its implementation.
Configuration Management	The task of integrating and accomplishing, in an optimal manner, the four subtasks of configuration identification, configuration control, configuration accounting, and configuration verification.
Contractor	The supplier of the associated products and services to the government under the terms of this contract.
Control Board	A management forum, which establishes and controls changes to the programmatic baseline and associated documentation. It is also a forum for resolving related technical and schedule issues. The specific scope, responsibilities, authority, and membership of the boards are defined in program approved board charters.
Control panels	A subordinate forum to a parent control board with delegated responsibility and control as defined in the charter.
Corrective Action	An action(s) taken to eliminate the root cause of a problem to prevent its recurrence.
Customer (or User)	An organization or individual requiring the services of this contract.

CARGO MISSION CONTRACT

Dictionary

Depot	A ground maintenance provider, usually used for repair of an item.
Design	The process of defining a new system or modifying a previously defined system in response to new requirements.
Design Change	An approved engineering change incorporated into the end item that modifies, adds to, deletes, or supersedes functions or parts in the end item.
Design Review, Critical	A meeting to assure that the design is in consonance with program and project specifications. Reference NPR 7120.5.
Design Review, Preliminary	A meeting at which preliminary designs are reviewed with customers and prime contractors to assure compliance with system and project requirements. Reference NPR 7120.5.
Design Services	Engineering, procurement, logistics, safety, and quality expertise needed for the design and development of new or modified systems or equipment.
Desktop Computers	Computers designed for primary general use by one employee in one specific location. Such machines typically have one CPU, one or more non-redundant hard disks, a keyboard, mouse, and monitor.
Develop	The process of converting initial requirements into a completed product. (Reference Sustaining Engineering).
Develop Requirements (context of documents)	The development of requirements includes coordination of efforts with stakeholder to satisfy ISS Program mission objectives as allocated to the Cargo Mission. This activity includes documenting requirements baselines and managing requirements baselines as Cargo Mission needs are identified through the ISS Program process.
Develop Requirements (context of hardware requirements)	Development of requirements for hardware includes defining the engineering and maintenance requirements of the hardware and documenting those requirements into the appropriate sustaining engineering and maintenance documentation for traceability.
Deviation	Authorization granted before the fact, to depart from a particular requirement, specification, or related document. (Reference Waiver)
Disposal	The process of transferring NASA excess property to another Federal Agency or donating, selling, abandoning, or destroying surplus property.
Distributed IT Systems	Relatively small and cost effective systems which are usually geographically distributed to be close to their primary user area but which are still often connected to a wide area network to support wider data access.

CARGO MISSION CONTRACT

Dictionary

Document Release Authorization (DRA)	Formal release of engineering drawings, engineering order (EO), specifications, and other documents into an Engineering Release System (KSC uses KSC Form 21-68 for release into the CAPPS Documentation Center, JSC Form XXX for release into the Engineering Documentation Control Center [EDCC]) performed by the ERU.
Drawings	Graphic or tabular data, including drawings, graphs, or diagrams, industry standards and industry specifications, on which details are represented with sufficient information to define completely, directly or by reference, the end result in the selection, procurement, and manufacture of the item required.
Equipment and Equipment Item	An item of real or personal property in the configuration of a mechanical, electrical, or electronic apparatus or tool, which may perform a function independently or in conjunction with other equipment or components.
Engineering Release Unit	Process of loading electronic copy of documentation or drawing to an official repository and filing of the hardcopy.
Exception	A pre-planned request to deviate from the approved requirement.
Expendable Item	Component or part (such as bolt, nut, rivet) for which (1) no authorized repair procedure exists, and, or (2) the cost of repair would exceed cost of its replacement. Expendable items are usually considered to be consumed when issued and are not recorded as returnable inventory.
External Carriers	External Carriers are a family of existing and proposed unpressurized carriers that supply Orbital Replaceable Units (ORU's), critical spares, payloads and logistical hardware on a reflight basis to and from ISS and/or orbit. External Carriers include, but are not limited to carriers such as: Space Lab Pallet (SLP), Side Wall Carrier (SWC), Lightweight MPESS Carrier (LMC), Unpressurized Logistics Carriers (ULC), Multi Purpose Experiment Support Structure (MPESS), or GAS bridge assembly.
Extravehicular Activity (EVA)	Activities by crewmembers conducted outside the space vehicle pressure hull or within the cargo bay when the cargo bay doors are open.
Facility	A term used to encompass land, buildings, or other structures, and real property improvements, including utilities and collateral equipment.
Factory Equipment	Non-flight support equipment that is not certified as GSE in accordance with SSP 50004.
Failure	The inability of a system, subsystem, component, or part to perform its specified function within specified limits, under specified conditions, and for a specified duration.

CARGO MISSION CONTRACT

Dictionary

Failure Mode, Effects and Analysis (FMEA)	An analysis to determine an item or systems method and frequency of failure and the resulting effects.
Flight	The launch and, or return of a visiting spacecraft vehicle to and from the ISS. Also, the level of certification for hardware items that are approved for launch and, or on-orbit operation aboard the ISS.
Flight Support Equipment	An item required to attach ORU/Contingency Items into/onto the carrier used in the shuttle payload bay or any pressurized volume, which is transported to orbit by a launch vehicle (e.g. adapter plates, shrouds).
Government Furnished Data (GFD)	Technical data provided to the contractor by the Government.
Government Furnished Equipment (GFE)	Hardware and software Equipment in the possession of, or directly acquired by, the government from suppliers and subsequently made available to the contractor.
Government Furnished Property (GFP)	Hardware and software in the possession of, or directly acquired by, the government from suppliers and subsequently made available to the contractor.
Government Property	All property owned by or leased to the Government or acquired by the Government under the terms of the contract. It includes both Government-furnished property and contractor-acquired property as defined in this section.
Ground Support Equipment (GSE)	Ground-based systems, hardware or software functionally designed to support flight hardware prelaunch and postlanding activities including servicing, checkout, test, movement, alignment, protection or calibration. GSE is certified in accordance with SSP 50004.
Ground Systems	Consists of the facility, facility systems, checkout systems, ground support equipment and tools and the service operators required to operate the infrastructure (i.e., network monitors, facility schedulers, tape operators, system administrators, etc.).
Hardware Provider	Organization responsible for providing hardware for flight or hardware to be processed for flight.
Hardware Audit	A meeting conducted (under the current contract process) to bring hardware providers and the Launch Package team together to review the list of manifested flight hardware for a given flight, and to collect packing, labeling and Imagery requirements for implementation by the CMC Contractor during physical processing.
Hardware Accountability Matrix Report	A report generated by the MIDAS system which includes hardware item information required for the development of analytical and physical cargo products.

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Hazard	A risk of personnel exposure, injury, or death, or of hardware damage or loss.
Hazardous Material	Any solid, liquid, or gaseous material which meets the hazard reporting requirements of 29CFR 1910.1200. This includes commodities, which, under foreseeable conditions, are toxic, carcinogenic, cryogenic, explosive, flammable, pyrophoric, water-reactive, corrosive, an oxidizer, a compressed gas, a combustible liquid, or are chemically unstable.
Hazardous Operation (Hazardous Tasks)	Any operation involving activities that could result in exposure, injury, or loss of life to operating personnel and/or damage to systems/equipment.
Increment Definition and Requirements Document, Annex 1	The Increment Definition and Requirements Document, Annex 1 establishes the ISS Program detailed launch and return manifest requirements for each ISS mission. Annex 1 establishes the items contained within ISS Program elements or carriers. Annex 1 is updated post-flight to reflect the actual as-flown details.
Information Technology (IT)	Any equipment, interconnected system, or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information that is used by the ISS Program. IT includes computers, ancillary equipment, software, firmware, and similar procedures, services (including support services), and related resources.
Insight	Government personnel monitoring contractor technical task, assembly and test support operations to assure engineering direction/ documentation is properly implemented and customer/Principle Investigator requirements are fully met. (Reference Oversight)
In-Situ	The physical location where an activity occurs.
Inspection	A method of certification of physical characteristics that determined compliance without the use of special equipment, procedures, test support items, or services. Inspection uses standard methods such as visuals, gauges, etc., to verify compliance with requirements.
Integration	A combination of activities and processes to combine various inputs (e.g. manifest data and hardware items from different sources) and develop the end product (e.g. packed cargo) in the desired configuration, and to verify compatibility with defined requirements.

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International Partner (IP)	Five international partners encompassing sixteen countries are involved in the ISS. Each partner is designing, developing and will be operating separate pieces of hardware, to be integrated on-orbit into a single orbital station. The International Partners include Roscosmos (Russia), Japan Aerospace Exploration Agency (JAXA), Canadian Space Agency (CSA), and the European Space Agency (ESA).
Inventory Management	The inventory management function is a program wide function to provide the infrastructure and tools to track hardware on the ground and on-orbit. The inventory management function integrates the ground and on-orbit activities through provision of multi-lateral requirements, equipment labeling, integration of packing data, and oversight of Inventory Management System (IMS) application development and associated tools (barcode reader).
Inventory Management System (IMS)	The ISS Inventory Management System (IMS) is a software application used by control centers and crews to manage on-orbit inventory. NASA and RSC-E jointly manage development efforts through the Bilateral Inventory Management System Working Group (BIMSWG). The ISS IMS is used to track assets during ground processing and in flight. This system includes bar code readers, bar code labels and JSC database for tracking (reference SSP 50007, Space Station Inventory Management System Bar Code Label Requirements and Specification).
ISSP Management Center	A program facility in the Mission Control Center that is staffed and operated by program personnel to provide real-time on-console support of ISS operations.
Launch Package	Full complement of ISS hardware and software delivered or returned on a visiting vehicle flight to the ISS.
Long Lead Items	Those items which because of their complexity of design, complicated manufacturing processes, or limited production, may cause production or procurement cycles which would preclude timely or adequate delivery, if not ordered in advance of normal provisioning.
Maintain (documentation)	A revision to incorporate "lessons learned," corrections or other improvements.
Maintainability	The design installation, and operating characteristics of an item that enables it to be retained in or returned to a specified operational condition by expending resources at an acceptable rate using prescribed procedures.
Maintenance	That broad range of activities involved in the day-to-day tasks required to keep or restore hardware, software and equipment in serviceable condition or replaced if economically feasible.

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Maintenance Concept	A description of a planned method for accomplishing maintenance. A thought process that relates the maintenance tasks to be performed to the maintenance levels to support the operation of the system or equipment in the planned operational environment.
Maintenance Plan (MP)	Documentation that itemizes maintenance requirements, resources, and procedures.
Major Subcontractor Past Performance	\$1M annual contract value.
Major Subcontractor Cost Templates	\$10M annual contract value.
Manifest	A Government approved list of flight hardware, software or data to be processed for launch or return on an ISS visiting vehicle. The list is maintained in the MIDAS system and is controlled by Government approval of Manifest Requests.
Manifest Request (MR)	A Government approved form submitted by hardware providers to request launch or return of a particular hardware, software or data item(s). The form is accessible on the MIDAS system and is approved by the Launch Package Team, Increment Management Team and the Manifest Working Group.
Material Review Board	The formal Contractor-Government Board established for the purpose of reviewing, evaluating, and disposing of specific nonconforming supplies or services; and, for assuring the initiation and accomplishment of corrective action.
Material Review Crib (MRC)	A controlled storage area for holding nonconforming articles and materials.
Material Service Center	A storage location of commonly used parts, hardware, equipment, and material near the point of use or consumption.
Memorandum of Understanding (MOU)/ Memorandum of Agreement (MOA)	A signed document between two or more parties that detail an understanding or agreement.
Minor Subcontractor Cost Template	Less than \$10M annual contract value.
Mission Integration Database Applications System (MIDAS)	The software tool maintained by the MIC team and utilized by the Government and the CMC contractor to define the flight manifest and related cargo integration requirements and products.
Mishap	An unplanned event which results in personnel fatality, injury, or exposure; damage to or loss of flight hardware, environment, public property; or could result in an unsafe situation or operational mode.
Mission	The performance of a defined set of operations in space to achieve program goals.

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Mission Evaluation Room (MER)	A program facility in the Mission Control Center that is staffed and operated by ISS program personnel to provide near real-time on-console engineering support of vehicle hardware, subsystems, and systems performance and anomaly resolution.
Mission Support	On-call support to real-time operations in the ISS Management Center, Mission Evaluation Room (MER) or other facility to monitor activities and recommend resolution of technical issues during supported flights including anomaly resolution.
MIDAS Inventory Tracking Report (MITR)	The MIDAS report that provides the hardware (part number, serial number and nomenclature) to barcode relationship for all items packed by the Contractor for a given flight. It is used to update the onboard IMS database.
Model	A software based description or conception of a particular system, situation, or process often used for additional calculations, predictions, or further investigations.
Modification	The work required to change, adjust, or modernize an existing facility, system, or item of equipment, so that it can be more effectively adapted or used for its designated purpose or to support new customer requirements.
Modification Package/Kit	Documentation, instructions, parts, and planning information necessary for implementation of a requirement.
Multi-lateral	Any action involving more than two (2) parties.
Network Servers	Computers that connect to a network for the purpose of providing bulk memory, printing functions, web publication, other functions across the network to other computers.
Next-Level Integrator	Organization next in line to process hardware for flight. In the context of this contract, the next-level integrator in many instances is the launch vehicle provider.
Nonconformance	A condition of any article or material in which one or more characteristics do not conform to requirements. Includes failures, discrepancies, defects, malfunctions and problems.
Non-Recoverable Cargo	Non-recoverable cargo is defined as crew waste, replaced hardware and experiment waste removed from the ISS and is not required to be returned to the original hardware provider.
Off-line maintenance	Maintenance function performed at the intermediate and depot maintenance levels.
On-Dock Date	Date of the physical arrival of hardware at the next-level integrator's facility ready for flight and next-level processing.
Operate	To control hardware, systems, firmware, or software in accordance with approved processes and practices.

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Operational Readiness Date	That date when a facility, system, or equipment, is operationally ready and is turned over to the user/operator for operational training and systems familiarization prior to first use in support of flight hardware checkout.
Operations and Maintenance Instruction (OMI)	A formally controlled document defining step-by-step instructions that provide the sequence and method of accomplishing operations and maintenance on end items or any part thereof. These instructions include such tasks as test and checkout, diagnostic inspection, handling, removal and installation, repair-in-place, servicing, calibrating, and cleaning.
Orbital Replacement Unit (ORU)	Any assembly that can be removed and replaced as a unit from the system on orbit.
Orbital Support Equipment (OSE)	An item required to support Flight hardware in the On-orbit ISS. OSE items are required to accommodate integrated assemblies used to deliver ORU/Contingency Items to/from on-orbit worksites and on-orbit storage locations (e.g. micro-meteoroid debris protection).
Out-of-family	Processing activities that: <ul style="list-style-type: none"> • Involve the first-time occurrence of a failure mode • Limit hardware life • Restrict hardware or software use • Affect the performance or reliability of safety or mission success critical hardware functions • Affect hazard control • Result in a weight change in excess of 2 pounds (equivalent weight to orbit) • Affect flight or ground operating procedures that are controlled by the government • Change software or hardware configuration • Allow use of hardware that does not meet performance specifications, exceeds certification limits, or surpasses time, age, or cycle life limits (waivers/exceptions) • Close or defer resolution of an unexplained anomaly • Requires government design element analysis or assistance • Affect critical hardware manufacture or repair processes • Affect interchangeability of like parts.

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<p>Oversight</p>	<p>Government personnel partnering/participating in contractor technical task, assembly and test support operations on first time, high risk, unique operation, to assure engineering direction/documentation is properly implemented and customer/Principle Investigator requirements are fully met. Includes providing real-time engineering change approvals for the first time utilization of each type cargo/payload element. Civil service will provide independent verification, validation assessment and approval of selected critical mission analysis, procedures, processes, tests, and acceptance criteria to maximize mission success. Specific areas requiring Government approval are as follows:</p> <ol style="list-style-type: none"> 1. Cargo/payload to launch vehicle and GSE interface control documents/drawings, 2. Decisions/resolutions of action items as determined by NASA-led teams, 3. Mission unique hardware/software design, analysis, manufacturing and test, 4. Risk management and systems effectiveness plan/approaches, 5. Top level test plans, requirements, and success criteria for first time/R&D integrated cargo/payload and ground systems and test that verify the integrated interfaces, 6. Launch commit criteria, closeout actions from NASA chaired mission and Flight Readiness Reviews, 7. Closeout actions from NASA chaired ground systems design and design certification reviews, 8. Cargo/Payload handling procedures and deviations, 9. Integrated cargo/payload mates, tests and closeout procedures and deviations on first-time unique R&D missions, 10. Launch countdown procedures and deviations that affect cargo/payload integrated assemblies, 11. Anomaly resolution, 12. Launch Go/No-Go. <p>(Reference Insight)</p>
<p>Pallet</p>	<p>An unpressurized platform, designed for installation in the Orbiter cargo bay, for mounting instruments and equipment requiring direct space exposure or can survive direct space exposure.</p>
<p>Performance-to-Plan</p>	<p>An integrated measurement of technical, cost (when applicable) and schedule performance of a project/program that includes an assessment and identification of variances to the integrated baseline plan, and estimates to completion.</p>

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Peripherals	Computational support equipment such as printers, monitors, external speakers, cameras, etc., that work with and communicate with a specific computer.
Phase-in Period	The period of time from the date of contract award through contract start (i.e. day 1).
Physical Integration	Physical integration consists of the physical (hands-on) processing of flight hardware in preparation for flight and the physical de-integration of cargo upon return. Processing activities begin with the receipt of the manifest through the final delivery of packed stowage containers to the next level integrator. De-integration activities include the return inventory and physical return of the flight hardware to the hardware provider.
Physical Integrator	The organization responsible for the physical integration of the cargo item. Specifically the packing of the cargo item into stowage provisions.
Pressurized Cargo Integration	Pressurized Cargo Integration is defined as the processing of pressurized cargo, from receipt of the manifest through the stowage integration and analytical integration processes to the performance of physical integration and de-integration.
Preventive Maintenance (PM)	The planned, scheduled periodic inspection, adjustment, cleaning, lubrication, parts replacement, and minor repair of equipment and systems.
Problem	A nonconformance which is, or is suspected of being, a failure, an unsatisfactory condition, an unexplained anomaly, or an overstress occurring during or subsequent to production acceptance testing or qualification testing.
Problem Reporting and Corrective Action (PRACA)	A management system for identifying, reporting, analyzing for cause, remedying, and preventing recurrence of problems.
Problem Resolution Team (PRT)	A team that is activated when an on-orbit failure or anomaly condition is identified.
Program	An activity involving management, manpower, material, funding, and scheduling which is necessary to achieve desired goals. (e.g. ISS Program)
Program Authorized Repository	NASA owned database/repository accessible to all ISS Program participants.
Property Accountability	A record of transaction, systematically maintained, which by any given time will disclose item identification, quantity, cost, location, and custodial responsibility of property controlled by an installation or a contractor.

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Reference (context of documents)	The document is provided for general context of the ISS Program execution and for influence on the Cargo Mission in its roll of support to the ISS Program.
Refurbishable Item	Capable of being restored to acceptable operating condition or state after use, damage, or failure. Also called Repairable Item.
Repair	Operations performed on a nonconforming article or material to place it in a usable and acceptable condition; requires additional written procedures and additional operations.
Repair Part	A part needed to return a higher assembly or component to a service or operational condition.
Reviewer (context of documents)	Within the documentation review and approval process, an individual having organizational responsibility to provide comments on a document that supports the Cargo Mission (goals, processes, or products).
Return Manifest Disposition Plan	SSP 50465 Return Manifest Disposition Plan aids ground personnel in the post-flight disposition and inventory of ISS manifested hardware returned on the Space Shuttle Orbiter. This document supplements the disposition instructions contained in the Landing Site Disposition Report (LSDR), Time-Critical Ground Handling Requirements (TGHR)/KSC Operational Middeck Agreements (KOMA), Mission Requirements and Allocations Document (MRAD) and Operations and Maintenance Requirements and Specifications (OMRS).
Rough Order of Magnitude (ROM)	Estimate based on a general evaluation of the work and materials required to accomplish a loosely defined task.
Serviceable Item	Item capable and ready to perform its intended function, usually after being overhauled and, or repaired, and calibrated and tested.
Signatory (context of documents)	Within the documentation review and approval process, an individual having organizational responsibility to approve a document that supports the Cargo Mission (goals, processes, or products).
Soft goods	End item constructed of fabric materials.
Spares	Those support items that are selected to be repairable or replaceable.
Stowage Payload Integration Manager (SPIM)	Point of contact for payload hardware consisting of logistics, research and development hardware items responsible for the coordination and implementation of payload hardware cargo integration requirements.

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Stowage Integration	Stowage Integration is defined as the engineering tasks required to determine appropriate launch, return or on-orbit stowage configurations required to ensure the safety and operability of the hardware that meets the defined carrier, vehicle and cargo's requirements.
Stowage Provisions	FSE used to contain and, or protect flight hardware for launch, on-orbit stowage and return, including but not limited to cargo transfer bags, foam cushions, dividers, labels, zip-lock ® bags and bubble wrap.
Station Program Implementation Plan	The Station Program Implementation Plans (SPIPs) address the multilateral functions and processes of the tactical and execute organizations for the International Space Station Program.
Station Program Implementation Plan Vol. 3	SSP 50200-03, Station Program Implementation Plan Vol. 3 Cargo Analytical Integration and its annex define the Cargo Integration processes and interfaces for analytically integrating cargo delivered to the International Space Station by NASA and its International Partners.
Station Program Implementation Plan Vol. 6	SSP 50200-06, Station Program Implementation Plan Vol. 6 Cargo Physical Processing defines the physical processing pre-launch and post landing tasks. The scope covers from the start of physical processing, to the launch of the flight hardware; and from the landing of the flight through deintegration and return of the hardware to the International Partners.
Sustaining Engineering	Sustaining engineering is defined as the essential engineering required to maintain the integrity of the design and ensure operability of hardware and software. Sustaining Engineering is categorized by tasks required for mission preparation, ground operations, mission execution, and generic tasks. Sustaining engineering includes: performance and anomaly analysis and resolution; maintenance of analytical models; development of hardware and software modifications; and configuration management of both flight and non-flight hardware and software.
System	One or more equipment items and their interconnecting elements serving a common purpose.
Tactical	Period of time from two years until implementation phase or "real-time."

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Technical Data	Recorded information, regardless of form, used to define, produce, test evaluate, modify, deliver, support, maintain, or operate a configuration item. Technical data may be recorded as: graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design type documents; in machine forms such as punched cards, magnetic tape, disks, computer memory printouts or computer memory. Examples of technical data include, but are not limited to, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, commercial item descriptions, logic diagrams, flow charts, and minutes of technical reviews and configuration audits. Research and engineering data are included, but financial and administrative data are excluded.
Technical Direction	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.
Technical Interchange Meeting	Meetings between two or more technical teams to exchange information, develop processes, and work issues.
Task Preparation Sheet (TPS)	A Work Authorization Document (WAD), KSC Form 4-124, used, generally, on a one-time basis to accomplish specific tasks on Payload Elements or Ground Support Equipment (GSE).
Turnover (Cargo)	Cargo turnover is the process of handing over packed cargo to the Next Level Integrator. At the completion of cargo turnover, the NLI assumes responsibility for the cargo.
Unexplained Anomaly	An anomaly that cannot be repeated (phantom or ghost) or for which a cause cannot be determined.
Uni-lateral	Any action involving only one (1) party.
Unserviceable Item	Item not capable or ready to perform its intended function, usually requires overhaul and, or repair and calibration and test.
Update	A revision to incorporate "lessons learned," corrections or other improvements.
Use	To employ an item of hardware, firmware, or software to perform specific functions or meet identified requirements.
User	An organization or individual requiring the services of a system or item of equipment.

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Validation	Verification that the equipment/system meets the operational needs of the Operations and Maintenance user. Part of the turnover process from the design agency to the O&M agency.
Vehicle	The vehicle includes the whole, integrated, on-orbit station (including hardware and software) as it exists today and in future station configurations as it evolves to the assembly complete configuration. The vehicle configuration is defined by the particular point in time under assessment or discussion.
Vehicle Master Database	The Vehicle Master DataBase (VMDB) is the authoritative source of engineering and operations data for the ISS Program. The VMDB tracks all parts and part resources that are used in the ISS.
Vendor	An open market or established commercial source to obtain end items.
Verification	A process that determines that the hardware and software systems meet all design, performance, and safety requirements. The certification process includes analysis, test, inspection, demonstration, or a combination thereof.
Verify	Review of recorded data (inspection, test, etc.) for conformance to specifications, drawing requirements, etc.
Virtual	A process that does not require the physical presence of the participants but provides them with the same data and, or information that would otherwise be available if they had been present.
Visibly Clean	The absence of all particulate and non-particulate visible to the normal, unaided (except corrected vision) eye. Particulate is identified as matter of miniature size with observable length, width, and thickness. Non-particulate is film matter without definite dimension.
Voting Member	A participate in a process or board where the participant has a right to vote for or against a new requirement or a change in the process.
Waiver	A written authorization, granted for a one time technical requirement noncompliance granted after the fact, for use or acceptance of an article or to perform an action which does not meet specified requirements. (Reference Deviation)
Work Authorization Document (WAD)	An approved written communication that identifies/directs work to be performed, and provides the detailed instructions necessary for accomplishing a task, and records accomplishment of the task.

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Work Breakdown Structure (WBS)	A product-oriented hierarchical division of the hardware, software, services, and data required to produce the program/project's end product(s), structured according to the way the work will be performed, and reflective of the way in which program/project costs, schedule, technical and risk data are to be accumulated, summarized and reported.
Work Day (s)	Monday through Friday, except for observance of legal holidays as defined in Clause H.6. For example, October 2009 has 21 work days.

ATTACHMENT J-2

ACRONYM

LIST

CARGO MISSION CONTRACT

Attachment J-2 – Acronym List

A/R	Acceptance Review
AAA	Allocation Assessment and Analysis
ABCL	As Built Configuration List
ACA	Associate Contractor Agreement
ACC	Aft Cargo Carrier
ACO	Administrative Contracting Officer
ADCN	Advanced Design Change Notice
ADL	Applicable Documents List
ADP	Acceptance Data Package
AF	Award Fee
AL	Associated List
ANE	Advanced Notification of Export
ANSI	American National Standards Institute
ANX	Annex
AOE	Area of Emphasis
APFR	Articulating Portable Foot Restraint
ASAP	Aerospace Safety Advisory Panel
ASCII	American Standard Code of Informational Interchange
ASME	American Society of Mechanical Engineer
Assy	Assembly
ATA	Action Tracking Application
ATV	Automated Transfer Vehicle
BDEALS	Bilateral Data Exchange Agreements, Lists and Schedules
BICE	Bureau of Immigration and Custom Enforcement
BIMSWG	Bilateral Inventory Management System Working Group
BIS	Bureau of Industry and Security
BIT	Built-In Testing
BITS	Barcode Inventory Tracking System
Bldg	Building
BMRRM	Bearing Motor Roll Ring Module
BOE	Basis of Estimate
BTU	British Thermal Unit
c.g.	Center of Gravity
C&A	Certification and Accreditation
C&DH	Command and Data Handling
CAD	Computer-Aided Design

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CAE	Computer-Aided Engineering
CAGE	Corporate and Government Entity
CAM	Camera
CAM	Cost Account Manager
CAOT	Cognizant Audit Office Template
CAP	Corrective Action Plan
CARD	Certification and Acceptance Requirements Document
CAS	Cost Accounting Standards
CBL	Commercial Bill of Lading
CCITT	International Consultative Committee on Telegraphy and Telephony
CCR	Central Contractor Registration
CCS	Center Chief of Security
CD	Compact Disc
CDR	Critical Design Review
CDRW	Compact Disc Read/Write
CEA	Center Export Administrator
CETA	Crew and Equipment Translation Assembly
CEV	Crew Exploration Vehicle
CFR	Code of Federal Regulation
CFT	Conversion Factor Template
Char	Character
CI	Configuration Item
CIL	Critical Items List
CIO	Chief Information Officer
CIP	Capital Investment Process
CIRD	Common Interface Requirements Document
CM	Configuration Management
CMC	Cargo Mission Contract
CO	Close-Out
CO	Contracting Officer
CoFR	Certification of Flight Readiness
COSMOS	Configuration Status Management Operations System
COTR	Contracting Officer Technical Representative
COTS	Commercial-Off-The-Shelf
COTS	Commercial Orbital Transportation System
CPACS	Cargo Planning, Analysis and Configuration System
CPAF	Cost Plus Award Fee
CPU	Central Processing Unit
CR	Change Request
CRLF	Carriage Return Line Feed
CRS	Commercial Resupply Services
CRU	Crew Remote Unit

CARGO MISSION CONTRACT

CSA	Configuration Status Accounting
CSA	Canadian Space Agency
CSCI	Computer Software Configuration Item
CSO	Corporate Security Officer
CST	Central Standard Time
CST	Cost Summary Template
CTB	Cargo Transfer Bag
CUCD	Contingency Urine Collection Device
CWI	Common Work Instruction
CxP	Constellation Program
CY	Calendar Year
DACR	Days Away Case Rate
DART	Days Away plus Restricted Duty Job Transfer
DC	Direct Current
DC	District of Columbia
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DCN	Document Change Notice
DD	Department of Defense form
DDPF	Decal Design and Production Facility
DDT&E	Design, Development, Test and Evaluation
DHS	Department of Homeland Security
DIMS	Digital Imagery Management System
DoD	Department of Defense
DOL	Department of Labor
DOT	Department of Transportation
DQA	Document Quality Assurance
DR	Data Requirement
DRA	Document Release Authorization
DRD	Data Requirements Description
DRL	Data Requirements List
DSSR	Daily Space Station Review
DWG	Drawing
DVD	Digital Video Disc
EAGLE	Enhanced Automated Graphical Logistics Environment
EAR	Export Administration Regulation
EBA	Equipment Bag Assembly
EC	Export Control
ECCN	Export Classification Control Number
ECL	Engineering Configuration List

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ECLSS	Environmental Control/Life Support System
ECN	Engineering Change Notice
ECP	Engineering Change Proposal
ECP	Export Control Plan
EDCC	Engineering Documentation Control Center
EDMS	Electronic Document Management System
EDO	Extended Duration Orbiter
EGLS	Exploration Ground Launch Services
EHIP	EVA Helmet Interchangeable Portable Light
EHTKA	Extension Hose/Tee Kit Assembly
EL	Engineering
EMP	Environmental Monitoring Package
EO	Engineering Order
EOD	Entrance On Duty
EP	Equivalent Personnel
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
EPM	Electronic Pricing Model
EPM	Excel Cost Model
EPS	Electric Power Specification
ESA	European Space Agency
ESC	Electronic Still Camera
ESD	Electrostatic Discharge
EST	Export Services Team
ET	Efficiency Template
EVA	Extravehicular Activity
EVR	Extravehicular Robotics Activity
FAR	Federal Acquisition Regulation
FAS	Financial Accounting Standards
FBR	Fully Burdened Rates
FCA	Functional Configuration Audit
FCE	Flight Crew Equipment
FCS	Flight Crew Systems
FDO	Fee Determination Official
FEMP	Federal Energy Management Program
FFP	Firm Fixed Price
FIPS	Federal Information Processing Standards
FMD	Financial Management Division
FMEA	Failure Modes and Effects Analysis
F.O.B.	Freight On Board
FOD	Foreign Orbital Debris

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FP	Fixed Price
FPRA	Forward Pricing Rate Agreement
FRAM	Flight Releasable Adjustment Mechanism
FSE	Flight Support Equipment
FSO	Facility Security Officer
FTE	Full Time Equivalent
FY	Fiscal Year
G&A	General and Administration
Gal	Gallon
GAO	Government Accountability Office
GAS	Get Away Special
GAT	General and Administrative Template
GB	Gigabyte
GBL	Government Bill of Lading
GFD	Government Furnished Data
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GFY	Government Fiscal Year
GN&C	Guidance, Navigation and Control
GOLD	Government On-Line Database
GOV	Government
GPE	Government-wide Point of Entry
GSE	Ground Support Equipment
HA	Hardware Audit
HAMR	Hardware Accountability Matrix Report
HATS	Hazard Abatement Tracking System
HBCU	Historically Black College or University
HBZ	HUBZone
HDBK	Handbook
HHM	Hand Held Microphone
HHRS	Hardware History Retrieval System
HPGL	Hewlett Packard Graphics Language
HQ	Headquarters
HTV	H-II Transfer Vehicle
I&O	Integration and Operations
I/F	Interface
IBM	International Business Machines
ICAMS	Integrated Checkout and Assembly Management System
ICP	Internal Camera Port

CARGO MISSION CONTRACT

ICST	IDIQ Rates Development Template – Contractor Specific
ID	Identification
IDD	Interface Definition Document
IDIQ	Indefinite Delivery/Indefinite Quantity
IDMS	Identity Management System
IDRD	Increment Definition and Requirements Document
IEEE	Institute of Electrical and Electronic Engineers
IG	Inspector General
II	International Integration
IMCOH	ISS Management Center Operations Handbook
IMRP	Integration Management Review Products
IMS	Inventory Management System
IP	International Partner
IP/P	International Partner/Participant
IPL	Indentured Parts List
IPO	Industrial Property Officer
IRIS	Incident Reporting Information System
IRMA	Integrated Risk Management Application
ISCT	IDIQ Summary Cost Template
ISS	International Space Station
IT	Information Technology
ITAR	International Traffic in Arms Regulation
ITS	Information Technology Security
ITT	IDIQ Rates Development Template Team
IVA	Intravehicular Activity
IWIS	ISS Wireless Instrumentation System
JAXA	Japan Aerospace Exploration Agency
JF	JSC Form
JPD	Joint Program Directive
JPD	JSC Procedural Directive
JPR	JSC Procedural Requirements
JSC	Johnson Space Center
JWI	JSC Work Instruction
KOMA	KSC Operational Middeck Agreements
KSC	Kennedy Space Center
LAN	Local Area Network
LED	Light Emitting Diode
LM	Lockheed Martin
LMC	Lightweight MPESS Carrier

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LPM	Launch Package Manager
LPT	Labor Pricing Template
LPT	Launch Package Team
LSAR	Logistic Support Analysis Record
LSB	Least Significant Bit
LSDR	Launch Site Dispositioning Record
M&O	Maintenance and Operations
MA	Management Approach
MA&RM	Mission Assurance and Risk Management
Max	Maximum
MCIU	Manipulator Controller Interface Unit
MEL	Master Equipment List
MER	Mission Evaluation Room
MI	Mission Integration
MIC	Mission Integration Contract
MIDAS	Mission Integration Database Application System
MIDSBB	Mission Integration Data Sets Blank Book
MIS	Management Information System
MITR	MIDAS Inventory Tracking Report
mm	Millimeter
MM/OD	Micrometeroid/Orbital Debris
MOA	Memorandum of Agreement
MOD	Mission Operations Directorate
MOU	Memorandum of Understanding
MP	Maintenance Plan
MPESS	Multi Purpose Experiment Support Structure
MPLM	Multi Purpose Logistics Module
MR	Manifest Request
MS	Mississippi
MS	Microsoft
MSB	Most Significant Bit
MSCST	Major Subcontractor Cost Summary Template
MSDS	Material Safety Data Sheet
MSFC	Marshall Space Flight Center
MSPT	Minor Subcontractor Pricing Template
MTBF	Mean Time Between Failures
MTBPM	Mean Time Between Preventive Maintenance
N/A	Not Applicable
NAC	National Agency Check
NACI	National Agency Check with Inquiries

CARGO MISSION CONTRACT

NAICS	North American Industry Classification System
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NASDA	National Space Development Agency
NASIRC	NASA Incident Response Center
NBL	Neutral Buoyancy Laboratory
NCIC	National Crime Information Center
NDC	Notification of Document Change
NF	NASA Form
NFNMS	NASA Foreign National Management System
NFS	NASA FAR Supplement
NITR	NASA Information Technical Requirements
NLI	Next Level Integrator
NLR	Non Labor Resources
NLRB	National Labor Relations Board
NLT	No Later Than
NM	Newton-meter
NPD	NASA Procedural Directive
NPR	NASA Procedural Requirements
NSCCB	Network Security Configuration Control Board
NSSC	NASA Shared Services Center
NTE	Not to Exceed
NW	North West
O&M	Operations and Maintenance
OCA	Orbiter Communication Adapter
ODS	Ozone Depleting Substance
OHT	Over Head Template
OMI	Operations and Maintenance Instructions
OMRS	Operations and Maintenance Requirements and Specification
OMRSD	Operations and Maintenance Requirements and Specification Document
OPR	Office of Primary Responsibility
OPT	Overtime Pricing Template
ORB	Orbital
ORCA	Online Representations and Certifications
ORU	Orbital Replacement Unit
OSE	Orbital Support Equipment
OSHA	Occupational Safety and Health Administration
oz	Ounce
P	Progress
PACS	Physical Access Control System

CARGO MISSION CONTRACT

PART	Problem Analysis Reporting Tool
PBA	Portable Breathing Apparatus
PBT	Prime Burdens Template
PC	Program Control
PC	Portable Computer
PCA	Physical Configuration Audit
PCI	PIV Card Issuance
PCMCIA	Personal Computer Memory Card International Adapter
PCMMU	Pulse Code Modulation Master Unit
PCS	Portable Computer System
PCST	Prime Cost Summary Template
PDIP	Payload Data Interface Panel
PDR	Preliminary Design Review
PDS	PRACA Data System
PEB	Performance Evaluation Board
PEB-IT	Performance Evaluation Board – Integration Team
PEP	Payload Execution Processor
PGSC	Payload General Support Computer
PGT	Pirani Gauge Transducers
PHA	Pre-breathe Hose Assembly
PHC	Permanently Human Capability
PHK	Personal Hygiene Kit
PI&C	Program Integration and Control
PIN	Personal Identification Number
PIT	Phase-In Template
PIV	Personal Identity Verification
PKI	Public Key Infrastructure
PM	Program Manager
PM	Preventive Maintenance
PMA	Pressurized Mating Adapter
PMB	Performance Measurement Baseline
PMR	Performance Management Review
POA&M	Plan of Actions and Milestones
POC	Point of Contact
POWER	Property Operations Workflow Enhancement Real-Time
PPBE	Program Planning, Budgeting, and Execution
PPE	Personal Protective Equipment
PR	Procurement
PRACA	Problem Reporting and Corrective Action
PRT	Problem Resolution Team
PSRP	Payload Safety Review Panel
PWR	Power

CARGO MISSION CONTRACT

QMS	Quality Management System
qt	Quart
R&M	Reliability and Maintainability
R&R	Remove and Replace
RFID	Radio Frequency Identification
RFP	Request For Proposal
RLLS	Russian Language and Logistic Services
Rm	Room
RMDP	Return Manifest Disposition Plan
ROM	Rough Order of Magnitude
Roscosmos	Federal Space Agency
RP	Re-Procurement
RSC-E	Rocket Space Corporation – Energia
RSP	Resupply Stowage Platform
S	Soyuz
S&H	Safety and Health
S&MA	Safety and Mission Assurance
SA	Safety Approach
SAPA	Small Adapter Plate Assembly
SARAH	Single Application Resource for Aerospace Hardware
SARSAT	Search and Rescue Satellite Aided Tracking
SB	Small Business Participation
SBU	Sensitive But Unclassified
SDB	Small Disadvantaged Business
SDVOCB	Service Disabled Veteran Owned Small Business
SE	Sustaining Engineering
SEB	Source Evaluation Board
SEMO	Supply and Equipment Management Officer
SF	Standard Form
SFAC	Space Flight Advisory Committee
SFAS	Statement of Financial Accounting Standards
SFBR	Subcontractor Fully Burdened Rate
SLA	Scanning Laser Altimeter
SGI	Square Grid Interface
SI	Stowage Integration
SIC	Standard Industry Code
SLC	Standard Labor Category
SLP	Spacelab Pallet
SMD	Security Management Directive

CARGO MISSION CONTRACT

SOP	Standard Operating Procedure
SORG	Shuttle Orbiter Repackaged Galley
SOW	Statement of Work
SP	Special Publication
SPDM	Special Purpose Dexterous Manipulator
SPIM	Stowage Payload Integration Manager
SPIP	Station Program Implementation Plan
SPT	Summary Pricing Template
Sp-X	Space-X
SRP	Standard Repair Procedure
SRP	Safety Review Panel
SRR	System Requirements Review
SSA	Source Selection Authority
SSAV	Space Station Accounting and Verification
SSN	Social Security Number
SSODB	Space Station Operations Data Book
SSP	Document prefix for ISS documents
SSRMS	Space Station Remote Manipulator System
SSS	Stanchion Support Structure
SSUAS	Space Station utilization Advisory Subcommittee
SSV	Still Sequential Video
STaR	Shuttle Transition and Retirement
Stbd	Starboard
STDIN/STDOUT	Standard In/Standard Out
STP-H2	Space Test Program, Houston 2
STT	Spacelab Transfer Tunnel
STD	Standard
STTCP	Security/Technology Control Plan
STWG	Stowage
SVF	Software Verification Facility
SVS	Space Vision System
SWC	Side Wall Carrier
TA	Technical Approach
TAA	Technical Assistance Agreement
TBD	To Be Determined
TC	Compensation Template
TCM	Technical Coordination Meeting
TCP	Total Compensation Plan
TCTI	Time Compliance Technical Instruction
TDH	Texas Department of Health
TeSS	Temporary Sleep Station

CARGO MISSION CONTRACT

TGHR	Time-Critical Handling Requirements
TMP	Temporary Export
TPS	Task Preparation Sheets
TRIR	Total Recordable Injury Rate
TRST	Technical Resources Summary Template
TRST-CF	Technical Resources Summary Template – Completion Form
TRT	Technical Resources Team
TRT	Technical Resources Template
TX	Texas
U.S.	United States
UL	Under Limit
ULC	Unpressurized Logistics Carrier
USA	United Space Alliance
USC	United States Code
US-CERT	United States Computer Emergency Readiness Team
USDA	United States Department of Agriculture
USOS	United States On-orbit Segment
USPPI	U.S. Principal Party in Interest
UV	Ultra Violet
VC	Visibly Clean
VDC	Volts Direct Current
VIU	Video Interface Unit
VMDB	Vehicle Master Database
VOSB	Veteran Owned Small Business
VPP	Voluntary Protection Program
VSU	Video Switch Unit
VTR	Video Tape Recorder
WAD	Work Authorization Document
WBS	Work Breakdown Structure
WCCS	Wireless Crew Communication System
WCS	Waste Collection System
WD	Wage Determination
WIB	Wireless Video Interface Box
WLE	Wing Leading Edge
WOSB	Women Owned Small Business
WPPR	Work Plan Revision Request
WSTF	White Sands Test Facility
ZSR	Zero-g Stowage Rack

ATTACHMENT J-4

DOL WAGE

DETERMINATION

CARGO MISSION CONTRACT

STANDARD FORM e98 January 1996 U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION	NOTICE OF INTENTION TO MAKE A SERVICE CONTRACT AND RESPONSE TO NOTICE <i>(See Instructions on Reverse)</i>	1. NOTICE NO. 71814 NASA																		
MAIL TO: <p style="text-align: center;">Administrator Wage and Hour Division U.S. Department of Labor Washington, DC 20210</p>	2. Estimated solicitation date <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">01</td> <td style="text-align: center;">15</td> <td style="text-align: center;">10</td> </tr> </table> 3. Estimated date bids or proposals to be opened or negotiations begun <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">04</td> <td style="text-align: center;">01</td> <td style="text-align: center;">10</td> </tr> </table> 4. Date contract performance to begin <i>(use numerals)</i> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Month</td> <td style="width:33%;">Day</td> <td style="width:33%;">Year</td> </tr> <tr> <td style="text-align: center;">01</td> <td style="text-align: center;">01</td> <td style="text-align: center;">11</td> </tr> </table>		Month	Day	Year	01	15	10	Month	Day	Year	04	01	10	Month	Day	Year	01	01	11
Month	Day	Year																		
01	15	10																		
Month	Day	Year																		
04	01	10																		
Month	Day	Year																		
01	01	11																		
5. PLACE(S) OF PERFORMANCE HARRIS COUNTY, TX BREVARD COUNTY, FL	6. SERVICES TO BE PERFORMED <i>(describe)</i> International Space Station Cargo Mission Contract																			
7. INFORMATION ABOUT PERFORMANCE A. <input checked="" type="checkbox"/> Services now performed by a contractor B. <input type="checkbox"/> Services now performed by Federal employees C. <input type="checkbox"/> Services not presently being performed																				
8. IF BOX A IN ITEM 7 IS MARKED, COMPLETE ITEM 8 AS APPLICABLE																				
a. Name and address of incumbent contractor Lockheed Martin Integrated Systems, Inc. 595 Gemini Houston, TX 77058	United Space Alliance, LLC 1150 Gemini Houston, TX 77058	b. Number(s) of any wage determination(s) in incumbent's contract WD 2005-2516 WD 2005-2118 WD 2005-2047 WD 2005-2008 WD 2005-2113																		
c. Name(s) of union(s) if services are being performed under collective bargaining agreement(s). Important: Attach copies of current applicable collective bargaining agreements None	RESPONSE TO NOTICE <i>(by Department of Labor)</i> A. <input checked="" type="checkbox"/> The attached wage determination(s) listed below apply to procurement. WD 2005-2516 Rev 11 WD 2005-2118 Rev 12 WD 2005-2047 Rev 9 WD 2005-2008 Rev 13 WD 2005-2113 Rev 7																			
9. OFFICIAL SUBMITTING NOTICE																				
SIGNED: Original signed by	DATE 01/08/10	B. <input type="checkbox"/> As of this date, no wage determination applicable to the specified locality and																		

CARGO MISSION CONTRACT

TYPE OR PRINT NAME	TELEPHONE NO.
Janet G. Arkinson Contracting Officer	281-244-5433

10. TYPE OR PRINT NAME AND TITLE OF PERSON TO WHOM RESPONSE IS TO BE SENT AND NAME AND ADDRESS OF DEPARTMENT OR AGENCY, BUREAU, DIVISION, ETC.

NASA Johnson Space Center
Eric Schell, Mail Code BG
2101 NASA Parkway
Houston, TX 77058

98-103

classes of employees is in effect.

C.

From information supplied, the Service Contract Act does not apply (*see attached explanation*).

D.

Notice returned for additional information (*see attached explanation*)

Signed: _____
(U.S. Department of Labor)

(Date)

COMPUTER-GENERATED

1/96

CARGO MISSION CONTRACT

<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2516 Revision No.: 11 Date Of Revision: 07/22/2009</p>

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		14.89
01012 - Accounting Clerk II		16.71
01013 - Accounting Clerk III		18.78
01020 - Administrative Assistant		23.55
01040 - Court Reporter		21.79
01051 - Data Entry Operator I		12.09
01052 - Data Entry Operator II		14.32
01060 - Dispatcher, Motor Vehicle		15.96
01070 - Document Preparation Clerk		13.41
01090 - Duplicating Machine Operator		13.41
01111 - General Clerk I		10.80
01112 - General Clerk II		12.97
01113 - General Clerk III		14.88
01120 - Housing Referral Assistant		20.55
01141 - Messenger Courier		11.95
01191 - Order Clerk I		13.52
01192 - Order Clerk II		15.24
01261 - Personnel Assistant (Employment) I		15.13
01262 - Personnel Assistant (Employment) II		16.92

CARGO MISSION CONTRACT

01263 - Personnel Assistant (Employment) III	18.86
01270 - Production Control Clerk	19.10
01280 - Receptionist	12.02
01290 - Rental Clerk	14.75
01300 - Scheduler, Maintenance	15.92
01311 - Secretary I	15.92
01312 - Secretary II	17.90
01313 - Secretary III	20.55
01320 - Service Order Dispatcher	15.16
01410 - Supply Technician	23.55
01420 - Survey Worker	16.59
01531 - Travel Clerk I	13.63
01532 - Travel Clerk II	14.69
01533 - Travel Clerk III	15.71
01611 - Word Processor I	13.50
01612 - Word Processor II	15.59
01613 - Word Processor III	17.44
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	24.80
05010 - Automotive Electrician	22.66
05040 - Automotive Glass Installer	21.68
05070 - Automotive Worker	20.91
05110 - Mobile Equipment Servicer	19.27
05130 - Motor Equipment Metal Mechanic	24.53
05160 - Motor Equipment Metal Worker	20.91
05190 - Motor Vehicle Mechanic	24.53
05220 - Motor Vehicle Mechanic Helper	18.48
05250 - Motor Vehicle Upholstery Worker	19.84
05280 - Motor Vehicle Wrecker	20.91
05310 - Painter, Automotive	22.66
05340 - Radiator Repair Specialist	22.88
05370 - Tire Repairer	14.40
05400 - Transmission Repair Specialist	25.17
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.04
07041 - Cook I	9.52
07042 - Cook II	10.88
07070 - Dishwasher	8.11
07130 - Food Service Worker	9.12
07210 - Meat Cutter	12.53
07260 - Waiter/Waitress	7.97
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	16.65
09040 - Furniture Handler	11.74

CARGO MISSION CONTRACT

09080 - Furniture Refinisher	16.09
09090 - Furniture Refinisher Helper	13.74
09110 - Furniture Repairer, Minor	15.29
09130 - Upholsterer	16.65
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.90
11060 - Elevator Operator	8.17
11090 - Gardener	14.52
11122 - Housekeeping Aide	8.17
11150 - Janitor	8.17
11210 - Laborer, Grounds Maintenance	10.93
11240 - Maid or Houseman	7.73
11260 - Pruner	8.99
11270 - Tractor Operator	12.82
11330 - Trail Maintenance Worker	10.93
11360 - Window Cleaner	8.92
12000 - Health Occupations	
12010 - Ambulance Driver	14.48
12011 - Breath Alcohol Technician	15.64
12012 - Certified Occupational Therapist Assistant	21.54
12015 - Certified Physical Therapist Assistant	22.53
12020 - Dental Assistant	15.64
12025 - Dental Hygienist	32.49
12030 - EKG Technician	23.56
12035 - Electroneurodiagnostic Technologist	23.56
12040 - Emergency Medical Technician	14.48
12071 - Licensed Practical Nurse I	18.94
12072 - Licensed Practical Nurse II	21.19
12073 - Licensed Practical Nurse III	23.62
12100 - Medical Assistant	12.40
12130 - Medical Laboratory Technician	15.90
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	7.79
12222 - Nursing Assistant II	10.02
12223 - Nursing Assistant III	10.94
12224 - Nursing Assistant IV	12.40
12235 - Optical Dispenser	15.26
12236 - Optical Technician	13.90
12250 - Pharmacy Technician	17.44
12280 - Phlebotomist	13.30
12305 - Radiologic Technologist	24.27

CARGO MISSION CONTRACT

12311 - Registered Nurse I	29.05
12312 - Registered Nurse II	35.53
12313 - Registered Nurse II, Specialist	35.53
12314 - Registered Nurse III	42.98
12315 - Registered Nurse III, Anesthetist	42.98
12316 - Registered Nurse IV	51.52
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	18.07
13042 - Illustrator II	22.56
13043 - Illustrator III	27.38
13047 - Librarian	26.69
13050 - Library Aide/Clerk	10.26
13054 - Library Information Technology Systems Administrator	24.09
13058 - Library Technician	14.58
13061 - Media Specialist I	17.39
13062 - Media Specialist II	19.46
13063 - Media Specialist III	21.68
13071 - Photographer I	13.93
13072 - Photographer II	17.60
13073 - Photographer III	22.56
13074 - Photographer IV	26.40
13075 - Photographer V	30.06
13110 - Video Teleconference Technician	16.73
14000 - Information Technology Occupations	
14041 - Computer Operator I	16.41
14042 - Computer Operator II	18.35
14043 - Computer Operator III	20.46
14044 - Computer Operator IV	22.74
14045 - Computer Operator V	25.18
14071 - Computer Programmer I	(see 1) 25.36
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	16.41
14160 - Personal Computer Support Technician	22.74
15000 - Instructional Occupations	

CARGO MISSION CONTRACT

15010 - Aircrew Training Devices Instructor (Non-Rated)	32.64
15020 - Aircrew Training Devices Instructor (Rated)	39.49
15030 - Air Crew Training Devices Instructor (Pilot)	47.34
15050 - Computer Based Training Specialist / Instructor	31.10
15060 - Educational Technologist	29.02
15070 - Flight Instructor (Pilot)	47.34
15080 - Graphic Artist	25.42
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
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)	18.32
19040 - Tool And Die Maker	21.12
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	12.84
21030 - Material Coordinator	18.58
21040 - Material Expediter	18.58
21050 - Material Handling Laborer	12.26
21071 - Order Filler	11.47
21080 - Production Line Worker (Food Processing)	12.84
21110 - Shipping Packer	14.60
21130 - Shipping/Receiving Clerk	14.60
21140 - Store Worker I	10.67
21150 - Stock Clerk	15.13
21210 - Tools And Parts Attendant	13.58
21410 - Warehouse Specialist	12.84
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	28.07
23021 - Aircraft Mechanic I	26.73
23022 - Aircraft Mechanic II	28.07
23023 - Aircraft Mechanic III	29.47

CARGO MISSION CONTRACT

23040 - Aircraft Mechanic Helper	20.93
23050 - Aircraft, Painter	24.39
23060 - Aircraft Servicer	23.28
23080 - Aircraft Worker	24.53
23110 - Appliance Mechanic	17.26
23120 - Bicycle Repairer	13.91
23125 - Cable Splicer	25.34
23130 - Carpenter, Maintenance	18.58
23140 - Carpet Layer	17.83
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	15.97
23290 - Fire Alarm System Mechanic	19.95
23310 - Fire Extinguisher Repairer	15.46
23311 - Fuel Distribution System Mechanic	19.28
23312 - Fuel Distribution System Operator	16.33
23370 - General Maintenance Worker	18.08
23380 - Ground Support Equipment Mechanic	26.73
23381 - Ground Support Equipment Servicer	23.28
23382 - Ground Support Equipment Worker	24.53
23391 - Gunsmith I	15.46
23392 - Gunsmith II	18.08
23393 - Gunsmith III	20.27
23410 - Heating, Ventilation And Air-Conditioning Mechanic	21.04
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	21.95
23430 - Heavy Equipment Mechanic	19.45
23440 - Heavy Equipment Operator	19.26
23460 - Instrument Mechanic	23.52
23465 - Laboratory/Shelter Mechanic	19.29
23470 - Laborer	10.97
23510 - Locksmith	18.99
23530 - Machinery Maintenance Mechanic	22.76
23550 - Machinist, Maintenance	20.16
23580 - Maintenance Trades Helper	13.58
23591 - Metrology Technician I	23.52
23592 - Metrology Technician II	24.54
23593 - Metrology Technician III	25.58
23640 - Millwright	21.53
23710 - Office Appliance Repairer	18.99
23760 - Painter, Maintenance	18.99

CARGO MISSION CONTRACT

23790 - Pipefitter, Maintenance	19.44
23810 - Plumber, Maintenance	18.98
23820 - Pneudraulic Systems Mechanic	20.27
23850 - Rigger	19.47
23870 - Scale Mechanic	18.08
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	23.20
23960 - Welder, Combination, Maintenance	20.27
23965 - Well Driller	20.27
23970 - Woodcraft Worker	20.27
23980 - Woodworker	15.04
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	10.65
24580 - Child Care Center Clerk	13.27
24610 - Chore Aide	7.25
24620 - Family Readiness And Support Services Coordinator	12.57
24630 - Homemaker	16.84
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21.14
25040 - Sewage Plant Operator	18.70
25070 - Stationary Engineer	21.14
25190 - Ventilation Equipment Tender	14.33
25210 - Water Treatment Plant Operator	18.32
27000 - Protective Service Occupations	
27004 - Alarm Monitor	16.14
27007 - Baggage Inspector	11.15
27008 - Corrections Officer	18.04
27010 - Court Security Officer	19.25
27030 - Detection Dog Handler	17.90
27040 - Detention Officer	18.04
27070 - Firefighter	19.10
27101 - Guard I	11.15
27102 - Guard II	17.90
27131 - Police Officer I	23.52
27132 - Police Officer II	26.14
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

CARGO MISSION CONTRACT

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		19.36
29020 - Hatch Tender		19.36
29030 - Line Handler		19.36
29041 - Stevedore I		17.98
29042 - Stevedore II		20.65
30000 - Technical Occupations		
30010 - Air Traffic Control Specialist, Center (HFO)	(see 2)	39.61
30011 - Air Traffic Control Specialist, Station (HFO)	(see 2)	27.31
30012 - Air Traffic Control Specialist, Terminal (HFO)	(see 2)	30.07
30021 - Archeological Technician I		21.10
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		21.10
30062 - Drafter/CAD Operator II		24.71
30063 - Drafter/CAD Operator III		27.56
30064 - Drafter/CAD Operator IV		32.42
30081 - Engineering Technician I		18.25
30082 - Engineering Technician II		22.45
30083 - Engineering Technician III		25.11
30084 - Engineering Technician IV		31.09
30085 - Engineering Technician V		38.65
30086 - Engineering Technician VI		46.04
30090 - Environmental Technician		29.96
30210 - Laboratory Technician		23.56
30240 - Mathematical Technician		30.62
30361 - Paralegal/Legal Assistant I		20.47
30362 - Paralegal/Legal Assistant II		25.36
30363 - Paralegal/Legal Assistant III		31.02
30364 - Paralegal/Legal Assistant IV		37.52
30390 - Photo-Optics Technician		30.62
30461 - Technical Writer I		21.46
30462 - Technical Writer II		26.25
30463 - Technical Writer III		31.75
30491 - Unexploded Ordnance (UXO) Technician I		25.17
30492 - Unexploded Ordnance (UXO) Technician II		30.45

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30493 - Unexploded Ordnance (UXO) Technician III	36.50
30494 - Unexploded (UXO) Safety Escort	25.17
30495 - Unexploded (UXO) Sweep Personnel	25.17
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	11.25
31030 - Bus Driver	16.38
31043 - Driver Courier	12.75
31260 - Parking and Lot Attendant	8.34
31290 - Shuttle Bus Driver	13.89
31310 - Taxi Driver	11.54
31361 - Truckdriver, Light	13.89
31362 - Truckdriver, Medium	17.25
31363 - Truckdriver, Heavy	19.46
31364 - Truckdriver, Tractor-Trailer	19.46
99000 - Miscellaneous Occupations	
99030 - Cashier	9.10
99050 - Desk Clerk	10.65
99095 - Embalmer	21.55
99251 - Laboratory Animal Caretaker I	9.74
99252 - Laboratory Animal Caretaker II	10.71
99310 - Mortician	24.04
99410 - Pest Controller	14.36
99510 - Photofinishing Worker	11.47
99710 - Recycling Laborer	14.96
99711 - Recycling Specialist	18.24
99730 - Refuse Collector	13.34
99810 - Sales Clerk	11.51
99820 - School Crossing Guard	9.96
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

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH AND WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer

CARGO MISSION CONTRACT

contributions costing an average of \$3.35 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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

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- (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 AND 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 regarding 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

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contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the Wage and Hour Division (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

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there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p> <p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p> <p>Wage Determination No.: 2005-2118 Revision No.: 12 Date Of Revision: 10/07/2009</p>
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State: Florida

Area: Florida Counties of Brevard, Indian River

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		12.70
01012 - Accounting Clerk II		14.60
01013 - Accounting Clerk III		18.43
01020 - Administrative Assistant		19.20
01040 - Court Reporter		16.31
01051 - Data Entry Operator I		11.69
01052 - Data Entry Operator II		13.31
01060 - Dispatcher, Motor Vehicle		16.31
01070 - Document Preparation Clerk		12.71
01090 - Duplicating Machine Operator		12.71
01111 - General Clerk I		12.38
01112 - General Clerk II		13.39
01113 - General Clerk III		14.93
01120 - Housing Referral Assistant		17.45
01141 - Messenger Courier		11.29
01191 - Order Clerk I		11.55
01192 - Order Clerk II		13.60
01261 - Personnel Assistant (Employment) I		13.60
01262 - Personnel Assistant (Employment) II		15.04
01263 - Personnel Assistant (Employment) III		17.12
01270 - Production Control Clerk		18.69

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01280 - Receptionist	10.84
01290 - Rental Clerk	12.83
01300 - Scheduler, Maintenance	14.20
01311 - Secretary I	14.20
01312 - Secretary II	15.65
01313 - Secretary III	17.45
01320 - Service Order Dispatcher	14.82
01410 - Supply Technician	19.20
01420 - Survey Worker	16.31
01531 - Travel Clerk I	11.33
01532 - Travel Clerk II	12.24
01533 - Travel Clerk III	13.11
01611 - Word Processor I	12.21
01612 - Word Processor II	13.16
01613 - Word Processor III	15.77
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	18.40
05010 - Automotive Electrician	17.29
05040 - Automotive Glass Installer	16.35
05070 - Automotive Worker	16.35
05110 - Mobile Equipment Servicer	14.76
05130 - Motor Equipment Metal Mechanic	17.98
05160 - Motor Equipment Metal Worker	16.35
05190 - Motor Vehicle Mechanic	17.98
05220 - Motor Vehicle Mechanic Helper	13.89
05250 - Motor Vehicle Upholstery Worker	15.79
05280 - Motor Vehicle Wrecker	16.35
05310 - Painter, Automotive	17.18
05340 - Radiator Repair Specialist	16.35
05370 - Tire Repairer	13.08
05400 - Transmission Repair Specialist	17.98
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.08
07041 - Cook I	11.12
07042 - Cook II	12.08
07070 - Dishwasher	7.86
07130 - Food Service Worker	10.11
07210 - Meat Cutter	14.25
07260 - Waiter/Waitress	9.09
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	17.08
09040 - Furniture Handler	12.39
09080 - Furniture Refinisher	15.76
09090 - Furniture Refinisher Helper	12.74

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09110 - Furniture Repairer, Minor	14.28
09130 - Upholsterer	15.76
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.32
11060 - Elevator Operator	9.32
11090 - Gardener	12.29
11122 - Housekeeping Aide	11.00
11150 - Janitor	11.00
11210 - Laborer, Grounds Maintenance	10.30
11240 - Maid or Houseman	8.63
11260 - Pruner	9.37
11270 - Tractor Operator	12.00
11330 - Trail Maintenance Worker	10.30
11360 - Window Cleaner	12.07
12000 - Health Occupations	
12010 - Ambulance Driver	15.46
12011 - Breath Alcohol Technician	17.75
12012 - Certified Occupational Therapist Assistant	25.81
12015 - Certified Physical Therapist Assistant	24.67
12020 - Dental Assistant	15.19
12025 - Dental Hygienist	26.19
12030 - EKG Technician	17.72
12035 - Electroneurodiagnostic Technologist	17.72
12040 - Emergency Medical Technician	15.46
12071 - Licensed Practical Nurse I	15.85
12072 - Licensed Practical Nurse II	17.75
12073 - Licensed Practical Nurse III	19.67
12100 - Medical Assistant	12.15
12130 - Medical Laboratory Technician	17.28
12160 - Medical Record Clerk	14.62
12190 - Medical Record Technician	15.17
12195 - Medical Transcriptionist	14.09
12210 - Nuclear Medicine Technologist	30.91
12221 - Nursing Assistant I	10.98
12222 - Nursing Assistant II	12.35
12223 - Nursing Assistant III	13.47
12224 - Nursing Assistant IV	15.12
12235 - Optical Dispenser	17.11
12236 - Optical Technician	13.58
12250 - Pharmacy Technician	11.70
12280 - Phlebotomist	15.12
12305 - Radiologic Technologist	23.31
12311 - Registered Nurse I	22.67
12312 - Registered Nurse II	27.73

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12313 - Registered Nurse II, Specialist	27.73
12314 - Registered Nurse III	33.55
12315 - Registered Nurse III, Anesthetist	33.55
12316 - Registered Nurse IV	40.22
12317 - Scheduler (Drug and Alcohol Testing)	21.89
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	17.52
13012 - Exhibits Specialist II	20.85
13013 - Exhibits Specialist III	23.37
13041 - Illustrator I	16.29
13042 - Illustrator II	19.38
13043 - Illustrator III	21.19
13047 - Librarian	22.41
13050 - Library Aide/Clerk	10.90
13054 - Library Information Technology Systems Administrator	20.85
13058 - Library Technician	15.05
13061 - Media Specialist I	15.05
13062 - Media Specialist II	16.55
13063 - Media Specialist III	17.31
13071 - Photographer I	14.25
13072 - Photographer II	16.29
13073 - Photographer III	20.18
13074 - Photographer IV	22.44
13075 - Photographer V	24.81
13110 - Video Teleconference Technician	14.31
14000 - Information Technology Occupations	
14041 - Computer Operator I	16.15
14042 - Computer Operator II	18.06
14043 - Computer Operator III	20.14
14044 - Computer Operator IV	22.37
14045 - Computer Operator V	24.79
14071 - Computer Programmer I	(see 1) 21.07
14072 - Computer Programmer II	(see 1) 25.76
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	16.15
14160 - Personal Computer Support Technician	22.37
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	28.74
15020 - Aircrew Training Devices Instructor (Rated)	32.25

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15030 - Air Crew Training Devices Instructor (Pilot)	35.00
15050 - Computer Based Training Specialist / Instructor	28.74
15060 - Educational Technologist	23.50
15070 - Flight Instructor (Pilot)	35.00
15080 - Graphic Artist	20.58
15090 - Technical Instructor	21.82
15095 - Technical Instructor/Course Developer	24.80
15110 - Test Proctor	17.90
15120 - Tutor	17.90
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	8.37
16030 - Counter Attendant	8.37
16040 - Dry Cleaner	10.44
16070 - Finisher, Flatwork, Machine	8.37
16090 - Presser, Hand	8.37
16110 - Presser, Machine, Drycleaning	8.37
16130 - Presser, Machine, Shirts	8.37
16160 - Presser, Machine, Wearing Apparel, Laundry	8.37
16190 - Sewing Machine Operator	11.12
16220 - Tailor	11.82
16250 - Washer, Machine	9.06
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	17.55
19040 - Tool And Die Maker	20.86
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	12.88
21030 - Material Coordinator	19.05
21040 - Material Expediter	19.05
21050 - Material Handling Laborer	10.51
21071 - Order Filler	11.67
21080 - Production Line Worker (Food Processing)	13.84
21110 - Shipping Packer	13.47
21130 - Shipping/Receiving Clerk	13.52
21140 - Store Worker I	11.67
21150 - Stock Clerk	15.52
21210 - Tools And Parts Attendant	14.66
21410 - Warehouse Specialist	14.58
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	23.29
23021 - Aircraft Mechanic I	22.18
23022 - Aircraft Mechanic II	23.29
23023 - Aircraft Mechanic III	24.46
23040 - Aircraft Mechanic Helper	15.59
23050 - Aircraft, Painter	19.14

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23060 - Aircraft Servicer	17.47
23080 - Aircraft Worker	18.35
23110 - Appliance Mechanic	18.09
23120 - Bicycle Repairer	13.08
23125 - Cable Splicer	24.84
23130 - Carpenter, Maintenance	17.98
23140 - Carpet Layer	16.71
23160 - Electrician, Maintenance	20.25
23181 - Electronics Technician Maintenance I	20.59
23182 - Electronics Technician Maintenance II	24.24
23183 - Electronics Technician Maintenance III	25.72
23260 - Fabric Worker	15.92
23290 - Fire Alarm System Mechanic	17.44
23310 - Fire Extinguisher Repairer	14.79
23311 - Fuel Distribution System Mechanic	19.18
23312 - Fuel Distribution System Operator	16.75
23370 - General Maintenance Worker	17.61
23380 - Ground Support Equipment Mechanic	22.18
23381 - Ground Support Equipment Servicer	17.47
23382 - Ground Support Equipment Worker	18.35
23391 - Gunsmith I	17.56
23392 - Gunsmith II	20.20
23393 - Gunsmith III	22.75
23410 - Heating, Ventilation And Air-Conditioning Mechanic	18.49
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	19.55
23430 - Heavy Equipment Mechanic	18.85
23440 - Heavy Equipment Operator	16.89
23460 - Instrument Mechanic	19.20
23465 - Laboratory/Shelter Mechanic	20.21
23470 - Laborer	11.04
23510 - Locksmith	16.96
23530 - Machinery Maintenance Mechanic	21.72
23550 - Machinist, Maintenance	19.20
23580 - Maintenance Trades Helper	13.71
23591 - Metrology Technician I	19.20
23592 - Metrology Technician II	20.31
23593 - Metrology Technician III	21.39
23640 - Millwright	20.21
23710 - Office Appliance Repairer	18.13
23760 - Painter, Maintenance	17.34
23790 - Pipefitter, Maintenance	18.47
23810 - Plumber, Maintenance	17.66

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23820 - Pneudraulic Systems Mechanic	19.20
23850 - Rigger	19.20
23870 - Scale Mechanic	17.01
23890 - Sheet-Metal Worker, Maintenance	19.20
23910 - Small Engine Mechanic	16.50
23931 - Telecommunications Mechanic I	24.15
23932 - Telecommunications Mechanic II	25.23
23950 - Telephone Lineman	19.95
23960 - Welder, Combination, Maintenance	18.14
23965 - Well Driller	19.20
23970 - Woodcraft Worker	19.20
23980 - Woodworker	13.88
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	9.32
24580 - Child Care Center Clerk	13.34
24610 - Chore Aide	10.53
24620 - Family Readiness And Support Services Coordinator	12.05
24630 - Homemaker	16.32
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	19.20
25040 - Sewage Plant Operator	18.17
25070 - Stationary Engineer	19.20
25190 - Ventilation Equipment Tender	13.71
25210 - Water Treatment Plant Operator	18.17
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14.34
27007 - Baggage Inspector	11.76
27008 - Corrections Officer	18.77
27010 - Court Security Officer	18.77
27030 - Detection Dog Handler	17.09
27040 - Detention Officer	18.77
27070 - Firefighter	19.22
27101 - Guard I	11.76
27102 - Guard II	17.09
27131 - Police Officer I	20.03
27132 - Police Officer II	22.25
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	11.93
28042 - Carnival Equipment Repairer	12.21
28043 - Carnival Equipment Worker	8.22
28210 - Gate Attendant/Gate Tender	13.09
28310 - Lifeguard	11.66
28350 - Park Attendant (Aide)	14.64

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28510 - Recreation Aide/Health Facility Attendant	10.69
28515 - Recreation Specialist	18.14
28630 - Sports Official	11.66
28690 - Swimming Pool Operator	14.79
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	17.91
29020 - Hatch Tender	17.91
29030 - Line Handler	17.91
29041 - Stevedore I	17.02
29042 - Stevedore II	19.05
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	35.15
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	24.24
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	26.69
30021 - Archeological Technician I	14.56
30022 - Archeological Technician II	16.54
30023 - Archeological Technician III	20.23
30030 - Cartographic Technician	19.71
30040 - Civil Engineering Technician	20.89
30061 - Drafter/CAD Operator I	12.87
30062 - Drafter/CAD Operator II	15.05
30063 - Drafter/CAD Operator III	18.21
30064 - Drafter/CAD Operator IV	20.11
30081 - Engineering Technician I	14.20
30082 - Engineering Technician II	17.04
30083 - Engineering Technician III	19.06
30084 - Engineering Technician IV	23.61
30085 - Engineering Technician V	28.89
30086 - Engineering Technician VI	32.88
30090 - Environmental Technician	18.78
30210 - Laboratory Technician	22.77
30240 - Mathematical Technician	19.22
30361 - Paralegal/Legal Assistant I	13.81
30362 - Paralegal/Legal Assistant II	18.68
30363 - Paralegal/Legal Assistant III	22.84
30364 - Paralegal/Legal Assistant IV	27.66
30390 - Photo-Optics Technician	19.71
30461 - Technical Writer I	18.88
30462 - Technical Writer II	23.10
30463 - Technical Writer III	27.95
30491 - Unexploded Ordnance (UXO) Technician I	22.34
30492 - Unexploded Ordnance (UXO) Technician II	27.03
30493 - Unexploded Ordnance (UXO) Technician III	32.40
30494 - Unexploded (UXO) Safety Escort	22.34

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30495 - Unexploded (UXO) Sweep Personnel		22.34
30620 - Weather Observer, Combined Upper Air Or Surface Programs	(see 2)	18.21
30621 - Weather Observer, Senior	(see 2)	19.59
31000 - Transportation/Mobile Equipment Operation Occupations		
31020 - Bus Aide		11.22
31030 - Bus Driver		11.65
31043 - Driver Courier		15.56
31260 - Parking and Lot Attendant		11.35
31290 - Shuttle Bus Driver		12.02
31310 - Taxi Driver		13.42
31361 - Truckdriver, Light		14.32
31362 - Truckdriver, Medium		15.11
31363 - Truckdriver, Heavy		15.18
31364 - Truckdriver, Tractor-Trailer		15.18
99000 - Miscellaneous Occupations		
99030 - Cashier		8.84
99050 - Desk Clerk		10.04
99095 - Embalmer		22.59
99251 - Laboratory Animal Caretaker I		10.25
99252 - Laboratory Animal Caretaker II		11.13
99310 - Mortician		22.59
99410 - Pest Controller		13.67
99510 - Photofinishing Worker		10.68
99710 - Recycling Laborer		12.76
99711 - Recycling Specialist		15.09
99730 - Refuse Collector		11.61
99810 - Sales Clerk		11.66
99820 - School Crossing Guard		10.48
99830 - Survey Party Chief		15.53
99831 - Surveying Aide		10.29
99832 - Surveying Technician		14.12
99840 - Vending Machine Attendant		13.23
99841 - Vending Machine Repairer		15.46
99842 - Vending Machine Repairer Helper		13.23

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH AND 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 \$3.35 per hour computed on the basis of all hours worked by service employees employed on the contract.

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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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY AND 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 regarding 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

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where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the Wage and Hour Division (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.

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- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

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

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

CARGO MISSION CONTRACT

<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p> <p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p> <p>Wage Determination No.: 2005-2047 Revision No.: 9 Date Of Revision: 05/26/2009</p>
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State: California

Area: California Counties of Los Angeles, Orange

OCCUPATION NOTES:

Heating, Air Conditioning and Refrigeration: Wage rates and fringe benefits can be found on Wage Determinations 1986-0879.

Laundry: Wage rates and fringe benefits can be found on Wage Determination 1977-1297.

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		14.59
01012 - Accounting Clerk II		16.38
01013 - Accounting Clerk III		18.61
01020 - Administrative Assistant		26.82
01040 - Court Reporter		19.38
01051 - Data Entry Operator I		12.05
01052 - Data Entry Operator II		13.15
01060 - Dispatcher, Motor Vehicle		22.41
01070 - Document Preparation Clerk		13.66
01090 - Duplicating Machine Operator		13.66
01111 - General Clerk I		10.69
01112 - General Clerk II		14.92
01113 - General Clerk III		16.67
01120 - Housing Referral Assistant		21.90
01141 - Messenger Courier		10.62

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01191 - Order Clerk I	16.98
01192 - Order Clerk II	18.53
01261 - Personnel Assistant (Employment) I	17.26
01262 - Personnel Assistant (Employment) II	19.31
01263 - Personnel Assistant (Employment) III	22.26
01270 - Production Control Clerk	23.51
01280 - Receptionist	14.51
01290 - Rental Clerk	15.10
01300 - Scheduler, Maintenance	16.84
01311 - Secretary I	16.84
01312 - Secretary II	19.17
01313 - Secretary III	21.90
01320 - Service Order Dispatcher	19.54
01410 - Supply Technician	26.82
01420 - Survey Worker	19.38
01531 - Travel Clerk I	14.25
01532 - Travel Clerk II	15.43
01533 - Travel Clerk III	16.57
01611 - Word Processor I	15.03
01612 - Word Processor II	16.87
01613 - Word Processor III	18.76
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	22.94
05010 - Automotive Electrician	21.60
05040 - Automotive Glass Installer	20.29
05070 - Automotive Worker	20.29
05110 - Mobile Equipment Servicer	18.66
05130 - Motor Equipment Metal Mechanic	2.94
05160 - Motor Equipment Metal Worker	20.29
05190 - Motor Vehicle Mechanic	22.94
05220 - Motor Vehicle Mechanic Helper	17.90
05250 - Motor Vehicle Upholstery Worker	19.86
05280 - Motor Vehicle Wrecker	20.29
05310 - Painter, Automotive	21.60
05340 - Radiator Repair Specialist	20.29
05370 - Tire Repairer	15.47
05400 - Transmission Repair Specialist	22.94
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.21
07041 - Cook I	12.91
07042 - Cook II	14.31
07070 - Dishwasher	9.89
07130 - Food Service Worker	10.85
07210 - Meat Cutter	15.92

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07260 - Waiter/Waitress	9.85
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.59
09040 - Furniture Handler	12.42
09080 - Furniture Refinisher	18.59
09090 - Furniture Refinisher Helper	14.82
09110 - Furniture Repairer, Minor	17.04
09130 - Upholsterer	18.59
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	11.19
11060 - Elevator Operator	11.19
11090 - Gardener	17.46
11122 - Housekeeping Aide	11.44
11150 - Janitor	13.27
11210 - Laborer, Grounds Maintenance	13.09
11240 - Maid or Houseman	9.36
11260 - Pruner	13.27
11270 - Tractor Operator	15.57
11330 - Trail Maintenance Worker	13.09
11360 - Window Cleaner	15.03
12000 - Health Occupations	
12010 - Ambulance Driver	17.82
12011 - Breath Alcohol Technician	17.82
12012 - Certified Occupational Therapist Assistant	26.03
12015 - Certified Physical Therapist Assistant	25.97
12020 - Dental Assistant	16.41
12025 - Dental Hygienist	38.30
12030 - EKG Technician	26.48
12035 - Electroneurodiagnostic Technologist	26.48
12040 - Emergency Medical Technician	17.82
12071 - Licensed Practical Nurse I	16.75
12072 - Licensed Practical Nurse II	18.77
12073 - Licensed Practical Nurse III	22.42
12100 - Medical Assistant	14.82
12130 - Medical Laboratory Technician	19.73
12160 - Medical Record Clerk	15.93
12190 - Medical Record Technician	17.82
12195 - Medical Transcriptionist	17.59
12210 - Nuclear Medicine Technologist	34.87
12221 - Nursing Assistant I	9.63
12222 - Nursing Assistant II	10.82
12223 - Nursing Assistant III	11.81
12224 - Nursing Assistant IV	13.26
12235 - Optical Dispenser	16.65

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12236 - Optical Technician	15.71
12250 - Pharmacy Technician	17.34
12280 - Phlebotomist	13.26
12305 - Radiologic Technologist	24.54
12311 - Registered Nurse I	30.80
12312 - Registered Nurse II	37.68
12313 - Registered Nurse II, Specialist	37.68
12314 - Registered Nurse III	45.63
12315 - Registered Nurse III, Anesthetist	45.63
12316 - Registered Nurse IV	54.69
12317 - Scheduler (Drug and Alcohol Testing)	22.81
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	24.83
13012 - Exhibits Specialist II	30.76
13013 - Exhibits Specialist III	37.63
13041 - Illustrator I	25.31
13042 - Illustrator II	31.37
13043 - Illustrator III	38.35
13047 - Librarian	30.36
13050 - Library Aide/Clerk	16.49
13054 - Library Information Technology Systems Administrator	26.57
13058 - Library Technician	21.38
13061 - Media Specialist I	18.51
13062 - Media Specialist II	20.69
13063 - Media Specialist III	23.07
13071 - Photographer I	17.95
13072 - Photographer II	20.08
13073 - Photographer III	26.61
13074 - Photographer IV	33.56
13075 - Photographer V	40.61
13110 - Video Teleconference Technician	18.25
14000 - Information Technology Occupations	
14041 - Computer Operator I	17.32
14042 - Computer Operator II	19.38
14043 - Computer Operator III	22.89
14044 - Computer Operator IV	25.73
14045 - Computer Operator V	25.80
14071 - Computer Programmer I	(see 1) 24.93
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)

CARGO MISSION CONTRACT

14103 - Computer Systems Analyst III	(see 1)	
14150 - Peripheral Equipment Operator		17.32
14160 - Personal Computer Support Technician		25.73
15000 - Instructional Occupations		
15010 - Aircrew Training Devices Instructor (Non-Rated)		34.08
15020 - Aircrew Training Devices Instructor (Rated)		41.23
15030 - Air Crew Training Devices Instructor (Pilot)		49.43
15050 - Computer Based Training Specialist / Instructor		34.08
15060 - Educational Technologist		32.81
15070 - Flight Instructor (Pilot)		49.43
15080 - Graphic Artist		25.66
15090 - Technical Instructor		23.72
15095 - Technical Instructor/Course Developer		29.02
15110 - Test Proctor		19.15
15120 - Tutor		19.15
19000 - Machine Tool Operation And Repair Occupations		
19010 - Machine-Tool Operator (Tool Room)		18.52
19040 - Tool And Die Maker		23.95
21000 - Materials Handling And Packing Occupations		
21020 - Forklift Operator		14.46
21030 - Material Coordinator		23.51
21040 - Material Expediter		23.51
21050 - Material Handling Laborer		13.02
21071 - Order Filler		13.31
21080 - Production Line Worker (Food Processing)		14.46
21110 - Shipping Packer		15.08
21130 - Shipping/Receiving Clerk		15.08
21140 - Store Worker I		11.30
21150 - Stock Clerk		16.13
21210 - Tools And Parts Attendant		14.46
21410 - Warehouse Specialist		14.46
23000 - Mechanics And Maintenance And Repair Occupations		
23010 - Aerospace Structural Welder		30.78
23021 - Aircraft Mechanic I		29.10
23022 - Aircraft Mechanic II		30.78
23023 - Aircraft Mechanic III		31.94
23040 - Aircraft Mechanic Helper		20.38
23050 - Aircraft, Painter		24.41
23060 - Aircraft Servicer		23.55
23080 - Aircraft Worker		24.58
23110 - Appliance Mechanic		19.52
23120 - Bicycle Repairer		15.47
23125 - Cable Splicer		29.85
23130 - Carpenter, Maintenance		27.29

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23140 - Carpet Layer	19.20
23160 - Electrician, Maintenance	30.18
23181 - Electronics Technician Maintenance I	23.38
23182 - Electronics Technician Maintenance II	24.90
23183 - Electronics Technician Maintenance III	26.53
23260 - Fabric Worker	23.38
23290 - Fire Alarm System Mechanic	20.30
23310 - Fire Extinguisher Repairer	18.25
23311 - Fuel Distribution System Mechanic	25.48
23312 - Fuel Distribution System Operator	19.48
23370 - General Maintenance Worker	23.26
23380 - Ground Support Equipment Mechanic	29.10
23381 - Ground Support Equipment Servicer	23.55
23382 - Ground Support Equipment Worker	24.58
23391 - Gunsmith I	18.25
23392 - Gunsmith II	21.11
23393 - Gunsmith III	23.87
23430 - Heavy Equipment Mechanic	26.97
23440 - Heavy Equipment Operator	31.04
23460 - Instrument Mechanic	25.70
23465 - Laboratory/Shelter Mechanic	22.49
23470 - Laborer	12.49
23510 - Locksmith	18.81
23530 - Machinery Maintenance Mechanic	24.65
23550 - Machinist, Maintenance	25.41
23580 - Maintenance Trades Helper	14.82
23591 - Metrology Technician I	25.70
23592 - Metrology Technician II	27.13
23593 - Metrology Technician III	29.73
23640 - Millwright	25.45
23710 - Office Appliance Repairer	20.86
23760 - Painter, Maintenance	21.05
23790 - Pipefitter, Maintenance	23.40
23810 - Plumber, Maintenance	22.04
23820 - Pneudraulic Systems Mechanic	23.87
23850 - Rigger	26.81
23870 - Scale Mechanic	21.11
23890 - Sheet-Metal Worker, Maintenance	22.13
23910 - Small Engine Mechanic	18.70
23931 - Telecommunications Mechanic I	24.92
23932 - Telecommunications Mechanic II	26.39
23950 - Telephone Lineman	24.18
23960 - Welder, Combination, Maintenance	19.75
23965 - Well Driller	23.18

CARGO MISSION CONTRACT

23970 - Woodcraft Worker	21.73
23980 - Woodworker	16.81
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	13.05
24580 - Child Care Center Clerk	16.03
24610 - Chore Aide	10.57
24620 - Family Readiness And Support Services Coordinator	15.39
24630 - Homemaker	19.21
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	26.22
25040 - Sewage Plant Operator	26.21
25070 - Stationary Engineer	26.22
25190 - Ventilation Equipment Tender	18.34
25210 - Water Treatment Plant Operator	26.21
27000 - Protective Service Occupations	
27004 - Alarm Monitor	23.77
27007 - Baggage Inspector	12.80
27008 - Corrections Officer	29.13
27010 - Court Security Officer	30.28
27030 - Detection Dog Handler	23.77
27040 - Detention Officer	29.13
27070 - Firefighter	29.97
27101 - Guard I	12.80
27102 - Guard II	23.77
27131 - Police Officer I	35.71
27132 - Police Officer II	39.68
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	12.76
28042 - Carnival Equipment Repairer	13.74
28043 - Carnival Equipment Worker	9.67
28210 - Gate Attendant/Gate Tender	14.09
28310 - Lifeguard	13.26
28350 - Park Attendant (Aide)	15.76
28510 - Recreation Aide/Health Facility Attendant	11.11
28515 - Recreation Specialist	18.75
28630 - Sports Official	12.55
28690 - Swimming Pool Operator	16.97
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	21.53
29020 - Hatch Tender	21.53
29030 - Line Handler	21.53
29041 - Stevedore I	20.46
29042 - Stevedore II	22.93

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30000 - Technical Occupations

30010 - Air Traffic Control Specialist, Center (HFO)	(see 2)	39.06
30011 - Air Traffic Control Specialist, Station (HFO)	(see 2)	27.98
30012 - Air Traffic Control Specialist, Terminal (HFO)	(see 2)	29.66
30021 - Archeological Technician I		20.47
30022 - Archeological Technician II		22.01
30023 - Archeological Technician III		31.33
30030 - Cartographic Technician		31.33
30040 - Civil Engineering Technician		28.07
30061 - Drafter/CAD Operator I		22.60
30062 - Drafter/CAD Operator II		25.28
30063 - Drafter/CAD Operator III		28.18
30064 - Drafter/CAD Operator IV		34.68
30081 - Engineering Technician I		18.14
30082 - Engineering Technician II		20.37
30083 - Engineering Technician III		22.78
30084 - Engineering Technician IV		28.23
30085 - Engineering Technician V		34.88
30086 - Engineering Technician VI		41.77
30090 - Environmental Technician		25.20
30210 - Laboratory Technician		21.03
30240 - Mathematical Technician		30.84
30361 - Paralegal/Legal Assistant I		21.17
30362 - Paralegal/Legal Assistant II		26.22
30363 - Paralegal/Legal Assistant III		32.07
30364 - Paralegal/Legal Assistant IV		38.81
30390 - Photo-Optics Technician		30.84
30461 - Technical Writer I		23.03
30462 - Technical Writer II		28.18
30463 - Technical Writer III		34.09
30491 - Unexploded Ordnance (UXO) Technician I		24.82
30492 - Unexploded Ordnance (UXO) Technician II		30.03
30493 - Unexploded Ordnance (UXO) Technician III		36.00
30494 - Unexploded (UXO) Safety Escort		24.82
30495 - Unexploded (UXO) Sweep Personnel		24.82
30620 - Weather Observer, Combined Upper Air Or Surface Programs	(see 2)	27.65
30621 - Weather Observer, Senior	(see 2)	30.72
31000 - Transportation/Mobile Equipment Operation Occupations		
31020 - Bus Aide		13.63
31030 - Bus Driver		19.62
31043 - Driver Courier		12.90
31260 - Parking and Lot Attendant		8.83
31290 - Shuttle Bus Driver		14.07

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31310 - Taxi Driver	12.03
31361 - Truckdriver, Light	14.07
31362 - Truckdriver, Medium	20.63
31363 - Truckdriver, Heavy	21.78
31364 - Truckdriver, Tractor-Trailer	21.78
99000 - Miscellaneous Occupations	
99030 - Cashier	12.13
99050 - Desk Clerk	12.65
99095 - Embalmer	21.08
99251 - Laboratory Animal Caretaker I	10.66
99252 - Laboratory Animal Caretaker II	11.63
99310 - Mortician	34.35
99410 - Pest Controller	15.17
99510 - Photofinishing Worker	14.87
99710 - Recycling Laborer	19.12
99711 - Recycling Specialist	22.43
99730 - Refuse Collector	17.05
99810 - Sales Clerk	15.57
99820 - School Crossing Guard	9.51
99830 - Survey Party Chief	34.71
99831 - Surveying Aide	19.43
99832 - Surveying Technician	25.56
99840 - Vending Machine Attendant	12.77
99841 - Vending Machine Repairer	14.67
99842 - Vending Machine Repairer Helper	12.77

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- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as

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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 regarding 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, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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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.

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6) The contractor informs the affected employees.

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2008 Revision No.: 13 Date Of Revision: 10/16/2009</p>

State: Alabama, Tennessee

Area: Alabama Counties of Colbert, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, Winston
Tennessee Counties of Giles, Lawrence, Lincoln, Moore, Wayne

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.47
01012 - Accounting Clerk II		14.65
01013 - Accounting Clerk III		16.77
01020 - Administrative Assistant		21.27
01040 - Court Reporter		17.16
01051 - Data Entry Operator I		11.95
01052 - Data Entry Operator II		13.89
01060 - Dispatcher, Motor Vehicle		16.31
01070 - Document Preparation Clerk		12.47
01090 - Duplicating Machine Operator		12.47
01111 - General Clerk I		10.80
01112 - General Clerk II		11.78
01113 - General Clerk III		13.86
01120 - Housing Referral Assistant		19.14
01141 - Messenger Courier		9.49
01191 - Order Clerk I		11.51
01192 - Order Clerk II		15.27
01261 - Personnel Assistant (Employment) I		13.93
01262 - Personnel Assistant (Employment) II		15.59

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01263 - Personnel Assistant (Employment) III	17.38
01270 - Production Control Clerk	19.18
01280 - Receptionist	11.02
01290 - Rental Clerk	11.79
01300 - Scheduler, Maintenance	15.32
01311 - Secretary I	15.32
01312 - Secretary II	17.16
01313 - Secretary III	19.14
01320 - Service Order Dispatcher	13.83
01410 - Supply Technician	21.27
01420 - Survey Worker	16.81
01531 - Travel Clerk I	10.64
01532 - Travel Clerk II	11.26
01533 - Travel Clerk III	12.01
01611 - Word Processor I	13.12
01612 - Word Processor II	14.73
01613 - Word Processor III	16.48
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	17.50
05010 - Automotive Electrician	17.94
05040 - Automotive Glass Installer	17.10
05070 - Automotive Worker	17.10
05110 - Mobile Equipment Servicer	15.50
05130 - Motor Equipment Metal Mechanic	18.77
05160 - Motor Equipment Metal Worker	17.10
05190 - Motor Vehicle Mechanic	17.14
05220 - Motor Vehicle Mechanic Helper	13.43
05250 - Motor Vehicle Upholstery Worker	16.32
05280 - Motor Vehicle Wrecker	17.10
05310 - Painter, Automotive	16.39
05340 - Radiator Repair Specialist	17.10
05370 - Tire Repairer	12.75
05400 - Transmission Repair Specialist	18.77
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.84
07041 - Cook I	9.14
07042 - Cook II	10.27
07070 - Dishwasher	7.57
07130 - Food Service Worker	8.09
07210 - Meat Cutter	14.21
07260 - Waiter/Waitress	7.50
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	17.56
09040 - Furniture Handler	13.94

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09080 - Furniture Refinisher	17.56
09090 - Furniture Refinisher Helper	14.41
09110 - Furniture Repairer, Minor	15.98
09130 - Upholsterer	17.56
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.80
11060 - Elevator Operator	9.44
11090 - Gardener	12.11
11122 - Housekeeping Aide	9.44
11150 - Janitor	9.44
11210 - Laborer, Grounds Maintenance	10.00
11240 - Maid or Houseman	7.88
11260 - Pruner	9.28
11270 - Tractor Operator	12.08
11330 - Trail Maintenance Worker	10.00
11360 - Window Cleaner	9.97
12000 - Health Occupations	
12010 - Ambulance Driver	14.41
12011 - Breath Alcohol Technician	14.71
12012 - Certified Occupational Therapist Assistant	21.24
12015 - Certified Physical Therapist Assistant	21.24
12020 - Dental Assistant	15.30
12025 - Dental Hygienist	22.48
12030 - EKG Technician	23.45
12035 - Electroneurodiagnostic Technologist	23.45
12040 - Emergency Medical Technician	14.41
12071 - Licensed Practical Nurse I	14.07
12072 - Licensed Practical Nurse II	15.81
12073 - Licensed Practical Nurse III	17.71
12100 - Medical Assistant	11.87
12130 - Medical Laboratory Technician	14.07
12160 - Medical Record Clerk	12.41
12190 - Medical Record Technician	14.96
12195 - Medical Transcriptionist	13.03
12210 - Nuclear Medicine Technologist	30.65
12221 - Nursing Assistant I	9.43
12222 - Nursing Assistant II	10.61
12223 - Nursing Assistant III	11.57
12224 - Nursing Assistant IV	12.99
12235 - Optical Dispenser	15.05
12236 - Optical Technician	11.42
12250 - Pharmacy Technician	13.36
12280 - Phlebotomist	12.99
12305 - Radiologic Technologist	23.95

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12311 - Registered Nurse I	22.94
12312 - Registered Nurse II	28.08
12313 - Registered Nurse II, Specialist	28.08
12314 - Registered Nurse III	33.97
12315 - Registered Nurse III, Anesthetist	33.97
12316 - Registered Nurse IV	40.70
12317 - Scheduler (Drug and Alcohol Testing)	19.18
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19.07
13012 - Exhibits Specialist II	23.50
13013 - Exhibits Specialist III	28.73
13041 - Illustrator I	19.07
13042 - Illustrator II	23.50
13043 - Illustrator III	28.73
13047 - Librarian	26.02
13050 - Library Aide/Clerk	14.49
13054 - Library Information Technology Systems Administrator	23.50
13058 - Library Technician	16.14
13061 - Media Specialist I	16.95
13062 - Media Specialist II	18.97
13063 - Media Specialist III	21.15
13071 - Photographer I	14.72
13072 - Photographer II	17.00
13073 - Photographer III	20.36
13074 - Photographer IV	24.89
13075 - Photographer V	30.21
13110 - Video Teleconference Technician	16.95
14000 - Information Technology Occupations	
14041 - Computer Operator I	14.73
14042 - Computer Operator II	19.13
14043 - Computer Operator III	20.49
14044 - Computer Operator IV	26.16
14045 - Computer Operator V	27.62
14071 - Computer Programmer I	(see 1) 25.00
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	14.73
14160 - Personal Computer Support Technician	26.16
15000 - Instructional Occupations	

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15010 - Aircrew Training Devices Instructor (Non-Rated)	29.35
15020 - Aircrew Training Devices Instructor (Rated)	35.52
15030 - Air Crew Training Devices Instructor (Pilot)	36.76
15050 - Computer Based Training Specialist / Instructor	30.38
15060 - Educational Technologist	30.12
15070 - Flight Instructor (Pilot)	36.76
15080 - Graphic Artist	21.00
15090 - Technical Instructor	18.91
15095 - Technical Instructor/Course Developer	23.11
15110 - Test Proctor	17.16
15120 - Tutor	17.16
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	7.98
16030 - Counter Attendant	7.98
16040 - Dry Cleaner	10.03
16070 - Finisher, Flatwork, Machine	7.98
16090 - Presser, Hand	7.98
16110 - Presser, Machine, Drycleaning	7.98
16130 - Presser, Machine, Shirts	7.98
16160 - Presser, Machine, Wearing Apparel, Laundry	7.98
16190 - Sewing Machine Operator	10.60
16220 - Tailor	11.18
16250 - Washer, Machine	8.65
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	22.22
19040 - Tool And Die Maker	27.11
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	14.82
21030 - Material Coordinator	19.18
21040 - Material Expediter	19.18
21050 - Material Handling Laborer	10.29
21071 - Order Filler	10.87
21080 - Production Line Worker (Food Processing)	14.82
21110 - Shipping Packer	12.98
21130 - Shipping/Receiving Clerk	12.98
21140 - Store Worker I	11.36
21150 - Stock Clerk	15.41
21210 - Tools And Parts Attendant	14.82
21410 - Warehouse Specialist	14.82
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	20.61
23021 - Aircraft Mechanic I	22.24
23022 - Aircraft Mechanic II	23.35
23023 - Aircraft Mechanic III	24.52

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23040 - Aircraft Mechanic Helper	17.44
23050 - Aircraft, Painter	19.32
23060 - Aircraft Servicer	19.34
23080 - Aircraft Worker	20.27
23110 - Appliance Mechanic	18.04
23120 - Bicycle Repairer	14.66
23125 - Cable Splicer	19.76
23130 - Carpenter, Maintenance	17.56
23140 - Carpet Layer	17.29
23160 - Electrician, Maintenance	23.21
23181 - Electronics Technician Maintenance I	18.65
23182 - Electronics Technician Maintenance II	25.55
23183 - Electronics Technician Maintenance III	26.62
23260 - Fabric Worker	16.54
23290 - Fire Alarm System Mechanic	18.79
23310 - Fire Extinguisher Repairer	15.72
23311 - Fuel Distribution System Mechanic	18.79
23312 - Fuel Distribution System Operator	16.80
23370 - General Maintenance Worker	16.43
23380 - Ground Support Equipment Mechanic	22.24
23381 - Ground Support Equipment Servicer	19.34
23382 - Ground Support Equipment Worker	20.27
23391 - Gunsmith I	15.12
23392 - Gunsmith II	16.67
23393 - Gunsmith III	18.38
23410 - Heating, Ventilation And Air-Conditioning Mechanic	18.38
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	19.30
23430 - Heavy Equipment Mechanic	20.22
23440 - Heavy Equipment Operator	17.87
23460 - Instrument Mechanic	22.82
23465 - Laboratory/Shelter Mechanic	17.58
23470 - Laborer	11.36
23510 - Locksmith	18.04
23530 - Machinery Maintenance Mechanic	23.32
23550 - Machinist, Maintenance	18.59
23580 - Maintenance Trades Helper	14.41
23591 - Metrology Technician I	22.82
23592 - Metrology Technician II	23.80
23593 - Metrology Technician III	24.74
23640 - Millwright	18.79
23710 - Office Appliance Repairer	21.83
23760 - Painter, Maintenance	17.56

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23790 - Pipefitter, Maintenance	18.90
23810 - Plumber, Maintenance	18.06
23820 - Pneudraulic Systems Mechanic	18.79
23850 - Rigger	18.79
23870 - Scale Mechanic	17.29
23890 - Sheet-Metal Worker, Maintenance	18.38
23910 - Small Engine Mechanic	16.75
23931 - Telecommunications Mechanic I	18.89
23932 - Telecommunications Mechanic II	20.21
23950 - Telephone Lineman	19.60
23960 - Welder, Combination, Maintenance	18.38
23965 - Well Driller	18.79
23970 - Woodcraft Worker	18.79
23980 - Woodworker	16.43
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	8.56
24580 - Child Care Center Clerk	10.68
24610 - Chore Aide	9.26
24620 - Family Readiness And Support Services Coordinator	12.61
24630 - Homemaker	13.55
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	18.86
25040 - Sewage Plant Operator	18.07
25070 - Stationary Engineer	18.86
25190 - Ventilation Equipment Tender	14.85
25210 - Water Treatment Plant Operator	18.07
27000 - Protective Service Occupations	
27004 - Alarm Monitor	12.57
27007 - Baggage Inspector	10.85
27008 - Corrections Officer	15.28
27010 - Court Security Officer	16.82
27030 - Detection Dog Handler	13.55
27040 - Detention Officer	15.28
27070 - Firefighter	16.82
27101 - Guard I	10.85
27102 - Guard II	13.55
27131 - Police Officer I	18.35
27132 - Police Officer II	20.41
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	9.52
28042 - Carnival Equipment Repairer	10.00
28043 - Carnival Equipment Worker	7.89
28210 - Gate Attendant/Gate Tender	13.76

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28310 - Lifeguard		12.21
28350 - Park Attendant (Aide)		15.40
28510 - Recreation Aide/Health Facility Attendant		11.24
28515 - Recreation Specialist		16.31
28630 - Sports Official		12.26
28690 - Swimming Pool Operator		15.65
29000 - Stevedoring/Longshoremen Occupational Services		
29010 - Blocker And Bracer		17.70
29020 - Hatch Tender		17.70
29030 - Line Handler		17.70
29041 - Stevedore I		16.90
29042 - Stevedore II		18.56
30000 - Technical Occupations		
30010 - Air Traffic Control Specialist, Center (HFO)	(see 2)	35.65
30011 - Air Traffic Control Specialist, Station (HFO)	(see 2)	24.58
30012 - Air Traffic Control Specialist, Terminal (HFO)	(see 2)	27.07
30021 - Archeological Technician I		17.26
30022 - Archeological Technician II		19.32
30023 - Archeological Technician III		23.94
30030 - Cartographic Technician		24.23
30040 - Civil Engineering Technician		22.83
30061 - Drafter/CAD Operator I		17.26
30062 - Drafter/CAD Operator II		19.55
30063 - Drafter/CAD Operator III		21.11
30064 - Drafter/CAD Operator IV		25.97
30081 - Engineering Technician I		14.53
30082 - Engineering Technician II		17.48
30083 - Engineering Technician III		21.00
30084 - Engineering Technician IV		28.62
30085 - Engineering Technician V		33.81
30086 - Engineering Technician VI		40.89
30090 - Environmental Technician		23.45
30210 - Laboratory Technician		18.92
30240 - Mathematical Technician		24.23
30361 - Paralegal/Legal Assistant I		18.54
30362 - Paralegal/Legal Assistant II		22.98
30363 - Paralegal/Legal Assistant III		28.11
30364 - Paralegal/Legal Assistant IV		34.01
30390 - Photo-Optics Technician		24.23
30461 - Technical Writer I		20.96
30462 - Technical Writer II		25.63
30463 - Technical Writer III		31.02
30491 - Unexploded Ordnance (UXO) Technician I		22.65
30492 - Unexploded Ordnance (UXO) Technician II		27.41

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30493 - Unexploded Ordnance (UXO) Technician III	32.85
30494 - Unexploded (UXO) Safety Escort	22.65
30495 - Unexploded (UXO) Sweep Personnel	22.65
30620 - Weather Observer, Combined Upper Air Or Surface Programs	(see 3) 21.11
30621 - Weather Observer, Senior	(see 3) 23.45
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	10.71
31030 - Bus Driver	13.94
31043 - Driver Courier	14.96
31260 - Parking and Lot Attendant	10.11
31290 - Shuttle Bus Driver	16.25
31310 - Taxi Driver	10.90
31361 - Truckdriver, Light	16.25
31362 - Truckdriver, Medium	16.82
31363 - Truckdriver, Heavy	17.62
31364 - Truckdriver, Tractor-Trailer	17.62
99000 - Miscellaneous Occupations	
99030 - Cashier	9.30
99050 - Desk Clerk	7.94
99095 - Embalmer	22.65
99251 - Laboratory Animal Caretaker I	8.61
99252 - Laboratory Animal Caretaker II	13.46
99310 - Mortician	22.65
99410 - Pest Controller	12.65
99510 - Photofinishing Worker	11.90
99710 - Recycling Laborer	14.15
99711 - Recycling Specialist	16.26
99730 - Refuse Collector	12.79
99810 - Sales Clerk	11.50
99820 - School Crossing Guard	12.71
99830 - Survey Party Chief	17.48
99831 - Surveying Aide	10.77
99832 - Surveying Technician	14.74
99840 - Vending Machine Attendant	12.64
99841 - Vending Machine Repairer	14.48
99842 - Vending Machine Repairer Helper	12.64

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

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contributions costing an average of \$3.35 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 10 years, and 4 after 20 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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

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- (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, 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 regarding 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

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that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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

Conformance Process:

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

The process for preparing a conformance request is as follows:

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

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

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

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<p>REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor</p>	<p>U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210</p>
<p>Shirley F. Ebbesen Division of Director Wage Determinations</p>	<p>Wage Determination No.: 2005-2133 Revision No.: 7 Date Of Revision: 10/15/2009</p>

State: Georgia

Area: Georgia Counties of Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, De Kalb, Douglas, Fannin, Fayette, Floyd, Forsyth, Franklin, Fulton, Gilmer, Gordon, Greene, Gwinnett, Habersham, Hall, Haralson, Henry, Jackson, Lumpkin, Madison, Morgan, Murray, Newton, Oconee, Oglethorpe, Paulding, Pickens, Polk, Rabun, Rockdale, Spalding, Stephens, Towns, Union, Walton, White, Whitfield

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.40
01012 - Accounting Clerk II		15.04
01013 - Accounting Clerk III		16.83
01020 - Administrative Assistant		26.66
01040 - Court Reporter		20.93
01051 - Data Entry Operator I		13.84
01052 - Data Entry Operator II		15.70
01060 - Dispatcher, Motor Vehicle		19.15
01070 - Document Preparation Clerk		13.16
01090 - Duplicating Machine Operator		13.16
01111 - General Clerk I		13.30
01112 - General Clerk II		14.84
01113 - General Clerk III		15.97
01120 - Housing Referral Assistant		21.85
01141 - Messenger Courier		11.70
01191 - Order Clerk I		12.48
01192 - Order Clerk II		14.20

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01261 - Personnel Assistant (Employment) I	15.22
01262 - Personnel Assistant (Employment) II	17.03
01263 - Personnel Assistant (Employment) III	19.00
01270 - Production Control Clerk	20.48
01280 - Receptionist	13.41
01290 - Rental Clerk	14.34
01300 - Scheduler, Maintenance	16.03
01311 - Secretary I	15.08
01312 - Secretary II	17.39
01313 - Secretary III	19.89
01320 - Service Order Dispatcher	15.87
01410 - Supply Technician	26.66
01420 - Survey Worker	16.73
01531 - Travel Clerk I	13.66
01532 - Travel Clerk II	14.92
01533 - Travel Clerk III	16.07
01611 - Word Processor I	13.25
01612 - Word Processor II	14.87
01613 - Word Processor III	16.64
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	22.25
05010 - Automotive Electrician	20.52
05040 - Automotive Glass Installer	19.22
05070 - Automotive Worker	19.22
05110 - Mobile Equipment Servicer	16.64
05130 - Motor Equipment Metal Mechanic	21.60
05160 - Motor Equipment Metal Worker	19.22
05190 - Motor Vehicle Mechanic	21.60
05220 - Motor Vehicle Mechanic Helper	16.72
05250 - Motor Vehicle Upholstery Worker	18.14
05280 - Motor Vehicle Wrecker	19.22
05310 - Painter, Automotive	20.52
05340 - Radiator Repair Specialist	19.22
05370 - Tire Repairer	13.80
05400 - Transmission Repair Specialist	21.60
07000 - Food Preparation And Service Occupations	
07010 - Baker	12.20
07041 - Cook I	11.95
07042 - Cook II	13.58
07070 - Dishwasher	10.24
07130 - Food Service Worker	10.01
07210 - Meat Cutter	12.57
07260 - Waiter/Waitress	8.17
09000 - Furniture Maintenance And Repair Occupations	

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09010 - Electrostatic Spray Painter	16.64
09040 - Furniture Handler	12.05
09080 - Furniture Refinisher	15.46
09090 - Furniture Refinisher Helper	11.95
09110 - Furniture Repairer, Minor	14.06
09130 - Upholsterer	15.46
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9.22
11060 - Elevator Operator	9.22
11090 - Gardener	14.32
11122 - Housekeeping Aide	10.13
11150 - Janitor	10.89
11210 - Laborer, Grounds Maintenance	10.99
11240 - Maid or Houseman	9.15
11260 - Pruner	13.31
11270 - Tractor Operator	13.81
11330 - Trail Maintenance Worker	10.99
11360 - Window Cleaner	12.46
12000 - Health Occupations	
12010 - Ambulance Driver	16.54
12011 - Breath Alcohol Technician	19.89
12012 - Certified Occupational Therapist Assistant	23.17
12015 - Certified Physical Therapist Assistant	22.52
12020 - Dental Assistant	16.11
12025 - Dental Hygienist	31.82
12030 - EKG Technician	20.47
12035 - Electroneurodiagnostic Technologist	20.47
12040 - Emergency Medical Technician	16.75
12071 - Licensed Practical Nurse I	17.72
12072 - Licensed Practical Nurse II	19.89
12073 - Licensed Practical Nurse III	21.97
12100 - Medical Assistant	14.18
12130 - Medical Laboratory Technician	16.93
12160 - Medical Record Clerk	13.71
12190 - Medical Record Technician	15.03
12195 - Medical Transcriptionist	16.01
12210 - Nuclear Medicine Technologist	31.29
12221 - Nursing Assistant I	9.24
12222 - Nursing Assistant II	10.39
12223 - Nursing Assistant III	11.34
12224 - Nursing Assistant IV	13.10
12235 - Optical Dispenser	16.89
12236 - Optical Technician	15.13
12250 - Pharmacy Technician	14.87

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12280 - Phlebotomist		13.10
12305 - Radiologic Technologist		23.94
12311 - Registered Nurse I		24.78
12312 - Registered Nurse II		29.17
12313 - Registered Nurse II, Specialist		29.17
12314 - Registered Nurse III		35.25
12315 - Registered Nurse III, Anesthetist		35.25
12316 - Registered Nurse IV		42.25
12317 - Scheduler (Drug and Alcohol Testing)		18.26
13000 - Information And Arts Occupations		
13011 - Exhibits Specialist I		20.57
13012 - Exhibits Specialist II		23.52
13013 - Exhibits Specialist III		28.34
13041 - Illustrator I		20.89
13042 - Illustrator II		23.52
13043 - Illustrator III		28.34
13047 - Librarian		27.98
13050 - Library Aide/Clerk		12.17
13054 - Library Information Technology Systems Administrator		25.27
13058 - Library Technician		14.50
13061 - Media Specialist I		17.94
13062 - Media Specialist II		20.09
13063 - Media Specialist III		22.37
13071 - Photographer I		14.44
13072 - Photographer II		15.01
13073 - Photographer III		18.59
13074 - Photographer IV		22.40
13075 - Photographer V		23.86
13110 - Video Teleconference Technician		16.40
14000 - Information Technology Occupations		
14041 - Computer Operator I		17.20
14042 - Computer Operator II		19.24
14043 - Computer Operator III		21.45
14044 - Computer Operator IV		23.84
14045 - Computer Operator V		26.40
14071 - Computer Programmer I	(see 1)	25.09
14072 - Computer Programmer II	(see 1)	25.31
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		17.20

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14160 - Personal Computer Support Technician	23.84
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	27.52
15020 - Aircrew Training Devices Instructor (Rated)	34.35
15030 - Air Crew Training Devices Instructor (Pilot)	39.94
15050 - Computer Based Training Specialist / Instructor	28.13
15060 - Educational Technologist	26.30
15070 - Flight Instructor (Pilot)	39.94
15080 - Graphic Artist	24.69
15090 - Technical Instructor	23.15
15095 - Technical Instructor/Course Developer	28.31
15110 - Test Proctor	18.68
15120 - Tutor	18.68
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	9.47
16030 - Counter Attendant	9.47
16040 - Dry Cleaner	12.49
16070 - Finisher, Flatwork, Machine	9.47
16090 - Presser, Hand	9.47
16110 - Presser, Machine, Drycleaning	9.47
16130 - Presser, Machine, Shirts	9.47
16160 - Presser, Machine, Wearing Apparel, Laundry	9.47
16190 - Sewing Machine Operator	13.54
16220 - Tailor	14.57
16250 - Washer, Machine	10.59
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	15.46
19040 - Tool And Die Maker	22.45
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	14.74
21030 - Material Coordinator	19.21
21040 - Material Expediter	19.21
21050 - Material Handling Laborer	13.01
21071 - Order Filler	13.06
21080 - Production Line Worker (Food Processing)	14.74
21110 - Shipping Packer	13.35
21130 - Shipping/Receiving Clerk	13.94
21140 - Store Worker I	11.48
21150 - Stock Clerk	16.17
21210 - Tools And Parts Attendant	14.74
21410 - Warehouse Specialist	14.74
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.60
23021 - Aircraft Mechanic I	24.49

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23022 - Aircraft Mechanic II	25.60
23023 - Aircraft Mechanic III	26.88
23040 - Aircraft Mechanic Helper	17.19
23050 - Aircraft, Painter	21.12
23060 - Aircraft Servicer	19.73
23080 - Aircraft Worker	20.99
23110 - Appliance Mechanic	18.74
23120 - Bicycle Repairer	12.83
23125 - Cable Splicer	20.85
23130 - Carpenter, Maintenance	19.28
23140 - Carpet Layer	16.58
23160 - Electrician, Maintenance	22.60
23181 - Electronics Technician Maintenance I	19.09
23182 - Electronics Technician Maintenance II	24.64
23183 - Electronics Technician Maintenance III	26.34
23260 - Fabric Worker	15.61
23290 - Fire Alarm System Mechanic	17.12
23310 - Fire Extinguisher Repairer	13.98
23311 - Fuel Distribution System Mechanic	20.61
23312 - Fuel Distribution System Operator	16.03
23370 - General Maintenance Worker	17.92
23380 - Ground Support Equipment Mechanic	24.49
23381 - Ground Support Equipment Servicer	19.73
23382 - Ground Support Equipment Worker	20.99
23391 - Gunsmith I	18.65
23392 - Gunsmith II	20.94
23393 - Gunsmith III	21.98
23410 - Heating, Ventilation And Air-Conditioning Mechanic	20.81
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	21.85
23430 - Heavy Equipment Mechanic	21.25
23440 - Heavy Equipment Operator	18.92
23460 - Instrument Mechanic	22.45
23465 - Laboratory/Shelter Mechanic	17.76
23470 - Laborer	11.55
23510 - Locksmith	15.46
23530 - Machinery Maintenance Mechanic	19.72
23550 - Machinist, Maintenance	18.32
23580 - Maintenance Trades Helper	12.53
23591 - Metrology Technician I	22.45
23592 - Metrology Technician II	23.57
23593 - Metrology Technician III	24.75
23640 - Millwright	21.52

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23710 - Office Appliance Repairer	18.91
23760 - Painter, Maintenance	16.35
23790 - Pipefitter, Maintenance	20.30
23810 - Plumber, Maintenance	19.33
23820 - Pneudraulic Systems Mechanic	18.99
23850 - Rigger	21.30
23870 - Scale Mechanic	16.58
23890 - Sheet-Metal Worker, Maintenance	19.19
23910 - Small Engine Mechanic	16.93
23931 - Telecommunications Mechanic I	24.67
23932 - Telecommunications Mechanic II	27.23
23950 - Telephone Lineman	20.19
23960 - Welder, Combination, Maintenance	16.33
23965 - Well Driller	17.53
23970 - Woodcraft Worker	18.99
23980 - Woodworker	13.76
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	10.36
24580 - Child Care Center Clerk	12.39
24610 - Chore Aide	10.93
24620 - Family Readiness And Support Services Coordinator	14.01
24630 - Homemaker	16.76
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21.71
25040 - Sewage Plant Operator	17.06
25070 - Stationary Engineer	21.71
25190 - Ventilation Equipment Tender	13.46
25210 - Water Treatment Plant Operator	17.06
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14.85
27007 - Baggage Inspector	12.47
27008 - Corrections Officer	14.66
27010 - Court Security Officer	17.23
27030 - Detection Dog Handler	16.44
27040 - Detention Officer	15.32
27070 - Firefighter	17.77
27101 - Guard I	12.47
27102 - Guard II	16.44
27131 - Police Officer I	19.25
27132 - Police Officer II	21.40
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	10.53
28042 - Carnival Equipment Repairer	12.24

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28043 - Carnival Equipment Worker		7.90
28210 - Gate Attendant/Gate Tender		14.25
28310 - Lifeguard		11.33
28350 - Park Attendant (Aide)		15.94
28510 - Recreation Aide/Health Facility Attendant		9.22
28515 - Recreation Specialist		12.41
28630 - Sports Official		11.75
28690 - Swimming Pool Operator		18.99
29000 - Stevedoring/Longshoremen Occupational Services		
29010 - Blocker And Bracer		18.97
29020 - Hatch Tender		18.97
29030 - Line Handler		18.97
29041 - Stevedore I		17.78
29042 - Stevedore II		20.31
30000 - Technical Occupations		
30010 - Air Traffic Control Specialist, Center (HFO)	(see 2)	36.60
30011 - Air Traffic Control Specialist, Station (HFO)	(see 2)	25.24
30012 - Air Traffic Control Specialist, Terminal (HFO)	(see 2)	27.79
30021 - Archeological Technician I		19.76
30022 - Archeological Technician II		21.21
30023 - Archeological Technician III		27.39
30030 - Cartographic Technician		25.92
30040 - Civil Engineering Technician		19.26
30061 - Drafter/CAD Operator I		19.76
30062 - Drafter/CAD Operator II		21.21
30063 - Drafter/CAD Operator III		23.33
30064 - Drafter/CAD Operator IV		28.80
30081 - Engineering Technician I		16.09
30082 - Engineering Technician II		19.31
30083 - Engineering Technician III		20.68
30084 - Engineering Technician IV		24.58
30085 - Engineering Technician V		30.06
30086 - Engineering Technician VI		33.65
30090 - Environmental Technician		22.75
30210 - Laboratory Technician		17.80
30240 - Mathematical Technician		22.75
30361 - Paralegal/Legal Assistant I		19.41
30362 - Paralegal/Legal Assistant II		24.05
30363 - Paralegal/Legal Assistant III		29.41
30364 - Paralegal/Legal Assistant IV		34.18
30390 - Photo-Optics Technician		26.06
30461 - Technical Writer I		26.07
30462 - Technical Writer II		29.01
30463 - Technical Writer III		34.75

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30491 - Unexploded Ordnance (UXO) Technician I	23.26
30492 - Unexploded Ordnance (UXO) Technician II	28.14
30493 - Unexploded Ordnance (UXO) Technician III	33.73
30494 - Unexploded (UXO) Safety Escort	23.26
30495 - Unexploded (UXO) Sweep Personnel	23.26
30620 - Weather Observer, Combined Upper Air Or	(see 2) 23.33
Surface Programs	
30621 - Weather Observer, Senior	(see 2) 27.39
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	11.49
31030 - Bus Driver	17.43
31043 - Driver Courier	13.10
31260 - Parking and Lot Attendant	9.40
31290 - Shuttle Bus Driver	14.30
31310 - Taxi Driver	10.70
31361 - Truckdriver, Light	14.30
31362 - Truckdriver, Medium	15.81
31363 - Truckdriver, Heavy	18.97
31364 - Truckdriver, Tractor-Trailer	18.97
99000 - Miscellaneous Occupations	
99030 - Cashier	9.25
99050 - Desk Clerk	10.05
99095 - Embalmer	24.45
99251 - Laboratory Animal Caretaker I	9.12
99252 - Laboratory Animal Caretaker II	10.03
99310 - Mortician	26.90
99410 - Pest Controller	14.59
99510 - Photofinishing Worker	14.95
99710 - Recycling Laborer	14.69
99711 - Recycling Specialist	18.48
99730 - Refuse Collector	12.78
99810 - Sales Clerk	13.50
99820 - School Crossing Guard	13.53
99830 - Survey Party Chief	18.87
99831 - Surveying Aide	11.07
99832 - Surveying Technician	15.59
99840 - Vending Machine Attendant	11.69
99841 - Vending Machine Repairer	14.27
99842 - Vending Machine Repairer Helper	11.69

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$3.35 per hour or \$134.00 per week or \$580.66 per month.

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VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 3 weeks after 8 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 modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
- (3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
- (4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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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

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where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

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

Conformance Process:

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

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

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- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

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

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

Attachment J-5

Award Fee

Evaluation Plan

Cargo Mission Contract

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1.0 INTRODUCTION

An Award Fee Evaluation Plan is established to evaluate contractor performance and determine the Award Fee to be earned and payable under this contract. The Award Fee evaluation process is composed of an objective as well as a subjective assessment by the government.

The contractor's performance will be evaluated by the Government, in accordance with the procedures set forth below, at the expiration of each period specified in Clause B.7, Award Fee. The evaluations 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 factors, weightings, procedures, and other provisions set forth below.

2.0 AWARD FEE PROVISIONS

Award Fee provisions have been established to motivate the contractor to strive for excellence in managerial, technical, schedule and cost performance. For each period, the contractor can earn Award Fee from a minimum of zero dollars to the maximum available Award Fee shown in Clause B.7 of this contract. Changes to these Award Fee provisions will be via a bilateral modification, except for evaluation factors and weightings that are established unilaterally by the government. The contractor will be informed of any changes to the evaluation factor or the weightings prior to the affected Award Fee period.

Each Award Fee evaluation rating is considered to be discrete and final. Unearned Award Fee in a given period is lost and cannot be reassessed or moved into subsequent fee evaluation periods for consideration. An overall performance evaluation and fee determination of zero may be made for any evaluation period when there is a major breach of safety or security as defined in NFS 1852.223-75, Major Breach of Safety or Security.

The government shall pay fee to the contractor in accordance with Clause G.2, Award Fee for Service Contracts.

2.1 ORGANIZATIONAL RESPONSIBILITIES**2.1.1 PERFORMANCE EVALUATION BOARD INTEGRATION TEAM (PEB-IT)**

The Performance Evaluation Board Integration Team (PEB-IT) will be composed of selected NASA technical and administrative personnel and headed by the Contracting Officer's Technical Representative (COTR). The COTR will be the focal point for the accumulation and development of Award Fee evaluation reports, reviews, and presentations, as well as discussions with contractor management on Award Fee matters. The PEB-IT will evaluate the Contractor's performance as related to the factors listed in enclosure II.

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The PEB-IT will furnish the contractor interim performance evaluations every three months (after 6 months for the first evaluation period). It shall be the purpose of these communications to discuss any specific areas where the contractor has excelled and areas where future improvement is necessary.

The PEB-IT will prepare a 6-month evaluation report for review by the PEB for each evaluation period. This report will include a recommendation to the PEB as to the adjective rating and numerical score to be assigned for the Contractor's performance for the period evaluated.

2.1.2 PERFORMANCE EVALUATION BOARD (PEB)

The Fee Determination Official (FDO) will appoint the Performance Evaluation Board (PEB). A PEB, comprised of selected technical and administrative personnel of NASA, will assess 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 Board, at the end of each evaluation period, will modify and/or approve the PEB-IT report and prepare a summary of the evaluations for review by the FDO. This summary will include a recommendation to the FDO as to the adjective rating and numerical score to be assigned for the contractor's performance in the preceding evaluation period.

2.1.3 FEE DETERMINATION OFFICIAL (FDO)

The Fee Determination Official (FDO), a senior NASA official, after considering available pertinent information and recommendations, will make a performance determination for each period in accordance with the provisions of this Award Fee Plan and the Clause G.2.

2.2 EVALUATION PROCEDURES**2.2.1 AWARD FEE PERIODS**

Each Award Fee period shall be 6 months in length. The contractor's performance will be assessed at the mid-point of each evaluation period (at the end of the sixth month for the first evaluation period). The COTR or the Contracting Officer may communicate contractor performance levels at other times during the evaluation period.

2.2.2 CONTRACTOR PERFORMANCE ASSESSMENT PLAN

No later than 30 calendar days prior to the start of each Award Fee evaluation period, the contractor may submit to the Contracting Officer a Performance Assessment Plan recommending objective performance metrics, weightings, and specific areas of emphasis for consideration by the Government to be used for the ensuing evaluation period.

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Objective performance metrics and specific areas of emphasis (AOE) will be established for each evaluation period by the Government and communicated to the contractor at least 15 calendar days prior to the start of each evaluation period. The Government may unilaterally change the weightings of the criteria from period to period. However, cost control will not fall below 25 percent of 100 percent of the award fee pool.

2.2.3. CONTRACTOR PERFORMANCE ASSESSMENT REPORT

The contractor may furnish a self-evaluation as a Performance Assessment Report for each evaluation period to the Contracting Officer within 7 calendar days of the end of the quarter in the established period. The contractor may present to the PEB an oral summary of its self-evaluation.

2.2.4 AWARD FEE FINDINGS

The contractor will be furnished a copy of the PEB's findings, conclusions, and fee recommendation. The contractor will be afforded the opportunity to submit for consideration of the FDO: (a) proposed evaluations or conclusions, or (b) exceptions to the evaluations, conclusions, or fee recommendations of the PEB, and (c) supporting reasons for such exceptions or proposed evaluations or conclusions. The contractor's submissions must be made in writing and must be submitted through the Contracting Officer to the FDO within 7 calendar days from the date of the contractor's receipt of the PEB findings and fee recommendations.

In the event the FDO has not received a submission from the contractor, the performance determination will not be considered final until expiration of the 7calendar day period prescribed above for contractor submissions unless the contractor has affirmatively indicated, in writing, that no contractor submission will be made.

2.2.5 CORRECTIVE ACTION PLAN

When a weakness is identified during a performance evaluation performed at the end of the award fee period, the contractor may submit to the CO a recommendation on which award fee weaknesses require a Corrective Action Plan (CAP) within 15 calendar days of the final award fee determination for each evaluation period. The CO, with assistance from the COTR, shall make the final determination of when a CAP is required. For any issue requiring corrective action, the CO shall request a CAP from the contractor. Any items not requiring corrective action shall be documented in the file.

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2.3 EVALUATION CRITERIA AND WEIGHTINGS

The Government will use objective, subjective criteria, socioeconomic performance, as well as an assessment of cost control as a basis for arriving at the Award Fee score. Objective metrics will be developed using a tiered approach of increasingly important metrics to measure the contractor's performance and assist the government in the Award Fee evaluation process. The metrics will be divided into three linked categories describing how lower level metrics affect the outcome of upper level metrics. Category I metrics are the most important outcome based metrics, Category II are considered important leading indicator metrics, and Category III are intended to assess trends. The contractor's performance against the objective metrics combined with the government's assessment of subjective criteria and the government's assessment of cost control will be used to arrive at an overall Award Fee score. See DRD C-PM-02 Integrated Management Review Product.

2.3.1 AWARD FEE BASED ON PERFORMANCE METRICS (OBJECTIVE CRITERIA)

The award fee based on performance metrics encourages contractor focus on overall safety, technical, and schedule. The Government will use objective criteria as a basis for arriving at this portion of the award fee score. This portion of the award fee score will be determined from the contractor's performance of the Category I metrics (see Areas of Emphasis of each specific award fee period).

2.3.2 AWARD FEE BASED ON OTHER THAN PERFORMANCE BASED METRICS (SUBJECTIVE CRITERIA)

The award fee portion that is based on other than Performance Based Metrics encourages contractor focus on program management and control and technical performance. The Government will use subjective criteria as a basis for arriving at this portion of the award fee score.

2.3.3 SOCIOECONOMIC CONSIDERATION

The award fee based on performance metrics encourages contractor focus on meeting or exceeding the socioeconomic goals established in the contract for the award fee period.

2.3.4 AWARD FEE BASED ON COST PERFORMANCE

Cost performance will be evaluated using metric status and plan versus actual during the period being evaluated. Other factors and circumstances that are pertinent to contractor performance may be taken into account as they apply to cost performance.

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2.4 EVALUATION PERIODS AND AWARD FEE CALCULATION**2.4.1 MAXIMUM AVAILABLE AWARD FEE**

The maximum available award fee for the base contract period is identified in Clause B.3, Estimated Cost and Award Fee. The available fee for each award fee period is set forth in Clause B.7 Table B-5, Available and Earned Fee.

2.4.2 EVALUATION SCALE AND ADJECTIVE RATING

Award Fee Rating Table, Enclosure I, includes adjective ratings as well as a numerical scoring system from 0 - 100. For this plan, earned award fee dollars are calculated by applying the total numerical score to available dollars. For example, a numerical score of 85 yields 85 percent of available award fee dollars. Notwithstanding the preceding, the Contractor will not earn award fee for any evaluation period when the performance score is "poor/unsatisfactory" (less than 61).

2.5 PROVISIONAL PAYMENT OF AWARD FEE

Pending a determination of the amount of award fee earned for periodic evaluations, a portion of the available award fee for that period will be provisionally paid to the Contractor on a monthly basis, in accordance with contract Clause G.2 .

3.0 LIST OF ENCLOSURES

Enclosure I, Numerical Ranges and Adjective Definitions, sets forth the adjective ratings, definitions, and associated numerical ranges to be used to define the various levels of performance under the contract.

Enclosure II, Award Fee Factors

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Enclosure I**Numerical Ranges and Adjective Definitions**

ADJECTIVE RATING	RANGE OF POINTS	DESCRIPTION
Excellent	100 - 91	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	90 - 76	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	75 - 51	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	No Greater than 50	Contractor has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	0	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

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Enclosure II**Award Fee Factors****A. OBJECTIVE CRITERIA****1. Safety and Health (Weight = 10%)**

Safety and health performance includes safety and health program implementation, adherence to the approved safety and health plan, management of safety incidents and injuries, and environmental compliance. Focus Areas include; safety incidents and injuries in conjunction with reported monthly statistical information on the contractor's safety and health program (JSC Form 288), substantial leadership initiatives taken by management in injury prevention and property damage avoidance and employee awareness programs; proactive programs with measureable impact on injury/mishap reduction; and employee input and management approaches to corrective action and safety and health compliance. Award fee scores may be positively affected by innovations which can be substantiated to reduce injuries, mishaps or overall safety risk to improve safety and health performance on the contract. Details on the evaluation process can be found at:

<http://procurement.jsc.nasa.gov/docs/Safety%20Performance%20Measures%20CSF%20060308.ppt>.

2. Technical and Schedule Control (15%)**B. SUBJECTIVE CRITERIA (40%):**

1. Program Management and Control
2. Technical Performance

C. SOCIOECONOMIC CONSIDERATION (10%)**D. COST CONTROL (25%)**

ATTACHMENT J-7

APPLICABLE AND REFERENCE

DOCUMENTS LIST

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Attachment J-7 - Applicable and Reference Document Lists

This attachment contains applicable documents for the contract effort. The contractor shall comply with these requirements in performing SOW requirements. This attachment is structured as follows:

Table J7-1: Applicable Documents List

Table J7-2: Reference Documents List

The documents identified within Table J7-1 are cited within the body of this contract or within a document that is cited in this contract (second tier). Requirements written in these documents have full force and effect as if their text were written in this contract to the extent that the requirements relate to context of the work to be performed within the scope of this contract. When a document is classified as "reference", the document is provided for information about the ISS Program execution and the Cargo Mission's role in the ISS Program.

The general approach for interpreting whether a document impacts the contractor's performance is that if a document is "applicable", then the contractor has requirements that derive from that document. Applicable documents contain additional requirements and are considered binding to the extent specified. Applicable documents shall be cited in the text of the document in a manner that indicates applicability such as follows:

- in accordance with
- as stated in
- as specified in
- as defined in
- per
- in conformance with

When a document is classified as "reference," the document is provided for general context of the ISS Program execution and for influence on the performance of the Cargo Mission Contract in its role of support to the ISS Program. Sample documentation that may be used or produced by the contractor is included as reference documents to allow the contractor to gain insight into the Cargo Mission functions and products. Reference documents shall not contain additional requirements and will not be considered binding. Citations of Reference documents shall clearly indicate that the material is for information or reference only such as follows:

- reference
- using (as a guide)
- for additional information

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Table J7-1: Applicable Documents List

Document Number	Title	Book Coordination Required
ANSI Z136.1	American National Standard for the Safe Use of Lasers	
ASME Y14.100	Engineering Drawing Practices	
ASME Y14.24	Types and Applications of Engineering Drawings	
ASME Y14.34	Associated Lists	
ASME Y14.35	Revision of Engineering Drawings and Associated Documents	
D684-10822-01		
DX12-SLP-014	Neutral Buoyancy Laboratory Mockup and Training Hardware Requirements	
Executive Order 13201		
FED-STD-313	Federal Standard 313	
FIPS PUB 199	Standards for Security Categorization of Federal Information and Information Systems	
FIPS PUB 200	Minimum Security Requirements for Federal Information and Information Systems	
FIPS PUB 201	Personal Identity Verification (PIV) of Federal Employees and Contractors	
HP RTL	Reference Guide (A Handbook for Program Developers)	
IEEE/ASTM SI 10-2002	American National Standard for Use of the International System of Unites (SI): The Modern Metric System	
ITS-SOP-0030	IT System Certification and Accreditation Process for FIPS 199 Moderate and High Systems	
ITS-SOP-0040	Contingency Planning Guidance	
No Number	ISS Management Center Operations Handbook	
JPD 306	Establishment of the Program Risk Management Plan (PRMS)	
J69W-01	Real Property Management	
J69W-02	Facility Space Allocation and Utilization	
J69W-03	Energy Conservation	
JE69W-06	EMS Aspect/Impact Assessment and EMP Process	
JPD 4310.1	National Historic Landmark Preservation	

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Document Number	Title	Book Coordination Required
JPD 8500.1	JSC Environmental Excellence Policy	
JPR 1700.1	JSC Safety and Health Handbook	
JPR 2310.1	JSC Organizational Learning Program	
JPR 8550.1	JSC Environmental Compliance Procedural Requirements	
JPR 8553.1	JSC Environmental Management System Manual	
JSC 17773	Preparing of Hazard Analyses for JSC Ground Operations	
JSC 27260	Decal Processing Document and Catalog	
JSC 27472	Requirements for Submission of Data Needed for Toxicological Assessment of Chemicals and Biologicals to be Flown on Manned Spacecraft	
JSC 28528	NBL Mockup Design and Requirements Document	
JWI 4210.1	JSC Instructions for Control of Program Stock	
MGT-OA-019	On-Orbit Anomaly Resolution Process Work Instruction	
MIL-PRF-28002	Requirements for Raster Graphics Representation in Binary Format	
MIL-STD-129	Military Marking for Shipment and Storage	
MIL-STD-1840	Automated Interchange of Technical Information	
NASA-HDBK-6003	Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques	
NASA-STD-6002	Applying Data Matrix Identification Symbols on Aerospace Parts	
NASDA-SPEC-2587 Part II Vol 3	HTCV Cargo Standard Interface Requirements	
NIST-SP-800-18	Guide for Developing Security Plans for Federal Information Systems	
NIST-SP-800-26	Security Self-Assessment Guide for Information Technology Systems	
NIST-SP-800-30	Risk Management Guide for Information Technology Systems	
NIST-SP-800-34	Contingency Planning Guide for Information Technology Systems	

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Document Number	Title	Book Coordination Required
NIST-SP-800-37	Guide for the Security Certification and Accreditation of Federal Information Systems	
NIST-SP-800-53	Guide for Assessing the Security Controls in Federal Information Systems	
NIST-SP-800-60 Vol 1	Guide for Mapping Types of Information and Information Systems to Security Categories	
NIST-SP-800-60 Vol 2	Appendices to Guide for Mapping Types of Information and Information Systems to Security Categories	
NIST-SP-800-61	Computer Security Incident Handling Guide	
NIST-SP-800-63	Electronic Authentication Guideline	
NITR 2810.12	Contingency Planning	
NITR 2810.15	Continuous Monitoring	
No Number	Energy Policy Act of 2005	
No Number	Freedom of Information Act	
No Number	Railway Labor Act	
No Number	Service Contract Act of 1965	
NPD 1440.6	NASA Records Management	
NPD 8800.14	Policy for Real Property Management	
NPR 1441.1	NASA Records Retention Schedule	
NPR 1600.1	NASA Security Program Procedural Requirements	
NPR 2810.1	Security of Information Technology	
NPR 4100.1	NASA Materials Inventory Management Manual	
NPR 4200.1	NASA Equipment Management Procedural Requirements	
NPR 4300.1	NASA Personal Property Disposal Procedural Requirements	
NPR 6000.1	Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components	
NPR 7120.6	Lessons Learned Process	
NPR 8621.1	NASA Procedures and Guidelines for Mishap Reporting, Investigating and Recordkeeping	
NPR 8715.3	NASA General Safety Program Requirements	
NPR 8000.4	Risk Management Procedures and Guidelines	
NPR 8570.1	Energy Efficiency and Water Conservation	
NPR 8831.2	Facilities Maintenance Management	

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Document Number	Title	Book Coordination Required
NPR 9501.2	NASA Contractor Financial Management Reporting	
OSHA CP 03-01-003	Voluntary Protection Program (VPP): Policies and Procedures Manual	
SAE AS9100	Quality Systems – Aerospace – Model for Quality Assurance in Design, Development, Production, Installation, and Servicing	
Section 508	Section 508 of the Rehabilitation Act of 1974	
SFAS 5	Accounting for Contingencies	
SFAS 13	Accounting for Leases	
SMD 500-15	Security Termination Procedures	
SN-C-0005	Contamination Control Requirements	
SSP 30219	ISS Reference Coordinate Systems Document	
SSP 30223	Problem Reporting and Corrective Action (PRACA) for Space Station	
SSP 30234	Failure Modes and Effects Analysis and Critical Item List (FMEA/CIL) Requirements for Space Station	
SSP 30256:001	EVA Standard Interface Control Document	
SSP 30309	Safety Analysis and Risk Assessment Requirements Document	
SSP 30599	Safety Review Process	
SSP 30695	Acceptance Data Package Requirements Specification	
SSP 41000	System Specification for the International Space Station	
SSP 41170	Configuration Management Requirements	
SSP 41173	Space Station Quality Assurance Requirements	
SSP 50004	Ground Support Equipment Design Requirements	
SSP 50005	ISS Flight Crew Integration Standards	
SSP 50007	Space Station Inventory Management System Label Specification	X
SSP 50010	Standards for ISS Program Documentation	
SSP 50013	ISS Information Systems Plan	
SSP 50021	Safety Requirements Document	
SSP 50108	Certification of Flight Readiness for ISS	
SSP 50123	Configuration Management Handbook	
SSP 50172	Data Management Handbook	

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Document Number	Title	Book Coordination Required
SSP 50175	ISS Risk Management Plan	
SSP 50200-01	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan	
SSP 50200-01-ANXC	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan, ANNEX C: Mission Integration and Operations	
SSP 50200-02	Station Program Implementation Plan (SPIP) Volume 2: Program Planning and Manifesting	
SSP 50200-03	Station Program Implementation Plan (SPIP) Volume 3: Cargo Analytical Integration	X
SSP 50200-06	Station Program Implementation Plan (SPIP) Volume 6: Cargo Physical Processing	X
SSP 50222	ISS Program Capital Investment Process (CIP)	
SSP 50223	ISS Export Control Plan	
SSP 50273	Segment Specification for the H-II Transfer Vehicle	
SSP 50276	Depot/Manufacturing Facility Certification Plan	
SSP 50287	Hardware/Software Acceptance Process	
SSP 50409	Crew Provisioning Management Plan	
SSP 50438	International Space Station to H-II Transfer Vehicle Interface Control Document	
SSP 50465	Return Manifest Dispositioning Plan (RMDP) Blank Book	X
SSP 50465-XXX-XX	Flight Specific RMDP Appendices	X
SSP 50489	Mission Integration Template	
SSP 50492	General ISS On-Orbit Requirements for Non-Pressurized Support Equipment	
SSP 50502	ISS Hardware Preflight Imagery Requirements	
SSP 50647	MIDAS to CIDMT Interface Control Document for ATV	
SSP 50833	International Space Station Cargo Transport Interface Requirements Document	
SSP 50835	ISS Pressurized Volume Common Interface Requirements Document	
SSP 50849	MIDAS to JAXA HTV Cargo Integration System Interface Control Document	

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Document Number	Title	Book Coordination Required
SSP 50930	ISS Common Communications for Visiting Vehicles (C2V2) Prime Item Development Specifications (PIDS)	
SSP 50934	Common Communications for C2V2 Radio Frequency (RF) Interface Control Document (ICD), Part 1	
SSP 51700	Payload Safety Policy and Requirements for International Space Station	
SSP 540XX-ANX1	Increment Definition and Requirements Document for Increment XX, Annex 1: Manifesting	
SSP 54100	Increment Definition and Requirements Document Flight Program	
TDH 505-507	Health and Safety Codes	

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Table J7-2: Reference Documents List

Document Number	Title	Book Coordination Required
II32928-103	Requirements for International Partner Cargoes Transported on Russian Progress and Soyuz Vehicles	
ATV-HB-AI-0001	ATV Cargo Accommodations Handbook	
ATV-E-RIBRE-PL-0054	ATV 2 Launch Site Operations Plan	
ESA-ATV-1700.7b	Safety Requirements for Payloads/Cargos On Board the ATV	
ESA-ATV-PR-13830	ATV Pressurized Payload/Cargo Safety Certification Process	
JFX-99102	HTV Cargo Accommodation Handbook	
JFX-20090175	HTV Cargo Integration Plan (CIP)	
JSC 64192	Requirements Verification Matrix for the Automated External Defibrillator	
JSC 64278	Pre-Delivery/Pre-Installation Acceptance Test Procedures for the CHeCS AED	
JSX 2001015	HTV Cargo Safety Requirements	
JSX-2208041	HTV Cargo Safety Review Process	
NASDA-SPEC 2857 Part I	HTV Cargo Standard Interface Requirements Document Part I	
NPD 2810.1	NASA Information Security Policy	
NPD 9501.1	NASA Contractor Financial Management Reporting System	
NPR 7120.5	NASA Program and Project Management Processes and Requirements	
OPS-IDD-2-200	ATV Cargo Integration Interface Definition Document	
OPS-PL-0-008-ESA	ESA Cargo Integration Plan	
SSP 50124	NASA/CSA Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50125	NASA/ASI Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50126	NASA/JAXA Bilateral Data Exchange Agreements, Lists and Schedules for the JEM	
SSP 50127	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Columbus	
SSP 50137	NASA/RSA Bilateral Data Exchange Agreements, Lists and Schedules	

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Document Number	Title	Book Coordination Required
SSP 50284	NASA/ASI Bilateral Data Exchange Agreements, Lists and Schedules for Node 2	
SSP 50301	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Node 2	
SSP 50352	NASA/AEB Bilateral Data Exchange Agreements, Lists and Schedules	
SSP 50359	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Node 3	
SSP 50407	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for Cupola 1 and 2	
SSP 50611	NASA/ESA Bilateral Data Exchange Agreements, Lists and Schedules for ATV	
SSP 50614	NASA/JAXA Bilateral Data Exchange Agreements, Lists and Schedules for HTV	
SSP 50659	ISS Program Work Breakdown Structure (WBS)	
XA-11-021	EVA Office Sharp Edge Policy for International Space Station Hardware Processed at Cargo Mission Contract Facility	

ATTACHMENT J-8

Data Requirements List (DRL) And Data Requirements Descriptions (DRDs)

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To the extent that data required to be furnished by other provisions of this contract are also identified and described in a DRL or DRD, compliance with the DRL or DRD shall be accepted as compliance with such other provisions.

Nothing contained in this DRL provision shall relieve the contractor from furnishing data not identified and described in the DRL attachment but called for by, or under the authority of, other provisions or as specified elsewhere in this contract. Except as otherwise provided in this contract, the cost of data to be furnished in response to the DRL attached to this contract or data to be delivered under the authority of other sections (clauses/statement of work) are included in the price of this contract.

DRD Categories

CM - Configuration Management II - International Integration IT- Information Technology
 PC - Program Control and Business Package PM - Program Management RP - Re-procurement
 SA - Safety and Mission Assurance CO – Close Out EL - Engineering
 MI - Mission Integration PR - Procurement

DRD Numbers	Type	Page Number	DRD Title
C-CM-01	1	J-A8-6	Configuration Management Plan
C-CO-01	1	J-A8-8	Contract Close-out Plan
C-CO-02	1	J-A8-9	SOW Evidence of Completion Matrix
C-EL-01	1	J-A8-10	New Hardware Interim Design Review Deliverables
C-EV-01	1	J-A8-12	Environmental and Energy Consuming Product Compliance Reports
C-II-01	2	J-A8-15	Export Control Plan (ECP)
C-II-02	2	J-A8-16	Export Control Audit Results
C-IT-01	1	J-A8-17	Information Technology (IT) Security Plan and Reports
C-IT-02	1	J-A8-19	Information Technology (IT) Management Plan
C-MI-01	1	J-A8-21	Certification of Flight Readiness (CoFR) Plan
C-MI-02			Reserved
C-MI-03	2	J-A8-22	Cargo Integration Cargo CAD Models for Launch, Return and On-Orbit Configurations
C-MI-04	3	J-A8-25	ISS Vehicle Engineering Data
C-MI-05	3	J-A8-28	Engineering Drawings and Associated Lists
C-PC-01	3	J-A8-49	NF533 Monthly Cost Reporting
C-PC-02	1	J-A8-60	Annual Work Plans
C-PC-03	3	J-A8-62	Workforce Reports
C-PC-04	1	J-A8-63	Work Breakdown Structure (WBS) and Dictionary
C-PC-05	3	J-A8-65	Program Schedules
C-PC-06	1/2	J-A8-67	Small Business Subcontracting Plan and Reports
C-PM-01	1	J-A8-69	Cargo Mission Management Plan
C-PM-02	3	J-A8-71	Integrated Management Review Product (IMRP)
C-PR-01	3	J-A8-73	Wage/Salary and Fringe Benefits Data

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C-PR-02	2	J-A8-81	Government Property Management Plan
C-PR-03	2	J-A8-83	Financial Reporting Contractor-Held Property
C-RP-01	3	J-A8-85	Re-procurement Data Package
C-SA-01	1	J-A8-88	Mission Assurance and Risk Management (MA&RM) Plan
C-SA-02	1	J-A8-90	Safety and Health (S&H) Plan
C-SA-03	3	J-A8-102	Monthly Safety and Health Metrics
C-SA-04	3	J-A8-104	Safety and Health Program Self-Evaluation
C-SA-05	2	J-A8-106	Safety Analysis and Hazard Reports
C-SA-06	2	J-A8-108	R&M Allocations, Assessments, and Analyses Reports
C-SA-07	2	J-A8-116	Acceptance Data Package (ADP)
C-SA-08	2	J-A8-117	Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)

Subject to the Rights in Data clause, this Data Requirements List (DRL)/Data Requirements Description (DRD) sets forth the data requirements in each DRD and shall govern that data required by the DRL/DRD for this contract. The contractor shall furnish data defined by the DRDs listed on the DRL by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DRL/DRD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DPD, per FAR 52.215.33. NASA-Owned/Contractor-Held records shall be managed by the Contractor in accordance with Title 36 of the code of Federal Regulations, Chapter XII B, Records Management, and NPD 1440.6, NASA Records Management Program. The records shall be organized in accordance with the instructions in NPR 1441.1, NASA Records Retention Schedules, as applicable. The contractor shall disposition records and non-records in accordance with NPR 1441.1, NASA Records Retention Schedules, which has been approved by NASA and the National Archives and Records Administration (NARA). All questions on records management issues shall be directed through the Contracting Officer to the ISS Technical Records Liaison Officer.

Documents included as applicable documents in this DRL/DRD are the issue specified in the Statement of Work, and form a part of the DRL/DRD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DRL/DRD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

DESCRIPTION

This document identifies and defines the requirements and data types for information and data required under this contract.

The DRDs define, by an individual DR, the information and data required for each deliverable document.

The data types are used to identify the approval and control required for each DR. The DRL is an index of all the DRs by category.

Documentation submitted pursuant to this clause may incorporate references to other current approved documentation, provided the references are adequate and include such identification

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elements as title, document number, and approval date (where applicable). However, if the pertinent information is of relatively minor size, the contractor shall incorporate the information itself, in lieu of using a reference. The contractor shall assure that any referenced information is readily available to appropriate users of the submitted document.

DATA TYPES

For the purpose of this clause, the following information/documentation types are applicable:

Type 1 That information and documentation which requires NASA approval prior to release. Approved type 1 information and documentation shall be controlled, and deviations from or changes to the concepts, techniques, and/or requirements stated therein shall require NASA approval prior to implementation. All work under this contract covered by approved type 1 documents shall be performed in accordance with those approved documents. The Contracting Officers Technical Representative will have approval authority and will sign the data prior to its release. Contractually binding documents will not be implemented nor revised without contractual authorization.

Type 2 That information and documentation for which NASA reserves a time-limited right to disapprove, in whole or in part. Type 2 data shall be submitted to JSC for review not less than 30 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not received any comment prior to the released target date, the document may be released for appropriate use. Any NASA comment received shall be appropriately dispositioned before the document is to be used. Type 2 data may be approved by NASA prior to its submittal.

Type 3 That information and documentation which is provided to NASA for surveillance, information, review, and/or management control. This information does not require formal NASA review and approval. Information in this category would include design solutions, status, and cost/schedule reporting; analyses and test results, handbooks; and other designated lists, reports, etc.

Type 1 submissions shall be marked "TYPE 1 PRELIMINARY pending NASA approval or Type I APPROVED BY NASA, as appropriate." Additional special designations and deviations may be required on specific submissions in accordance with configuration management requirements.

Type 2 submissions shall be marked "TYPE 2 PRELIMINARY - RELEASE TARGET DATE, xx/xx/xx" or "TYPE 2 FINAL - NASA COMMENTS INCLUDED" or "TYPE 2 FINAL DOCUMENT," where NASA comments were not received.

NOTE: Documents submitted under this clause, even though directly (Type 1) or implicitly (Type 2) approved by NASA, shall not take precedence over the specifications as set out in Section C, Statement of Work.

The contractor shall normally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 calendar days of receipt of comments.

Type 3 submissions shall be marked "TYPE 3 DOCUMENT - FOR INFORMATION, SURVEILLANCE, REVIEW OR MANAGEMENT CONTROL".

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ELECTRONIC FORMAT

Management Information System (MIS) Data Requirements. MIS is a web-based data repository designed to keep ISS Program management and personnel aware of the most current ISS Program technical, financial, workforce, schedules, and operational information, including issues and risks. MIS links ISS Program core business issues and goals with the technical aspects of the Program. To accomplish this, ISS Program managers will utilize (from the Contractor) selected financial planning technical costs, workforce data, Program schedules, Program metrics and other status information. This selected information exists in the various DRDs which are requested by the contract. As required, other data and supporting formats should be developed by the Contractor with concurrence from ISS Program Business Management Office.

DRDs shall be maintained electronically in the Contractor's own format, unless a specified format is defined in the DRD. The government may define specific DRD data format to support the utilization of this data in the Management Information System.

SUBMISSION INFORMATION

Wherever in the following DRDs under Block 10 "First Submission Date," or "Frequency of Submission," delivery is specified as at "SRR" or at any other program event, then delivery shall be required at the start or initialization of the event. Similarly when delivery is specified as a discrete amount of time before a program or project event (i.e., SRR minus 60 calendar days) then delivery will be required that discrete amount of time before the start of the program or project event. In addition, whenever delivery is specified as after an event, (i.e., SRR plus 30 calendar days) delivery should be required after the end of the event.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Configuration Management Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-CM-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Describes the assignment of responsibility organizationally and the procedures used in accomplishment of the specific configuration management requirements as stated in the SOW and SSP 41170.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.3 SSP 41170		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This Configuration Management plan defines the requirements, responsibilities, and procedures for the contractor's CM system pursuant to SSP 41170, as it applies to this contract.

8b. CONTENT:

1. Management Organization (including reference documents)

Identification, Relationships and Integration of contractor's proposed organization and its relationship to the configuration management function. Responsibility and authority for CM including roles in configuration control boards and technical reviews Interfaces between contractor's CM organization and NASA, Subcontractors, and other contractor's/contracts. Training plans.

2. Configuration Identification

- Selection of CIs (Hardware, CSCIs, and firmware),
- Establishment of the functional, allocated and product baselines,
- Assignment and application of configuration identifiers including serial numbers, part numbers, lot codes, software and firmware identifiers.

3. Configuration Control

- Establishment of internal configuration and contractual baselines,
- Implementation of Internal and NASA configuration control,
- Establishment of configuration control boards and processes,
- Identification of processes to control changes, deviations, and waivers to program baselines (both class I and class II),
- Subcontractor and vendor control,
- Systems and tools.

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4. Configuration Status Accounting (CSA)

- Hardware/Software Configuration Status Accounting processes and provisions for reports and/or access to CSA data.
- Description and methods of processes and tools to provide:
 - Identification of current approved configuration documentation and configuration identifiers associated with each CI,
 - Status of proposed engineering changes from initiation to implementation
 - Waiver/deviation status and processing,
 - Results of configuration audits; status and disposition of discrepancies,
 - Traceability of changes and confirmation of change incorporation,
 - Methods of access to information,
 - Retention of historical data,
 - Systems and tools (including data elements).

5. Configuration Verification\Audits

- Audit conduct, policies, procedures, documentation, access, and support.
- Processes, plans, schedules for internal CM audits and subcontractor CM audits.

6. Data Management

- Development, approval, release and submittal of configuration data/documentation (including drawings) in relation to program and contractual events (DRDs, technical reviews, FCA/PCA, Acceptance reviews, COFR, etc.).
- Plan for subcontractor data management deliveries/control and access,
- Establishment and operation of Engineering Release Unit and CM receipt desk, Document Quality Assurance process for Documentation control (i.e., DCNs), retention of historical data, systems and tools.

8c. **FORMAT:** Format supported by EDMS or successor equivalent system.

9. **OPR:** OH

10. **FIRST SUBMISSION DATE:** Thirty (30) calendar days after Contract Award. Final due 75 calendar days after contract award.

Additional Submissions: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

11. **MAINTENANCE:** The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

12. **COPIES/DISTRIBUTION:**

1 e-copy to Program Repository via EDMS workflow.

13. **REMARKS:**

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Contract Close-out Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-CO-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Define contractor close-out activities and cost			5. DRD Category Administrative
6. References (SOW, Clause, etc.) Clause F.7		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This plan shall provide the details necessary to transition the contract to any follow-on contract and to close out the existing contract.

8b. CONTENT: The content of the deliverables shall include:

- (a) Implementation Strategy
- (b) Task description and schedule
- (c) Staffing profile
- (d) Cost Estimate

8c. FORMAT: Contractor's format is acceptable.

9. OPR: BG

10. FIRST SUBMISSION DATE: 1 year prior to end of contract

Frequency Of Submission: Once

Additional Submissions:

11. MAINTENANCE: This data delivery shall be maintained electronically by the contractor.

12. COPIES/DISTRIBUTION:

1 hard copy to BG/Contracting Officer

1 e-copy to Program Repository via EDMS workflow

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: SOW Evidence of Completion Matrix	2. Date of Current Version JANUARY 15, 2010	3a. DRD No. C-CO-02	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 1	4. Use (Define need for, intended use of, and/or anticipated results of data) To provide closure criteria for each paragraph of the Statement of Work		5. DRD Category Technical Administrative
6. References (SOW, Clause, etc.) Clause H.21		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The contractor shall provide a matrix defining completion criteria for each numbered paragraph of the statement of work.

CONTENT: This document shall identify the completion requirements for each numbered statement of work paragraph. Completion requirements shall be identified within the matrix in terms of products, events or time period. Paragraphs within the matrix will be categorized as I&O, DDT&E, OPD and/or Spares. Updates to the Evidence of Completion Matrix will be made in response to approved supplemental agreements compiled and submitted on an annual basis.

FORMAT: The specific format of the document (e.g. Microsoft Word, Excel, etc.) shall be mutually agreed to between the parties and shall be compatible with the Program authorized repository

9. OPR: BG

10. FIRST SUBMISSION DATE: March 30, 2011 for the baseline submission
Frequency Of Submission: Baseline plus annually on the 1st of September
Additional Submissions: None.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

Electronic copy: to a Program authorized repository (EDMS or equivalent)
Contracting Officer/BG
COTR/OA

13. REMARKS: None

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: New Hardware Interim Design Review Deliverables	2. Date of Current Version January 15, 2010	3a. DRD No. C-EL-01	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 1 4. Use (Define need for, intended use of, and/or anticipated results of data) To support each new hardware design review process, the contractor shall deliver all products per expectation agreement.			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW 5.2		7. Interrelationships (e.g., with other DRDs) N/A	

- 8. PREPARATION INFORMATION:** The contractor shall prepare the data delivery as follows:
- 8a. SCOPE:** When the contractor is developing new hardware for the cargo contract, interim design reviews shall be held for the customer to review the hardware design. The design reviews shall be in accordance with the Interim Design Review Expectation Agreement.
- 8b. CONTENT:**
- Interim Design Review Expectation Agreement (NASA provided)
 - Design review package
 - Drawing
 - Analysis documentation
 - Mass property
 - Design models
- 8c. FORMAT:**
The Data shall be delivered in the Subcontractor's format and sufficient for electronic delivery.
- 9. OPR:** OB or OM
- 10. FIRST SUBMISSION DATE:** The Interim Design Review Expectation Agreement is required 30 calendar days prior to new hardware design start-up. This agreement is only submitted once for the contract. The rest of the review products are due per the Interim Design Review Expectation Agreement.
- Frequency Of Submission:**
- Additional Submissions:**
- 11. MAINTENANCE:** The updates of the products are per the Interim Design Review Expectation Agreement.
- 12. COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow.
- 13. REMARKS:**

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Environmental and Energy Consuming Product Compliance Reports 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-EV-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Used to complete JSC's required annual report to NASA HQ on affirmative procurement, waste reduction, energy efficient product procurement, and ozone depleting substances.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) Clause H.8		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

For Section I and III, where the Contractor does not purchase any designated product during the fiscal year, the report shall be a statement to that effect.

For Section IV, if the Contractor does not purchase, own, operate, maintain, or repair ODS equipment on-site, the report shall be a statement to that effect.

Fiscal year is the Federal Government fiscal year and is defined as October 1 through September 30.

I. Annual Affirmative Procurement Report

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information regarding the purchase by the Contractor (including subcontracts) of all products on the U. S. Environmental Protection Agency's Comprehensive Procurement Guideline list and items on the USDA Farm Bill Biobased list:

- a. The total amount of each item purchased during the previous fiscal year in dollars,
- b. The total amount of each listed item purchased during the previous fiscal year that contained at least the minimum recommended percentages of recycled content or biobased content during the fiscal year in dollars,
- c. The total amount of each listed item purchased during the previous fiscal year that contained some recycled content or biobased content but less than the minimum recommended percentages of recycled content or biobased content during the fiscal year in dollars,
- d. The number of waivers and the name of the item each waiver was requested for submitted to the Environmental Office during the previous fiscal year,
- e. The total amount purchased for each waived item during the previous fiscal year in dollars, and
- f. A narrative explanation of constraints for purchasing each item that did not meet affirmative procurement or biobased content requirements during the previous fiscal year.

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II.a Waste Reduction Activity Report

The Contractor shall track and report each January 15 to the JSC Environmental Office any new process improvements or programs undertaken by the Contractor (or subcontractors) that have contributed to waste reduction during the previous fiscal year. Waste reduction means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products. This may be done through recycling* or waste prevention**. *This may be accomplished through source reduction or by increasing reuse and recycling of items that would normally go to the landfill (trash).* The information will be included in JSC's annual report to NASA HQ on waste reduction activities. Limit responses to one page or less per item. The response should include a description of the activity, the materials or wastes reduced, an estimated volume or weight of reduction, and a contact name and phone number for a person knowledgeable about the reduction activity.

* Recycling means the series of activities, including collection, separation, and processing by which products or other materials are recovered from the solid waste stream for use in the forms of raw materials in the manufacture of products other than fuel for producing heat or power by combustion.

**Waste prevention means any change in the design, manufacturing, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they are discarded. Waste prevention also refers to the reuse of products or materials.

II.b For Construction/Facility Modification Contracts Only:

The Contractor shall track and report to the JSC Environmental Office the total weight in pounds of material sent to the landfill (this does not include shipments managed and paid for by the Environmental Office or their support contractor) and the total number of pounds of material recycled by media (scrap metal, wood, concrete, soil). The report is due within 30 days of completion of all waste generating and recycling activities or of final waste shipments associated with the project and in no case later than completion of the contract.

III. Annual Energy Efficiency Product Procurement Report

The Contractor shall report to the JSC Energy Manager, on January 15 of each year, information on purchases of energy consuming products made by the Contractor (including subcontracts) beginning upon contract start. This includes the purchase of premium efficiency motors and efficiency lighting covered by the Energy Policy Act of 2005. The report shall provide the following:

- a. A list of all energy consuming products purchased during the previous fiscal year.
- b. The total purchase cost of each item on the list.
- c. A designation of which items were Energy Star or Federal Energy Management Program (FEMP)-sanctioned.
- d. For each Energy Star or FEMP-sanctioned product purchased, provide:
 - i. The simple payback value as determined by the contractor's life cycle cost analysis.
 - ii. The annual savings in dollars and British Thermal Units (BTUs) due to the purchase of the item
- e. Metrics which show the effectiveness of the contractor's purchases
 - i. Percentage of purchased products that are Energy Star and FEMP-sanctioned against the total number of energy consuming products purchased.

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- ii. Total dollar value of the purchased products that are Energy Star and FEMP-sanctioned against the total dollar value of all energy consuming products purchased.

IV. Ozone Depleting Substances (ODS) Reports

The Contractor shall track and report each January 15 to the JSC Environmental Office the following information for the previous fiscal year related to ODS equipment that the contractor purchases, owns, operates, maintains, or repairs on-site:

- a. A list of the names of all EPA-Certified service technicians employed and their certification dates
- b. A list of any ODS recovery/recycling equipment that will be used and copy of the 40 CFR 82.162 EPA registration
- c. A list of any refrigeration/air conditioning units with a full charge of more than 50 pounds, not previously reported, including
 - i. any identifying equipment numbers
 - ii. the location of the equipment (building/room)
 - iii. the owning organization or contract name and number
 - iv. a narrative description of the equipment.
 - v. refrigeration or air conditioning equipment with a full charge of > 50 pounds, permanently removed from service during the year.

9. **OPR:** See Paragraphs above

10. **FIRST SUBMISSION DATE:** See Paragraphs above

11. **MAINTENANCE:** See Paragraphs above

12. **COPIES/DISTRIBUTION:**

1 e-copy to Program Repository via EDMS workflow.

13. **REMARKS:**

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Export Control Plan (ECP)	2. Date of Current Version January 15, 2010	3a. DRD No. C-II-01	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) Document the contractor's approach for export control.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.6 Clause H.15 and NFS 1852.225-70		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe all export control activities related to the performance of contract requirements.

8b. CONTENT: The contractor shall prepare and submit an Export Control Plan (ECP), describing the contractor's planned approach for accomplishing contract functions while adhering to export laws, regulations and directives.

8c. FORMAT: Contractor format is acceptable.

9. OPR: JA

10. FIRST SUBMISSION DATE: Draft Plan with in 30 calendar days after contract award. Final contractor approved Plan with in 120 calendar days after contract award.

Frequency Of Submission: Annually
Additional Submissions: As Requested

11. MAINTENANCE: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: The ECP Plan requires concurrence of the Center Export Administrator (CEA). The plan shall be submitted within 30 calendar days after contract start in draft form and revised to provide a final plan for approval within 120 calendar days after contract start. The plan shall be reviewed at least annually thereafter and updated as required.

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Export Control Audit Results	2. Date of Current Version January 15, 2010	3a. DRD No. C-II-02	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide insight into the Contractor's Export Control processes			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.6 Clause H.15 and NFS 1852.225-70		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Audits should include a thorough examination of all export control processes (as outlined in the Contractor's Export Control Plan) associated with this contract, areas for improvement (if any), and corrective action plans for identified areas of improvement. Affected subcontractors are required to do their own self-audits and report the results of the audit to NASA through the Cargo Mission Contract prime contractor. Prior to audit completion, inclusion on the audit process thru informal statuses to the JSC Export Services Team or Center Export Administrator is optional and might prove useful in the success of this effort.

8b. CONTENT:

- (a) Define your current audit processes
- (b) Document the export control processes audited and audit findings
- (c) Based on audit findings, the contractor/subcontractor shall include corrective action plans for any processes identified for improvements and notification when the correction of any non-conformances has been completed.

8c. FORMAT: a, b, c, and d must be submitted to the Center Export Administrator (CEA) at the end of each fiscal year for review and approval and be in an acceptable format (e.g. Microsoft Word, Excel, etc.) that is compatible with the Program authorized repository

9. OPR: JA

10. FIRST SUBMISSION DATE: September 30, 2011

Frequency Of Submission: annually, at the end of each fiscal year

Additional Submissions:

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS:

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Information Technology (IT) Security Plan and Reports 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-IT-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To meet IT security reporting requirements			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW 1.4, NPR 2810.1A, NPD 2810.1A, NFS 1852.204-76, FIPS-PUB-199, NIST SP 800-18, 800-30, 800-34, 800-37, 800-53, , SOP-0030C, , SOP-0040,		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The Contractor shall prepare the deliverable as follows:

SCOPE: This DRD applies to all internal and external Information Technology (IT) systems that are managed under this contract and those that contain or process NASA data or information.

CONTENT:

I. Internal Systems

- (a) The Contractor shall update and maintain Certification and Accreditation (C&A) packages and related documentation for ISS Program IT systems as per NPR 2810.1A, ITS-SOP-0030C and NIST 800-37. Major re-certifications of IT Systems requiring C&A occur every three years, and the Contractor must prepare for and support this activity to ensure successful system re-certification.
 - (1) The Contractor shall map types of ISS information and ISS Program IT systems to security categories as per NPR 2810.1A, , FIPS-PUB-199 and NIST 800-60 (Volumes 1 and 2).
 - (2) The Contractor shall update risk assessments for ISS Program IT systems as per NPR 2810.1A and NIST 800-30.
 - (3) The Contractor shall update and maintain a Security Plan and a Plan of Actions and Milestones (POA&M) for ISS Program IT systems as per NPR 2810.1A, and NIST 800-18 Rev 1, assessing security controls as per NIST 800-53.
 - (4) The Contractor shall perform periodic technical assessment, security testing and continuous monitoring of ISS Program IT systems as per NPR 2810.1A and NITR 2810-12.
 - (5) The Contractor shall perform disaster recover, contingency, and continuity of operations planning and testing for ISS Program IT systems as per NPR 2810.1A and NITR 2810-15. The planning and testing shall include support of Center severe-weather annual planning and testing.

II. External Systems

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FORMAT: As defined in NPR 2810.1A and the applicable NIST, NITR and ITS-SOP documents specified above.

9. OPR: OH/ISS Management Systems Office

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award

Frequency of Submission: As defined in NPR 2810.1A

Additional Submissions: As defined in NPR 2810.1A

11. MAINTENANCE: As defined in NPR 2810.1A

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management

Program Authorized Repository Upload Notification: OH/ISS Chief Information Officer

1 electronic copy: Program Authorized Repository

13. REMARKS: None.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: IT Management Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-IT-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) The IT Management Plan is required to manage IT activities within the CMC, to manage interfaces with other ISS Program users/customers and to manage interfaces with institutional IT providers.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.4		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The Contractor shall prepare the deliverable as follows:

SCOPE: The Contractor shall provide plans to coordinate and execute all technical and administrative tasks for all activities required to manage ISS Program IT resources and interface with other ISS Program and institutional IT providers.

CONTENT: The IT Management Plan shall be an umbrella document, which encompasses and integrates all IT management activities. As a minimum, the IT Management Plan shall cover:

- A. The significant policies and plans of all aspects of reportable IT.
- B. Levels of approvals.
- C. Flow of authority.
- D. External interfaces with the Government, other ISS Program Contractors, and institutional IT providers.
- E. The relationship between and integration of IT DRDs to the overall management of the IT content.
- F. IT Metrics will be partnered annually and shall include:

(a) LEVEL 1 METRICS: The Contractor shall calculate and report service delivery, productivity, system availability, problem identification/resolution, and customer satisfaction for each functional area on a monthly basis. The monthly reports shall be available to the government within 2 weeks following monthly closeout. The Contractor shall use the same information to create and report quarterly and annual roll-ups.

(b) LEVEL 2 METRICS: Contractor-specific metrics will augment or provide greater detail than Level 1 metrics and identify key areas of interest (such as the measurement of proactive, vendor-discovered, versus user-discovered, problems). These metrics will be specified by the Contractor and will be used to augment, validate, and ensure the completeness of the Level 1 metrics; however, regular reporting of Contractor-specific metrics to the Government is not required. These metrics shall also be used to ensure the impartiality, effectiveness, and

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consistency of the overall metric gathering and reporting process.

(c) **LEVEL 3 METRICS:** The Contractor shall create a set of metrics, comprised of the previously reported Level 1 and Contractor-specific metrics, which will allow for the evaluation of time-based trends. These metrics will illustrate IOSS service level trends over the previous three-month or greater period.

(d) **DAILY METRICS SUPPORT:** The Contractor shall provide identification of work closures on a daily basis and shall provide for online read access to the detailed information for the closed work for a limited number (not to exceed 5) of individuals identified by the Contracting Officer (CO). These individuals should be able to request online reports, formatted from the available parameters.

FORMAT: Contractor-supplied format, compatible with ISS document standards

9. **OPR:** OH/ISS Management Systems Office

10. **FIRST SUBMISSION DATE:** 30 calendar days after contract award

Frequency of Submission: Once

Additional Submissions: The IT Management Plan shall be updated as required to reflect significant changes that occur after its initial publication.

11. **MAINTENANCE:** The IT Management Plan shall be maintained electronically in the ISS EDMS (or equivalent).

12. **COPIES/DISTRIBUTION:**

Program Authorized Repository Upload Notification: OH2/Data Management

Program Authorized Repository Upload Notification: OH/ ISS Management Systems Office

1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Certification of Flight Readiness (CoFR) Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-MI-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide a management approach and implementation plan for Certification of Flight Readiness (CoFR) endorsement			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW 1.5 SSP 50108		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe the management approach and planned implementation methods for accomplishing the contractor's CoFR responsibilities and requirements of the contract.

8b. CONTENT: Address all contractor responsibilities for preparing the CoFR endorsement in accordance with SSP 50108. The Plan must address the relationship to NASA counterparts and the division of responsibility for the CoFR endorsement activities.

8c. FORMAT: Contractor format is acceptable

9. OPR: OC

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award.
 Final/approved due 75 calendar days after contract award.
 Review: Provide annual review and update as required. If there are no changes since the last update, the Contractor shall re-certify it's accuracy NLT 1 October of each fiscal year.

11. MAINTENANCE: Changes to the plan shall be incorporated as required by change page or complete reissue. Changes to Flight Readiness Status and Endorsements shall be made as required. The contractor shall maintain a historical file of Flight Readiness Status.

12. COPIES/DISTRIBUTION:
 1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Cargo Integration Cargo CAD Models for Launch, Return and On-Orbit Configurations	2. Date of Current Version January 15, 2010	3a. DRD No. C-MI-03	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) The CAD models will be used to insure the integrated assemblies are compatible with ISS visiting vehicles. The CAD models are used to assess clearances for both launch, return and on-orbit operations.			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW 3.2.4 and 5.4		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Develop and deliver CAD models for the hardware within the scope of this SOW. Models of the hardware will be delivered to the USOS Acceptance and ISS Vehicle Sustaining Contractor. Best Available, As-designed models for planned construction are required and as-built models are required.

8b. CONTENT:
CAD models should be 3-D CAD models sufficient detail that the external and internal geometry shows an accurate depiction of the hardware. Two levels of fidelity are expected.

Exterior CAD Models

A low fidelity model is required that shows all hardware external extrusions.

A high fidelity model that shows all hardware external extrusions is required which includes higher fidelity renderings of the following details (but are not limited to): docking aids, debris shields, cables, cable clamps, brackets, antennas, cameras, lights, targets, vents, handrails, EVA aids, sensors, thrusters, and element-to-element interface geometry. The models shall also include surface features that would prohibit the installation of any SVS target and surface features that would obstruct a camera's view of the SVS targets. Visible ORUs planned to be replaced on-orbit should be included in the model and partially visible ORUs that require a crewmember to replace should also be modeled as complete entities.

Launch and on-orbit configurations are required if the "as launched" hardware model is different than the on-orbit model. A description of which files to use for each configuration is required.

Interior CAD Models

Low fidelity CAD models of interior features are required that include the interior pressure shell, standoffs, hatches, stowage compartments, and view ports. Attach

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features for additional details such as vents; lights, and handrails are not specifically required, although models shall be complete with appropriate datum information such that additional details can be appropriately placed as they become available.

High fidelity CAD models of interior features are required that include the following details: internal pressure shell, standoffs, hatches, ports, stowage compartments, rack attachments, vents, lights, handrails, racks, seat track, and emergency equipment. All objects that deploy rotate or otherwise move shall be appropriately documented and modeled with location and limit parameters described.

8c. FORMAT:

Exterior CAD Models

Models shall be full scale in English (inches) units.

Models shall be constructed to nominal dimensions.

Models should be built with respect to element local coordinate system as defined by SSP 30219.

One of the following formats should be provided: CATIA, UG, Pro-E, JT or Microstation.

Translation: STEP AP203 neutral file format acceptable only if none of the above formats are available.

Solid Models Only—Models may be unparameterized “dumb solids” meaning tolerance data; model history, material properties, etc. need not be included. CATIA models must be solid-E.

Model parts should be individual entities and not fused together. This will allow CAD team to update the model based on hardware measurements. Assembly structure, part names and part numbers would be helpful. However, for controlling file size growth and having redundant geometry, all identical components (i.e., handrails, connectors, etc) will be nested in detail/ditto space/assemblies. For example if 20 identical handrails are used, only one detail is required and the rest should be in ditto space/assembly.

Description on movement limits for any articulating items should be included in the model/drawing.

As-designed and As-built (validated and final) models shall be validated to released engineering drawings. Drawings should also be located in the VMDB.

Interior CAD Models

Models shall be full scale in English (inches) units.

Models shall be constructed to nominal dimensions.

Models should be built with respect to element local coordinate system as defined by SSP 30219.

Solid models only

Models may be supplied in CATIA, UG, Pro-E, Parasolid, DGN, SLA, VMRL, JT or Microstation formats

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Translation: STEP AP203 neutral file format acceptable only if none of the above formats are available.

Interior models shall be delivered either separate from exterior models, or as an appropriately documented assembly such that interior models can easily be separated leaving both interior and exterior features intact. If supplied as separate models, information to associate interior to exterior shall be provided.

Where interior subassemblies are supplied as separate models, sufficient documentation shall be provided to support correct geometrical integration of each subassembly into its larger interior element.

A model tree shall be provided which documents the element model assembly architecture as well as model and subassembly titles.

Supplied configuration data shall include: 1) Identification of the configuration baseline documented source including approved changes incorporated/not-incorporated, and 2) Configuration description data compared with previously delivered versions of the same models.

Model parts should be individual entities and not fused together.

Models and associated assembly trees and configuration data shall be delivered electronically via FTP site or as Compact Discs.

9. **OPR:** OM

10. **FIRST SUBMISSION DATE:**

Frequency of Submission: High fidelity best available CAD model required at L-21 months, Design Review 1 or Preliminary Design Review. (electronically accessible). High fidelity validated CAD model required at L-15 months, Design Review 2 or Critical Design Review (electronically accessible). High fidelity final CAD model required at L-6 months or Acceptance Data Package.

Additional Submissions: The drawings shall be submitted for all remaining flights through Assembly Complete according to agreed to template of best available model at L-21 months, validated model at L-15 and final model at L-6 month.

11. **MAINTENANCE:** Changes and/or updating of models shall be accomplished in accordance with the Contractor's engineering system and the provisions cited through Sustaining Engineering for the as-built configuration. Models must be maintained electronically.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

13. **REMARKS:**

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: ISS Vehicle Engineering Data 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-MI-04	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To describe the overall data requirements to be delivered to the VMDB.			5. DRD Category Technical
6. References (SOW, Clause, etc.) SOW paragraph 5.3		7. Interrelationships (e.g., with other DRDs) DRD C-MI-05 and DRD C-SA-06	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This DRD encompasses the capture, storage, loading, integration, sustaining and configuration management of Vehicle engineering data and GFD that will reside in the Vehicle Master Database (VMDB) (a Government Furnished Database).

GFD providers shall be IPs (reference BDEALS) and the manufacturers of GFE. This DR is not intended to generate any data not required in the Statement of Work or other DRDs.

8b. CONTENT:

1) The ISS Vehicle, as defined by SSP 41000, System Specification for the International Space Station, and modified by latest revision, engineering and safety Data shall include:

(a) Configuration Data

- Drawings and schematics
- Master Equipment List (MEL) (Indentured Parts List [IPL])
- Identification of as-built configuration (SSAV)

(b) Resource Data

- Mass Properties (weight and c.g.)
- Power and Thermal

(c) Assembly Data

- Assembly Sequence
- Traffic Model

(d) Performance and Characteristics Data (Space Station Operations Data Book [SSODB]).

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- Constraints and Operational Limits, Design Limits, Hardware Characteristics for the operating envelope
- (e) Electromagnetic and Environment Interference
- (f) Safety and Mission Assurance
- Safety Hazards
- (g) Parts Selection and Control
- Electrical, Electronic, and Electromechanic.
- (h) Component Electrical Power and Thermal Consumption during steady-state, standby, startup, and peak operations
- 2) The GFD engineering and safety data shall include applicable items of:
- (a) Configuration Data
- Drawings and schematics
 - Master Equipment List (MEL)(IPL)
 - Identification of as-built configuration (SSAV)
- (b) Resource Data
- Mass Properties (weight and c.g.)
 - Power and Thermal
- (c) Safety and Mission Assurance
- Safety Hazards
- (d) Electrical Power and Thermal Consumption
- 8c. FORMAT:** Data shall be stored, managed and controlled in VMDB electronic format. The data inventory shall be electronically generated and available as a report from the VMDB.
Copy of all GFD hard copy data received for conversion into electronic format shall be retained in EDM provided storage.
- 9. OPR:** OH2, Management Systems Office
- 10. FIRST SUBMISSION DATE:** Data set and inventory updates - Provide data as mutually established by NASA and Contractor.
- Frequency Of Submission:**
Additional Submissions:
- 11. MAINTENANCE:** The DR shall be maintained electronically.
- 12. COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
- 13. REMARKS:**

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Engineering Drawings and Associated Lists 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-MI-05	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide the design data used to manufacture, install, verify, operate, and maintain the products of this contract.			5. DRD Category Technical
6. References (SOW, Clause, etc.) a. SOW 3.2.3, 5.3 b. ASME Y14.34M, Drawings, Engineering and Associated Lists c. ASME Y14.100, Engineering Drawing Practices d. MIL-PRF-28002C, Requirements for Raster Graphics Representation in Binary Format e. IEEE/ASTM SI 10-2002, American National Standard for Use of the International System of Units (SI): The Modern Metric System f. SSP 30695 Space Station Quality Assurance Acceptance Data Package Requirements Specification g. Mil-STD-100M, Department of defense standard practice for engineering drawings		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This DR establishes the content, format, control, delivery requirements and post delivery maintenance of drawings, schematics, and associated lists prepared by the contractors and/or obtained from subcontractors/vendors for products of this contract. Subcontractor/vendor drawings, describing items classified as minor procurements or limited development items, which were not developed on CAD systems, are exempt from the electronic transmission and database requirements herein. These drawings shall be accepted by the Prime Contractor and converted to an electronic format using a file format consistent with the requirements in format paragraph for delivery under this DRD.

8b. CONTENT: Raster Images are to be Group 4 raster images, prepared per MIL-PRF-28002C and applicable documents. The format and quality verification requirements for Raster images of engineering drawing and related documents shall be in conformance with MIL-PRF-28002C, section 6.4.5 (Ordering Data). Ordering data to be used for the interchange of engineering drawings and associated document images are as follows:

1. The basic requirements for interchange of raster image of engineering drawings and related documents shall be in accordance with Military Specification, Requirements for Raster Graphics Representation in Binary Format, MIL-PRF-28002C.
2. The type of raster graphics being procured is Type 1 (untiled).

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3. The delivery medium to be used shall be either by magnetic or an electronic transmission, as determined by the Product Group and Tier 1 Subcontractor organizations involved in the interchange.
4. Proper viewing orientation shall be based on a pixel element path direction of 0 degrees and a line progression direction of 270 degrees, as defined in section 6.4.6, and shown in Figures 1 and 2 of MIL-PRF-28002C.
5. Raster image pixel element spacing shall be 200 dots per inch (dpi) minimum.
6. No over-scanning is required beyond the drawing sizes listed in section 6.4.2; however, over-scanning is encouraged to capture ancillary information that is placed outside the border, such as CAD file name or plot date.
7. Bit ordering shall be MSB to LSB (most significant bit to least significant bit).
8. Coding of background and foreground information. To the extent that a drawing represents lines on paper, the pixel elements representing lines shall be coded as "black" and those pixel elements representing the paper background shall be coded as "white". This coding convention shall hold, regardless of the colors used for display on any particular device, and regardless of the coding as "0" or "1" on any particular system. In this way, white pixel elements (paper) may be processed as background, and black pixel elements (lines) may be processed as foreground.

NOTE: The preceding definition of the convention for coding background and foreground has been provided because a choice of convention has not been defined in MIL-PRF-28002C or CCITT Recommendation T.6. This convention is needed to support processing of drawing images without human interpretation.

- 8c. FORMAT:** Delivery to NASA of drawings and associated lists will be made electronically, to the NASA server bundled into a ". zip" or a ". tar" file, as mutually agreed to by the NASA and Contractor organizations involved in the interchange and consistent with the specific requirements discussed below.

Delivery of drawing, and associated list files will be electronic. The file formats and structures of drawing delivery packages are defined in the attachment.

Drawing deliveries will be in one of the following formats as mutually agreed to between the Prime Contractor and NASA: Raster image format, HPGL plot files, PDF files, or Printerleaf files. "A" size (8.5x11) book form drawings may be delivered in an electronic format other than raster image (including PDF files) as mutually agreed to by the NASA and Contractor organizations involved in the interchange.

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Other associated lists, including engineering parts list, shall be delivered in one of the following formats as mutually agreed to between the Contractor and NASA: ASCII text files, MS Excel files, HPGL plot files, Printerleaf files, PDF files, or raster image format.

- a. Engineering flight drawings shall be in accordance with the intent of ASME Y14.100-2000 (Exceptions to this below). For inseparable, integral items which require no intermediate maintenance activities upon installation and operation, specification of part marking and identification requirements in all applicable product drawings may be considered optional.

Exception:

ASME Y14.100 Engineering Drawing Practices, Section D-9.9 Transferring Design Responsibility to Another Activity.

- b. Drawings for Ground Support Equipment (GSE), Functionally Equivalent Units, and Facility Outfitting shall be in accordance with the intent of ASME Y14.34M-1996, Level 2 characteristics, ASME Y14.100-2000, and the specific tailoring shall be as defined by a Product Group-prepared and Prime Contractor-approved GSE/TSE Tailoring Document submitted and maintained under the associated SDRL. Regardless of tailoring, the following requirements shall be met:

Drawings will be provided to the lowest level of assembly subject to replacement during maintenance. Existing drawing or catalog data may be provided for items incorporated without alteration into GSE design.

Processes shall be referenced to military specifications, described in the drawings, or when referenced to company standards, the standards shall be provided as part of the drawing package delivered per this DR.

ANSI standards shall be used for dimensions and tolerance.

Acceptance test requirements shall be identified for replaceable functional components.

Cable diagrams for the GSE unit shall be provided. Connector reference numbers including commercial-off-the-shelf (COTS) receptacles shall be shown. Identify COTS connectors by the vendor's part number, cage code (if available) and manufacturer's name and address.

- c. Drawings for Facility Outfitting (Software Verification Facility, SVF) shall be in accordance with the intent of ASME Y14.34M-1996 (Level 1 classification) and ASME Y14.100-2000.
- d. All design activities shall use the methods designated in IEEE/ASTM SI 10-2002 to convert dimensional units from one system (SI or English) to another, where required for interfaces with International Partners.

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- e. All design activities shall use the U.S. convention on third-angle projection in depicting views on drawings.
- f. Where design activity material or process specification numbers are called out, the equivalent Government or industry specification numbers shall accompany them wherever a Government or industry specification is applicable.
- g. Engineering parts list, bill of materials, and note format shall be consistent with ASME Y14.100 and delivered in ASCII format, Raster Image or Printerleaf with each drawing.
- h. Electronic formats shall provide for magnetic, optical media, or electronic transmission exchanges between the Product Group and Prime Contractor computer systems.

Delivery of drawings, and associated list files will be electronic. The file formats and structures of drawing delivery packages are defined in the C-MI-05 Attachment.

Drawing deliveries will be in one of the following formats as mutually agreed to between the Product Group and the Prime Contractor: Raster image format, HPGL plot files, PDF files, or Printerleaf files.

Other associated lists shall be delivered in one of the following formats as mutually agreed to between the Product Group and the Prime Contractor: ASCII text files, HPGL plot files, Printerleaf files, MS Excel files, PDF files, or raster image format.

- i. See the attachment (C-MI-05 Attachment) that describes the formats for the Headers, Content and Packaging requirements for delivering engineering drawings.

9. OPR: OM or OB

10. FIRST SUBMISSION DATE:

Frequency Of Submission: Available for major design reviews with electronic data delivery to the Vehicle Master Data Base (VMDB). Drawing delivery provide for each applicable Acceptance Data Packages. CAGE Codes for drawings on the CMC will not be updated until the drawings are required to be updated for technical reasons.

Additional Submissions: The drawings shall be submitted through the end of contract period of performance.

11. MAINTENANCE: The document shall be maintained electronically.

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Changes and/or updating of drawings and list shall be accomplished in accordance with the Contractor's engineering system and the provisions of the cited applicable documents. Drawings shall be maintained electronically.

- 12. COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
- 13. REMARKS:** See C-MI-05 Attachment that describes the formats for the Headers, Content and Packaging requirements for delivering engineering drawings.

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C-MI-05 Attachment

1.0 INTRODUCTION

This attachment defines the specific requirements for the delivery of engineering drawings and associated lists.

1.1 HOW TO USE THIS ATTACHMENT

This attachment will specify the format in which engineering drawings and associated lists are to be delivered by the contractor. Contractor will deliver as described in this attachment.

	See Section
Drawings	2.1
Change Documents	2.2
Parts Lists	2.3
Other Associated Lists	2.4

1.2 APPLICABLE DOCUMENTS

The following specifications are referenced in this document:

MIL-PRF-28002C, Requirements for Raster Graphics Representations in Binary Formats

MIL-STD-1840A, Automated Interchange of Technical Information

ASME Y14-100-2000*, Engineering Drawings Practices

ASME Y14.34*, Associated List

MIL-STD-100G, Engineering Drawing Practices

HP RTL, Reference Guide (Copyright 1994)

Note: *Drawings on the previous contract were governed by DOD-STD-100C and MIL-D-1000B, but these references have been retired and ASME Y14.100-2000 and ASME Y14.34 are the equivalent documents. The policy of the DoD is to utilize to the maximum degree possible those non-Government standards which satisfy the needs of the military. Accordingly, the MIL-STD-100 is revised periodically to take advantage of those non-Government standards which meet the DoD criterion for technical sufficiency. Similarly, and in keeping with the DoD practice of adopting non-Government standards whenever practicable, Chapters 600 and 700, as contained in previous versions of MIL-STD-100, have been entirely replaced by ASME Y14.35M and ASME Y14.34M respectively, and Chapter 200 is largely based on ASME Y14.24M. An accurate perception of DoD Engineering Drawing Practices therefore necessitates user recognition of MIL-STD-100G, ASME Y14.24M, ASME Y14.34M, ASME Y14.35M, and ASME Y14.100M as being a composite set.

1.3 GLOSSARY OF TERMS

ASCII [American Standard Code for Informational Interchange]
The predominant character set encoding of present day computers. The code includes the 128 upper and lower letters, numerals, and special characters, each encoded in a unique 7 or 8-bit binary number.

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ASCII	Text A subset of ASCII, common to virtually all computer devices, consisting principally of printable characters.
CAGE	[Corporate And Government Entity] The code used to uniquely identify a manufacturer. The CAGE code acronym has replaced former acronym FSCM (Federal Supply Code for Manufacturers).
CCITT	[International Consultative Committee on Telegraphy and Telephony]
Delivery	A delivery, or drawing delivery, is a complete delivery made in accordance with F-PC05. This includes all of the drawings, change documentation, parts lists, associated lists, declaration files, and packaging files for the delivery. A delivery is made-up of multiple drawing packages and packaging files.
HPGL	[Hewlett-Packard Graphics Language] A widely used computer language for communicating with printers and plotters.
ISS Package	[International Space Station] Packages, or drawing packages, are the collection of files that relate specifically to a single drawing. This includes the drawing itself, change documentation, parts lists, associated lists, and declaration files specific to that drawing.
Pixels	Physical picture elements.
PDF	PDF (Portable Document Format) is a universal file format that preserves the fonts, images, graphics, and layout of any source document, regardless of the application and platform used to create it. Adobe PDF files are compact and complete, and can be shared, viewed, and printed by anyone with Adobe Reader software.
Raster	The closely spaced parallel lines produced on a display device. An image is formed by modulating the intensity of the individual pixels. A binary representation, "raster form," of the pixels can be used to digitally represent an image.
Raster Graphics	The presentation or storage of images in raster form.

2.0 DOCUMENTS

This section describes the formats that are to be delivered by the product group. In the tables Describing format, Header refers to the section of this document, which defines the relevant headers for this file format, Content refers to the section of this document, which describes the

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content of this format, and Packaging refers to the section of this document that describes the methods required to package.

2.1 DRAWINGS

Drawing images are to be delivered in one of the following formats, as directed by the SDS

TABLE 2.1-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE_Dwg_CL_DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE_Dwg_CL.IPL
HPGL	3.3	4.4	5.1	CAGE_Dwg_CL_DSI.HPL
PDF	3.6	4.7	5.1	CAGE_Dwg_CL_DSI.PDF

The dstdocid defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 2.1-2

Code	Description	Length (max)	Example(s)
CAGE:	Contractor CAGE Code	6 char	018355
Dwg:	Drawing number	40 char/digits	1F12345
CL: ¹	Change Letter	Up to 10 char as req’d	-, A, AY, A01
DSI: ²	Drawing Sheet Identifier	7 digits/underscore	002_015

¹ Up to 10 characters; initial (first) release shall be indicated by a single dash (“-”). ‘NEW’, ‘N/C’, ‘N/A’, or any other designation is not acceptable for an initial release. Each sheet should be marked with its current revision letter.

² First three digits indicate current sheet number; last three digits indicate total number of sheets for the drawing.

For example, a raster image of the third page (of six) of Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_1F12345_A_003_006.IMG”.

For example, a raster image scanned from a MIL-Std-1840 Condition 4 Aperture Card for pages 5 through 8 (of 16 pages total) of a Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_1F12345_A_005_016.IMG”.

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A printerleaf document of the same drawing (all sheets are present in a single printerleaf file) would have the dstdocid: “018355_1F12345_A.IPL”.

An Acrobat PDF document of the same drawing would have the dstocid: ”018355_1F12345_A_003_006.PDF.”

2.2 CHANGE DOCUMENTS

The change document, otherwise known as: Engineering Order (EO), Engineering Change Notices (ECN), Advanced Design Change Notices (ADCN) (unincorporated), or any other document used to describe the type and scope of changes that differentiate the current drawing from its previous revision. If this information is on the face of the drawing, no separate document need be delivered. The change document must contain: the drawing number affected, change letter, the part number affected, description of change, next assembly part number, and effectivity. Change documents are to be delivered in one of the following formats, as directed by the DRD.

TABLE 2.2-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .IMG
Printerleaf	3.4	4.5	5.1	<i>CAGE_EO_Dwg_CL</i> .IPL
HPGL	3.3	4.4	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .HPL
ASCII Text	3.1	4.1	5.1	<i>CAGE_EO_Dwg_CL</i> .LIS
PDF	3.6	4.7	5.1	<i>CAGE_EO_Dwg_CL_DSI</i> .PDF

Note: Where Dwg this can be either the drawing number or the EO/CR number.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined in Table 2.1-2.

For example, a raster image of the third page (of six) of the EO for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_EO_1F12345_A_003_006.IMG”.

A printerleaf document of the same drawing EO (All sheets are present in a single printerleaf file) would have the dstdocid: “018355_EO_1F12345_A.IPL”.

An Adobe PDF document of the same drawing EO would have the dstdocid of: “018355_EO_1F12345_A_003_006.PDF.”

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2.3 PARTS LISTS

The Parts Lists can be delivered as part of a Raster Image, Printerleaf file, MS Excel spreadsheet or file or as an ASCII file. If delivered in ASCII, the file shall be identified by Drawing Number and Change Letter. The Parts List shall contain, as a minimum, the following data elements for each constituent material: Material Code, description, quantity, and unit of measure. The Parts List shall contain, as a minimum, the following data elements for each component part: Part Number, quantity, description, and vendor CAGE Code (if purchased). Parts lists are to be delivered in the following formats defined in Table 2.3-1.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table.. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 2.3-1

Format	Header	Format	Packaging	Dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE_PL_Dwg_CL_DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE_PL_Dwg_CL.IPL
HPGL	3.3	4.4	5.1	CAGE_PL_Dwg_CL_DSI.HPL
ASCII Text	3.1	4.1	5.1	CAGE_PL_Dwg_CL.LIS
MS Excel	3.5	4.6	5.1	CAGE_PL_Dwg_CL.XLS
PDF	3.6	4.7	5.1	<i>CAGE_PL_Dwg_CL_DSI.PDF</i>

For example, as ASCII text PL for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_PL_1F12345_A.LIS”.

An Adobe PDF document of the same drawing PL would have the dstdocid of: “018355_PL_1F12345_A_003_006.PDF.”

2.3.1 DELIVERY OF PARTS LISTS ONLY

2.3.1.1 NAMING CONVENTION FOR DATASETS

The naming convention for the dataset of a Parts List only delivery shall be 3a768_PL_YYYYMMDD.tar or .zip (where YYYYMMDD shall be the year, month and day). For Boeing Huntsville’s subcontractor PL only deliveries you would add an “s” after the date such as 3a768_PL_YYYYMMDDs.tar or .zip.

NAMING CONVENTION FOR ASCII MAP FILE

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The naming convention for the ASCII Map File shall be 3a768_PL-Number_-.TXT. (Note: Where PL-Number_ - is the PL number and the Revision Letter or a dash.) For example an ASCII map file for the PL for drawing 9008477 would be 3A768_PL9008477_-A.TXT. Each PL can be mapped to only one drawing.

2.3.1.3 ATTACHMENT FILE

Please note the order in which the file names appear within each Parts List package; first the Parts List Declaration File, then the ASCII map file, Parts List files.

Each record shall be a maximum of 80 characters in lengthy, un-padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

10 20 30 40 50 60 70

123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789

3A768_20020929.DF
3A768_20020929.LET
3A768_20020929.ATT
3A768_DF_PL9008477_A.LIS
3A768_PL9008477_A.TXT
3A768_PL_PL9008477_A_001_001.IMG
3A768_DF_PL1J01512_-.LIS
3A768_PL1J01512_-.TXT
3A768_PL_PL1J01512_-_001_002.IMG
3A768_PL_PL1J01512_-_002_002.IMG

2.4 OTHER ASSOCIATED LISTS

Other Associated Lists (AL), those documents which are a part of the drawing package and are not otherwise defined in this document, are to be delivered in the following formats as described in Table 2.1-1, or as directed by the DRD.

Other Associated Lists (AL) must reference: the drawing number, change letter, and the part number (if applicable) of its parent drawing.

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore (“_”) as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes (shown in italicized font) applied to the file names above are explained in the following table. Static codes (shown in normal font) are applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

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TABLE 2.4-1

Format	Header	Format	Packaging	dstdocid
Group 4 Raster	3.2	4.3	5.1	CAGE_AL_Dwg_CL_DSI.IMG
Printerleaf	3.4	4.5	5.1	CAGE_AL_Dwg_CL.IPL
HPGL	3.3	4.4	5.1	CAGE_AL_Dwg_CL_DSI.HPL
ASCII Text	3.1	4.1	5.1	CAGE_AL_Dwg_CL.LIS
PDF	3.6	4.7	5.1	CAGE_AL_Dwg_CL_DSI.PDF

Note: Where Dwg this can be either the drawing number or the AL number.

For example, a raster image of the third page (of six) of the AL for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_AL_1F12345_A_003_006.IMG”.

A printerleaf document of the same drawing AL (All sheets are present in a single printerleaf file) would have the dstdocid: “018355_AL_1F12345_A.IPL”.

An Adobe PDF document of the same drawing AL would have the dstdocid of: “018355_AL_1F12345_A_003_006.PDF.”

3.0 FILE HEADERS

The file headers for drawing delivery files are detailed in this section. File names, types and content for those files used in the delivery of the drawing package are detailed in section 5.0.

3.1 ASCII TEXT FILE HEADER

Reference: MIL-STD-1840A, Paragraph 5.1.4.1

All text files share the same common file header structure.

Example:

```

      10      20      30              40  50      60      70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 1234567890

```

srcdocid: 1F02676_A.PL

dstdocid: 018355_PL_1F02676_A.LIS

txtfilid: AW

doccls: Unclass

notes:

Notes: srodoid: Original name of file (if none, use name in dstdocid)

dstdocid: Destination Document ID as defined in sections 2.1-2.5

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txtfilid: Use as directed in the content description of the text file
 doccls: Use as shown
 notes: Use as shown,
 unless directed
 otherwise.

3.2 RASTER FILE HEADER

All MIL-PRF-28002(C) raster files share a common header structure. The following information is provided to clarify the values these fields should take for this application. The raster image files are set up so that the first 2048 bytes contain the header information in ASCII code and the residual bytes containing the image data are encoded in raster CCITT Group 4 code. The first 2048 bytes shall be written with 128 byte ANSI type F fixed-length records using ASCII data. The area provided for data in a given record can be computed by subtracting the length of the record tag (the field name with a colon and space at the end, i.e.; "notes:") from 128. The notes field in the header can store 121 characters of test (128-7).

Rec	Name	Contents
1	srcdocid	Filename used to uniquely identify this drawing in senders system (80 characters of data max.)
2	dstdocid	Destination Document ID as defined in sections 2.1-2.5
3	txtfilid	The text literal "None"
4	figid	The text literal "None"
5	srcgph	The text literal "None"
6	doccls	The text literal "Unclass"
7	rtype	The text literal "1", describing a type 1 raster per MIL-PRF-28002C ÁÁÁÁ
8	rorient	Two three digit, zero padded character, strings separated by a comma, specifying the integer pel path and line progression, i.e., "000,270:
9	rpelcnt	Two six digit, zero padded character strings separated by a comma, specifying the integer pel count, i.e.; "040800,052800"
10	rdensty	The text literal "0200", specifying a raster density of 200dpi
11	notes	Free test

Example: The first 90 characters of the first 3 records:

```

10    20    30          40  50    60    70    80
123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789
123456789
srcdocid: DL1F12345 18355 A 000100001U EHN 002
dstdocid: 018355_1F12345_A_001_006.IMG
    
```

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txtfilid: None
figid: None
srcgph: None
doccls: Unclass
rtype: 1
rorient: 000,270
rpelcnt: 040800,052800
rdensty: 0200
Notes: None

3.3 HEWLETT PACKARD GRAPHIC LANGUAGE FILE HEADER

Hewlett Packard Graphic Language (HPGL) files do not support file headers

3.4 PRINTERLEAF FILE HEADER

Do not alter the Printerleaf file headers.

3.5 MS EXCEL FILE HEADER

MS Excel does not require a header.

3.6 Adobe Acrobat PDF FILE HEADER

Do not alter the PDF file headers.

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4.0 DATA FILE FORMAT

The file formats for drawing delivery files are detailed in this section. File names, types, and content for those files used in the delivery of the drawing package are detailed in section 5.0.

4.1 ASCII DATA FILE FORMAT

Files shall be 80 (Portrait) or 132 (Landscape) characters wide, blank padded, followed by a Carriage Return Line Feed (CRLF) [ASCII 13 followed by ASCII 10] terminator. Only 7 bit ASCII characters shall be used in ASCII data files

4.2 DRAWING INFORMATION FILE FORMAT

The drawing information file is an ASCII text file contained variable length records, terminated by a CRLF [ASCII 13 followed by ASCII 10] sequence. See section 2.4 for specific formatting requirements relating to the content of the document.

4.3 RASTER IMAGE FILE FORMAT

Raster images are to be Group 4 raster images, prepared per MIL-PRF-28002C and applicable documents. The format and quality verification requirements for Raster images of engineering drawings and related documents shall be in conformance with MIL-PRF-28002C, section 6.4.5 (Ordering Data). Ordering data to be used for the interchange of engineering drawing and associated document images are as follows:

- a. The basic requirements for interchange of raster image of engineering drawings and related documents shall be in accordance with Military Specification, Requirements for Raster Graphics Representation in Binary Format, MIL-PRF-28002C.
- b. The type of raster graphics being procured is Type 1 (untiled).
- c. The delivery medium to be used shall be either by magnetic or an electronic transmission, as determined by the organizations involved in the interchange.
- d. Proper viewing orientation for single page per raster fin engineering documents shall be based on a pel path direction of 0 degrees and a line progression direction of 270 degrees, as defined in section 6.4.6, and shown in Figures 1 and 2 of MIL-PRF-28002C. Multi sheet per raster file engineering documents (i.e., documents scanned from MIL-STD-1840 condition 4 aperture cars) may use one of the other sets of values defined in section 6.4.6 and shown in Figures 1 and 2 of MIL-PRF-28002C, if said values represent the normal viewing orientation.
- e. Raster image pel (pixel element) spacing shall be 200 dpi (dots per inch) minimum.
- f. No overscanning is required beyond the drawing sizes listed in section 6.4.2; however, overscanning is encouraged to capture ancillary information that is placed outside the border, such as CAD file name or plot date.
- g. Bit ordering shall be MSB to LSB (most significant bit to least significant bit).
- h. Coding of background and foreground information. To the extent that a drawing represents lines on paper, the picture elements (pels) representing lines shall be coded as "black" and those pels representing the paper background shall be coded as "white". This coding convention shall hold, regardless of the colors used for display on any particular device, and

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regardless of the coding as "0" or "1" on any particular system. In this way, white pels (paper) may be processed as background, and black pels (lines) may be processed as foreground.

NOTE: The preceding definition of the convention for coding background and foreground has been provided because a choice of convention has not been defined in MIL-PRF-28002C or CCITT Recommendation T.6. This convention is needed to support processing of drawing images without human interpretation.

4.4 HEWLETT PACKARD GRAPHIC LANGUAGE DATA FILE FORMAT

Hewlett Packard Graphic Language (HPGL) files are to be compliant with HPGL/2 as defined in "The HP-GL/2 and HP RTL Reference Guide [A Handbook for Program Developers]", Hewlett Packard, 1994. (HP part number 5959-9733).

4.5 PRINTERLEAF DATA FILE FORMAT

Printerleaf files shall be compatible with those produced by Interleaf version 5.x.

4.6 MS EXCEL DATA FILE FORMAT

Ms excel files shall be compatible with Windows 97, 2000 or any succeeding version.

4.7 Adobe Acrobat PDF FILE FORMAT

Adobe Acrobat PDF files shall be compatible with Adobe Acrobat Reader version 4.0 or higher.

5.0 PACKAGING OF DOCUMENTS FOR DELIVERY

This section details file names, types, and content for those files used in the delivery of drawing packages. Regardless of the methods and formats used, each drawing package must be complete within a submittal when delivered.

Drawings packages split across submittals or incomplete drawing packages will not be accepted. All pages belonging to a multiple-page drawing must be accounted for and included within the drawing submittal and must be delivered in the same submittal

The Drawing Declaration file must include all images files, change document files, associated lists, and parts list files submitted electronically.

Copies of the transmittal letter (5.1.2) and its attachment (5.1.3) are to accompany the electronic portion of the delivery.

5.1 PACKAGING OF ELECTRONIC DOCUMENTS FOR DELIVERY

This section details file names, types, and content for those files used in the delivery of electronic documents in drawing packages. A delivery package consists of one delivery declaration file, one transmittal letter, one attachment file, and one or more drawing packages. Each drawing package may contain from one to 999 drawings and be organized as follows:

Delivery Declaration file
 Transmittal Letter

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Attachment (Electronic)
Drawing declaration file #1
 One or more data files
Drawing declaration file #2
 One or more data files

5.1.1 DELIVERY DECLARATION FILES

The delivery declaration file is an ASCII file, providing information about the source, destination of the delivery as a whole and specifically the transmittal letter and its attachment.

The destination document ID (dstdocid) for the delivery declaration file shall be a concatenation of the Contractor's six digit CAGE code, an underscore ("_"), the date of the delivery package's transmittal in the format YYYYMMDD, and the extension ".DF". For example, the dstdocid for a transmittal made on 17 March, 2002 by Boeing-Huntington Beach would be: "018355_20020317.DF". The file name of the delivery declaration file is to be the file's destination document ID (dstdocid).

The Delivery Declaration File contains 15 records. Each record shall be 80 characters in length, blank padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator. Use the format in the example below. Clarification of data fields is provided in the notes after the example. Where "None" or "Unclass" appears, use as shown. Each line in this file consists of a code starting in column 1, followed by a colon, followed by a space, followed by a data field pertinent to the delivery package. These codes are defined in MIL-STD-1840A.

The example below shows the formatting of a typical line srcdocid: "XMIT20020228".

Example of Delivery Declaration File (Do not include ruler):

```
10    20    30          40  50    60    70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 1234567890
```

srcsys: Boeing-Huntington Beach 5301 Bolsa Ave, HB CA 92647
srcdocid: XMIT20020123
srcrelid: NONE
chglvl: 20020123
dteisu: 20020123
dstsys: The Boeing Company: 13100 Space Center Blvd, Houston, TX 77059
dstdocid: 18355_20020123.DF
dstrelid: NONE
dtetrn: 20020123
dlvacc: F-PC-05
filcnt: T3
titcls: Unclass
doccls: Unclass
doctyp: NONE
docttl: NONE

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Notes:

- srcsys: Name and address of subcontractor
- srcdocid: Name of Transmittal Letter file on source system
- chglvl: Date of original document formatted YYYYMMDD
- dteisu: Date of issue of the latest change to this document
- dstsys: Name and address of receiving system
- dstdocid: Destination document ID as defined above
- dtetrn: Date of transmission or mailing date formatted YYYYMMDD
- dlvacc: Contract – use as shown
- filcnt: Number of files – use as shown.

5.1.2 TRANSMITTAL LETTER

The transmittal letter is an ASCII text document with no header. The file name and destination document ID (for use in the attachment) for the transmittal letter shall be a concatenation of the subcontractor’s six-digit CAGE code, an underscore (“_”), the date of the delivery package’s transmittal in the format YYYYMMDD and the extension “.LET”. Please note that with the exception of the extension, the file names of the transmittal letter and the delivery declaration file are identical. For example the dstdocid for a transmittal made on 17 March, 2002 by Boeing-Huntington Beach would be “018355_20020317.LET”.

Use the template below for the format of the Transmittal Letter. Note that it is not a formal contract letter. Formal contract transmittal letters are to be sent by contract administrator.

```

      10      20      30              40  50      60      70
123456789 193456789 123456789 123456789 123456789 123456789 123456789 1934567890
Date: 23-Jan-02
Subject: Space Station Data submittal

```

1. This is an electronic transmittal of Your Company Name Here drawings enumerated on the enclosed attachment
2. Distribution of the electronic drawing information has been sent to the computer database system at **Computer DescriptionHere** on January 23, 2002.
3. The number of drawing(s) transmitted: 3
4. A formal contract transmittal letter will follow under separate cover.

Each record shall be 80 characters in length, blank padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

5.1.3 ATTACHMENT

The attachment lists all of the destination document IDs for all of the files in a delivery package. The files are the Delivery Declaration File, the Transmittal Letter, the Attachment, and the filenames in each drawing package. The destination document ID for the attachment shall be a concatenation of the subcontractor’s six digit CAGE code, an underscore (“_”), the date of the delivery package’s transmittal in the format YYYYMMDD and the extension “.ATT”.

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Please note the order in which the file names appear within each drawing package; first the Drawing Declaration File, then the image file(s), Change Document files, Parts List files, and any other associated lists. Note also that the drawing title follows only the first image file for each drawing number.

Each record shall be a maximum of 80 characters in length, un-padded, followed by a CRLF (ASCII 13 followed by ASCII 10) terminator.

10 20 30 40 50 60 70

123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789

018355_20020123.DF
018355_20020123.LET
018355_20020123.ATT
018355_DF_1F04087_B.LIS
018355_1F04087_B_001_003.IMG FRAME ASSY, SLING-FLIGHT ELEMENT
018355_1F04087_B_002_003.IMG
018355_1F04087_B_003_003.IMG
018355_EO_993344_-.LIS
018355_PL_1F04087_B.LIS
018355_DF_1F65085_-.LIS
018355_1F65085_-_001_002.HPL BAR, SPREADER - FLIGHT ELEMENT SLING
018355_1F65085_-_002_002.HPL
018355_EO_993344_-.LIS
018355_PL_1F65085_-.LIS
018355_AL_SP-M-512_B.LIS
018355_DF_1F65555_-.LIS
018355_1F65555_-_001_002.IMG BRACKET ASSEMBLY-FLIGHT ELEMENT SLING
018355_1F65555_-_002_002.IMG
018355_EO_1F65555_-.LIS
018355_PL_1F65555_-.LIS
018355_AL_1F65555_-_001_002.IMG
018355_AL_1F65555_-_002_002.IMG

5.1.4 DRAWING DECLARATION FILE

The drawing declaration file is, in itself, a header for the drawing package, and consists of only header information. The file name and destination document ID (dstdocid) of the drawing declaration file is "CAGE_DF_DWG_CL.LIS".

The dstdocid, defines the destination document ID for file headers and delivery packaging purposes. Please note the use of the underscore ("_") as a delimiter between lexical tokens. This is very important because the software used to verify deliveries relies on this delimiter. Variable codes applied to the file names above are explained in the following table. Static codes are

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applied as shown. Do not forget the period preceding the extension. Variable codes are defined as follows:

TABLE 5.1.4-1

Code	Description	Length (max.)	Example(s)
CAGE	Contractor CAGE Code	6 char	018355
Dwg	Drawing number	40 char/digits	1F12345
CL ¹	Change Letter	Up to 10 char as req'd	-, A, AY, A01

1. One or two characters; initial (first) release shall be indicated by a single dash (“-”). ‘NEW’, ‘N/C’, ‘N/A’, or any other designation is not acceptable for an initial release.
Reference: MIL-STD-1840A, Paragraph 5.1.1.2

For example, the drawing file for Boeing-Huntington Beach drawing 1F12345, “A” change letter would have the dstdocid of: “018355_DF_1F12345_A.LIS”.

Example:

```

      10      20      30              40  50   60   70
123456789 123456789 123456789 123456789 123456789 123456789 123456789 123456789
srcsys: Boeing-Huntington Beach 5301 Bolsa Ave, HB CA 92647
srcdocid: 1F04087
srcrelid: NONE
chglvl: B
dteisu: 20020123
dstsys: The Boeing Company: 13100 Space Center Blvd, Houston, TX 77059
dstdocid: 018355_DF_1F04087_B.LIS
dstrelid: NONE
dtetrn: 20020123
dlvacc: F-PC-05
filcnt: R01, T01
titcls: Unclass
doccls: Unclass
doctyp: PD
docttl: FRAME ASSY, SLING-FLIGHT ELEMENT
    
```

Notes:

srcsys: Name and address of subcontractor (80 char max.)
srcdocid: Drawing number (35 char max.)
srcrelid: Use as shown
chglvl: Change Letter (use single “-” if new)(2 char max.)
dteisu: Date of issue of the latest change to this document (YYYYMMDD format)
dstsys: Name and address of receiving system

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dstdocid: Cage Code, Drawing number and Change letter (use single “-” if new)
 dtetrn: Date of transmission or mailing date formatted YYYYMMDD
 dl vacc: Contract – use as shown
 filcnt: Number of files R01 means one raster file. T4 means four text files, X07 means seven Printerleaf files, and L05 means five HPGL files, E01 means one MS Excel file, and P01 means one PDF file. (Comma separated)
 titlcls: Use as shown
 doccls: Use as shown
 doctyp: Use as shown
 docttl: Drawing title

The filcnt document types are as follows:

Type	Code
Group 4 Raster Image	R
ASCII Text File	T
Printerleaf File	X
HPGL/2 File	L
MS Excel File	E
PDF	P

5.1.5 DATA FILE NAMES

The file name for data files shall be the file’s description document ID (dstdocid), as defined in the relevant sections of this document.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: NF533 Monthly Cost Reporting	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-01	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 3	4. Use (Define need for, intended use of, and/or anticipated results of data) Provide summary level cost reporting to the International Space Station Program Office for the evaluation of the contractor's actual cost and fee for the planning, monitoring, and controlling of project and program resources, and for accruing cost.		5. DRD Category Administrative
6. References (SOW, Clause, etc.) NPD 9501.1G, NPR 9501.2D SOW 1.2.1		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: Overall instructions and guidance are provided in NPR 9501.2D.

8a. SCOPE: The monthly/quarterly report shall provide a report for projecting costs and equivalent personnel (EPs), for evaluating contractors' actual cost and fee, for the planning, monitoring, and controlling of project and program resources, and for accruing cost.

8b. CONTENT: Instructions for content are in Attachment 1. Content shall also include adding EPs associated with direct labor and EPs associated with subcontracts to the list of cost elements in NPR 9501.2D. Also added to the cost elements is a separate line for major subcontractor's costs. Major subcontractors are defined as contracts with \$1M annually. All content shall be mapped and reported at the ISS Program WBS level provided in Attachment 2. All content of C-PC-01 shall reconcile to C-PC-03, and C-PM-02.

8c. FORMAT: C-PC-01 shall be uploaded into EDMS as an Excel file, with the exception of the signature page, which shall be a .pdf format.

In addition to Attachments 1 and 2, the following modifications shall be made to the monthly format. A column shall be added in front of section 7a to provide for "Prior Years Costs" (this column shall remain blank until the beginning of FY12). For section 8 add 4 columns to provide for four months of forecast; also under section 8, a column shall be added to provide for "Balance of Current Year (forecast)."

The report shall be in three parts:

C-PC-01A shall be an executive summary narrative with variance explanations at each WBS level provided in attachment 2. Variance explanations shall be required when a +/- 5% and +/- \$10,000 variance occurs between the monthly forecasted cost and the actual cost for that month. The computation is (Monthly Forecasted Cost - Monthly Actual Cost / Monthly Forecasted Cost). The variance explanation shall identify the lowest level WBS contributing to the variance. In addition, variance explanations need to detail what caused the variance (i.e., ISS Program change in direction, unexpected problems, and discrepancy due to a change order.) Also addressed will

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be any impact to delivery and, or schedule and the contractor's plan for resolving the affect of the variance. The forecast plan shall be adjusted to reflect a change in baseline plan. The executive summary shall also explain (listing and amount) any contract value changes and any changes between the types of contract.

C-PC-01B shall be a top level summary listing by contract cost elements (see NPR 9501.2D) including EPs and major subcontractors. The top level summary shall also include a cost rollup at the WBS 1 level.

C-PC-01C shall be by the WBS level in Attachment 2. Detail for rollup and additional contractor requirements also are included in attachment 2. In addition, cost elements reported in C-PC-01A shall be reported in each section of the WBS designated as a rollup.

9. OPR: LO

- 10. FIRST SUBMISSION DATE:** NF533Q (initial baseline) shall be submitted 30 calendar days after authorization to proceed.

Frequency of Submission: 533M

- a. **533M** hardcopy due not later than 12 working days following the close of the contractor's monthly accounting period.
- b. **533M EDMS** due not later than 10 working days following the close of the contractor's monthly accounting period.

Frequency Submission: 533Q

- a. An annual 533Q is due 15 working days before the start of the new fiscal year.

- 11. MAINTENANCE:** The contractor shall provide a revised NF533M to correct errors when deemed necessary by the Financial Management Division. The revised NF533M shall be delivered prior to closure of the current JSC accounting system for the month. The reports shall be maintained electronically by the contractor

12. COPIES/DISTRIBUTION:

1 e-copy to Program Repository via EDMS workflow.

1 hardcopy to BG/Contracting Officer

Program Authorized Repository Upload Notification: LO, LF6, COTR, BG, OH/Assessment Office, OH/Data Management, DCMA

- 13. REMARKS:** None

C-PC-01 ATTACHMENT 1

The NASA Form 533 (NF533) reports provide data necessary for the following:

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, 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 Contractor Financial Management Reporting, NPR 9501.2D, or its most current revision, identifies the cost reporting requirements for a contract.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment. Examples of accrual accounting for common cost elements reported on the NF533 follow:

Cost Element

Labor: Reported to NASA as hours are incurred.

Equipment and Materials (commercial off the shelf): Generally reported to NASA when received and accepted by the contractor.

Manufactured Equipment: Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs or the use of supplemental information obtained from the vendor are acceptable methods used to calculate the cost accrual amount.

Leases: Reported to NASA using a proration over the life of the lease.

Travel: Reported to NASA as costs are incurred.

Subcontracts: Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material (significant), 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

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fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub-divisions of work. Data submitted by the subcontractor should be structured similar to the prime contractor's 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 sub-contractor costs reported and provide this information to the Contracting Officer and Center Deputy Chief Financial Officer (Finance).

Unfilled Orders: Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.

Fee: Should be accrued as earned using a consistent and auditable method to determine the amount. For example: an acceptable method would be to use historical data to determine the amount to accrue each month. Fee should be reported on the 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 the 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. Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533.

The due dates for the NF533M and NF533Q reports are outlined in NPR 9501.2D, Chapter 3. The following is a summary of the NF533 due date requirements.

NF533 Report Due Date

NF533M: 533M hardcopy due not later than 12 working days following the close of the contractor's monthly accounting period. 533M EDMS due not later than 10 working days following the close of the contractor's monthly accounting period.

NF533Q: Due not later than the 15th day of the month preceding the quarter being reported.

The due dates reflect the date the NF533 reports are loaded into EDMS, 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.

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Uncompensated overtime hours worked should be reported on NF533 reports as a separate line item or in the footnotes.

For contracts which have multiple schedules, a summary NF533 is required to provide a cumulative from inception cost for the contract, regardless of schedule.

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 NF533M 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 and column 7a of the NF533Q 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.

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SECTION J
Attachment J-8

CARGO MISSION CONTRACT

NASA Monthly Contractor Financial Management Report National Aeronautics and Space Administration				Form Approved OMB No. 2700-0003		2. REPORT FOR MONTH ENDING AND NUMBER OF WORKING DAYS				
TO:			FROM:			3. CONTRACT VALUE		a. COST \$		b. FEE \$
1. DESCRIPTION OF CONTRACT	a. TYPE		b. CONTRACT NO. & LATEST DEFINITIZED MODIFICATION NO.			4. FUND LIMITATION \$				
	c. SCOPE OF WORK		d. AUTH. CONTR. REP. (Signature)		DATE	5. BILLING				
						a. INVOICE AMTS. BILLED \$		b. TOTAL PYTS. REC'D \$		
6. REPORTING CATEGORY	7. COST INCURRED/HOURS WORKED				8. ESTIMATED COST/HOURS TO COMPLETE		9. ESTIMATED FINAL		10. UN-	
	DURING MONTH		CUM TO DATE		DETAIL		BALANCE OF CONTRACT	COST/HOURS		FILLED ORDERS OUTSTANDING
	ACTUAL a.	PLANNE D b.	ACTUAL c.	PLANNE D d.	a.	b.	c.	a.	CONTRACT VALUE b.	

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CARGO MISSION CONTRACT

Baseline Plan Identification (Col. 7b & 7d): Revision No. _____, Dated _____

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Quarterly Contractor Financial Management Report													Form Approved O.M.B. No. 2700-0003		2. REPORT FOR QUARTER BEGINNING			
To:						From :						3. CONTRACT VALUE						
												a. COST \$		b. FEE \$				
1. DESCRIPTION OF CONTRACT	a. TYPE						b. CONTRACT NO. AND LATEST DEFINITIZED MOD. NO.						4. FUND LIMITATION \$					
	c. SCOPE OF WORK						d. AUTH. CONTR. REP. (Signature)			DATE			5. BILLING		a. INVOICE AMTS. BILLED \$		b. TOTAL PYTS. RECD. \$	
6. REPORTING CATEGORY	7. COST INCURRED/ HOURS WORKED			8. ESTIMATED COST/HOURS TO COMPLETE										9. ESTIMATED FINAL COST/HOURS		10. ESTI- MATE D COM- PLETIO N DATE	11. UN- FILLED ORDER S OUT- STAND- ING	
	CUMU- LATIVE ACTUA L THROU GH PRIOR MONTH a.	CUR- RENT MON TH ESTI- MAT E b.	CUM U- LATI VE ESTI- MAT E TO DATE c.	MON TH a.	MON TH b.	MON TH c.	QUAR TER d.	QUAR TER e.	QUAR TER f.	BALA NCE OF FY- g.	NEX T FY- h.	BALA NCE OF CON- TRACT i.	TOTA L TO COM- PLET E j.	CON- TRACTO R ESTIMA TE a.	CONTRA CT VALUE b.			

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SECTION J
Attachment J-8

CARGO MISSION CONTRACT

NASA FORM 533Q AUG 96 PREVIOUS EDITIONS ARE OBSOLETE.

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C-PC-01 ATTACHMENT 2

Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
Rollup	1 Management Integration and Control	1.0	MANAGEMENT INTEGRATION AND CONTROL	N/A
Rollup, Variance Explanation	1.1 Program Mgmt	1.1	Cargo Mission Management and Administration	N/A
	1.1.1 Program Mgmt and Administrative Staff	1.1.1	Performance Management Reviews	N/A
	1.1.2 Internal/External Program Review Support	1.1.2	External and Internal Reviews	N/A
Rollup; Variance Explanation	1.2 Business Mgmt	1.2	Business Management	N/A
	1.2.3 Resources Mgmt	1.2.1	Contract Financial System	N/A
	1.2.3 Resources Mgmt	1.2.2	Contract Work Breakdown Structure	N/A
	1.2.3 Resources Mgmt	1.2.3	Workforce Reports	N/A
Rollup; Variance Explanation	1.3 Configuration Management/Data Integration	1.3	Configuration and Data Management and Integration	N/A
Rollup; Variance Explanation	1.4 Program Information Technology	1.4	Information Technology	N/A
	4.1.1.1 General Mgmt	1.5	Certification of Flight Readiness	N/A
	1.5.2.5 Export Control	1.6	Export Management	N/A
Rollup	6.0 S&MA	2	SAFETY AND MISSION ASSURANCE (S&MA)	N/A
Rollup; Variance Explanation	6.1 Mgmt & Admin	2.1	S&MA Management	N/A
	6.1 Mgmt & Admin	2.1.1	Safety and Health	N/A
	6.1 Mgmt & Admin	2.1.2	Lesson learned	N/A
Variance Explanation	6.3 Risk Management	2.3	Risk Management	N/A

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
Rollup; Variance Explanation	6.4 Safety	2.4	ISS Safety Program	N/A
Rollup; Variance Explanation	6.5 Reliability and Maintainability (R&M)	2.5	Reliability and Maintainability	N/A
Rollup; Variance Explanation	6.6 Quality Assurance	2.6	Quality Assurance	N/A
	3.5.1.2 FCS Sustaining	3.0	Hardware Sustaining	
	3.5.1.2 FCS Sustaining	3.1	Maintenance and Operations (M&O)	
	3.5.1.2 FCS Sustaining	3.1.1	Storage	
	3.5.1.2 FCS Sustaining	3.1.2	Inventory Management	
	3.5.1.2 FCS Sustaining	3.1.3	Crew Provisioning	
	3.5.1.2 FCS Sustaining	3.1.4	Maintenance and Repair	
	3.5.1.2 FCS Sustaining	3.1.5	Processing of Hardware	
	3.5.1.2 FCS Sustaining	3.1.6	M&O Schedules	
	3.5.1.2 FCS Sustaining	3.2	Sustaining Engineering	
	3.5.1.2 FCS Sustaining	3.2.1	Hardware Performance Analysis	
	3.5.1.2 FCS Sustaining	3.2.2	Anomaly Resolution	
	3.5.1.2 FCS Sustaining	3.2.3	Engineering Drawings/Data	
	3.5.1.2 FCS Sustaining	3.2.4	Computer-Aided Design (CAD) Models	
	3.5.1.2 FCS Sustaining	3.2.5	Obsolescence Management	
	3.5.1.2 FCS Sustaining	3.2.6	Standard Repair Procedures	
	3.5.1.2 FCS Sustaining	3.2.7	Sustaining Engineering Schedules	
	4.1.3 Pressurized Cargo Integration	4.0	Pressurized Cargo Integration	

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
	4.1.3.1 Cargo Integration & Analysis	4.1	Cargo Mission Planning	
	4.1.3.1 Cargo Integration & Analysis	4.1.1	Manifest Assessments	
	4.1.3.1 Cargo Integration & Analysis	4.1.2	Launch Package Team Support	
	4.1.3.1 Cargo Integration & Analysis	4.1.3	NASA Cargo Integration Office Support	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2	Cargo Coordination	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.1	Cargo Integration Planning	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.2	Cargo De-Integration Planning	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.3	IMS Bar Code Tracking	
	4.1.3.3 Cargo Mission Rqmts & Planning	4.2.4	IMS Containment Data	
	4.1.3.1 Cargo Integration & Analysis	4.3	Stowage Integration	
	4.1.3.1 Cargo Integration & Analysis	4.3.1	Cargo Layouts	
	4.1.3.1 Cargo Integration & Analysis	4.3.2	Mass Properties Analysis	
	4.1.3.1 Cargo Integration & Analysis	4.3.3	On-Orbit Operations Support	
	4.1.3.4 Physical Processing	4.4	Physical Cargo Processing	
	4.1.3.4 Physical Processing	4.4.1	Facilities Requirements	
	4.1.3.4 Physical Processing	4.4.2	Inventory Control	
	4.1.3.4 Physical Processing	4.4.3	Hardware Verification	
	4.1.3.4 Physical Processing	4.4.4	Labeling	
	4.1.3.4 Physical Processing	4.4.5	Cargo Imagery	

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Reporting Requirement: Rollup; Variance Explanation (Note 1)	ISSP WBS MAPPING	SOW #	Performance Requirement	Additional Contractor Reporting Requirements
	4.1.3.4 Physical Processing	4.4.6	Foam Cutting Services	
	4.1.3.4 Physical Processing	4.4.7	Cargo Packing	
	4.1.3.4 Physical Processing	4.4.8	Cargo Review	
	4.1.3.4 Physical Processing	4.4.9	As-Built Data Delivery	
	4.1.3.4 Physical Processing	4.4.10	Hardware Shipment	
	4.1.3.4 Physical Processing	4.4.11	Return Cargo Processing	
	3.5.1.2 FCS Sustaining	4.5	Decals, Placards and Graphics	
	3.5.1.2 FCS Sustaining	4.5.1	Flight and non-flight Decals, Placards and Graphics	
	3.5.1.2 FCS Sustaining	4.5.2	Product Delivery Schedule	
	3.5.1.2 FCS Sustaining	4.5.3	Delivery Report	
	3.5.1.1 FCS Development and Support	5.0	Hardware Development and Manufacturing	
	3.5.1.1 FCS Development and Support	5.1	Design and Manufacturing Requirements	
	3.5.1.1 FCS Development and Support	5.2	Hardware/Data Deliveries	
	3.5.1.1 FCS Development and Support	5.3	Engineering Drawings/Data	
	3.5.1.1 FCS Development and Support	5.4	CAD Models	
	3.5.1.1 FCS Development and Support	5.5	Safety & Reliability Assessments	
	3.5.1.1 FCS Development and Support	5.6	Development Schedules	

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Annual Work Plans 1b. Data Type: 1	2. Date of Current Version Modification 03	3a. DRD No. C-PC-02	3b. RFP/Contract No. NNJ10GA35C
5. Use (Define need for, intended use of, and/or anticipated results of data) These products will be utilized by Government and contractor personnel to manage the fiscal year baseline work.			5. DRD Category PC
6. References (SOW, Clause, etc.) 1.1		7. Interrelationships (e.g., with other DRDs) C-PC-01 C-PC-05	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Yearly Work Plan: The plan will document the content and estimated resources/cost for authorized work projected to be performed in the subsequent fiscal year. Projected work content will be jointly developed by the Government and the Contractor and approved by the Government. The workplan will be the basis of the initial BCWS and EAC provided in the Performance Management Review (PMR).

8b. CONTENT: For the purposes of this DRD, the Work Plan is defined as the summary of all tasks projected to be worked during the FY. There is to be one work plan per NASA CAM with work and resources defined at the lowest level WBS, consistent with the agreed to cost reporting structure.

For each task or function defined in the work plan:

- (a) Describe the work to be performed at the 3rd level WBS level including:
 - a. Task Description
 - b. SOW associated with the task
 - c. Groundrules and assumptions
 - d. Parameters for performance describing limitations of performance scope (as negotiated in contract),
 - e. Summary of required resources (i.e. EPs, materials, ODC)
 - f. Products delivered including DRDs and/or major milestones or events
- (b) Provide a high level schedule of the work including flight, project and non-flight specific deliveries and milestones.
- (c) Identify monthly spread of resource requirements by element of cost at the 3rd level WBS and at the NASA CAM level.

8c. FORMAT: Contractor format

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9. **OPR:** OA/COTR
10. **SUBMISSION:** Initial: two weeks prior to GFY12. Annual Updates: NLT 1 month prior to GFY start for the remainder of the period of performance following GFY12.
11. **MAINTENANCE:** All deliverables shall be maintained electronically. Government approved adjustments to individual Work Packages as a result of added or deleted or modified tasks shall be maintained in the monthly PMR. The current Work Plan shall be available as a “read-only” file.
12. **COPIES/DISTRIBUTION:** 1 copy distributed to each of the following:
 - (a) BG/Contracting Officer
 - (b) NASA CAM, their responsible work only
 - (c) OA/COTR, entire contract
 - (d) Program-authorized electronic repository (EDMS or equivalent)
13. **REMARKS:**

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Workforce Reports	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-03	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides workforce information by geographic location to NASA for use in congressional inquiries.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.2.3		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The reports provide workforce data by geographic location. There are two types of reports: 1) a Yearly Workforce Report by location, and 2) an As Requested Workforce Report.

8b. CONTENT: The yearly workforce report should provide Equivalent Personnel (EPs) by location, specifically on or near site (JSC), and by State for workforce outside of the Clear Lake area. The data should be reconcilable to other financial deliverables. The content of the As Requested Workforce Report will vary based on specific direction provided by NASA Headquarters to support congressional inquiries. Its most common form is an annual request to provide workforce by Zip Code.

8c. FORMAT: Specific formatting to be tailored by LO/Contractor.

9. OPR: LO

10. FIRST SUBMISSION DATE: Thirty (30) calendar days prior to the end of the Government Fiscal Year (GFY).

Frequency Of Submission: Yearly for the Monthly Workforce Report, and as directed for the As Requested Workforce Report.

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow.

13. REMARKS:

CARGO MISSION CONTRACT

**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Work Breakdown Structure (WBS) and Dictionary 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-04	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides framework to define work and to establish financial reporting levels and to correlate schedules.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.2.2 SSP 50659 International Space Station Work Breakdown Structure		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Contains the contractual Work Breakdown Structure (WBS), the WBS Dictionary, and a map to the ISS Program WBS.

8b. CONTENT: Contains the contractual WBS, its dictionary, and Program map as follows:

1. **WBS:** The WBS shall subdivide the total contracted effort into elements that serve as the basis for detailed planning and control of the project, and permit collection of cost and schedule data at element level. These elements include hardware, software, services, tasks, etc. It shall include all subcontracting and major procurement effort at the proper level. It shall be product oriented and structured so that key SOW tasks are at an appropriately high level.

2. **WBS Dictionary:** The WBS Dictionary shall define the scope of each WBS element and narratively describe the tasks included in each element

3. **Program WBS Map:** The contractor shall provide a mapping of the contract WBS to the ISS Program WBS.

8c. FORMAT: Per JSC instructions and in a format supported by the program-authorized electronic library. The WBS shall be in a chart format showing element relationships. The WBS Dictionary shall be ordered in consonance with the WBS and shall reference each WBS element by its identifier and name. Specific formatting for the map to the Program WBS will be done by LO/contractor.

9. OPR: OH

10. FIRST SUBMISSION DATE: Draft to be submitted with contract proposal. A final submittal is due 60 calendar days after contract award.

Frequency Of Submission: Draft submitted with initial contract proposal, final submittal 60 calendar days after contract award.

Additional Submissions:

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11. **MAINTENANCE:** The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.
12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
13. **REMARKS:** N/A

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Cargo Mission Contract Program Schedules 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PC-05	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide Program schedules using established standard processes, data structures and reporting conventions to plan, manage, and report the assigned work for the ISS Program Manager, International Partners Element Integration Managers, System Engineering and Integration Managers, Program Schedules Manager, and the Space Station Program Office			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 3.1.6, 3.2.8, 4.1.3, 5.6		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Top level and lower level schedules for the Cargo Mission Contract to include, as a minimum, flight hardware status and interface schedules for analytical products, ground and flight support equipment, and government furnished equipment with linkages to ISS Program schedules..

8b. CONTENT:

a. The contractor shall provide top level and lower level schedules which clearly depict the interrelationships and constraints among related tasks. The contractor is encouraged to utilize modern manufacturing resource planning, industrial engineering techniques and other approaches to ensure schedule stability, accuracy, reliability, predictability, and achievability.

b. The schedules shall be developed, maintained (updated), and provided monthly to ensure a consistent, accurate, and stable scheduling approach that provides for the identification, coordination, sequencing, control, implementation and tracking of all ISS Program activities.

c. The approach shall provide the ability to fully identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical activities; and allow its users to easily measure the progress towards achieving the intended plan.

d. The approach shall not only represent the scheduled work, but also the requirements commitment from all interfacing organizations.

e. The contractor shall represent the ISS Program Office on issues, status analyses and special agenda topics to the Integrated Program Schedule Panel weekly.

f. *Schedule consistency* as used in this DRD is defined as the degree to which the contractor utilized standardized scheduling approaches between similar processing activities and flows. *Accurate scheduling* as used in this DRD is defined as the accurate representation of work content and tasks duration (predicted vs. actuals). A *stable schedule* as used in this DRD refers to the degree to which daily schedule changes are minimized and limited to unforeseen hardware/software problems or NASA-directed changes.

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- g. Scheduling approaches shall address the following information as a minimum
- I. Scheduling symbology that is consistent Project Management Institute general guidelines.
 - II. Predicted task duration/labor standards derived from accurate and objective prediction methodologies
 - III. Indications of activities by appropriate nomenclature that clearly delineates the task to be performed
 - IV. Identification of who is responsible for doing the actual work
 - V. Required supporting activities or support from other contractors, outside organizations, agencies, or NASA centers.
 - VI. Identification of critical resource requirements.
 - VII. Clear depiction of the interrelationships and constraints among related tasks
 - VIII. Identification of priorities, high risk activities and other significant activities
 - IX. Special test activities or requirements.

h. Cargo Mission schedules (Data type 3) shall cover, as a minimum, the following activities in addition to the above information:

Name	Required by	Frequency
Performance to Plan	Daily Space Station Review (DSSR)	1 day per week starting at L-12
Team Level schedules	Team Lead	Weekly

8c. **FORMAT:** Excel based file.

9. **OPR:** OB, OC

10. **FIRST SUBMISSION DATE:** One month after contract start, on the first Monday of the next month.

Frequency Of Submission: Monthly no more than 5 working days after last day of previous month.

Additional Submissions: Informal updates in accordance with 8h above.

11. **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue. The contractor is encouraged to minimize documentation.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

13. **REMARKS:** None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

<p>1a. DRD Title: Small Business Subcontracting Plan and Reports</p> <p>1b. Data Type: Plan -1 Report - 2</p>	<p>2. Date of Current Version Modification 5</p>	<p>3a. DRD No. C-PC-06</p>	<p>3b. RFP/Contract No. NNJ10GA35C</p>
<p>6. Use (Define need for, intended use of, and/or anticipated results of data) To describe the Contractor's planned approach to Small Business Subcontracting and their reporting against this plan.</p>			<p>5. DRD Category PC</p>
<p>6. References (SOW, Clause, etc.)</p> <ul style="list-style-type: none"> a. FAR 19.702, Statutory requirements b. FAR 52.219-8, Utilization of Small Business Concerns c. FAR 52.219-9, Small Business Subcontracting Plan d. NFS 1852.219-75, Small Business Subcontracting Reporting 		<p>7. Interrelationships (e.g., with other DRDs) Section H, H.7 and H.12 Section J, Attachment J-6</p>	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The Small Business Subcontracting Plan shall be in compliance with FAR 52.219-9. The Small Business Subcontracting Reporting shall be in compliance with NFS 1852.219-75.

8b. CONTENT: The Subcontracting plan must include the approach that the Contractor intends to use in meeting the subcontracting goals. Subcontractors whose bid is part of this proposal should be identified. For each subcontractor, the percentage of the proposal and any small or small business subcategory classification should be identified. For areas of potential future subcontracting, the Contractor should identify the area of work, the percentage of contract that this is expected to encompass, potential subcontractors and their small business or small business subcategory classification. Describe the management approach to subcontracting with small, small disadvantaged 8(a), Women-owned, HUBZoned, Veteran owned, and Service disabled veteran owned companies and HBCU/MIs.

8c. FORMAT: Contractor format is acceptable for the plan; reporting shall be in compliance with NFS 1852.219-75.

9. OPR: BG/Contracting Officer

10. SUBMISSION:

i. Subcontracting Plan:

1. Initial – Due with proposal.

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2. Approval – Prior to contract award.
3. Frequency – Subcontracting Plan to be updated in accordance with FAR 19.702.

ii. Reports:

1. All reports shall be submitted in accordance with FAR 52.219-9 and NFS 1852.219-75.
2. In lieu of submitting a paper copy of the SF 294 and SF 295 Subcontracting Report for Individual Contracts. The contractor shall submit semi-annually and at contract completion to the NASA/JSC Contracting Officer electronically version of this data.
3. Contractors are required to submit subcontracting data in the Electronic Subcontracting Reporting System (eSRS) which has replaced the paper Standard Form 294 and SF 295 Summary Subcontracting Reports.
4. All contractors are required to register and file both types of subcontracting reports using the eSRS system. The website to register is www.esrs.gov.

11. MAINTENANCE: Revisions shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: 1 copy distributed to each of the following:
(a) BG/Contracting Officer
(b) Program-authorized electronic repository (EDMS or equivalent)

13. REMARKS:

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Cargo Mission Management Plan	2. Date of Current Version January 15, 2010	3a. DRD No. C-PM-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) The Cargo Mission Management Plan will describe the systems to provide overall coordination of activities under this contract and will integrate these activities into the broader NASA operational plans which utilize other government agencies and contractors.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.1		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: The plan shall describe the contractor’s organization, approach and systems for accomplishing required activities including the management systems to be used and the interface relationships required.

8b. CONTENT: The plan shall be in consonance with the performance-based Statement of Work. The plan shall include but not be limited to, the following:

- Narrative descriptions of the management, technical, and business approaches used to accomplish and monitor contractual tasks and the methods the contractor will employ to provide government insight, data accessibility, and deliverables.
- Interfaces between the contractor, the government, customers, and other contractors or entities that are necessary and pertinent to the accomplishment of contractual tasks.
- Assessment of risks inherent in the management, technical, and business approaches.
- Narrative description of the contractor’s management approach to defining processes, plans and procedures including government approval of first time/high risk operations, out of family activities, and critical processes, plans and procedures.
- Planned reporting to the government of performance to plan in preparation for major milestone reviews and regularly scheduled daily/weekly/monthly reviews.
- Narrative description of contractor controls applicable to any tasks, activities and projects exceeding established cost or schedule plans including requirements for providing recovery plans.
- Narrative description of the contractor’s proposed scope and approach implementing Associate Contractor Agreements.

8c. FORMAT: The contractor’s format is acceptable. The plan shall identify contract title and contract number and shall contain a table of contents. Descriptive material (sketches, flow charts,

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drawings, photographs, tables, forms, graphs, worksheets, charts, etc.) may be included if needed to clarify or explain matters in the text.

9. OPR: OA

- 10. FIRST SUBMISSION DATE:** Thirty (30) calendar days after contract award. Final/approved due 75 calendar days after contract award.

Frequency Of Submission: The plan shall be reviewed at least annually thereafter and updated as required. If there are no changes since the last update, the contractor shall re-certify its accuracy no later than 1 October of each year.

Additional Submissions: Within 45 calendar days after the addition/deletion of major content to the contract or to describe and justify major changes in the contractor's management organization, approach and/or systems.

- 11. MAINTENANCE:** Changes shall be incorporated as required by change page or complete reissue.

- 12. COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow

- 13. REMARKS:**

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Integrated Management Review Product (IMRP) 1b. Data Type: 3	2. Date of Current Version <u>Modification 5</u>	3a. DRD No. C-PM-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) These products support the quarterly management reviews of costs, schedule, and technical performance. The format provides a standardized approach for review materials.			5. DRD Category Administrative
6. References (SOW, Clause, etc.) SOW 1.1.1 NPR 7120.5 NPR 9501.2		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: This DRD must be reconcilable to DRD C-PC-01. These data packages document the integrated management reviews of the cost, schedule, and technical performance on the contract. The package supports the quarterly management review of cost, schedule, and technical performance; however the contract shall provide monthly integrated management review products to the Government. These review packages shall document the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this statement of work or elsewhere in this contract. Packages presented for program review, including insight into the contractor's, subcontractors', and vendors' overall technical, schedule, and cost performance and status metrics and management responsiveness to the performance indicated by the metrics.

8b. CONTENT: The presentations shall depict award fee period metrics, performance measurements, accomplishments, issues, corrective actions, and contract financial status including rates and other data necessary to demonstrate performance levels. The cost baseline is the Performance Measurement Baseline (PMB). The format provides a standardized approach for review materials.

The package includes:

Program Overview and Component Sections (by organization):

- Cost and Schedule performance (monthly, government fiscal year (GFY), and cum to date). Includes forecasts and variance explanations.
- Baseline comparison trace (original contract value, negotiated changes, authorized unpriced work, and pending changes).
- GFY contract headcount plan and actuals by Cost Account Manager (CAM). Note: Included in summary package only.
- Highlights and accomplishments.
- Issues/risks
- Status on Award Fee Corrective Action Plans (CAPs).

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- Metrics
- Status on action Items
- Undistributed budget
- Management reserves

8c. **FORMAT:** Specific formatting to be tailored by LO/contractor

9. **OPR:** OH

10. **FIRST SUBMISSION DATE:** The first Monthly review shall be within 20 working days after the initial financial month end. All subsequent Monthly reviews shall be within 25 working days after the contractor's accounting month end.

Frequency Of Submission: Monthly

Additional Submissions:

11. **MAINTENANCE:** Changes shall be incorporated as required by change page or complete reissue.

12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow.

13. **REMARKS:**

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Wage/Salary and Fringe Benefit Data 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-PR-01	3b. RFP/Contract No. NNJ10GA35C
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) e-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 <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) FAR 52.222-41, Service Contract Act of 1965, As Amended		7. Interrelationships (e.g., with other DRDs) FAR 52.222-41	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

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 of 1965, to the Contracting Federal Agency. This requirement is in accordance with FAR regulations 22.1007 and 22.1008.

CONTENTS: The Wage/Salary and Fringe Benefit Data should contain the data included in the enclosed DRD forms, titled "Wage/Salary Rate Information," "Fringe Benefit for Service Employees," and "Fringe Benefits per Collective Bargaining Agreement." The Wage/Salary Rate Information shall contain a listing of all exempt and nonexempt labor classifications working on the contract. Separate forms should be utilized for classifications working in different geographic areas and for each subcontractor. Wage determination numbers, appropriation labor organization names, and subcontractor names, must be reflected. All nonexempt labor classifications must be matched to wage determination classes or to Collective Bargaining Agreement (CBA) classifications if union represented employees are working on the contract. 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 non-represented classifications and for each separate CBA, if applicable. A separate form must be completed for the prime and each subcontractor. Three hardcopies and one electronic copy of each Collective Bargaining Agreement are required if organized labor is represented on your contract.

FORMAT: The Wage/Salary and Fringe Benefit Data should be in a format substantially the same as enclosed with this DRD (Forms 2, 3A, 3B, 3C and 4).

9. OPR: BA

10. FIRST SUBMISSION DATE: Thirty (30) calendar days after contract award.

Frequency of Submission: Annually, 90 calendar days prior to the anniversary date of the contract.

Additional Submission: N/A

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management, CO, COTR, and BA2/Contract Labor Relations Officer

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1 Hardcopy: BA2/Contract Labor Relations Officer

13. REMARKS: Sample Work Sheet

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**Attachment to C-PR-01
FORM 2
PAGE 1 OF 1**

WORK SHEET FOR SF-98 DATA					
WAGE RATE INFORMATION					
CONTRACTORS LABOR CLASSIFICATION	WAGE DETERMINATION CLASSIFICATION	EXEMPT OR NON EXEMPT	UNION OR NON UNION	CURRENT HOURLY RATE	MYE NO OF EMPLOYEES
Illustration of required data:					
Project Manager	Not Required	E	N	\$40.00	1
Supervisor	Not Required	E	N	\$32.00	1
Electrical Engineer	Not Required	E	N	\$26.50 - \$30.00	3
Engineer Technician, Jr	Engineering Tech, I	N	N	\$16.59 - \$18.00	12
Engineer Technician, Sr	Elect Tech Main II	N	U	\$23.28 - \$24.00	4
Secretary	Secretary I	N	N	\$15.92 - \$17.50	2
File Clerk	General Clerk II	N	N	\$12.97	1
Clerical Data Entry	Word Processor I	N	N	\$12.27 - \$12.90	3

Submit data in the above illustrated format for all labor classifications used, or planned to be used, on this contract.

All nonexempt labor classifications must be matched to wage determination classes listed in the area wage determination or applicable collective bargaining agreement.

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3A
Page 1 of 1

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 and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

Service Requirement Days per Year

- a. Vacation
- b. Holidays
- c. Sick Leave
- d. Jury Leave
- e. Funeral Leave
- f. Military Leave
- g. Other (Describe)

Signature of Company Representative

Date

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3B
Page 1 of 1

FRINGE BENEFITS FOR EXEMPT EMPLOYEES

For Period from _____ to _____

Contractor:

Number of exempt 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 and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

Service Requirement Days per Year

- a. Vacation
- b. Holidays
- c. Sick Leave
- d. Jury Leave
- e. Funeral Leave
- f. Military Leave
- g. Other (Describe)

Signature of Company Representative

Date

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3C
Page 1 of 2

FRINGE BENEFITS PER COLLECTIVE BARGAINING AGREEMENT

For period from _____ to _____

Contractor:

Contract Number:

Number of employees in bargaining unit _____

Total number of employees on contract _____

1. Shift Differential: (Describe any pay over and above base rates for 2nd, 3rd, weekend, or other shifts.)

2. Health and Welfare Items and Other Fringe Items: (Indicate whether or not coverage is provided to employees and state current average hourly cost per employee covered by a Collective Bargaining Agreement.)

Item	Coverage Provided (Yes or No)	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition		
j. Other (Describe)		

(Continue on a blank page if necessary)

CARGO MISSION CONTRACT

FORM 3C
Page 2 of 2

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

(Continue on a blank page if necessary)

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FORM 4

Page 1 of 1

DESCRIPTION OF FRINGE BENEFITS			
			FORM 4
<input type="checkbox"/> Prime Contractor: <input type="checkbox"/> Major Subcontractor:			
DESCRIPTION	EXEMPT	NON-EXEMPT	Ref.
Insurance (Life)			
Insurance (Health) (Employee/Company Share)			
Insurance (Dental, Disability, Etc.)			
Retirement			
Severance Pay			
Personal Leave			
Sick Leave			
Vacation			
Holidays			
Special Workweek			
Overtime Policy			
Uncompensated Overtime			
Pension Portability			
Pay Differentials Policy			
Shift			
Off-site			
Compensatory Leave Policy			
Award Policy			
Suggestion			
Other			
Bonus Plan			
Training			
Employee Morale			

CARGO MISSION CONTRACT

**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Government Property Management Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-PR-02	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To describe the method of administering Government personal property			5. DRD Category Administrative
6. References (SOW, Clause, etc.) Clause 52.245-1		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

DISTRIBUTION: Formatting and electronic distribution per Contracting Officer's letter.

INITIAL SUBMISSION:

- A. Initial – Due with proposal
- B. Final – Due 30 days after contract award

SUBMISSION FREQUENCY: Initial, with updates as required.

SCOPE: The Government Property Management plan defines the contractor's use, maintenance, repair, protection, and preservation of Government personal property. It shall describe the contractor's approach to receiving, handling, stocking, maintaining, protecting, and issuing Government property. The plan should include interaction and Departmental or Office responsibilities. The delegated Property Administrator will request detailed procedures after contract start.

APPLICABLE DOCUMENTS: FAR 52.245-1 and NFS Part 1845.

CONTENTS: This plan shall reference those policies and procedures, which constitutes the contractor's Property Management Manual and shall include at a minimum the following categories:

- | | | |
|---|----------------------|-------------|
| Property Management | Acquisition | Receiving |
| Identification | Records | Movement |
| Storage | Physical Inventories | Reports |
| Consumption | Utilization | Maintenance |
| Subcontractor | Control Disposition | Contractor |
| Closeout | | |
| Reconcile Contractor Records with Financial Records | | |
| Center-Unique Considerations | | |

CARGO MISSION CONTRACT

FORMAT: Contractor format is acceptable, electronic format and availability as required by the Contracting Officer's letter.

MAINTENANCE: Changes shall be incorporated by change pages or complete reissue.

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Financial Reporting of Contractor-Held Property 1b. Data Type: 2	2. Date of Current Version January 15, 2010	3a. DRD No. C-PR-03	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Report NASA property in the custody of contractors on both a monthly and annual basis			5. DRD Category Administrative
6. References (SOW, Clause, etc.) NFS Subpart 1845.7101		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

SUBMISSION:

1. The due date for the Monthly Property Financial Reporting submission is on the 21st day after the close of the month, beginning at the first month after contract start. Example due dates for the monthly submission are as follows:
 - a. August 21st for the month ending July 31st
 - b. September 21st for the month ending August 31st
 - c. October 21st for the month ending September 30th
2. The due date for the Annual Property Reporting via NASA form (NF) 1018 is November 30th.
3. All reports shall be submitted electronically

DATA PREPARATION INFORMATION:

1. Monthly Property Financial Reports are required to be submitted using the format located at the URL referenced in paragraph below. Monthly Financial Report will be submitted in accordance with Procurement Information Circular (PIC) 04-12.
2. Annual Property NF 1018 reports shall be submitted using the NF 1018 Electronic Submission System (NESS). The NF 1018 report provides annual summary level property management and financial data on Government-furnished and contractor acquired NASA property.

MONTHLY PROPERTY FINANCIAL REPORTS:

1. Monthly property financial reports are required with item level supporting data. This data shall be submitted for all items with an acquisition cost of \$100,000 or more, in the contractor's and its subcontractor's possession, in the following classifications: real property, equipment, special test equipment, and special tooling. Monthly reporting is not required for property in the above classifications of materials and contract work in process (WIP). Itemized monthly data is required for materials and WIP line items of \$100,000 and over. Summary monthly data is required for materials and WIP line items under \$100,000. The monthly reports shall be electronically submitted using the

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Contractor-Held Asset Tracking System (CHATS) (<http://nasachats.gsfc.nasa.gov/>) using the format described in the CHATS user's manual.

2. Acquisition costs shall be developed using actual costs to the greatest extent possible, especially costs directly related to fabrication such as labor and materials. Supporting documentation shall be maintained and available for all amounts of reported, including any amounts developed using estimating techniques.
3. All adjustments shall be thoroughly explained and directly related to a specific fiscal year. If the fiscal year cannot be determined the default shall be the previous fiscal year.
4. Work Breakdown Structures (WBS) shall be provided for all Contractor Acquired Property (CAP), WIP, and any new materials acquired.
5. The contractor is required to gain access to NASA's CHATS at the following website following instructions on the website: <http://nasachats.gsfc.nasa.gov/>

NF 1018 REPORTS:

1. Contractors shall report all NASA-owned property in US dollars, regardless of location.
2. Negative reports are required
3. This reporting shall be completed in accordance with the NFS subpart 1845.7101 and any supplemental guidance provided by the Contracting Officer, delegated Property Administrator or procuring center Industrial Property Officer.
4. The contractor is required to gain access to NASA's NESS at the following website following instructions on the website: <http://ness.gsfc.nasa.gov/>

DISTRIBUTION:

1. The monthly reports shall be electronically submitted using CHATS using the format described in the CHATS manual.
2. NF 1018 reports shall be submitted using NESS.

MAINTENANCE:

1. Revisions shall be incorporated by change page or complete reissue.

CARGO MISSION CONTRACT

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Reprocurement Data Package 1b. Data Type: 2	2. Date of Current Version January 15, 2010	3a. DRD No. C-RP-01	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide content and format requirements for delivery to NASA of all analytical models, tools, supporting documentation, equipment and resource/cost information used to perform future reprocurement activities Note: This data may be disclosed to competing offerors in the future.			5. DRD Category Technical
6. References (SOW, Clause, etc.) Clause H.17		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the data delivery as follows:

8a. SCOPE: Analytical models, unique tools, supporting documentation, equipment and resource/cost information shall be submitted in accordance with this DR.

8b. CONTENT:

- A catalog of models and tools provided according to any DR on this contract shall be developed which contains the following:
- Unique name of item
- Version number, revision number, or release date as appropriate
- Abstract which describes purpose or use of item
- Location of electronic copy (i.e. VMDB)
- Models and tools to be submitted include:
- Models which are delivered per requirements contained in any other DR on this contract shall not be redelivered for this DR. However, each shall still be documented appropriately in the model catalog required in 8.2.1.
- Supporting documentation for the use of each item, including those submitted per other DRDs on this contract where that DRD doesn't require it, shall be submitted. The documentation shall include, at a minimum, the following information:
 - Purpose of the model or tool
 - Inputs required
 - Governing assumptions or constraints, including definition of the Vehicle configuration if pertinent to the model definition or its use
 - Model or tool certification history, including description of validation methods used and results of correlation activities
 - Association with other models, such as connection between an integrated ISS model and a supporting element model
 - For models, necessary tools such as a specific software modeling environment required to operate the model

CARGO MISSION CONTRACT

- For tools, necessary platforms such as computer processor requirements or operating system limitations

Data package containing the following:

4. Labor resources:

- a. List of all direct labor skills by labor category segregated by current Work Breakdown Structure (WBS)
- b. An estimate of the number of indirect labor skills such as business or computer support normally charged through an indirect expense pool or through a service center expense
- c. Current annual average wage rates for each labor category and when these wages were last adjusted for escalation. Also indicate whether any adjustments are projected to be made prior to contract expiration
- d. The number of FTEs (Full Time Equivalents) and the estimated number of productive hours for each labor category currently on contract, segregated by current WBS
- e. Seniority level of all skills on the current contract

5. Non-labor resources:

- a. List of all materials, equipment, travel, supplies, etc., and the incurred annual cost by WBS
- b. Provide a discussion associated with the major items identified above, such as the materials estimate includes a prompt payment discount of TBD% due to large volume discounts you have negotiated with your vendors.

6. 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.

7. Equipment (additional information to that listed in #2, a., above):

List of all contractor-owned equipment (at the time of delivery of this DRD) being used in the performance of the contract. The list of equipment shall include:

- a. Description of the equipment (include make and model #)
- b. Location of the equipment (address, building and room #)
- c. Date purchased
- d. Purchase price of the equipment
- e. Current depreciated value of the equipment

8c. FORMAT: Electronic format of all submissions shall be compatible with VMDB per DRD C-MI-05. Organizational format of the supporting documentation shall be the contractor's.

9. OPR: OA

10. FIRST SUBMISSION DATE: 1 year prior to contract end or at Contracting Officer's discretion

Frequency Of Submission: No periodic submissions required per this DR (this does not relieve the requirement for periodic or incremental deliveries per other DRs)

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Additional Submissions: End of period of performance: submission of current version of all models, tools, and supporting documentation which have been updated since first submission

- 11. MAINTENANCE:** All models/tools shall be maintained electronically. All documentation developed to support the use of each model/tool shall also be maintained electronically. Both the models and the supporting documentation shall be updated as necessary to perform the assessments for which they were developed.
- 12. COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
- 13. REMARKS:** It is only intended that unique models and tools developed for the ISS Program be delivered per this DR. Unmodified commercially available tools should not be delivered, but must be referenced in the supporting documentation.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Mission Assurance and Risk Management (MA&RM) Plan 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-01	3b. RFP/Contract No. NNJ10GA35C
4. Use The plan is used to identify, evaluate, and eliminate or control risks related to safety, health and mission assurance.			5. DRD Category S&MA/PR
6. References SOW 2.1.4		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Applicable to all contractor sites where the contractor is operational including on-site NASA facilities.

8b. CONTENT: The plan shall demonstrate the contractor's compliance with Section 2.0 of the SOW. In addition, the plan shall address:

- A. S&MA Management (SOW 2.1, 2.2, 2.3).
- B. Risk Management (SOW 2.1.1).
- C. ISS Safety Program (SOW 2.1.2).
- D. Reliability and Maintainability (SOW 2.1.3).
- E. Quality Assurance (SOW 2.1.4).

8c. FORMAT: MS Word

9. OPR: OE

10. FIRST SUBMISSION DATE: Draft MA&RM plan by the end of the phase-in period. Final MA&RM plan within 90 calendar days after contract start.

Frequency Of Submission: The MA&RM plan shall be reviewed at least annually thereafter and updated as required. If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT 1 October of each year.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

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12. **COPIES/DISTRIBUTION:** 1 e-copy to Program Repository via EDMS workflow
13. **REMARKS:** The MA&RM plan requires approval of the Manager, Safety and Mission Assurance (S&MA)/Program Risk Office.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Safety and Health (S&H) Plan	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-02	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 1 4. Use Establishes Safety and Health Compliance Plan for Contractors providing support to JSC organizations.			5. DRD Category S&MA/PR
6. References SOW 2.2 OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual JSC 17773, Instructions for Preparation of Hazard Analysis for JSC Ground Operations JPR 1700.1 JSC Safety and Health Handbook		7. Interrelationships C-SA-04	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Applicable to safety and health activity at all NASA Centers and sites where the contractor is operational under this contract.

8b. FORMAT:

- A. Cover page - to include as a minimum, blocks for the signatures of Contractor's project manager and designated safety official; NASA COTR; JSC Safety and Test Operations Division; JSC Occupational Health Officer; and the NASA Contracting Officer. Other signatures may be required at the discretion of the Government. Once approved by NASA, signatures will be collected and the plan placed on the contract.
- B. Table of Contents. See content below.
- C. Body of plan - as required. Contractor's format is acceptable but should be aligned with the elements of the content below.
- D. When preparing its plan, the Offeror/Contractor is expected to review all the items below and tailor its plan accordingly. The plan will clearly identify those resources to be provided by the Contractor and proposed resources to be provided by the Government. This review and supporting rationale is to be made available to the Government as part of this plan. It can be documented as a checklist or outline, inserted directly in the body of the plan, or in any format developed by the Contractor that clearly conveys the results of this review including the basis for any underlying assumptions.

CONTENT AND DETAIL:

1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION

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1.1 Policy: Provide the Contractor's safety and health compliance policy statement with the plan. Compare the Contractor's policy statement with those of NASA and OSHA and discuss any differences.

1.2 Goals and Objectives. Describe your approach to the following:

1.2.1 Specific annual safety and health goals and objectives to be met.

1.2.2 Methods to be used, if any, to improve on the Days Away Case Rate (DACR), the Total Recordable Injury Rate (TRIR), and the total Days Away plus Restricted Duty plus Job Transfer (DART).

1.3 Management Leadership. Describe management's procedures for implementing its sustaining commitment to safety and health compliance through visible management activities and initiatives including a commitment to exercise management prerogatives to ensure workplace safety and health. Describe processes and procedures to making this visible in all Contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

1.4 Employee Involvement. Describe procedures to promote, implement, and sustain employee (e.g., non-supervisory) involvement in safety and health compliance program development, implementation and decision-making. Describe the scope and breadth of employee participation to be achieved so that approximate safety and health risk areas of the Contract are equitably represented. Describe methods to be used to obtain employee buy in and address the behavioral aspects of safety.

1.5 Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other Contractors, or other 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 and fire protection concerns and goals, and who will participate in meetings and other activities related to the JSC Safety and Health program.

1.5.2 Company Physician/Occupational Injury/illness case manager - identify a point of contact who is responsible for the transfer or receipt of company medical data and who will be the primary contact for the company in the event any employee suffers a work related injury or illness (such as the company physician) by name, address, and telephone number to the JSC Occupational Medicine Clinic, mail code SD32. This will facilitate communication of medical

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data to Contractor management. Prompt notification to the JSC Occupational Medicine Clinic shall be given of any changes that occur in the identity of the point of contact.

1.5.3 Building Fire Wardens - provide a roster of fire wardens at the start of each Contract year (their names, telephone numbers and pagers, and mail codes). Contractor fire wardens are needed to facilitate the JSC fire safety program, including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives. Fire wardens will be trained in accordance with JPR 1700.1. The Roster shall be maintained by letter to the JSC Safety and Test Operations Division, mail code NS2, with copies to the Contracting Officer and the Contracting Officers Technical Representative. The initial letter shall be received by the Government not later than 15 days after contract start.

1.5.4 Designated Safety Official - identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.

1.6 Provision of Authority. Describe consistency of the plan for compliance with applicable NASA and JSC requirements and contractual direction as well as applicable Federal, State, and Local regulations and how compliance will be maintained throughout the life of the contract.

1.7 Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe, healthful, and environmentally compliant manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.

1.8 Program Evaluation. Describe your approach to safety and health program evaluation. The program evaluation consists of:

1.8.1 [RESERVED]

1.8.2 A written self-evaluation report to be delivered once per year. The self evaluation shall be provided for the Contractor performance evaluation. The self-evaluation shall follow the VPP program evaluation report format found in OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual, Appendix C, "Format for Annual Submissions," as mandated by the cognizant OSHA regional office. Contractors who have submitted a written self evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self evaluation provided that all action plans and status are updated. The self-evaluation shall as a minimum cover the elements of the approved safety and health plan.

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

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

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- a. Date of report, Contractor identity, and Contract number.
- b. For each person listed, provide name, social security number, and date of termination.
- c. Name, address, and telephone number of Contractor representative to be contacted for questions or other information.

1.9.2 Material Safety Data Sheets (MSDS). The Contractor shall prepare and/or deliver MSDS for hazardous materials brought onto Government property or included in products delivered to the Government. This data is required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication," EPA "Emergency Planning and Community Right-to-Know (EPCRA, ref. 40 CFR 302, 311, 312); and the Texas Department of Health (TDH, ref. Chapters 505-507 of the Health and Safety Code), and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities," as revised. This inventory is also required by JPR 1700.1, JSC Safety and Health Handbook, as revised. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central MSDS Repository, maintained by the JSC Occupational Medicine Occupational Health contractor, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrive with the material and is needed for immediate use, the MSDS shall be delivered to the Central MSDS Repository by close of business of the next working day after it enters the site.

1.9.3 Hazardous Materials Inventory. The Contractor shall compile an inventory report of all hazardous materials it has located on Government property quarterly, and which is within the scope of 29 CFR 1910.1200, Hazard Communication; and Federal Standard 313 (or FED-STD-313), Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities, as revised. This inventory is also required by JPR 1700.1, JSC Safety and Health Handbook, as revised. The call for this inventory and instructions for delivery will be issued by the JSC Occupational Medicine Occupational Health contractor, mail code SD33. This information shall use the format used by JSC for chemical inventory compilation to provide the following:

- a. The identity of the material (product number, chemical, manufacturer, and NSN as available).
- b. The location of the material by building, room and area/cabinet number.
- c. The quantity of each material normally kept at each location (number of containers, container size, type container, unit of measure, conversion factor, storage temp and pressure, physical state/form, specific gravity, total pounds).
- d. Peak quantity stored.

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e. Actual or estimated rate of annual usage of each chemical.

1.10 Government Access to Safety and Health Program Documentation. The Contractor shall recognize, in its plan, that all safety and health documentation (including relevant personnel records) be available for inspection or audit at the Government's request. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For Contractor activities conducted on NASA property, the Contractor will identify what records will be made available to the Government in accordance with the criteria of OSHA as implemented in JPR 1700.1, JSC Safety and Health Handbook, as revised. For the purpose of this plan, safety and health documentation includes but is not limited to: logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, or emergency preparedness.

1.11 Review and Modification of Safety Requirements. The Contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative (COTR) in accordance with established contractual procedures.

1.12 Procurement. Identify procedures used to assure that procurements are reviewed for safety and health compliance considerations and that the specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.

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

2. WORKSITE ANALYSIS

2.1 Analysis of Worksite Hazards. Contractor worksite 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, facilities related incidents related to partial or full loss of systems functions; etc. Describe how hazards identified by any of the techniques identified below shall be ranked, processed, and mitigated in accordance with JPR 1700.1. All hazards on NASA property, which are immediately dangerous to life or health, shall be reported immediately to the Safety and Test Operations Division. All safety engineering products that address operations, equipment, etc., on NASA property will be subject to JSC Safety and Test Operations Division review and concurrence unless otherwise waived by the JSC Safety and Test Operations Division.

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2.2 Industrial Hygiene. Describe your industrial hygiene program and how it will be coordinated with the JSC Government provided resources for industrial hygiene. In the event corporate resources are used to determine workplace exposures, copies of all monitoring data shall be provided to JSC Occupational Medicine Occupational Health contractor within 15 days of receipt of results.

2.3 Hazard Identification. Describe the procedures and techniques to be utilized to compile an inventory of hazards associated with the work to be performed on this Contract. This inventory of hazards shall address the work specified in this Contract as well as operations and work environments in the vicinity or in close proximity to Contract operations. The results will be reported to the Government in a manner suitable for inclusion in facilities baseline documentation as a permanent record of the facility. Specific techniques to be considered include:

2.3.1 Comprehensive Survey - A “wall to wall” engineering assessment of the Contractor’s worksite, which includes the Government furnished facilities to be used by the contractor and the immediate vicinity in which contractual work or tasks will be performed. This assessment encompasses facilities, equipment, materials, and processes.

2.3.2 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.

2.3.3 Hazard Analysis - May address facilities, systems/subsystems, operations, processes, materials (including waste), and specific tasks or jobs. Analyses and report formats will be in accordance with JSC 17773, Preparing of Hazard Analyses for JSC Ground Operations.

2.3.4 The Contractors safety plan will describe the flow of the findings of the comprehensive survey of hazards into hazard analyses and job hazard analyses and subsequently into controls such as design, operations, processes, procedures, performance standards, and training. The contractor will discuss its approach to notify NASA and other parties external to the contract work of its identified hazards and subsequent analyses and controls.

2.4 Inspections. Include assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The Contractor will describe administrative requirements and procedures for control of regularly scheduled inspections for fire and explosion hazards. The Contractor has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify:

- a. Discrepancies between observed conditions and current requirements, and,
- b. New (not previously identified) or modified hazards.

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c. Use of JSC's Hazard Abatement Tracking System to manage hazards onsite at JSC (see paragraph 3.12 below).

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

2.6 Employee Reports of Hazards - Identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The Contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation/awareness activities.

2.7 Accident and Record Analysis

2.7.1 Mishap Investigation – identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The Contractor will describe the methods to be used to report and investigate mishaps on NASA property and on Contractor or third party property. The Contractor will describe its procedures for implementing immediate notification of NASA using the call tree in 2.7.1.a below. The use of the quick incident reports found at the lower center of the home page of the NASA Incident Reporting Information System (IRIS) at <https://nasa.ex3host.com/iris/newmenu/login.asp> and use of NASA forms as specified in JPR1700.1 or any alternate forms used by Contractor. The contingency plan will emphasize timely notification of NASA; preliminary and formal investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; preparation and submission of a formal report to NASA; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The Contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The Contractor will include appropriate details to address the following:
Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form is NOT available from JSC or NASA forms management; it can be obtained from the following link: <http://jschandbook.jsc.nasa.gov/>.

a. The Contractor will include a mishap contingency plan as part of the Safety and Health Plan which meets the requirements of NPR 8621.1, NASA Procedural Requirement for Mishap and Close Call Reporting, Investigating, and Recordkeeping, and JPR 1700.1, JSC Safety and Health Handbook. The plan will identify the method of immediately notifying NASA in the advent of a type A or B mishap or C property damage mishap and close call with equivalent potential so NASA may take custody of the mishap scene and initiate its investigation as soon as it is safe following the mishap. The Contractor will immediately contact the JSC Safety and Test Operations Division at 281-483-1935 for guidance when a Type A or B mishap or Type C property damage mishap occurs in the course of performing work on a NASA Contract in whole or in part. The contingency

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plan will clearly identify the Government investigation as taking precedence over any contractor investigation.

b. For Type C injuries and all lower level mishaps, the Contractor will perform its own investigation and submit a report to NASA in accordance with the requirements of NPR 8621.1. The Contractor will ensure that NASA is promptly notified of any Type D mishap so that NASA provides a civil servant to oversee the investigation in an ex officio capacity prior to start of any formal investigation. All initial reports and selected follow up reporting will be accomplished using IRIS.

c. When a NASA investigation is required, witnesses will be identified and their names and contact information provided to NASA investigator but witness statement must be requested and collected by NASA. Such statements will be retained by the Government as part of the mishap file in accordance with NPR 8621.1.

d. The Contractor will deliver to NASA mishap reports which shall include the data specified in NPR 8621.1 for the level of mishap. NASA approval and endorsements will be required as specified in NPR 8621.1 and included in the approved Safety and Health Plan.

2.7.2 Trend Analysis – Describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.). Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the Contractor will discuss method of providing data as follows.

a. Accident/Incident Summary Report - The Contractor shall prepare and deliver Accident/Incident Summary Reports as specified on JSC Form 288, “Accident/Incident Statistics” as revised. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and close calls shall be described in summary form along with current status. Negative reports are also required monthly. Report frequency is monthly; date due is the 10th days of the month following each month reported. Report to be delivered to the JSC S&MA Directorate through the Safety and Test Operations Division, mail code NS2, by fax to 281-244-0426 or by attaching to an e-mail and transmitting to JSC-Safety-Report-Submittals@mail.nasa.gov.

b. Log of Occupational Injuries/Illnesses

i. For each establishment on and off NASA property that performs work on this Contract, the Contractor shall deliver, to the Government, a copy of its annual summary of occupational injuries and illnesses (OSHA 300 and OSHA 300A or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5. If the Contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in Contractor’s format is acceptable (such as loss runs from insurance carrier) which contains the data required by JSC Form 288.

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ii. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g. not later than February 15 of the year following).

3. HAZARD PREVENTION AND CONTROL

3.1 Identified hazards must be eliminated or controlled. In the multiple employer environment of the Center, it is required that hazards including discrepancies and corrective actions be collected in a Center wide information system Hazard Abatement Tracking System (HATS) for risk management purposes. Describe your approach to implementing this requirement.

3.2 Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence (see JPR 1700.1). Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, energies, etc.). Discuss need for coordination with safety, health, and emergency authorities at NASA.

3.3 Hazardous Operations and Processes. Establish methods for notification of personnel when hazardous operations and processes are to be performed in their facilities or when hazardous conditions are found to exist during the course of this Contract. JPR 1700.1 will serve as a guide for defining, classifying, and prioritizing hazardous operations; 29 CFR 1910.119 will be the guide for hazardous processes when the material or process meets the requirements therein.

Develop and maintain a list of hazardous operations and processes to be performed during the life of this Contract. The list of hazardous operations and processes will be provided to JSC as part of the plan for review and approval. JSC and the Contractor will decide jointly which operations and processes are to be considered hazardous, with JSC as the final authority. Before hazardous operations or processes commence, the Contractor will develop a schedule to develop written procedures with particular emphasis on identifying the job safety steps required. NASA will have access on request to any Contractor data necessary to verify implementation. For all identified operations or processes that may have safety or health implications outside Contract operations, the Contractor shall identify such circumstances to the JSC Safety and Test Operations Division and Occupational Health Officer who will provide additional instructions for further NASA management review and approval.

3.4 Written Procedures. Identification of methods to assure that the relevant hazardous situations and proper controls are identified in documentation such as inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.

3.5 Hazardous Operations Permits. Identify facilities, operations and/or tasks where hazardous operations permits will be required as specified in JPR 1700.1 such as confined space entry, hot

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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.

3.6 Operations Involving Potential Asbestos Exposures. Set forth method by which compliance is assured with JSC Asbestos Control Program as established in JPR 1700.1, as revised.

3.7 Operations Involving Exposures to Toxic or Unhealthful Materials. Such operations must be evaluated by the JSC Occupational Health Office and must be properly controlled as advised by same. JSC Occupational Medicine must be notified prior to initiation of any new or modified operation potentially hazardous to health.

3.8 [RESERVED]

3.9 Baseline Documentation. Discuss the Contractor's responsibilities for maintaining facilities baseline documentation in accordance with JSC requirements. The Contractor will implement any facilities baseline documentation tasks (including safety engineering) as provided in the Contractor's plan approved by NASA or as required by Government direction.

3.10 Preventive Maintenance. Discuss approach to preventive maintenance. Describe scope, frequency, and supporting rationale for your preventive maintenance program including facilities and/or equipment to be emphasized or de-emphasized. Discuss methods to promote awareness in the NASA community (such as alerts, safety flashes, etc.) when preventive maintenance reveals design or operational concerns in facilities and equipment (and related processes where applicable).

3.11 Medical (Occupational Healthcare) Program. Discuss the Contractor's medical surveillance program and injury/illness case management to evaluate personnel and workplace conditions to identify specific health issues and prevent degradation of personnel health as a result of occupational exposures. Discuss approach to Cardiopulmonary Resuscitation (CPR), first aid, and, return to work policies and the use of Government provided medical and emergency facilities for the initial treatment of occupational injuries/illnesses.

3.12. Hazard Correction and Tracking. Discuss your system for correcting and tracking safety, health, and environmental hazards with particular emphasis on integration with JSC's Hazard Abatement Process (found on line @ <http://www.srqa.jsc.nasa.gov/HATS/>). (The scope is restricted to establishments at JSC, Sonny Carter Training Facility, and Ellington Field.) This includes the following:

3.12.1 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.

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3.12.2 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 HATS for all hazards within Contractor-occupied facilities that are not finally abated (all interim and final abatement actions completed) within 30 days of discovery. Discuss your approach to posting such plans using JSC Form 1240, JSC Notice of Safety or Health and Action Plan, or equivalent. Discuss compatibility of your system with JSC's role of facility managers in abatement planning, implementation, and verification.

3.13 Disciplinary System. Describe your system for ensuring safety and health discipline in your personnel (including subcontractors). Describe your approach to modifying personnel behaviors when personnel are exhibiting discrepant safety and health performance.

3.14 Emergency Preparedness. Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, etc. Discuss compliance with 29 CFR 1910.120 (HAZWOPER) and role in JSC Incident Command System (see JPR 1700.1 for details). Discuss methods to be used for notification of JSC emergency forces including emergency dispatcher, safety hotline, director's safety hotline, etc. Discuss establishment of pre-planning strategies through procedures, training, drills, etc. Discuss methods to verify emergency readiness.

4. SAFETY AND HEALTH TRAINING

Discuss the following:

4.1 Describe the Contractor's training program including identification of responsibility for training employees to assure understanding of safe work practices, hazard recognition, and appropriate responses for protective and/or emergency countermeasures, including training to meet Federal, State, and Local regulatory requirements.

4.2 Describe approach to identifying training needs including traceability to exercises such as job safety analyses, performance evaluation profiles, hazard analyses, mishap investigations, trend analyses, etc.

4.3 Describe approach to training personnel in the proper use and care of personal protective equipment (PPE).

4.4 Discuss tailoring of training towards specific audiences (management, supervisors, and employees) and topics (safety orientation for new hires, specific training for certain tasks or operations).

4.5 Discuss approach to ensure that training is retained and practiced. Discuss personnel certification programs. Certifications should include documentation that training requirements and physical conditions have been satisfied (examples include physical examination, testing, and on-the-job performance).

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4.6 Address utilization of JSC safety and health training resources (such as asbestos worker training/certification, hazard communication, confined space entry, lockout/tagout, etc.) as appropriate with particular emphasis on programs designed for the multiple employer work environment on NASA property. If the Contractor wishes to train their personnel in any regulatory mandated training, an agreement will be secured with JSC Occupational Safety Branch and Occupational Health and Test Operations Division and the JSC Occupational Health Officer Support office prior to beginning training. The agreement will ensure that safety and health training resources available from NASA are utilized where appropriate.

4.7 Discuss approach to making all training materials and training records available to NASA, and other Federal, state, and local agencies for their review upon request.

9. OPR: OE

10. FREQUENCY OF SUBMISSION: Initial submission with the proposal. Upon NASA approval, the Contractor's Safety and Health Compliance Plan becomes a contractual requirement.

Subsequent Revisions to the Plan: Review the plan annually or as directed by the Contracting Officer (CO). The plan shall be updated to meet the latest OSHA, JSC and VPP requirements. Provide a copy of the updated plan with changes highlighted to the distribution list at the start of each contract year. If no changes are required after the annual review, notify the individuals in the distribution list in writing to that affect.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

1 electronic copy: to a Program authorized repository (EDMS or equivalent)

After the plan is approved by NASA, the contractor will send additional copies to each of the following:

NS /Safety and Test Operations Division (2 hard copies)

JSC occupational Health Officer (1 hard copy)

JSC Emergency Preparedness Office (1hard copy)

13. REMARKS: The Safety and Health Plan requires approval of the Manager, S&MA/Program Risk Office.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Monthly Safety and Health Metrics 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-03	3b. RFP/Contract No. NNJ10GA35C
4. Use Establishes selected Safety and Health Program metrics in accordance with OSHA Requirements.			5. DRD Category S&MA/PR
6. References SOW 2.2		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: The scope of the information required is limited to the JSC-administered establishments of Houston Texas at NASA Road One, the Sonny Carter Training Facility, and Ellington Field; MSFC and KSC facilities.

DEFINITIONS: Refer to JPR 1700.1 and OSHA requirements for definitions of terms below.

8b. 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 JPR 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
Total												

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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

8c. FORMAT: electronic to NS2, SD13; hard copy to COTR. Send as Excel spreadsheet or in tables compatible with MS Word.

9. OPR: OE

10. FIRST SUBMISSION DATE: 10th day of the first full month after contract start

Frequency Of Submission: Monthly the by the 10th of the month following month being reported.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 e-copy to Program Repository via EDMS workflow

13. REMARKS: None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Safety and Health Program Self-Evaluation 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-04	3b. RFP/Contract No. NNJ10GA35C
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide Self-Evaluation of Contractor's safety and health program performance.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.2		7. Interrelationships (e.g., with other DRDs) C-SA-02	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: The scope of the information required is limited to NASA Centers and sites where the Contractor is operational under this contract.

8b. CONTENT: The Contractor shall conduct an annual self-evaluation of its safety and health program as required by its safety and health plan.

Information required:

1. The internal assessment of safety and health program effectiveness during the report period (i.e., the previous year) indicating the status of goals or objectives previously established and areas of strength and weakness in Contractor safety program performance.
2. Safety and health concerns and resolutions relating to JSC operations which may have been identified during the report period.
3. Unresolved safety and health concerns relating to JSC operations which the Contractor feels merit attention of JSC safety and health management.
4. The goals and objectives of the Contractor safety and health program for the next report period.
5. An analysis of the contractor's performance at JSC-administered establishments in each of the 32 Voluntary Protection Program sub-elements found in the Federal Register Notice 65:45649-45663, July 24, 2000.
6. Attach action plans for identified problem areas. Action plans must include schedule for periodic progress reports to the Government on a frequency agreed to by the Government and the Contractor for each problem area.

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8c. FORMAT: 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.

9. OPR: OE

10. FIRST SUBMISSION DATE: September 30, 2011

Frequency Of Submission: Annually on September 30th of each year.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: None

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Safety Analysis and Hazard Reports	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-05	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 2 4. Use (Define need for, intended use of, and/or anticipated results of data) The ISS Safety Review Panel (SRP) will use the Safety Analysis and Hazard Reports to assess the ground and flight safety.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.1.2, 5.5		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: Submittals shall consist of a safety analysis and hazard reports for all packed bags and hardware sustained, and, or developed on this contract. This includes ground and flight safety assessments. The safety assessment shall include recommendations and constraints on co-location of NASA pre-packed bags in the respective launch vehicle racks and sub-racks to ensure no damage to hardware contained within the bags.

8b. CONTENT: Hazard Reports shall be provided that are commensurate with the level of maturity of the design in accordance with SSP 30309.

System Description: The Contractor shall provide a description of the launch and on-orbit configuration of the hardware and software in accordance with SSP 30599, Safety Review Process. Functional diagrams shall be submitted and supplemented with descriptions of interfaces and operations.

Hazard Report: Hazard Reports shall include the following data fields:

1. Hazard Report Number
2. Hazard Title
3. Review Level
4. Revision Date
5. Scope
6. Hazard Description
7. Cause Summary
8. Program Stage
9. Interfaces
10. Status of Work
11. Remarks
12. Submittal Concurrence
13. Approval
14. Mission Phase
15. Severity Category
16. Likelihood of Occurrence

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17. Controls
18. Method for Verification of Controls
19. Safety Requirements
20. Detection and Warning Method
21. Cause Remarks
22. CIL Reference
23. Point of Contact.

For Phase I maturity, Hazard Reports shall reflect the preliminary design and define hazards causes. Additionally, provide the preliminary hazard controls and verification methods when available. For Phase II maturity, the Hazard Reports shall be updated to reflect the critical design and define the finalized hazard controls and verification methods. For Phase III maturity, the Hazard Reports shall be updated to reflect the as-built contractor design and document completion of verification.

8c. FORMAT: These deliverables shall be in the format described in SSP 30599.

9. OPR: OE

10. FIRST SUBMISSION DATE: 45 calendar days prior to formal review by SRP/Payload Safety Review Panel (PSRP).

Frequency Of Submission: As required.

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: The Safety Analysis and Hazard Reports shall be prepared in accordance with SSP 30599 in support of the safety review process.

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: R&M Allocations, Assessments, and Analyses Reports 1b. Data Type: 3	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-06	3b. RFP/Contract No. NNJ10GA35C
4. Use The R&M Allocations, Assessments, and Analysis Report shall be used to status quantitative and qualitative R&M performance characteristics of pressurized cargo equipment and flight crew equipment. The Report shall include an electronic file that includes the data elements as levied herein.			5. DRD Category S&MA/PR
6. References SOW 2.1.3		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: This report shall provide R&M predictions and analyses for the pressurized cargo equipment and flight crew equipment. Predicted and/or experienced R&M performance shall be documented according to equipment, function and repairable item.

8b. CONTENT: The R&M Allocations, Assessments, and Analysis Report shall document the equipment predicted and/or actual performance and provide R&M data as specified in Table 1. The report shall contain the following:

- (1) R&M Quantitative Predictions and Analyses
 - (a) Define the approach/process used, including prediction techniques, methodologies, and tools.
 - (b) Identify associated ground rules and assumptions used in making predictions and performing analyses.
 - (c) Identity source data used in analysis.
 - (d) Provide reliability block diagrams and associated data used in any quantitative analyses required by ISS Program.
- (2) Limited Life and Preventive Maintenance
 - (a) Identify any limited life items and preventive maintenance items and/or perform reassessments as needed to reflect technical findings. Preventive maintenance analyses shall be performed in accordance with Figure 1, PM Decision Matrix.
 - (b) Identify ground rules and assumptions used in making predictions and performing analyses. Provide rationale for items assessed for preventive maintenance.
- (3) Provide R&M source data in accordance with Table 1, R&M Source Data Field Definition Table.

8c. FORMAT: Reports shall be delivered electronically in a format supported by MS Word. Data required in accordance with Table 1 shall be provided electronically in a format support by MS Excel

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9. OPR: OE

10. FIRST SUBMISSION DATE: First report due March 31 of the first contract year (annually thereafter)

Frequency Of Submission: Report submitted annually, including data required by Table 1. Data updates made once approved by NASA S&MA.

Additional Submissions: Table 1 updates are required to maintain accuracy and completeness of the R&M data. Updates to the table are required within 30 calendar days of NASA/Contractor validation of need to make an update.

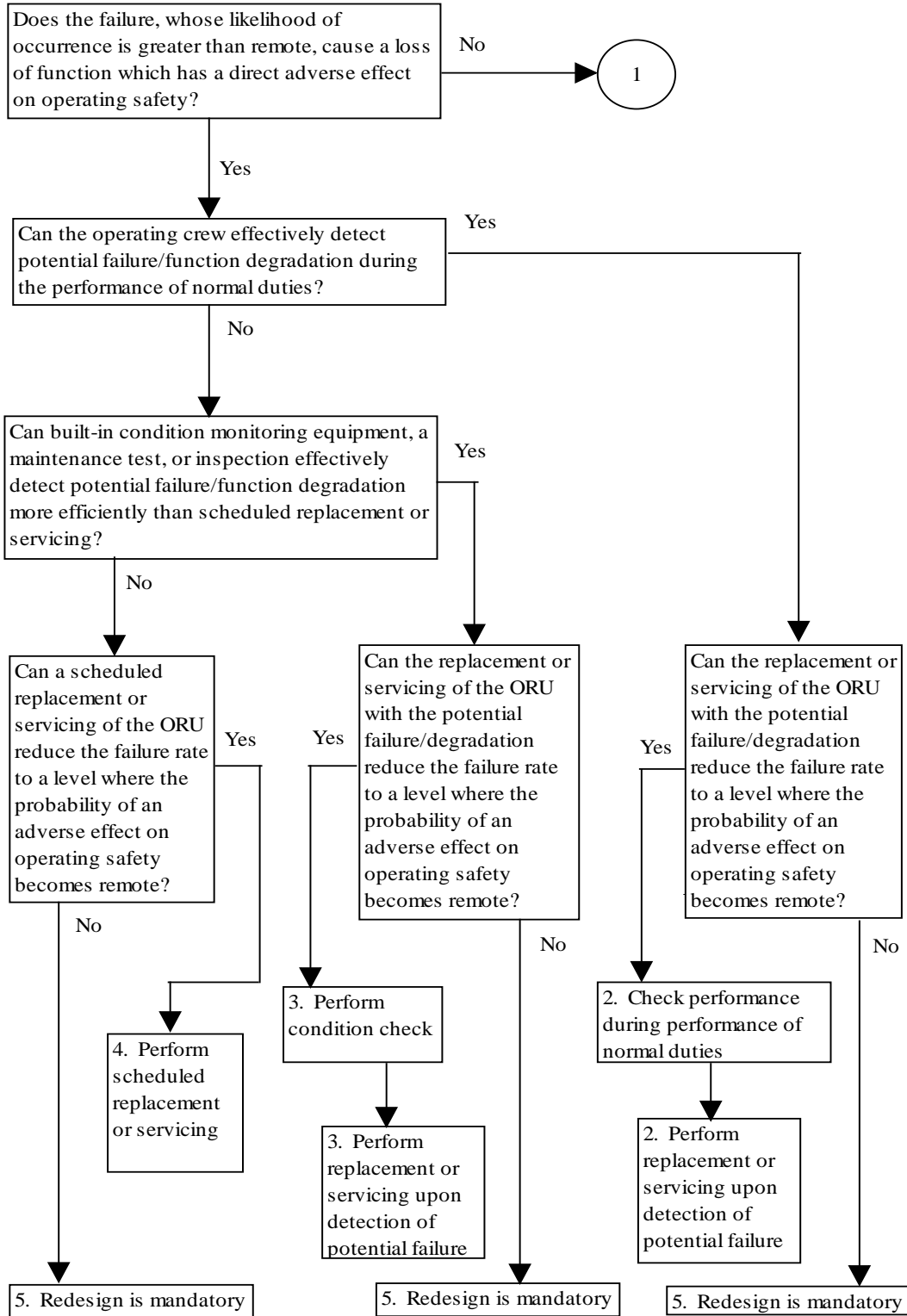
11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

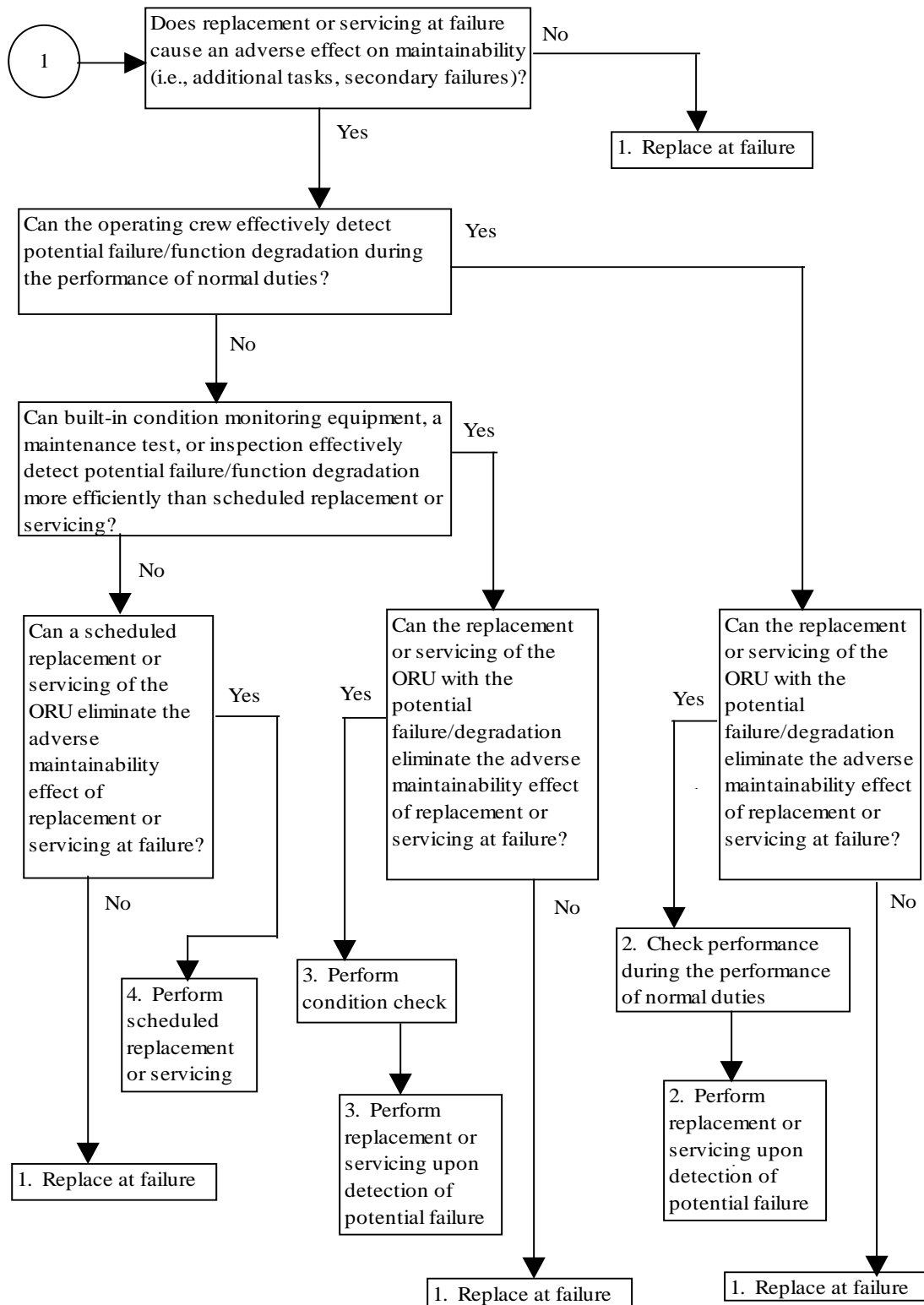
13. REMARKS: None

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Figure 1 PM Decision Matrix



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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE

Col DESCRIPTION

- A. Item Name** –R&M attributes shall be entered for each item that is to be maintained on orbit. The Vehicle Master Data Base (VMDB) nomenclature shall be used for all R&M reporting. R&M is not responsible to develop the Item Name but shall use it as a reference for reporting R&M parameters.
Field specification: Defined by Engineering.
- B. Drawing/Part Number** – R&M attributes shall be referenced to the Drawing/Part number in the VMDB. R&M is not responsible to develop the Drawing/Part number but shall use it as a reference for reporting R&M parameters.
Field specification: Defined by Engineering.
- C. Occurrence Number** – R&M attributes shall be referenced to a unique Identifying number for each different record of an item that has the same Drawing/Part Number with multiple entries in the VMDB. R&M is not responsible to develop a serial or occurrence number but shall use it, if available, as a reference for reporting R&M parameters.
Field Specification: Defined by Engineering.
- D. Distributed System Name** – The distributed system or subsystem that contains the item in the distributed systems breakdown (i.e., C&DH, EPS, GN&C, etc.). R&M is not responsible to develop a System name but shall use it, if available, as a reference for reporting R&M parameters.
Field specification: Defined by Engineering.
- E. Subsystem Name** – The name assigned to the subsystem of a given distributed system in which an equipment item is located. R&M is not responsible to develop a Subsystem name but shall use it, if available, as a reference for reporting R&M parameters.
Field specification: Defined by Engineering.

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)

Col DESCRIPTION

F. Reliability Class – Reliability classification. This is used to assign the K-factor values of Table 4
Field specification: II. The six reliability class codes are as follows:

CODE	DESCRIPTION
1	Electronic – equipment that primarily contains digital or low power analog electronics. Moving parts and high power electrical equipment normally constitute less than 5% of the item failure rate in the classification. Electronic types will typically have a fairly high level of Built-In-Testing (BIT).
2	Electrical – equipment that performs electrical power distribution, power storage, signal distribution, and/or radio frequency radiation functions. Moving parts or low power electronics normally constitute less than 5% of the item failure rate in this classification. Electrical types will typically have a low level of BIT.
3	Electro-Mechanical – equipment which contains electrical/electronic and mechanical parts, including devices which use electrical power to produce mechanical motion, and devices which use mechanical motion to produce electrical power or signals. Electro-mechanical items should contain more than 5% electrical/electronic and more than 5% mechanical parts by failure rate contribution in this classification.
4	Mechanical – equipment that primarily consists of moving parts, fluid handling equipment (including thermal systems), and/or seals. High power electrical equipment or low power electronics normally constitute less than 5% of the failure rate in this classification.
5	Structural with Crew Contact – equipment that is primarily structural but encounters planned crew contact or provides equipment protection. This type specifically includes doors, covers, panels, hatches, micrometeoroid/debris shields, and thermal blankets.
6	Structural with No Crew Contact – equipment that is load bearing. Moving parts, electronics, and electrical equipment normally constitute less than 5% of the failure rate in this classification. Structural items should not normally encounter planned crew contact.

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)

Col DESCRIPTION

G. IVA/EVA/Robotics Code – The code that describes the level of robotic compatibility of the equipment.

Field specification: I1. The codes are as follows:

CODE	DESCRIPTION
0	Equipment located in pressurized area.
1	Equipment can be maintained only by EVA crew member. No robotic support is required or intended.
2	Equipment can be maintained using SPDM without EVA. Equipment is SPDM compatible. Compatibility consists of Equipment to SPDM interface. EVA can provide maintenance support in a backup role.
3	Equipment can be maintained using SSRMS without EVA. Equipment is SSRMS compatible. Compatibility consists of Equipment to SSRMS interface. Equipment must be equipped with SSRMS grapple fixture. EVA can provide maintenance support in a backup role.
4	Equipment requires combined SPDM/EVA operations for maintenance
5	Equipment requires EVA crew member to be positioned on SSRMS for access to the worksite. Equipment requires no robotic compatibility.
6	Equipment requires the Mobile Servicing System/SSRMS for transportation to the EVA worksite. Dimensions or mass of equipment to be replaced are not compatible with EVA/CETA translation. Equipment must be equipped with SSRMS grapple fixture.

H. Average Duty Cycle Prior to PHC – Fraction of time an equipment item’s operating (hot) MTBF is applicable. Format is a number from 0.0 to 1.0. Based on the sum of total operating and test hours per year for the given part number divided by the product of 8760 hours per year times the quantity of items with that part number. Cyclic failure rates shall be converted to time-based failure rates and the duty cycle of the parent equipment shall be reported and used to make that correlation. Items having different operating times for various lower-level components may report a duty cycle of 1 and the operating (hot) MTBF shall be adjusted for those different duty cycles accordingly. A duty cycle of 1.0 shall be reported for items with failure rates independent of active operation time such as fluid filled or pressurized containers, lines, and static seals, structure, and static wiring harnesses.

Field specification: R7.5

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TABLE 1: R&M SOURCE DATA FIELD DEFINITION TABLE (CONT'D)

Col	DESCRIPTION
I.	<p>Average Duty Cycle after PHC – Fraction of time an equipment item’s Operating MTBF is applicable. Field specification: R7.5</p>
J.	<p>MTBF – Mean Time Between Failures (“Hot” or “operating” MTBF). The estimated average time in hours between failures due to random effects under nominal operating conditions at the maintainable equipment level. Redundancy within the maintainable equipment item that is not necessary to meet failure tolerance requirements (e.g., component redundancy used for reducing maintenance demand) shall be modeled so as to improve the reported MTBF. Worst case estimates shall not be used. Failures of components that are used only during installation or removal (such as deployment motors and mechanisms) shall be excluded where maintenance would not be caused by the component’s failure. Failures of components that cause degradation of the equipment within the specified limit shall also be excluded. For complex items having components operating at different duty cycles, the operating MTBF may be adjusted to a duty cycle of 1.0 if the duty cycle is reported as 1.0. MTBF does not include failures due to Micrometeoroid/Orbital Debris (MM/OD). Field specification: R14.2</p>
K.	<p>Deleted</p>
L.	<p>Wearout Life – Expected time to failure (in calendar years at the stated average duty cycles) due to wear-out, degradation, or fatigue conditions in the absence of random failures for age or cycle life limited items. wearout life shall be used as an estimate of characteristic life (L Char) in the algorithms (Table3). Best available data and engineering judgment should be used to estimate wearout life as the time when 63 percent of a population would have failed due to wearout/aging conditions alone. Minimum design life shall not be reported as the wearout life. No life limit should be reported if the expected wearout life is 15 years or greater. Field specification: R4.2</p>
M.	<p>MTBPM: Removal/Replacement – Mean Time Between Preventive Maintenance for Removal and Replacement – The average time in calendar hours (at the stated duty cycles) between all preventive maintenance (PM) replacements. Care should be given when determining if preventive maintenance replacements should be performed in place of waiting until maintenance is required due to gradual performance degradation and eventual wearout (life limits). The ability of the system to effectively accommodate wearout without adverse system function impacts may allow maintenance to be performed on an as required basis instead of at specific time intervals. Field specification: R4.2</p>
N.	<p>MTBPM – Inspect/Service – Mean Time Between Preventive Maintenance for Inspection – The average time between PM inspections and/or servicing expressed in calendar hours. A single MTBPM – Inspect/Service parameter shall be developed for any equipment items requiring multiple servicing and/or inspection actions. Field specification: R4.2</p>

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DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Acceptance Data Package (ADP)	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-07	3b. RFP/Contract No. NNJ10GA35C
1b. Data Type: 3 4. Use (Define need for, intended use of, and/or anticipated results of data) Provide baseline documentation defining the CIs.			5. DRD Category S&MA/PR
6. References (SOW, Clause, etc.) SOW 2.1.4 SSP 30695 ISS Acceptance Data Package Requirements Specification SSP 41170 ISS CM Requirements Document		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: The Acceptance Data Package (ADP) is an accumulation of documentation that provides a verified, complete, and current status of deliverable hardware needed by the procuring and, or using organization to enable the continuation of required activities.

8b. CONTENT: The ADP contents shall be in accordance with current revision of SSP 30695.

8c. FORMAT: The ADP shall be delivered in the Contractor's format in accordance with SSP 30695.

9. OPR: OE

10. FIRST SUBMISSION DATE: Submitted with initial shipment and, or transfer of hardware item or software delivery.

Frequency Of Submission: Required with each delivery of hardware from a manufacturer and, or developer to a using site or deliveries between using sites.

11. MAINTENANCE: In accordance with the current version of SSP 30695.

12. COPIES/DISTRIBUTION: 1 electronic copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: For CMC developed/sustained hardware, not pass through as documented in SOW paragraph 2.1.4.

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**DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)**

1a. DRD Title: Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) 1b. Data Type: 1	2. Date of Current Version January 15, 2010	3a. DRD No. C-SA-08	3b. RFP/Contract No. NNJ10GA35C
4. Use The FMEA serves as a source that documents the systematic evaluation of credible failure modes and effects to hardware functionality, system performance, and personnel and crew. Each credible failure mode is assessed in order that appropriate corrective action(s) may be taken to eliminate or control the root cause of the failure. The CIL documents reliability risk item's that meet criteria of SSP 30234, Paragraph 6.1. These items require additional disposition to communicate risk from failure and request program acceptance of its use.			5. DRD Category S&MA/PR
6. References SOW 2.1.3, 5.5		7. Interrelationships N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

8a. SCOPE: The FMEA and CIL assessment are performed on pressurized cargo equipment and flight crew equipment as specified in SSP 30234.

8b. CONTENT: The FMEA and CIL Report and worksheet contents are specified by SSP 30234.

8c. FORMAT: The data element format is specified in SSP 30234. The reports shall be delivered electronically in a MS Word compatible format that can be edited and made accessible in the VMDB.

9. OPR: OE

10. FIRST SUBMISSION DATE: First report due March 31 of the first contract year (annually thereafter)

Frequency Of Submission: FMEA/CIL Report: FMEA/CIL worksheets: Submitted in accordance with the project schedule for delivery, review, and approval of programmatic deliverables.

Critical Items: Submitted for Program Management approval in accordance with SSP 30234 and no later than 60 calendar days prior to first flight of the hardware to support CoFR for that flight.

Additional Submissions: FMEA/CIL worksheets and Critical Items: Updates are required to maintain accuracy and completeness of individual FMEA/CIL worksheets. FMEA/CIL worksheets for hardware transitioned to the CMC have been accepted with existing formatting. Modifications of existing FMEA/CIL worksheets required to maintain technical accuracy and completeness will be performed in accordance with SSP 30234. Only the areas of the FMEA/CIL worksheets that are affected by the modifications will be updated to meet SSP 30234. Updates are required within 30 calendar days of NASA/Contractor validation of need to make an update.

11. MAINTENANCE: The document shall be maintained electronically.

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- 12. COPIES/DISTRIBUTION:** 1 electronic copy to a Program authorized repository (EDMS or equivalent)
- 13. REMARKS:** None

Hardware List

Attachment J-9

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CMC is responsible for all dash numbered subassemblies associated with the part numbers shown in the tables below.

TABLE 1.1-A STOWAGE ACCOMMODATIONS

Item Number	Description	Drawing/Part Number	Sustain
1	M01 Bag	SEG33111805	Yes
2	M02 Bag	SEG33111806	Yes
3	M03 Bag	SEG33117683	Yes
4	RSP BMRRM Bag	SDG33113985	Yes
5	BMRRM Bag Extension Strap	SDG33113986	Yes
6	Cargo Transfer Bag, Half Size	SEG33111836	Yes
7	Cargo Transfer Bag, Full Size, With Windows	SEG33111837	Yes
8	Cargo Transfer Bag, Full Size, Without Windows	SEG33111838	Yes
9	Cargo Transfer Bag, Double Size	SEG33111839	Yes
10	Cargo Transfer Bag, Triple Size	SEG33111840	Yes
11	Divider Assembly, Cargo Transfer Bag	SEG33111841	Yes
12	Pocket Assembly, Cargo Transfer Bag	SEG33111842	Yes
13	Strap Assembly, Cargo Transfer Bag	SEG33111843	Yes
14	RCTB, 0.5/Half	SEG33122042	Yes
15	RCTB, 1.0/Full	SEG33122043	Yes
16	RCTB, 2.0/Double	SEG33122044	Yes
17	RCTB, 3.0/Triple	SEG33122045	Yes
18	Jettison Stowage Bag	SEB13100134	Yes
19	FLEIO Clamshell	SEG33122114	Yes
20	FLIPPA Clamshell	SEG33122113	Yes
21	Water Storage ORU Clamshell	SEG33122131	Yes
22	WSTA Clamshell	SEG33122132	Yes
23	OGA Pump ORU Support FSE	SEG33121369	Yes
24	FLOOOO	SEG33121871	Yes
25	FLIPPA	SEG33121894	Yes
26	FLEIO	SEG33122051	Yes
27	RFTA PSIP01 Kit	SJG33121409	Yes
28	Locker Inserts	SED39119019	No
29	Locker Inserts (lightweight)	SED32106209	No
30	ATV Non-Standard Bags (HUNCH) - Type A	9400AT101	No
31	ATV Non-Standard Bags (HUNCH) - Type B	9400AT201	No
32	ATV Non-Standard Bags (HUNCH) - Type C	9400AT301	No
33	Shuttle Middeck Locker (Lightweight)	SED32106209	No
34	Shuttle Middeck Locker Assembly (Lightweight)	V602-660800	No
35	STRAP ASSY, HAND HOLD	SED33104065	Yes

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TABLE 1.1-B BATTERIES

Item Number	Description	Drawing/Part Number	Sustain
±	AN/PRC-112 Battery Pack	1794AS0953C/U	Yes
2	Wing Leading Edge (WLE) Battery Pack	528-21404	Yes
2A	Circuit Board, Wing Leading Edge, L91	528-21405	Yes
2B	Wing Leading Edge (WLE), Printed Wiring Board	528-21411	Yes
2C	LI-FES2 Battery W/Tabs Assy	SED18100708	Yes
2D	LI-FES2 Battery/High-Temp Sleeve Altered Item Drawing	SED18100707	Yes
5	AA Lithium Iron Disulfide	528-43100	Yes
6	Alkaline Batteries	528-41350	Yes
7	Silver Oxide Battery	528-41875	Yes
8	Battery, LI-CF	BR3032	Yes
9	3.0V Waffer Cell	CR2016	Yes
10	3.0V Waffer Cell	CR2025	Yes
11	Battery Lithium 3.0V	CR2032	Yes
12	Battery Lithium 3.0V	CR2320	Yes
13	Battery, Frezzi	DT105-0009	Yes
14	Battery Pack Assembly, XL - 1 Digital Camcorder same as Canon BP-930	SED33111486	Yes
15	Decal - XL - 1 Digital Camcorder	SDD33110586	Yes
16	Battery Assy, Button (CR2025)	SEZ33111316	Yes
17	Battery Assy (544)	SEZ33111322	Yes
18	Battery Assy (EL1-CR2)	SEZ33111323	Yes
19	EN-EL4a Li-Ion Rechargeable (For Nikon D2XS Digital Camera)	SEZ33120535	Yes
20	Wireless Crew Communication System (WCCS) Crew Remote Unit (CRU) Battery Pack	SED16102307	Yes
21	SARSAT Beacon Battery Pack	PS-002957-002	Yes
22	DCS760 Kodak Battery	SDZ33112993	Yes
23	Battery, WCCS LI-BCX	SED33103846	Yes

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TABLE 1.1-C CABLES

Item Number	Description	Drawing/Part Number	Sustain
1	Communication Cable Assy	10108-10079	Yes
2	Cable Assy, DC Harness	10108-10082	Yes
3	Pigtail Connector DC Harness	10108-10098	Yes
4	Shielded DC Harness Power Cable Assy	528-20990	Yes
5	Express Payload Connector Pigtail Assy	528-21123	Yes
6	Cable Assembly - SSV TO PDIP / CIP	SED16103246	Yes
7	PCMCIA TO WIB-Remote Cable	SED16103249	Yes
8	W' Accessory Cable	SED33108816	Yes
9	ICP Power/Video Cable Assembly	SEG16103296	Yes
10	ESC Power Adapter Cable Assy	SEG33111365	Yes
11	Power Cable Assy, 28 VDC, 20AMP-10 FT and 20 ft	SEG33112266	Yes
12	RS232 Cable Assy	SEZ33113437	Yes
13	Cable Assembly, 28 VDC Y - Cable (2 ft)	SEZ39134173	Yes
14	Cable Assembly, Russian Adapter	SEZ39134178	Yes
15	Cable Assembly, Russian Chassis Ground	SEZ39134181	Yes
16	Junction Box Assembly, PS120	SEG33114648	Yes
17	Cable Assembly, PS120	SEG33114649	Yes

TABLE 1.1-D LAPTOPS

Item Number	Description	Drawing/Part Number	Sustain
1	Laptop Computer Assy, IBM A31P	SEG33115360	Yes
2	A31p Docking Station (OCA)	SEZ33120584	Yes
3	A31P Docking Station (PCMMU)	SEZ33120585	Yes
4	RJ45 Cable	1F15940	Yes
5	Access Point	1F15938	Yes
6	10' Power Supply Cable	1F15985	Yes
7	Wireless RF Network Card	1F15983	Yes
8	Stand-By Battery NIMH	29H9497	Yes
9	Back-Up Battery Lith-ion (WAIFER)	29H9506	Yes
10	Cable Assy DC "Y" Power PGSC	528-21016	Yes
11	Programming Cable, RS-422, Pistol Grip Tool	528-21137	Yes
12	IWIS Power Cable Assembly	528-21376	Yes
13	Cable Assembly, 120 VDC Power Supply	SDG38117717	Yes
14	Cable Assembly, 28 VDC Power	SDG38117718	Yes
15	Cable Assembly, 16VDC Output Adapter	SDG38117719	Yes
16	MIL-STD 1553 PCMCIA Card/Cable	SDG39129273	Yes
17	MDM Serial Interface Card	SDIO-PCM2-1/TYPE II	Yes
18	1553 PCMCIA Card	SDZ33119900	Yes
19	1553 PCMCIA Cable	SDZ33119901	Yes
20	Flash Memory PC Card	SDZ39121200	Yes
21	3-COM Ethernet Card/Cable	SDZ39129269	Yes
22	QUATECH RS-422 Card Cable	SDZ39129284	Yes
23	Cable Assy, RS-232-C, 9 PIN, PGSC	SED33103348	Yes

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Item Number	Description	Drawing/Part Number	Sustain
24	Adapter DC Power (486)	SED39126010	Yes
25	Cable Assembly, RS-422-, PGSC 486	SED39126965	Yes
26	P.W. Board Assy Two Port Isolated	SED39126966	Yes
27	120V Power Supply	SED39129272	Yes
28	Network, 3 Ft. PGSC Cable Assy.	SED39129316	Yes
29	Network, 25 Ft. PGSC Assy.	SED39129317	Yes
30	BNC T-Adapter	SED39129318	Yes
31	Terminator 50 OHM	SED39129319	Yes
32	Cap Assy., Connector, Protective	SED39135896	Yes
33	W - Cable Assy Power Extension	SED46117063	Yes
34	Audio/Video Cable Assy	SEG12100475	Yes
35	Battery Pack Assembly, A31P	SEG33115356	Yes
36	DVD/CDRW Drive Assembly, A31P	SEG33115357	Yes
37	Floppy Drive Assembly, A31P	SEG33115358	Yes
38	60GB Hard Drive Assembly, A31P	SEG33115359	Yes
39	Cable Assembly, PCS Power Supply To A31P	SEG33115361	Yes
40	Ultrabay Adapter Assembly, A31P	SEG33115362	Yes
41	Cable, A31P Audio/Video	SEG33115370	Yes
42	Ultraport Camera	SEG33115371	Yes
43	Ultraport Camera Kit, Minus Camera	528-43107	Yes
44	S-Video Adapter Cable	SEG33115372	Yes
45	Power Supply Assembly	SEG33116412	Yes
46	Power Supply Assembly - 28VDC Power Supply	SEG33116428	Yes
47	Cable A31P 16VDC Power Cable	SEG33115459	Yes
48	T61p Laptop Computer	SEG33120761	Yes
49	T61p 160GB Hard Disk Drive	SEG33120738	Yes
50	T61p Li-On 9-Cell Internal Battery	SEG33120739	Yes
51	T61p 2GB Memory Module	SDG33120740	Yes
52	T61p Ultrabay Adapter	SEG33120741	Yes
53	T61p USB 120GB Hard Disk Drive	SEG33120742	Yes
54	T61p USB DVD-RW Dual Layer Multi-burner Drive	SEG33120743	Yes
55	T61p USB QuickCam Pro Camera	SEG33120744	Yes
56	T61p USB To Serial Interface Converter Cable	SEG33120745	Yes
57	T61p USB to Parallel Interface Converter Cable	SEG33120746	Yes
58	T61p 160GB Hard Disk Drive Rubber Shock Rails	SEG33120747	Yes
59	T61p Internal DVD Multi-burner Drive	SEG33120748	Yes
60	Backup Battery	02K6572	Yes
61	Trackpoint Cap	91P8421	Yes
62	DC Power (Shuttle Orbiter) 28 VDC PCS/PGSC	SEG38114834	Yes
63	Power Cable	SEG38116215	Yes
64	Cable Assembly - PCS/DC Power (20VDC) PCS/PGSC	SEG39129263	Yes
65	28 VDC Power (Space Station)	SEG39129264	Yes
66	Power Supply, DC, 120VDC/16VDC, PCS	SEG39129272	Yes

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Item Number	Description	Drawing/Part Number	Sustain
67	UOP Power/Data Cables (Vehicle PWR)	SEG39129274	Yes
68	Power Cable, PCS-UOP 28 VDC (Space Station)	SEG39129280	Yes
69	Data Cable Assy, PCS To PDIP 1553 (8 Ft)	SEG39129282	Yes
70	Floppy Disk Drive	SEG39129288	Yes
71	Power Cable, Date/120 VDC (Space Station)	SEG39131206	Yes
72	Power Supply	SEG39134698	Yes
73	W-Cable Assembly (Vehicle PWR)	SEG46117140	Yes
74	PCMCIA Micro Drive Assembly	SEZ33112992	Yes
75	PCMCIA Adapter Assy	SEZ33113155	Yes
76	Cable Assembly, Power Supply Output	SEZ38116320	Yes
77	Adapter, RS-422	SEZ39121212	Yes
78	Power Cable, PCS-UOP 120 VDC (Space Station)	SEZ39129260	Yes
79	Pwr. Cbl., UOP 1553 Data/120 VDC (Space Station)	SEZ39129268	Yes
80	Cable Assembly, Video	SEZ39131213	Yes
81	Assembly, Writable CD-ROM, PCS	SEZ39131210	Yes
82	RS232 Y-Cable Assembly	SED39124826	Yes
83	1553 Node 1 Cable Assembly	SEG39135897	Yes
84	Color Printer	SEZ39134666	Yes
85	Parallel Data Cable	SEZ39131220	Yes
86	Color Printer Paper (6 Hole, 1/4" Dia.)	528-43093	Yes
87	2 GB LIGHTING FLASHDRIVES	SM-OAC-FD	Yes
88	Cable Assembly, A31P 16V DC Power	SDG33115374	Yes
89	Cable Assembly, A31P Enhanced 16VDC Power	SEG33116459	Yes
90	Track Point Cap, A31p	26P9198	Yes
91	Track Point Cap, A31p	84G6536	Yes
92	Track Point Cap, A31p	26P9212	Yes
93	A31p Docking Station	SEZ33119826	Yes
94	Orbiter Communications Adapter, Rev. 2A	SEZ16103933	Yes
95	Sealevel Serial I/O Card (i.e., PCMMU card)	SED33119854	Yes
96	A31p Docking Station Power Cable	SEZ33119834	Yes
97	Orbiter Communications Adapter (SSP) Cable Assembly	SED16103948	Yes
98	Assembly, Writable DVD, PCS	SEZ39136155	Yes
99	T61p 16V Power Cable	SEG33121547	Yes
100	USB Video Adapter	SEG33121544	Yes
101	USB Video Dongle	SEG33121545	Yes
102	Hard Drive Shock Rails	SDG33120747	Yes

CARGO MISSION CONTRACT

TABLE 1.1-E Photo and TV

Item Number	Description	Drawing/Part Number	Sustain
1	Lens 24-120mm f/3.5-3.6 "D" AF	1975 NCP	Yes
2	Nikon To C-Mount Adapter	DL06612P	Yes
3	Wrist Strap Nikon	FC-51	Yes
4	Haze Filter, 39MM	L-37C	Yes
5	RCA Gender Changer	PRO-GFF/2	Yes
6	Bumper Ring, Bayonet Mount - 70mm	SDD33111380	Yes
7	Bumper Ring	SDD33111381	Yes
8	Compact Flash to PC Card Adapter Assy	SDZ12100650	Yes
9	DTV IEEE 1394 Cable	SDZ16103649	Yes
10	DTV IEEE 1394 4-Pin to Female CIRC Cable	SDZ16103651	Yes
11	IEEE 1394 4-4 Pin Firewall Cable	SDZ16103652	Yes
12	Lens, 55mm f/1.2 Visible	SEB33100009	Yes
13	Lens, 55mm f/1.2 Visible	SEB33100773	Yes
14	Lens, 55MM 5/2 UV Assembly	SEB33100774	Yes
15	Filter, Wratten No. 12, Nikon	SEC33101011	Yes
16	Lens, 28MM F2.8D (EVA)	SED22105019	Yes
17	Flash Card Assy	SED32103455	Yes
18	Extension Ring, PK13, Nikon	SED33101581	Yes
19	Lens 105mm f/2.8	SED33101582	Yes
20	Bracket Adapter (1/4-20), Multi-Use	SED33102474	Yes
21	Mount Assy, 35MM	SED33102475	Yes
22	Mounting Bracket Clamp	SED33102476	Yes
23	Filter Assy, UV Lens	SED33102477	Yes
24	Lens/Window Cleaning Kit Assy	SED33102528	Yes
25	Divider/Holder/Insert Assy	SED33102534	Yes
26	Filter Assy	SED33102535	Yes
27	Lens, 85mm f/1.4 AI	SED33102541	Yes
28	Bracket, Dual Camera	SED33102545	Yes
29	Lens 16mm f/2.8 AF "D"	SED33103387	Yes
30	Lens 15mm f/3.5	SED33103429	Yes
31	Filter Assy, Wratten 12, Nikon	SED33103869	Yes
32	Lens, 180mm f/2.8 AF	SED33104057	Yes
33	Lens, 35-70mm f/2.8 AF	SED33104059	Yes
34	Lens, 20mm f/2/8 AF	SED33104060	Yes
35	Lens, 60mm f/1.2 AF	SED33104062	Yes
36	Flash Assy, Nikon	SED33104064	Yes
37	Loc Line Mounting Bracket	SED33104070	Yes
38	52MM IR Filter Assy	SED33104373	Yes
39	Filter Ring Assy - Lens, Camera Nikon	SED33104374	Yes
40	Kit Assy, Fuse	SED33104381	Yes
41	Lens Nikon 24-50mm f/3.3-4.5 D AF Zoom	SED33104495	Yes
42	Extension Ring, PK12, Nikon	SED33104497	Yes
43	Filter Assy, Polarizing, 62mm	SED33104498	Yes
44	Filter Assy, Orange, 62MM	SED33104529	Yes
45	Teleconverter, 2X (TC-301)	SED33104530	Yes
46	Teleconverter, 1/4 (TC 14 A)	SED33104535	Yes
47	Converter Assy, Scope, Lens	SED33104536	Yes

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Item Number	Description	Drawing/Part Number	Sustain
48	Flash Card Assy	SED33104786	Yes
49	Bumper Ring, 50-300MM Zoom	SED33104787	Yes
50	Bracket Clamp Assy, Multi-Use	SED33104844	Yes
51	Bumper Ring Assy, 62mm	SED33104881	Yes
52	Bumper Ring Assy, 72 MM	SED33104882	Yes
53	Filter Assy, Wratten 12, 95MM	SED33104884	Yes
54	Lens Assy, 1000MM F/11	SED33104885	Yes
55	Filter Assy, Type H3 (620-690NM/Center WL 651 NM)	SED33104904	Yes
56	Filter Assy, Type H4 (730-810NM/Center WL 762 NM)	SED33104905	Yes
57	Filter Assy, Type H9 (540-580NM/Center WL 566 NM)	SED33104906	Yes
58	Filter Assy, Type H6, Image Intensifier	SED33104907	Yes
59	Filter Assy, Polarizing, 39MM	SED33104908	Yes
60	Lens Assy, 105MM, F/2.8 AF, Nikon	SED33104909	Yes
61	CC/CPL Power Interface (CCPI)	SED33104920	Yes
62	CCPI PWR I/F Cable (28VDC)	SED33104922	Yes
63	Blanket Assy, Thermal, Nikon F5 EVA	SED33105013	Yes
64	Lens, 35-70mm f/2.8 AF	SED33105059	Yes
65	Lens, 80-200mm f/2.8 AF	SED33105099	Yes
66	CCPI Fuse Kit	SED33105384	Yes
67	Cable Assy, Shutter Release, 10' (F4)	SED33105450	Yes
68	Lens, 58mm f/1.2 NOCT	SED33105453	Yes
69	Binoculars, GYRO STAB, 10 X 40	SED33105454	Yes
70	Binoculars, 16 X 70	SED33105455	Yes
71	Binoculars, 20 X 60S	SED33105456	Yes
72	Binoculars, 8 X 20	SED33105457	Yes
73	Linear Polar Filter	SED33105632	Yes
74	Lens, 20-35mm AF	SED33105676	Yes
75	52MM Bumper Ring Assy	SED33105740	Yes
76	Balanced Video Cable	SED33105778	Yes
77	BNC Video Cable	SED33105779	Yes
78	Lens Assy, 400MM	SED33105842	Yes
79	RCA-BNC Adapter	SED33106400	Yes
80	77MM Bumper Ring Assy	SED33107850	Yes
81	Lens, Nikkor, 28MM F1.4 D AF	SED33110609	Yes
82	Cable Assy, Shutter Release	SED33112525	Yes
83	Extension Cord Assy	SED33112526	Yes
84	Stereo-To-Mono Audio Adapter	SED33113649	Yes
85	Lens, Nikkor 50mm f/1.4 D AF	SED33114372	Yes
86	Bracket Assy	SED33117404	Yes
87	Bracket, Thermal Blanket	SED33117416	Yes
88	Blanket, Thermal, Camera Mount	SED33117417	Yes
89	NIKON D2XS CAMERA BODY	SEZ33120534	Yes
90	NIKON 12-24MM LENS (For Nikon D2XS)	SEZ33120536	Yes
91	NIKON 10.5MM LENS (For Nikon D2XS)	SEZ33120537	Yes
92	NIKON SB 800 SPEEDLIGHTS (For Nikon D2XS)	SEZ33117229	Yes

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Item Number	Description	Drawing/Part Number	Sustain
93	STEC 4 GB FLASH MEMORY CARDS (For Nikon D2XS)	SEZ33120539	Yes
94	D2XS BLANKET (For Nikon D2XS)	SEZ33120543	Yes
95	D2XS BLANKET TETHER (For Nikon D2XS)	SEZ33120556	Yes
96	DIFFUSER DOME (For Nikon D2XS)	SEZ33120540	Yes
97	EYEPIECE ASSEMBLY (For Nikon D2XS)	SEZ33120546	Yes
98	NIKON BATTERY DOOR (For Nikon D2XS)	SEZ33120538	Yes
99	SIMPLETECH FLASH CARD (For Nikon D2XS)	SEZ33118356	Yes
100	Flash Cord Assy, Nikon SC-17	SED33104796	Yes
101	Teleconference Camera Video/Power Cable Assembly	SED33109713	Yes
102	AVIU/CM-CC Video Cable	SED39122260	Yes
103	Cable Assy, VTR/VIU	SED39122270	Yes
104	Cable Assembly, 25 ft DC Power PGSC II	SED39126013	Yes
105	PPOV VSU TEE Cable Assys PPOV-CAM	SED39127624	Yes
106	Minicam Power Video Cable	SED39127625	Yes
107	Cable Assembly - PPOV/MINI-CAM	SED39127626	Yes
108	Audio/Video Cable Assy, Altered Item Drawing	SEZ16103275	Yes
109	Microphone Extension Cable Assy - XL - 1 Digital Camcorder	SEZ16103285	Yes
110	Cable Assembly, Audio RCA	SEZ16103286	Yes
111	Headphone-Camcorder Interface Cable Assembly	SEZ16103287	Yes
112	PD1 Camcorder Remote Altered Item Drawing	SEZ16103291	Yes
113	RCA Video Cable Assembly	SEZ16103292	Yes
114	RCA Video Cable	SEZ16103284	Yes
115	70mm Dual Bracket Cable	SEZ33113435	Yes
116	Canon XH-G1 High Definition Video Camcorder	SEZ33120850	Yes
117	ST to ST Optical Cable	SEZ33120840	Yes
118	Multi-Protocol Converter (MPC)	SEZ33120841	Yes
119	Canon WD-H72 Wide Angle Lens	SEZ33120851	Yes
120	Dual Canon Lithium-Ion Battery Charger	SEZ16103626	Yes
121	FLASH MEMORY STORAGE DEVICE (EVA)	SEZ33118356	Yes
122	AVIU	SED33111493	Yes
123	LENS, 17-35mm f/2.8 D AF	SEZ33112987	Yes
124	FILTER	SEZ33114460	Yes
125	LENS, 35mm f/2 D AF	SED33111975	Yes
126	EVA FLASH ASSEMBLY	SEZ33117230	Yes
127	EVA FLASH BLANKET	SEZ33117228	Yes
128	SYNC CABLE ASSEMBLY	SEZ33117231	Yes
129	LENS, NIKKOR (EVA) 85mm f/1.4 D AF	SEZ33113442	Yes
130	LENS SLEEVE ASSEMBLY	SEZ33113449	Yes
131	LENS, NIKKOR MICRO (EVA) 105mm f/2.8 D AF	SEZ33113443	Yes
132	DC POWER ADAPTER CABLE 28VDC (6')	SEZ33112998	Yes
133	DCS POWER CABLE (7.2V SUPPLY TO DCS)	SEZ33112997	Yes

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Item Number	Description	Drawing/Part Number	Sustain
134	DCS POWER SUPPLY/CHARGER	SEZ33112994	Yes
135	FIREWIRE CABLE ASSEMBLY (6-4 PIN)	SEZ33112995	Yes
136	LENS, 28-70mm f/2.8 D IF-ED	SEZ33112999	Yes
137	PCMCIA ADAPTER CARD ASSY	SED33107706	Yes
138	NIKON BATTERY CHARGER	SEG33121059	Yes
139	G1 LENS HOOD	D52-0320-000	Yes
140	DIGITAL CC VIDEO/POWER CABLE ASSY.	SED33111490	Yes
141	DV CLEANING CASSETTE	SED33111489	Yes
142	PGSC POWER CABLE (6 FT)	SED39122875	Yes
143	SHURE MICROPHONE	SM58SE	Yes
144	SONY DSR PD1 CAMCORDER (PAL)	SEZ16103281	Yes
145	VIU/CM -CC CABLE (CAMCORDER VIDEO) (15ft)	SED39122269	Yes
146	XLR MICROPHONE CABLE	ECO5	Yes
147	90 Degree Camera, Autotrac (Minicam)	528-20946	Yes
148	LENS, 12MM MINICAM	VCL-12S12XM	Yes
149	LENS, 3.5MM MINICAM	VCL-03S12XM	Yes
150	LENS, 6MM MINICAM	VCL-06S12XM	Yes
151	MINICAM / AVIU ADAPTER CABLE	528-21088	Yes
152	3 AMP FUSE (12V BATT CHARGER)	272003	Yes
153	BALANCE-UNBALANCED TRANSFORMER	SED39124190	Yes
154	BNC STRAIGHT ADAPTER	528-43087	Yes
155	BNC TO PHONO ADAPTER	SED39122368	Yes
156	BRACKET CLAMP ASSY, MULTIUSE (IP CLAMP)	SEG33111394	Yes
157	BRACKET, FLEXIBLE	SEG33107630	Yes
158	BRACKET, MULTI-USE	SEG33107631	Yes
159	CLAMP ASSY, HANDRAIL	SEG33107633	Yes
160	VTR BYPASS CABLE ASSEMBLY	SEG16103295	Yes
161	OCA DATA CABLE VER 2	SEG16103950	Yes
162	SONY 750 POWER/VIDEO CABLE	SEG33118995	Yes
163	50 FOOT VIDEO CABLE	528-21389	Yes
164	LAVILIER MICROPHONE	SED33104330	Yes
165	Hand Held LIDAR & Night Vision Scope (HHL/NVS) w/Battery Pack (as Flown)	SED39124521	Yes
166	Battery Pack (w/C-Cells Installed)	SED39125550	Yes
167	Hand Held LIDAR (HHL)	SED39125549	Yes
168	M944 Intensifier (COTS P/N)	209738	Yes
169	M944 Modified Intensifier	SED39124520	Yes
170	3X Lens Assy	SED39124692	Yes
171	10X Eyepiece	206554	Yes
172	Base Plate Assy	SDD39124519	Yes
173	EXTENSION RING, PK11A, NIKON	SDD33104496	Yes
174	SPOTMETER, AUTOMATIC II	SED33102470	Yes
175	FILTER ASSY, 39mm	SED33103868	Yes
176	FILTER HOLDER ASSY, NIKON GELATIN	SED33103879	Yes
177	LENS, 28mm f/2.8 AF	SED33104058	Yes
178	BAG, CAMCORDER ASSY	SED33104331	Yes
179	LENS, ESC NIKON 50mm f/1.4 AF	SED33104372	Yes

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Item Number	Description	Drawing/Part Number	Sustain
180	BATTERY ASSY, EPX BUTTON	SED33104793	Yes
181	LENS, 28mm f/2.8 D AF	SED33105019	Yes
182	LENS ASSY, 300MM, NIKON	SED33105448	Yes
183	IR/Hot Mirror Filter	SED33109776	Yes
184	Body Cap Assy	SED33110611	Yes
185	LENS, 16MM	SED33111483	Yes
186	BINOCULARS, 8 X 32	SED33111790	Yes
187	8MM FISHEYE LENS	SED33120531	Yes
188	CABLE, DC POWER ADAPTER, 28VDC (6 FT)	SEG33111359	Yes
189	Binoculars, Leica Trinivod 8x32 BA	SEZ33111790	Yes
190	FILTER ASSY	SEZ33113006	Yes
191	LENS, NIKKOR MICRO (EVA) 180mm f/2.8 D AF	SEZ33113444	Yes
192	LENS ASSY, SCHNEIDER XENOPLAN F/1.4, 23MM	SEZ33114221	Yes
193	FIREWIRE CABLE 4-4 PIN 5M	SEZ33120842	Yes
194	G1 Camcorder Hood	SEZ33120853	Yes
195	CAMERA BODY, NIKON D3S	SEZ33121953	Yes
196	NIKON 14-24MM F2.8 FX LENS	SEZ33121954	Yes
197	SENSORKLEAR PEN	SEZ33121955	Yes
198	SENSORKLEAR LOUPE	SEZ33121956	Yes
199	NIKON D3 IR-CAMERA	SEZ33122713	Yes
200	NIKON D3S-IR CAMERA FILTER SET	SEG33123114	Yes
201	MULTIPLE USE BRACKET ARM	SED33104076	Yes
202	FLEXIBLE BRACKET ASSY	SED33104480	Yes
203	BNC TO BNC CABLE	SED16103248	Yes
204	LENS, 600MM F/4ED	SED33103407	Yes
205	35MM F1.4 AF LENS	SED33104061	Yes
206	70-200MM LENS ASSY	SEZ33113445	Yes

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TABLE 1.1-F Flight Crew Systems (FCS)

Item Number	Description	Drawing/Part Number	Sustain
1	Shampoo, No-Rinse 00100 (8 oz), 00100-N (8 oz), 00120 (2 oz), 00120-N (2 oz)	00100 (8 oz), 00100-N (8 oz), 00120 (2 oz), 00120-N (2 oz)	Yes
2	TOWEL ID CLIP	0769	Yes
3	Crew Pref, Cotton	26094	Yes
4	Fabric Knee Board, Paper	49511	Yes
5	PERSONAL HYGIENE KIT ASSY	10103-10003	Yes
6	Razor, Gillette Twin	10103-20001	Yes
7	Container, PHK (Personal Hygiene Kit Containers)	10103-80001	Yes
8	TOOTHBRUSH	10103-80002	Yes
9	SOAP AND ZIPLOCK BAG	10103-80003	Yes
10	Gloves, Disposable	10103-80004	Yes
11	Temporary Stowage Bag	10104-20002	Yes
12	Trash Container	10104-20003	Yes
13	Velcro	10104-20004	Yes
14	TISSUE DISPENSER ASSY	10104-20005	Yes
15	CREWMEMBER, SCISSORS	10104-20006	Yes
16	Wet Wipe Dispenser	10104-20019	Yes
17	SLEEP KIT	10104-20024	Yes
18	Trash Container Liner	10104-20027	Yes
19	Stowage Container, Large Assy	10105-10001	Yes
20	Stowage Container Medium Assy	10105-10002	Yes
21	Stowage Container, Small Assy	10105-10003	Yes
22	Strap-Utility Short Assy	10105-10004	Yes
23	Strap-Utility Long Assy	10105-10005	Yes
24	Bungee Snap Assy	10105-10007	Yes
25	BUNGEE, RETENTION STOWAGE ASSY	10105-10008	Yes
26	Retention Net Assy	10105-10025	Yes
27	STRAP, VELCRO CABLE RESTRAINT	10105-10059	Yes
28	HYGIENE, STATION MIRROR ASSY	10108-10001	Yes
29	FLIGHT MIRROR ASSY	10108-10002	Yes
30	AMERICAN FLAG	10108-10023	Yes
31	FECAL COLLECTION ASSY	10108-10045	Yes
32	WET WASH ASSY	10108-10048	Yes
33	PEN, DATA RECORDING	10108-10059	Yes
34	MARKER PEN	10108-10060	Yes
35	Transfer Pouch, Mission Specialist	10108-10063	Yes
36	STOWED CLOTHING TRAY ASSY	10108-10068	Yes
37	INFLIGHT STOWAGE RESTRAINT BAG	10108-10075	Yes
38	CONTINGENCY URINE COLLECTION DEVICE (CUCD) ASSY	10108-10076	Yes
39	EMESIS BAG ASSY	10108-10083	Yes
40	ZIPLOCK BAG/HYGIENE	10108-10091	Yes
41	Multimeter Kit Assembly [Fluke 87]	10118-10018	Yes
42	MECHANICAL PENCIL ASSY KNEEBOARD ASSY	10123-20001	Yes

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Item Number	Description	Drawing/Part Number	Sustain
43	FLIGHT DATA FILE CONTAINER ASSY	10125-10025	Yes
44	FOAM APPLICATOR KIT	10127-10027	Yes
45	Minimag Spare Bulbs	107-000-003	Yes
46	Spotlight Spare Bulbs	107-000-019	Yes
47	TWEEZERS	2332-10	Yes
48	Lichtenberg Clamp (Paper Clip)	30A90528	Yes
49	TAMPON BAG ASSEMBLY	528-20058	Yes
50	CREW MEMBER FLASHLIGHT [Maglite]	528-20084	Yes
51	USA Cable Cutters	528-20145	Yes
52	Duxseal Assembly	528-20157	Yes
53	Speed Handle Assembly	528-20169	Yes
54	CREWMEMBER, SPOTLIGHT (4D MAGLITE FLASHLIGHT)	528-20184	Yes
55	Temporary In-flight Stowage Container	528-20269	Yes
56	CREW PREFERENCE/CLOTHING BAG ASSY	528-20308	Yes
57	BLUSH COMPACT ASSY	528-20357	Yes
58	ADHESIVE REMOVER WIPE ASSY	528-20591	Yes
59	GLOVES ASSY, POLYETHYLENE DISPOSABLE	528-20621	Yes
60	SHOES ASSY, CYCLING	528-20627	Yes
61	COTTON SWAB ASSY	528-20693	Yes
62	Launch/Return Stowage Bag	528-20707	Yes
63	CREW PREFERENCE MAKE-UP KIT ASSY	528-20728	Yes
64	MAKE-UP KIT ASSY	528-20729	Yes
65	CREW TIMER/STOP WATCH ASSY [Egg Timer]	528-20760	Yes
66	G-SHOCK DIGITAL WATCH ASSY	528-20776	Yes
67	COMPACT DISC STOWAGE CONTAINER	528-20888	Yes
68	F-D-F MESSAGE FOLDER ASSEMBLY	528-20944	Yes
69	Lens adapter for Minicam	528-20946	Yes
70	CHRONOGRAPH, SPACE AVIATION WATCH	528-20991	Yes
71	ZIPLOCK BAG W/VELCRO	528-21039	Yes
72	Node Barcode Location Label Kit	528-21046	Yes
73	SPARE BULB KIT	528-21064	Yes
74	Crew Identifier Label Kit	528-21075	Yes
75	FLAG ASSY	528-21136	Yes
76	LICHTENBERG CLAMP TOOL	528-21140	Yes
77	ATHLETIC EXERCISE BAND	528-21166	Yes
78	NAME TAG	528-21268	Yes
79	CREW PREF, CARGO PANTS	528-21457	Yes
80	MARKING PEN	528-40674	Yes
81	2" x 3" Flag [2x3 Flag]	528-40718	Yes
82	Jockey Briefs	528-40800	Yes
83	CREW PREFERENCE, Shirt-T	528-40801	Yes
84	SOCKS	528-40802	Yes
85	TOWEL	528-40805	Yes
86	CLOTH, WASH	528-40806	Yes
87	KNIFE, SWISS ARMY	528-40807	Yes
88	LIPSTICK, ANTICHAP	528-40808	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
89	Velcro, Loop, 2", Yellow	528-40818	Yes
90	Velcro, Hook, 2", Yellow	528-40819	Yes
91	Crew Pref, Soap	528-40826	Yes
92	NAME TAG	528-40836	Yes
93	BRASSIERE	528-40853	Yes
94	PANTIES	528-40854	Yes
95	CREW PREFERENCE, SHORTS, Boxer	528-40861	Yes
96	GLOVES, FLIGHT	528-40865	Yes
97	TAPE, GENERAL PURPOSE	528-40878	Yes
98	TAPE, 3M, 2" X 60 YDS (ALUMINUM)	528-41020	Yes
99	TAMPONS, PLAYTEX	528-41027	Yes
100	SKIN CREAM	528-41042	Yes
101	DEODORANT, BAN UNSCENTED	528-41079	Yes
102	ALLIGATOR CLIP	528-41316	Yes
103	TAPE Kapton, 1"	528-41353	Yes
104	SLIPPER SOCKS	528-41369	Yes
105	DEERSKIN GLOVES	528-41514	Yes
106	Gloves	528-41517	Yes
107	Razor, Sensor Excel (Gillette Sensor Razor)	528-41526	Yes
108	RAZOR BLADES	528-41527	Yes
109	Hair Restraint	528-41572	Yes
110	CREW PREFERENCE, Shirt, Sleep	528-41585	Yes
111	SHAVE CREAM, EDGE, TUBE	528-41595	Yes
112	DEERSKIN GLOVES, MEN'S	528-41637	Yes
113	ATHLETIC, HEADBANDS	528-41655	Yes
114	ELECTRIC RAZOR, RECHARGEABLE	528-41666	Yes
115	SCREWDRIVER, CORDLESSELECTRIC	528-41677	Yes
116	DEODORANT	528-41759	Yes
117	TOOTHPASTE CAPS	528-41788	Yes
118	GENERAL PURPOSE TAPE	528-41798	Yes
119	REMINGTON ELECTRIC SHAVER	528-41815	Yes
120	PADLOCK	528-41845	Yes
121	FEMINE NAPKIN PADS MAXITHINS	528-42033	Yes
122	CREW PREFERENCE, Shirt, IVA Short	528-43012	Yes
123	CREW PREFERENCE, Shirt, IVA Long	528-43013	Yes
124	HANDKERCHIEF	528-43015	Yes
125	ATHLETIC SUPPORTER	528-43019	Yes
126	HAND CREAM	528-43025	Yes
127	TOOTHBRUSH	528-43026	Yes
128	DISPOSABLE ABSORPTION GARMENT	528-43027	Yes
129	HAIR RESTRAINT DEVICE	528-43032	Yes
130	FLIGHT, HIGHLIGHTER	528-43033	Yes
131	Crewmember, Headphone Cable (Recorder/Headset Extension Cable, 20')	528-43040	Yes
132	Running Shorts	528-43058	Yes
133	SHOES, ATHLETIC	528-43059	Yes
134	BITE-A-LITE FLASHLIGHT HOLDER	528-43061	Yes
135	SHOES, CYCLING	528-43063	Yes
136	BRUSH, HAIR [HAIR BRUSH/COMB]	528-43064	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
137	JAKSTRAP	528-43065	Yes
138	SWEATERS	528-43066	Yes
139	MAKEUP	528-43067	Yes
140	TOOTHPASTE	528-43069	Yes
141	Bag, Static Dissipative	528-43072	Yes
142	CABLE STRAP, ONE WRAP (BLACK CABLE TIE)	528-43074	Yes
143	GLIDE DENTAL FLOSS	528-43079	Yes
144	LEATHER GLOVES	528-43086	Yes
145	CREW PREFERENCE, CARGO SHORTS	528-43108	Yes
146	CREW PREF, CARGO PANTS	528-43117	Yes
147	Ziplock Bag	528-50000	Yes
148	Black Record Book	7530-00-274-5494	Yes
149	COMB, HAIR (PIK)	6485-60-0311	Yes
150	Seat Track	683-50222	Yes
151	SpaceHab Trash Container	9062250	Yes
152	SpaceHab Trash Container Liner	9062251	Yes
153	CHARTAPE, RED	BG5002M	Yes
154	CHARTAPE,BLUE	BG5003M	Yes
155	CHARTAPE, GREEN	BG5004M	Yes
156	CHARTAPE, YELLOW	BG5011M	Yes
157	CREW PREF, WATCH	CP-2-TBD	Yes
158	Equipment Bag Assembly (EBA)	G11F5160-1	Yes
159	DICTIONARY, ENGLISH TO RUSSIAN	ISBN0-471-01707-8	Yes
160	Sling Back Chair, Back-Up	JEV-01	Yes
161	CREWMEMBER MICROCASSETTE TAPE SPARE	MC-60	Yes
162	SONY HEADPHONE	MDR-14L	Yes
163	POST-IT NOTES, YELLOW (1.5X2)	MMM 653-YW	Yes
164	PADS, SELF-STICK NOTE PADS 3X3	MMM 654-YW	Yes
165	POST-IT-NOTES, YELLOW (3"X5")	MMM 655-YW	Yes
166	MASKING TAPE (1")	MMM202-BX-1	Yes
167	POST-IT-TAPE FLAGS (MMM 680-X)	MMM680	Yes
168	Official Flight Kit	OFK-XX	Yes
169	Personal Preference Kit	PPK-XX	Yes
170	Athletic, Dyna Band (Dyna band Exercise Device)	PUC-16	Yes
171	Retractable Tether	RT2-0010	Yes
172	Cartridge, Ink, Tri-Color, Epson 600	S020089	Yes
173	Black Ink Cartridge	S020108	Yes
174	Black, Cartridge	S189108	Yes
175	Color, Cartridge	S191089	Yes
176	PERSONAL PREFERENCE KIT ASSEMBLY	SDD12100370	Yes
177	IV/EV TIEWRAP [Zip Ties]	SDD13101649	Yes
178	MULTI-USE BRACKET Knob Cover (Bogen Arm)	SDD33105352	Yes
179	STIFFENER	SDD33105628	Yes
180	FOAM BALL	SDD33111961	Yes
181	EGGSERCIZER	SDD33111962	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
182	Finger Exerciser	SDD33111963	Yes
183	Power Web	SDD33111964	Yes
184	Pinch Guage	SDD33111965	Yes
185	Power Stick	SDD33111966	Yes
186	GRIP MASTER	SDD33111967	Yes
187	Grip Strength Dynameter	SDD33111968	Yes
188	CABLE RESTRAINT	SDG33107627	Yes
189	RACK SEAT TRACK STUD	SDG33110621	Yes
190	HEPA FILTER RECEPTACLE	SDG33115755	Yes
191	HEPA FILTER	SDG33115756	Yes
192	Pouch Assy, Gloves Dispenser	SDG33116808	Yes
193	ENGINEERING PAD, 8 1/2 X 11, WHITE (R2 MODS)	SDZ33112275	Yes
194	Bag, Dry Vacuum	SDZ33113693	Yes
195	WATCHBAND ASSY	SEB12100030	Yes
196	FLIGHT, PENCIL MECHANICAL	SEB12100081	Yes
197	Book Tether Assembly	SEC32100180	Yes
198	CREW PREF, WATCH CHRONOGRAPH	SED12100312	Yes
199	UAS	SED12100316	Yes
200	ADAPTATION GOGGLES	SED12100317	Yes
201	PERSONAL HYGIENE CONTAINER	SED12100619	Yes
202	EMESIS, Bag Assy	SED12100656	Yes
203	Fanny Pack, Wallet	SED12100665	Yes
204	Flight, Crew Pref Jacket Liner	SED13101629	Yes
205	Flight, Crew Pref Trousers	SED13101630	Yes
206	Removable Pocket Assy	SED13101631	Yes
207	Flight Crew Pref, Sleep Shorts	SED13101632	Yes
208	Flight, Crew Pref Jacket	SED13101638	Yes
209	Tape Dispenser W/Tape	SED32100289	Yes
210	Rubber Eraser	SED32100353	Yes
211	Book Clip, Assy	SED32100356	Yes
212	D/T 70/35MM CAMERA SYSTEM	SED32102143	Yes
213	NO RINSE BODY BATH POUCH ASSEMBLY	SED32103194	Yes
214	ADJUSTABLE BUNGEE	SED32103198	Yes
215	CREWMEMBER, FANNY PACK	SED32103453	Yes
216	CREW PREF, HAND GRIP ASSY	SED32105205	Yes
217	CREWMEMBER MICROCASSETTE, RECORDER	SED33101837	Yes
218	PENCIL ASSY, FDF	SED33102093	Yes
219	RUBBER BAND ASSY	SED33102094	Yes
220	Book, Clamps, Large (Clamp, Large Book)	SED33102143	Yes
221	PAYLOAD BAY OPS CABLE	SED33102180	Yes
222	CASSETTE PLAYER	SED33103266	Yes
223	VOL "F" WET TRASH LINER BAG ASSY	SED33103746	Yes
224	CREWMEMBER MINI MAG LIGHT ASSEMBLY	SED33104075	Yes
225	EAR PHONES ASSY, CD, SONY	SED33104082	Yes
226	BAG ASSY, COMPACT DISC, SONY	SED33104084	Yes
227	CD Kit Assy	SED33104183	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
228	DC POWER DISTRIBUTION BOX	SED33105618	Yes
229	SOUND PROTECTION HEADSET ASSY	SED33108572	Yes
230	Snakelight Assembly	SED33111320	Yes
231	SPEAKER KIT	SED33114461	Yes
232	RAZOR, MACH III TURBO ASSY	SED33115495	Yes
233	RAZOR, CARTRIDGES	SED33115496	Yes
234	TRASH CONTAINER	SED33117566	Yes
235	FOAM APPLICATOR ASSEMBLY	SED33119859	Yes
236	SEAT CUSHION, EXTENDED	SED39116647	Yes
237	RATCHET ASSEMBLY - DRIVE SYSTEM TRASH COMPACTOR, EDO	SED39119031	Yes
238	DISPOSABLE ABSORPTION PAD	SED39121519	Yes
239	Wet Trash Bag Assy	SED39122459	Yes
240	Contingency Wet Trash Bag Assy	SED39125070	Yes
241	WMS Airvent Hose	SED39120596	Yes
242	Urine Collection Device, Contingency (Single Void Supply Assy)	SED46116445	Yes
243	CREW PREF, WATCH IRONMAN	SEG12100476	Yes
244	Multimeter Kit Assy, Fluke 87 [Kit Assy, Multimeter]	SEG33104532	Yes
245	MULTI-USE BRACKET Knob Assy (Bogen Arm)	SEG33105465	Yes
246	WIPE ASSEMBLY - SURFACE WIPES	SEG33107170	Yes
247	RACK RETENTION NET	SEG33107623	Yes
248	LARGE NON-ADJUSTABLE BUNGEE	SEG33107625	Yes
249	SMALL ADJUSTABLE BUNGEE	SEG33107626	Yes
250	PILE FASTENER RESTRAINT	SEG33107628	Yes
251	Hand Loop Assy	SEG33107629	Yes
252	PANEL COVERS	SEG33107639	Yes
253	MULTI-USE BRACKET Arm Assy (Bogen Arm)	SEG33107661	Yes
254	PGSC Desktop Plate [TeSS]	SEG33108703	Yes
255	Fiber-optic Penlight Adapter Assy	SEG33109827	Yes
256	3 - INCH BUNDLING WRAP ASSEMBLY	SEG33109828	Yes
257	Printer Paper, A4	SEG33110070	Yes
258	Seat Track Stud (MPLM BUNGEE KIT (36"- 72")) [Bungee Jail]	SEG33110621	Yes
259	Ring Clip Assy	SEG33111332	Yes
260	Wire Mount Self Closing Clip Assembly	SEG33112400	Yes
261	WIRE MOUNT CLIP ASSEMBLY	SEG33112401	Yes
262	QUICK TWIST WIRE MOUNT ASSEMBLY	SEG33112402	Yes
263	8 - INCH BUNDLING WRAP ASSEMBLY	SEG33112403	Yes
264	PMA RETENTION NET	SEG33113429	Yes
265	SLEEVE ASSY, FOOT RESTRAINT	SEG33113617	Yes
266	CABLE TRAY ASSY	SEG33113708	Yes
267	SHARP CALCULATOR	SEG33113711	Yes
268	Trash Container Liner	SEG33114033	Yes
269	3-Hole Punch	SEG33114110	Yes
270	Aluminum Clipboard	SEG33114111	Yes
271	Electronic Keyboard Assy	SEG33114632	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
272	RACK FRONT RESTRAINT ASSY (SPIDER STRAP)	SEG33115135	Yes
273	HUGGIES WIPES ASSY	SEG33115639	Yes
274	Nitrile Gloves Assy	SEG33116807	Yes
275	GLOVES DISPENSER ASSY(100 PK)	SEG33117162	Yes
276	Disinfectant Wipes Assy	SEG33117799	Yes
277	bag, Wet/ Dry Vacuum	SEG39123308	Yes
278	SURFACTANT LIQUID (CLEANING AGENT POUCHES)	SEG39123711	Yes
279	PORTABLE WET/DRY VACUUM CLEANER	SEG39125637	Yes
280	VACUUM CLEANER TOOL POUCH ASSEMBLY	SEG39126290	Yes
281	DVD PLAYER ASSY	SEZ12100606	Yes
282	RAZOR, PANASONIC ELECTRIC	SEZ12100621	Yes
283	LED HEADLAMP ASSEMBLY	SEZ33103989	Yes
284	Engineering Pad Assembly	SEZ33112273	Yes
285	Metric Pad Assembly, Green (R2 MODS)	SEZ33112274	Yes
286	Flag Assembly	SEZ33112278	Yes
287	Cord Assy, Vectran	SEZ33112279	Yes
288	THREAD	SEZ33112281	Yes
289	Exercise Tubing Assembly (5 PC)	SEZ33112286	Yes
290	Color Pencil Set Assembly	SEZ33112287	Yes
291	Sail Palms	SEZ33112288	Yes
292	Needle #1	SEZ33112291	Yes
293	AUDIO CABLE ASSY, 1/8" PLUG	SEZ33113217	Yes
294	CD PLAYER ASSY, PANASONIC	SEZ33113218	Yes
295	Ziplock Bag, FR w/Velcro	SEZ33113225	Yes
296	HYGIENE DISPOSAL BAG	SEZ33113458	Yes
297	Headlamp Light Assy	SEZ33114010	Yes
298	TRASH CONTAINER LINER ASSY	SEZ33114033	Yes
299	Shampoo Assy	SEZ33114283	Yes
300	Pert Plus, Shampoo	SEZ33114285	Yes
301	SHAMPOO, NO RINSE (8oz)	SEZ33114865	Yes
302	MULTIPURPOSE DRY WIPE ASSY	SEZ33114924	Yes
303	COMBINATION LIGHT ASSEMBLY	SEZ33115753	Yes
304	BINDER ASSY	SEZ33118969	Yes
305	FACIAL CLEANSING WIPES ASSY	SEZ42104610	Yes
306	LIQUID FERTILIZER CONTAINER ASSY	SEZ46118520	Yes
307	EYE GLASS KIT	SJD13100428	Yes
308	HAIR CLIPPER ASSY KIT	SJG33115164	Yes
309	SPARE BULB KIT Assy	SJZ33114014	Yes
310	STOWAGE, HELMET BAG	SKD13101494	Yes
311	PENCIL, STYPTIC	SLC42100171	Yes
312	NAIL CLIPPERS	SLC42100172	Yes
313	COMB, HAIR CREW PREF	SLC42100174	Yes
314	FLOSS, DENTAL	SLC42100606	Yes
315	Deodorant, Mitchum	SLC42100620	Yes
316	Hygiene Wet Wipe Assembly (64 count)	SLD48100161	Yes
317	TOOTHPASTE, CREST	SLF42100786	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
318	GUITAR ASSY	SLG12100618	Yes
319	Utility Knife	SLG33113712	Yes
320	DOUBLE-SIDED FOAM TAPE	SLG33114216	Yes
321	X-STATIC SOCKS	SLG33114899	Yes
322	X-STATIC T-SHIRT, MEN'S	SLG33114900	Yes
323	REMOVABLE MOUNTING SQUARES	SLZ33111325	Yes
324	SCISSORS	SLZ33112267	Yes
325	CAN OPENER	SLZ33112268	Yes
326	LEATHERMAN TOOL	SLZ33112269	Yes
327	410 DOUBLE SIDED TAPE ROLL	SLZ33112270	Yes
328	RUSSIAN-ENGLISH TECHNICAL DICTIONARY	SLZ33112271	Yes
329	Green Record Book 8 X 10.5 Lined	SLZ33112272	Yes
330	METRIC PAD ASSEMBLY, GREEN	SLZ33112274	Yes
331	DRAWING PAPER, 14X17, WHITE	SLZ33112277	Yes
332	SUNBLOCK, BANANA BOAT	SLZ33112280	Yes
333	BINDER	SLZ33112283	Yes
334	Bag, Hefty Cinch Sak, 39 Gal.	SLZ33112284	Yes
335	Bag, Black Polyliner, 20-30 GAL	SLZ33112285	Yes
336	SLEEP HAT	SLZ33113457	Yes
337	BIKE SHORTS	SLZ33114222	Yes
338	TOILET TISSUE, 5"X8 1/2" KAYDRY WIPERS (100)	ST10P804	Yes
339	JOHNSON'S BABY WASH CLOTHS	ST10W1532	Yes
340	BINDER CLIPS, MED BLACK	UNV-10210	Yes
341	HYGIENE, Wet Trash Disp.	V669-000704	Yes
342	Odor/Bacteria Filter	WCS1134	Yes
343	WCS Canister Assy	WCS1347	Yes
344	Hose Assy	WCS1355	Yes
345	NOMEX WEBBING	528-40868	Yes
346	Fabric, Nomex 40.5"W	528-41198	Yes
347	Pyrell Foam	528-41396	Yes
348	Mini-Cell Foam	528-41484	Yes
349	Armalon Stiffener	528-41926	Yes
350	Resin	FK-800	Yes
351	Desktop Plate Assy	SED33108703	Yes
352	Ultrasonic Leak Detector	40659G-01	Yes
353	CREWMEMBER, TETHER ACCESSORY	528-20144	Yes
354	LABEL MAKER	SEG33120486	Yes
355	SLEEPWEAR MEN'S TOP, LARGE	SLZ33113709	Yes
356	Kneeboard Lanyard Assembly	SED33104423	Yes
357	IFM Breakout Box	SED39121772	Yes
358	Personal Hygiene Kits	SED12100626	Yes
359	STATION MIRROR ASSY	10108-10112	Yes
360	BOTTLE ASSY	SED48101663	Yes
361	Urinal, Female-Oblong	WCS1184	Yes
362	Urinal, Female-Oblong	199C3102	Yes
363	Screwdriver	SED33109793	Yes
364	Male Urinal Funnel	199C3082	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
365	Female Round Urinal Funnel	199C3099	Yes
366	Female Oval Urinal Funnel	199C3102	Yes
367	CREVICE TOOL ASSY	10113-20008	Yes
368	CABIN FAN FILTER TOOL ASSY	10113-20045	Yes
369	DDU FILTER CLEANING TOOL	SED39121810	Yes
370	EAR PLUGS	528-40824	Yes
371	EYE COVER	528-40825	Yes
372	Gloves, Les Comfort	SDD33105700	Yes
373	Calculator Assembly, HP-48SX	SED33104385	Yes
374	Wrist Band Extension	SED33105589	Yes
375	Vacuum Cleaner Flex Hose	528-20179	Yes

TABLE 1.1-G CONSTELLATION CREW SURVIVAL (RESERVED)

Item Number	Description	Drawing/Part Number	Sustain

TABLE 1.1-H ADDED NON SPOC ITEMS

Item Number	Description	Drawing/Part Number	Sustain
1	BNC JACK-PLUG-JACK TEE ADAPTER	31-208-1051	Yes
2	BNC PLUG-PLUG STRAIGHT ADAPTER	31-218-RFX	Yes
3	MANUAL ELECTRICAL CABLE TESTER CARD ASSEMBLY	SEG33115457	Yes
4	TEST LEAD CABLE ASSY, MECT	SEG33115458	Yes
5	MECT POUCH ASSEMBLY	SEG33115459	Yes
6	MECT KIT ASSEMBLY	SJG33115460	Yes
7	SPACE STATION LAB INTERFACE BOX (SLIB)	SEG16103299	Yes
8	DSR V10 DIGITAL VIDEO RECORDER	SEZ16103294	Yes
9	CANON CB900 12V LITHIUM ION BATTERY CHARGER	SED33111491	Yes
10	Crew Contamination Protective Kit (CCPK)	SEG42103702	Yes
11	Automatic External Defibrillator (AED)	SEG52101600	Yes
12	AED BATTERY	SEG52101601	Yes
13	Bose Active Noise Canceling (ANC) HEADSET ASSEMBLY	SEG16103501	Yes
14	Bose Headphones Integrated Cable (BHIC)	SEG12100700	Yes
15	LED Control Unit	SEG33112643	Yes
16	Caframo Minimax Battery Powered Portable Fan Assembly	SEG11100291	Yes

CARGO MISSION CONTRACT

TABLE 1.1-I ADDED NON SPOC FLIGHT CREW SYSTEMS (FCS) ITEMS

Item Number	Description	Drawing/Part Number	Sustain
1	AC/DC current probe	SEG39130242	Yes
2	Acoustic Meter	SEG33108707	Yes
3	Battery Tester Assy	SEG33114630	Yes
4	Fiber Optics Cleaning Kit	SJG32110464	Yes
5	Fiber Optic Swab (Fiber Optics Cleaning Kit)	CO25123X	Yes
6	Pin Cable Pouch Kit	SJG32110466	Yes
7	Light Source, Altered Item	SEG32110467	Yes
8	Light Meter, Altered Item	SEG32110468	Yes
9	Caddy, Fiber Optic	SEG32110470	Yes
	Foam Cushion, Caddy	SEG32110471	Yes
10	Impact Driver Kit	SJG33110640	Yes
11	IVA Hand Tools	SEG33109820	Yes
12	Large Gauge Pin Kit	SJG33115400	Yes
13	ESD carrier	SEG33111779	Yes
14	Power Supply Card Carrier Assembly	SEG33111780	Yes
15	Card Puller Assembly	SEG33111774	Yes
16	Pouch Assembly	SEG33111775	Yes
	Disk Drive Card Carrier Assembly	SEG33111781	Yes
	Place Card	SEG33111782	Yes
17	Extractor Adapter	SLG33114631	Yes
18	Driver/Drill Bit Pouch Kit	SJG33114294	Yes
19	Torque Analyzer Kit Phase I	SJG33115179	Yes
20	FIBERSCOPE KIT	SJG33116129	Yes
21	Fiberscope Pouch Assy	SDG33117913	Yes
22	Fiberscope Layer Foam Assy	SDG33117343	Yes
23	Light Source Power System Assy	SDG33117342	Yes
24	Fiberscope Assy	SDG33117344	Yes
25	Light Source Assy	SDG33117346	Yes
26	Lens Adaptor Assy	SDG33117902	Yes
27	Viewing Tips Kit	SDG33117927	Yes
28	Viewing Tips Pouch Assy	SDG33117925	Yes
29	AT60S/NF	1150020	Yes
30	AT100D/NF	1150047	Yes
31	AT60D/NF	1150045	Yes
32	AT60S/FF	1150021	Yes
33	AT100D/FF	1150048	Yes
34	AT60D/FF	1150046	Yes
35	Light Bulb (Fiberscope Kit)	3030733AC	Yes
36	Light Bulb (Fiberscope Kit)	JCRM12V50W	Yes
37	Extraction Tools Kit	SJG33117928	Yes
38	Extraction Tool Album Assy	SDG33117926	Yes
39	Guide Tube Kit-Extraction Tool	SEG33117345	Yes
40	Diagnostic Caddy	SEG33110623	Yes
41	SCOPEMETER KIT	SJG33115340	Yes
42	SCOPEMETER KIT, Diagnostic Caddy (Ni-Cd) [Ni-Cad]	SEG39130246	Yes
43	SCOPEMETER TEMPERATURE PROBE	SEG39130249	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
	ASSY, DIAGNOSTIC CADDY		
44	Scopemeter Kit, Diagnostic (Altered Item) (w/Alkaline Battery Pack) [Batteries] [Scopemeter Assy]	SEG39129678	Yes
45	Scopemeter Assy, Diagnostic (Altered Item) Pouch Assy	SEG33114064	Yes
46	Scopemeter Assy, Diagnostic (Altered Item) Pouch Assy	SEG33111784	Yes
47	Scopemeter Assy, Diagnostic (Altered Item) Probe Assy	SEG39129679	Yes
48	Scopemeter Assy, Diagnostic (Altered Item) Probe Assy (Black)	SEG39129680	Yes
49	Ni-CAD Battery Pack	PM9086/011	Yes
50	SCOPEMETER LOAD AND CONNECTOR KIT (SLaCK)	SJG33120108	Yes
51	Scopemeter Surface Temperature Probe	SEG39130243	Yes
52	SCOPEMETER CURRENT PROBE KIT	SEG39130250	Yes
53	SCOPEMETER PRESSURE / DOWNLINK KIT	SEG39130251	Yes
54	Scopemeter Downlink Cable	SEG33111952	Yes
55	Scopemeter Pressure Probe	SEG39130244	Yes
56	Scopemeter Power Adapter (SMPA) / Battery Charger Kit	SJG33111349	Yes
57	Scopemeter Adapter Cable [SCOPEMETER POWER ADAPTER]	SEG33113009	Yes
58	Tool Battery Charging Adapter [SCOPEMETER POWER ADAPTER]	SEG33110639	Yes
59	SMPA Charger (blue box) [SCOPEMETER POWER ADAPTER]	SEG33110643	Yes
60	SMPA Charger Soft Goods Lab	SEG33111379	Yes
61	TORQUE WRENCH ASSY, 5-35 IN LBS, 1/4" DRIVE	SEG33117289	Yes
62	Eye Cup	MB-99400	Yes
63	Power Supply (120 VDC) [Xantrex] [Diagnostic Power Supply]	SEG33110150	Yes
64	Power Supply Accessory Kit [Xantrex] [Diagnostic Power Supply]	SJG33110142	Yes
65	HIGH TORQUE LOCKER TOOL	SDZ33114002	No
66	CAPTURE/CENTERING DEVICE ASSY	SEG33108573	Yes
67	IVA DRIVER/DRILL KIT	SJG33109829	Yes
68	TAP AND DIE SET (KIT M)	SJG33109850	Yes
69	IVA 12V NIMH BATTERY (MAKITA BATTERY) (2.2AH)	SEG33111376	Yes
70	CABLE CUTTER/POUCH ASSY	SEG33113153	Yes
71	ISS Food Warmer	SED39114053	Yes
72	ISS Food Warmer Cable	SEG39135494	Yes
73	Moisture Removal Kit	SEG11100311	Yes
74	IVA Connector Cleaner Tool kit	SJG33114991	Yes
75	Maintenance Work Area [MWA] Drawing Tree	SIG33110300	Yes
76	Maintenance Work Area Work Surface [MWA]	SEG33110270	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
77	Rack Mounting Hardware, Left [MWA]	SEG33110280	Yes
78	Utility Strip [MWA]	SEG33108463	Yes
79	Utility Kit [MWA]	SJG33110310	Yes
80	Debris Containment System [MWA]	SEG33110290	Yes
81	Bungee Loaded Rod Kit [MWA]	SJG33110307	Yes
82	ARIS TOOLS	SEG33109848	Yes
83	FOLDING HONE KIT	SEG33112396	Yes
84	POCKET MAGNIFIER ASSEMBLY	SEG33112397	Yes
85	MAGNIFYING VISOR ASSY	SEG33112398	Yes
86	Nomex pouch	SEG33113152	Yes
87	CROWFOOT WRENCHES, 7/16", FC14B	SEG33114112	Yes
88	WISE ASSY. PANAVISE	SEG33114312	Yes
89	SMALL GAUGE CRIMP TOOL	SEG33116078	Yes
90	COMBINATION WRENCH ASSEMBLY	SEG33116079	Yes
91	Power Supply Probes Kit [Xantrex] [Diagnostic Power Supply]	SJG33110149	Yes
92	Jaw Clamp Assy, MWA [Xantrex] [Diagnostic Power Supply]	SEG33110172	Yes
93	Cable Assy, Power Supply [Xantrex] [Diagnostic Power Supply]	SEG33111384	Yes
94	Cable Assy, UOP [Xantrex] [Diagnostic Power Supply]	SEG33108825	Yes
95	Handle Assy [Xantrex] [Diagnostic Power Supply]	SEG33110146	Yes
96	SOLDERING IRON KIT	SJG33110598	Yes
97	ETHERNET REPAIR KIT	SJG33110638	Yes
98	SEWING KIT	SJG33110642	Yes
99	ISS PIN KIT	SJG33110644	Yes
100	Spade Terminals - #6 Hole 16Ga [ISS PIN KIT]	7-52935-1	Yes
101	Spade Terminals - #10 Hole 16Ga [ISS Pin Kit]	7-52937-1	Yes
102	Ring Terminals - #8 Hole 20-22Ga [ISS Pin Kit]	8-31890-1	Yes
103	Ring Terminals - #8 Hole 16Ga [ISS Pin Kit]	8-320565-1	Yes
104	Ring Terminals - #6 Hole 16Ga [ISS Pin Kit]	8-320619-1	Yes
105	Ring Terminals - #8 Hole 10-12Ga [ISS Pin Kit]	8-35108-1	Yes
106	Ring Terminals - #6 Hole 10-12 Ga [ISS Pin Kit]	8-35149-2	Yes
107	Ring Terminals - #6 Hole 20-22 Ga [ISS Pin Kit]	8-36152-1	Yes
108	Ring Terminals - #10 Hole 20-22 Ga [ISS Pin Kit]	8-36154-1	Yes
109	Ring Terminals - #10 Hole 16Ga [ISS Pin Kit]	8-36160-1	Yes
110	Spade Terminals - #6 Hole 20-22 Ga [ISS Pin Kit]	8-52929-1	Yes
111	Spade Terminals - #8 Hole 20-22 Ga [ISS Pin Kit]	8-52930-1	Yes
112	Spade Terminals - #10 Hole 20-22 Ga [ISS Pin Kit]	8-52931-1	Yes
113	Ring Terminals - #10 Hole 10-12Ga [ISS Pin Kit]	8-35109-1	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
114	Spade Terminals - #8 Hole 16Ga [ISS Pin Kit]	8-52936-1	Yes
115	Spade Terminals - #6 Hole 10-12 Ga [ISS Pin Kit]	8-52941-2	Yes
116	Spade Terminals - #8 Hole 10-12 Ga [ISS Pin Kit]	8-52942-1	Yes
117	Spade Terminals - #10 Hole 10-12 Ga [ISS Pin Kit]	8-52943-1	Yes
118	Butt Splices - 12 Ga [ISS Pin Kit]	FVC1210	Yes
119	Butt Splices - 14-16 Ga [ISS Pin Kit]	FVC1614	Yes
120	Butt Splices - 20-22 Ga [ISS Pin Kit]	FVC2216	Yes
121	Test Adapter – 20 Ga Socket [ISS Pin Kit]	3560-0	Yes
122	Test Adapter - 20 Ga Pin [ISS Pin Kit]	3561-2	Yes
123	Test Adapter - 16 Ga Socket [ISS Pin Kit]	3562-0	Yes
124	Test Adapter - 16 Ga Pin [ISS Pin Kit]	3563-2	Yes
125	Test Adapter - 12 Ga Socket [ISS Pin Kit]	3564-0	Yes
126	Test Adapter - 12 Ga Pin [ISS Pin Kit]	3565-2	Yes
127	Test Adapter - 22 Ga Socket [ISS Pin Kit]	4690-0	Yes
128	Test Adapter - 22 Ga Pin [ISS Pin Kit]	4691-2	Yes
129	Test Connectors - Minigrabber 24" [ISS Pin Kit]	SEG33114372	Yes
130	Alligator Clips [ISS Pin Kit]	1437-2	Yes
131	Insulation Tubing - 5" 22 Ga [ISS Pin Kit]	M23053/11-201-C	Yes
132	Insulation Tubing - 5" 20 Ga [ISS Pin Kit]	M23053/11-202-C	Yes
133	Insulation Tubing - 5" 12-16 Ga [ISS Pin Kit]	M23053/11-109-C	Yes
134	Pouch Assembly	SEG33112713	Yes
135	24" Pin/Socket [ISS Pin Kit]	SEG33112714	Yes
136	5" Pin/Pin [ISS Pin Kit]	SEG33112715	Yes
137	5" Pin/Socket [ISS Pin Kit]	SEG33112716	Yes
138	5" Socket/Socket [ISS Pin Kit]	SEG33112717	Yes
139	Pin/3Socket [ISS Pin Kit]	SEG33112718	Yes
140	Pin/4Socket [ISS Pin Kit]	SEG33112719	Yes
141	Pin/5Socket [ISS Pin Kit]	SEG33112720	Yes
142	20 INCH PIN TO 5 SOCKET JUMPER ASSEMBLY	SEG33112721	Yes
143	22GA socket [ISS Pin Kit]	M39029/56-350	Yes
144	12GA socket [ISS Pin Kit]	M39029/56-353	Yes
145	20GA socket [ISS Pin Kit]	M39029/57-357	Yes
146	16GA socket [ISS Pin Kit]	M39029/57-358	Yes
147	22GA pin [ISS Pin Kit]	M39029/58-360	Yes
148	20GA pin [ISS Pin Kit]	M39029/58-363	Yes
149	16GA pin [ISS Pin Kit]	M39029/58-364	Yes
150	12GA pin [ISS Pin Kit]	M39029/58-365	Yes
151	22 Ga wire [ISS Pin Kit]	M22759/11-22-9	Yes
152	20 Ga wire [ISS Pin Kit]	M22759/11-20-9	Yes
153	16 Ga wire [ISS Pin Kit]	M22759/11-16-9	Yes
154	12 Ga wire [ISS Pin Kit]	M22759/11-12-9	Yes
155	LOGIC ANALYZER KIT	SJG33110645	Yes
156	Shielded Cable Assy	SEG33111954	Yes
157	Logic Analyzer Pouch Assembly	SEG33111956	Yes
158	Daqcard / Adapter Cable Assemblies	SEG33111951	Yes

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Item Number	Description	Drawing/Part Number	Sustain
159	Test Lead Assemblies	SEG33111955	Yes
160	COLDPLATE WIREWAY KIT ASSY	SJG33111361	Yes
161	COLDPLATE WIREWAY Covers ASSY (small)	SDG33111763	Yes
162	COLDPLATE WIREWAY Cover Softgoods Assy	SDG33111377	Yes
163	LOCKER TOOL KIT	SJG33111363	Yes
164	MDM Replacement CARD KIT	SJG33111778	Yes
165	CLAMP & BRACKET KIT	SJG33112385	Yes
166	CLAMP AND BRACKET TOOL POUCH ASSEMBLY	SEG33113010	Yes
167	TIN SNIPS ASSY	SEG33113011	Yes
168	POP RIVET GUN ASSY	SEG33113012	Yes
169	WISE GRIPS ASSY	SEG33113013	Yes
170	¼" Pop Rivet, .125" dia, Assy [Clamp & Bracket Kit]	SEG33113014	Yes
171	HAND PUNCH ASSY	SEG33113015	Yes
172	CLAMP AND BRACKET CONSUMABLE POUCH ASSEMBLY	SEG33113016	Yes
173	Aluminum Angle Stock [Clamp & Bracket Kit]	SDG33112988	Yes
174	TA Handheld Assy (2 ea) [TAK]	SEG33115176	Yes
175	Torque Analyzer Assy (2 ea) [TAK]	SEG33115180	Yes
176	Pouch Assy. (2 ea) [TAK]	SDG33115175	Yes
177	Foam Block Assy [TAK]	SDG33115177	Yes
178	Run down Adapter (2 ea) [TAK]	63974	Yes
179	Run down Adapter (2 ea) [TAK]	62974	Yes
180	Cable (2 ea) [TAK]	065145-WD5	Yes
181	Kapton Tape	7648A713	Yes
182	SCREW EXTRACTOR MASTER KIT	SJG33116581	Yes
183	Crowfoot, 3/8" Drive, 19mm	FCOM19A	Yes
184	Crowfoot, 3/8" Drive, 17mm	FCOM17A	Yes
185	Crowfoot, 3/8" Drive, 1-5/16"	SEG33112391	Yes
186	8 MM SOCKET, 3/8" DRIVE	FMS81	Yes
187	Extension, 3/8" Drive, 4" Long	FXX4	Yes
188	Adaptor, 3/8" Female to 1/4" Male	TM1	Yes
189	Adaptor, 3/8" Female to 1/2" Male	A2A	Yes
190	Adaptor, 1/4" Female to 3/8" Male	TA3	Yes
191	Hex Head Driver, 1/4" Drive, 3/32"	TMA3E	Yes
192	.050" Hex Bit, 1/4" Hex Size	CRA.050A	Yes
193	1/16" Hex Bit, 1/4" Hex Size	CRA2A	Yes
194	5/64" Hex Bit, 1/4" Hex Size	CRA2.5A	Yes
195	3/32" Hex Bit, 1/4" Hex Size	CRA3A	Yes
196	7/64" Hex Bit, 1/4" Hex Size	CRA3.5A	Yes
197	1/8" Hex Bit, 1/4" Hex Size	CRA4A	Yes
198	9/64" Hex Bit, 5/16" Hex Size	CRA4.5A	Yes
199	5/32" Hex Bit, 5/16" Hex Size	CRA5A	Yes
200	3/16" Hex Bit, 5/16" Hex Size	CRA6A	Yes
201	7/32" Hex Bit, 1/4" Hex Size	CRA7A	Yes
202	1/4" Hex Bit, 1/4" Hex Size	CRA8A	Yes
203	5/16" Hex Bit, 5/16" Hex Size	CRA10A	Yes

CARGO MISSION CONTRACT

Item Number	Description	Drawing/Part Number	Sustain
204	1/4" Square Bit, 1/4" Hex Size	CRD8B	Yes
205	#1 Phillips Bit, 1/4" Hex Size	CRP1D	Yes
206	#2 Phillips Bit, 1/4" Hex Size	CRP2D	Yes
207	Flat Tip Bit, .036"x5/16", 1/4 Hex Size	CRS8B	Yes
208	Flat Tip Bit, .051"x13/32", 5/16 Hex Size	CRS12B	Yes
209	#1 Posidriv Bit, 1/4" Hex Size	CRZ1A	Yes
210	#2 Posidriv Bit, 1/4" Hex Size	CRZ2A	Yes
211	Jewelers Screwdriver Kit	SJG33114299	Yes
212	1/4" Hex Adapter, 3/8" Drive	N/A	Yes
213	Locator for PN MS27490-20	86-5	Yes
214	Locator for PN MS24308/12-1	86-7	Yes
215	Wire Cutters	184CCP	Yes
216	File Handle	HB100	Yes
217	Hand File, Large	HB100	Yes
218	Torque Wrench, 1/4" Drive, 10-50 in-lb	QC1R50	Yes
219	KIT K ASSEMBLY - HAMMER, CHISEL, PUNCH, PRY BAR	SJG33109844	Yes
220	HEADBAND PENLIGHT HOLDER ASSEMBLY	SEG33112399	Yes
221	LONG DURATION CREW MEMBER RESTRAINT	SEG33107621	Yes
222	IVA PORTABLE UTILITY LIGHT ASSEMBLY (PUL)	SEG33107306	Yes
223	IVA PORTABLE UTILITY LIGHT Lamp ASSEMBLY (PUL Bulb)	SEG33111358	Yes
224	DIAL TORQUE WRENCH ASSY	SEG33116504	Yes
225	ULD AUDIO CABLE ASSY	SEG33117591	Yes
226	TREADMILL HARNESS ASSY	SEG46120250	Yes
227	INNER HATCH WINDOW SHIELD KIT	SJD33117564	Yes
228	TVIS GYRO REPAIR TOOL KIT	SJG33116475	Yes
229	TVIS MAINTENANCE TOOLS KIT	SJG33117580	Yes
230	Two Part Epoxy	SEG33121357	Yes
231	Green laser pointer	SEG33121108	Yes
232	Work light	SEG33120784	Yes
233	JSL Data Cable	SEG33120875	Yes
234	Power Interface Cable	SEG33120873	Yes
235	Secondary Power Interface Cable	SEG33120874	Yes
236	CDH Interface Cable	SEG33120876	Yes
237	ATU Interface Cable	SEG33120878	Yes
238	Pin insertion/extraction tool Assembly	SEG33121512	Yes
239	Inflatable Globe	SEG33121804	Yes
240	Bolt, 9/16 Hex (for ECLSS)	SDG52102486	Yes
241	Glue Assembly	SEG33121321	Yes
242	Vacuum Cleaner cable	SEG39130245	Yes
243	Fiber Optic Diagnostic Kit	SJG32110465	Yes
244	Suction Hose, Wet/Dry Vacuum Cleaner	SEG39123305	Yes
245	Cleaner Assy - Hose, Rod Push Type, Vacuum Cleaner, Extendable	SEG39125638	Yes
246	Socket Driver Assy, 5/64", Long Bit	SEG33122025	Yes
247	Power Brush Assy (Nylon Brush)	SEG33122099	Yes

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Item Number	Description	Drawing/Part Number	Sustain
248	pH Test Strips, 1.8 to 3.8	53282	Yes
249	pH Test Strips, 3.8 to 5.5	53283	Yes
250	pH Test Strips, 5.2 to 6.8	53284	Yes
251	IFM Parts Kit	SJG33121074	Yes
252	Wet Trash Bag	SLG33122024	Yes
253	Hygiene Towel, Wet	SLG33121830	Yes
254	Hygiene Towel, Compressed	SEG33122022	Yes
255	Mini LED Flashlight	SEZ33122496	Yes
256	Antistatic Tape	SLG33122066	Yes
257	FEP Film, 36" wide X 0.002"	200A FEP-36IN Wide	Yes
258	FEP Film, 36" wide X 0.005"	500A FEP-36IN Wide	Yes
259	Bag, Layflat, FEP, 24"x24"x0.005" thick	P-00248	Yes
260	Bag, Layflat, FEP, 36"x36"x0.005" thick	P-00249	Yes
261	Bag, Layflat, FEP, 24"x24"x0.002" thick	P-00252	Yes
262	Bag, Layflat, FEP, 2436"x2436"x0.002" thick	P-00253	Yes
263	BARCODE READER ASSY	SEG33109788	Yes
264	CABLE ASSY, BARCODE READER	SEG33109789	Yes
265	ADAPTER ASSY BARCODE READER	SEG33109790	Yes
266	Jewelers Screw Driver Set, Flat Tip (6 Piece)	641948	Yes
267	Feeler Gauge	FB335	Yes

CARGO MISSION CONTRACT

TABLE 1.1-J ADDED NON SPOC Flight Crew Systems (FCS) TOOLBOX

Item Number	Description	Drawing/Part Number	Sustain
1	IVA TOOLBOX ASSEMBLY	SEG33113668	Yes
2	Wedge Assemblies	SEG33113669	Yes
3	Tray Assembly - Tray #1 (Empty)	SEG33114130	Yes
4	Tray Assembly - Tray #2 (Empty)	SEG33114131	Yes
5	Tray Assembly - Tray #3 (Empty)	SEG33114132	Yes
6	Tray Assembly - Tray #4 (Empty)	SEG33114133	Yes
7	Tray Assembly - Tray #5 (Empty)	SEG33114134	Yes
8	Tray Soft Cover	SEG33113670	Yes
9	Adjustable Wrench	SKG33117562	Yes
10	Crowfoot, 3/8" Drive, 19 mm	SEG33114495	Yes
11	Crowfoot, 3/8" Drive, 5/8"	SEG33112392	Yes
12	Crowfoot, 1/4" Drive, 5/16"	SEG33114112	Yes
13	Adaptor, 3/8" Female to 1/4" Male	SEG33117595	Yes
14	Torque Wrench, 1/4" Drive, 40-200 In-lbs	SEG33112394	Yes
15	Torque Wrench, 1/4" Drive, 10-50 In-lbs	SEG33112395	Yes
16	Crowfoot, 3/8" Drive, 1-1/4"	SEG33114127	Yes
17	Crowfoot, 3/8" Drive, 1-3/8"	SEG33114218	Yes
18	Crowfoot, 3/8" Drive, 1-5/8"	SEG33113226	Yes
19	Ratcheting Bit Set	SJG33114298	Yes
20	L-Wrench, 5/32" Modified	SEG33113213	Yes
21	File Handle, Large	SDG33114300	Yes
22	File Set, Small (Round, Half-Round, Flat, Crossing, Knife, Square, 3-Square, Equaling, Barrette, Joint, Slitting, Marking, and Handle)	SJG33114296	Yes

Government Provided Software

Attachment J-10

CARGO MISSION CONTRACT

Government will provide access to the applications show in Table 5-A.

TABLE 5-A Government Owned – Contractor Accessible Applications

Application Name	Description
Action Tracking Application (ATA)	ATA is an online, interactive tool for tracking, reviewing and reporting program actions from their identification until their closure.
Configuration Status Management Operating System (COSMOS)	COSMOS supports configuration management processes for the ISS Program. It is used to document, track and manage ISS Program Change Requests (associated directives, actions, etc.), Program Directives, and Deviations & Waivers.
Digital Imagery Management Systems (DIMS)	DIMS is the ISS Program's repository for still photo and video imagery of NASA hardware and activities recorded during ground and on-orbit operations.
Electronic Document Management System (EDMS)	EDMS is the ISS Program's repository for official program documentation.
Enhanced Automated Graphical Logistics Environment (EAGLE)	EAGLE is the official ISS Logistics Support Analysis Record (LSAR) Master Database. It integrates all LSAR data for USOS hardware and IP Element ORUs.
Government On-Line Database (GOLD)	The Government On-Line Database (GOLD) is an application which can be used to do tagged property/asset tracking and reporting, inventory management, spares replenishment reporting, calibration tracking and reporting, and maintenance/repairs job orders and reporting.
Hardware History Retrieval System (HHRS)	The Hardware History Retrieval System (HHRS) provides access to historical documents used for fabrication, test and operation of each piece of Space Station

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Application Name	Description
	flight hardware.
Integrated Checkout Assembly and Management System (ICAMS)	ICAMS is a fully functional Configuration Status Accounting System (NASA owned, Boeing Configuration Management operated/maintained) designed to receive Engineering Configuration Lists (ECLs), create and maintain As-Built Configuration Lists (ABCLs), perform electronic comparison (ECL to ABCL and ABCL to ECL), and provide reporting capabilities.
Integrated Risk Management Application (IRMA)	The Integrated Risk Management Application (IRMA) is used by the ISS Program to status and track technical concerns and risks, as well as, cost issues and threats. The application integrates the risk management approach for the Program (key information and rating scale) with information on cost by fiscal year for each risk or concern.
Mission Integration Database for Assembly Sequence (MIDAS)	The Mission Integration Database for Assembly Sequence (MIDAS) is an ORACLE database application used to support Cargo Planning. It provides functionality in support of all aspects of cargo processing including the creation of new ISS Program requirements, development of ISS manifests, processing of manifested cargo, and collection of inventory data for use by on-board ISS systems.
NASA Equipment Management System (NEMS)	The NASA Equipment Management System (NEMS) is a NASA provided database for tracking government owned equipment that includes location and estimated replacement value.
Problem Analysis Reporting Tool (PART)	PART is the ISS Program's database tool used to track and monitor hardware or system anomalies.
Problem Reporting and Corrective Action	The Problem Reporting and Corrective

CARGO MISSION CONTRACT

Application Name	Description
(PRACA)	Action (PRACA) is used for problem reporting and disposition.
Vehicle Master Database (VMDB)	The Vehicle Master Database (VMDB) is the ISS Program's authoritative source of engineering data containing drawings, documents, relational data and images.

The software applications available as government provided software applications and maintained by the Cargo Mission Contractor are show in Table 5-B

TABLE 5-B Government Provided Software Applications

Application Name	Description
Single Application Resource for Aerospace Hardware (SARAH)	A database tool used to manage the inventory of Flight Crew Equipment hardware.

ATTACHMENT J-11

Government Furnished Property

**(See Excel File provided on the CD for the CMC
Consolidated Property List)**

ATTACHMENT 13 - INSTALLATION PROVIDED SERVICES AND FACILITIES

NASA's estimate of services available (including computer workstations and other services listed in Section G, Clause G.7, NFS 1852.245-71 (c) (7), Installation Provided Services and Facilities, for on-site Cargo Mission Contract personnel:

Johnson Space Center

Item	Cost Adjustment
ODIN Seat (computer, IT Connectivity, and network Printer)	\$3,000 a seat/year

Kennedy Space Center

Item	Cost Adjustment
No office space requested at KSC (LM-TA2a-SW-09)	

ATTACHMENT J-15

Surveillance Plan

**Will be incorporated in the contract after contract
award**

CARGO MISSION CONTRACT

NO	CHANGE NUMBER	PART NUMBER	SERIAL NUMBER	LM ID NO*	NOMENCLATURE	QTY	UNIT	DD250 DATE	ACTUAL DELIVERY DATE	REMARKS
1	12846	SJG33121409-603	1001		WPS PS PSIP01 Kit	1	Each	8/24/11		
2	12396	WCS1184-02			Urinal, Female Oblong	20	Each	9/30/11		
3	12396	199C3102P2			Urinal, Female Oblong	10	Each	9/30/11		
4	12964	SDG33121549-301		CMC0267	T61p Serial/Parallel Bay Adapters	15	Each	10/2011		
5	12853	SEG33114648-301		CMC0264	PS-120 Junction Box	3	Each	4/23/12		
6	12853	SEG33114648-301		CMC0265	PS-120 Junction Box	8	Each	7/31/12		
7	12853	SEG33114649-305		CMC0266	PS-120 Cable (10ft length)	7	Each	7/31/12		
8	13125	SJG33121409-604			ICU PSIP01 Kit	1	Each	5/11/12		
9	13131	SEG39126291-301			Vacuum Cleaner Tool Pouch Assy	3	Each	6/29/12		
10	13131	SEG39126291-301			Vacuum Cleaner Tool Pouch Assy	1	Each	6/29/12		
11	13210	SED39114053-3XX			Food Warmer – ISSFW	1	Each	10/12/12		
12	13259	CMC0279			Bose QC15 communications kit cable	6	Each	5/20/12		
13	13259	CMC0280			Headset Buddy Y Cable	6	Each	5/20/12		
14	13259	CMC0281			Bose QC15 communications kit cable	12	Each	6/12/12		
15	13259	CMC0282			Headset Buddy Y Cable	12	Each	6/12/12		
16	13259	CMC0283			Bose QC15 Communication Kit Cable	82	Each	6/30/12		

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NO	CHANGE NUMBER	PART NUMBER	SERIAL NUMBER	LM ID NO*	NOMENCLATURE	QTY	UNIT	DD250 DATE	ACTUAL DELIVERY DATE	REMARKS
17	13259	CMC0284			Headset Buddy Y Cable	32	Each	6/30/12		
18	13259	CMC0285			Headphone Extension Cable	20	Each	6/30/12		
19	13302	N/A			Trade Study Presentation to NASA	1	Each	8/31/12**		
20	13302	N/A			Delivery of White Paper based on Trade Study Presentation	1	Each	9/17/12**		
21	13216	SEG33107630-305		CMC0276	Flexible Bracket Assy	4	Each	10/2012		
22	13216	SEG33107631-303		CMC0277	Multi-Use Bracket Assy	47	Each	10/2012		
23	13216	SEG33111394-303		CMC0278	Heavy Duty Clamp Assy	23	Each	10/2012		
24	13164			CMC0286	iPad Tablets, Flight	24	Each	12/29/12		
25	13164			CMC0286	iPad Tablets, Qualification and Test	14	Each	12/29/12		
26	13164			CMC0288	iPad USB Charging Adapters	38	Each	12/29/12		
27	13164			CMC0287	iPod Nano MP3 Players, Flight	32	Each	12/29/12		
28	13164			CMC0287	iPod Nano MP3 Players, Qualification and Test	19	Each	12/29/12		
29	13222				Evidence of drawing delivery	1	Each	9/30/12**		
30	13222				Evidence of Material Assessment delivery	1	Each	9/30/12**		
31	13222				Evidence of Certification of the LVA	1	Each	9/30/12**		
32	13141	TBD			Waste Trash Bag (T-01)	200	Each	6/30/13		

CARGO MISSION CONTRACT

NO	CHANGE NUMBER	PART NUMBER	SERIAL NUMBER	LM ID NO*	NOMENCLATURE	QTY	UNIT	DD250 DATE	ACTUAL DELIVERY DATE	REMARKS
33	13141	TBD			Waste Trash Bag (T-02)	200	Each	6/30/13		
34	13344	TBD			Multi-Port USB Serial Adapter Flight	15	Each	11/30/12		
35	13344	Quatech ESU2-400			Multi-Port USB Serial Adapter Ground Spares	30	Each	11/30/12		
36	13343	CMC0305			External Hard Drives – Flight	24	Each	11/30/12		
37	13343	CMC0306			External Hard Drives – Ground	14	Each	11/30/12		
38	13343	CMC0307			External Hard Drives – Test	2	Each	11/30/12		
39	13343	CMC0308			USB Thumb Drive – Flight	50	Each	11/30/12		
40	13343	CMC0309			USB Thumb Drive – Ground	29	Each	11/30/12		
41	13343	CMC0310			USB Thumb Drive – Test	1	Each	11/30/12		
42	13343	CMC0311			SD Cards – Flight	50	Each	11/30/12		
43	13343	CMC0312			SD Cards – Ground	29	Each	11/30/12		
44	13343	CMC0313			SD Cards – Test	1	Each	11/30/12		
45	13372	CMC0314			ISS Food Warmer Mod Kit	4	Each	2/25/13		
46	13372				Delivery, to EDMS, of White Paper based on Trade Study Presentation	1	Each	5/13/13**		
47	13372	N/A			Trade Study Presentation to NASA at VCB and SSPCB	1	Each	6/20/13**		

CARGO MISSION CONTRACT

NO	CHANGE NUMBER	PART NUMBER	SERIAL NUMBER	LM ID NO*	NOMENCLATURE	QTY	UNIT	DD250 DATE	ACTUAL DELIVERY DATE	REMARKS
48	13417				Drawing Release (EDCC Upload)	1	Each	5/06/13**		
49	13417				Certification Complete (EDMS Upload)	1	Each	5/27/13**		
50	13314			CMC0292	S3 CAA Upper Assembly	1	Each	11/04/14		
51	13314			CMC0322	S3 CAA Lower Assembly	1	Each	11/04/14		
52	13314			CMC0293	P3 CAA Upper Assembly	1	Each	11/04/14		
53	13314			CMC0323	P3 CAA Lower Assembly	1	Each	11/04/14		
54	13314			CMC0294	CAA Antenna ORU	4	Each	11/04/14		
55	13314			CMC0324	CAA Antenna ORU Kit	1	Each	11/04/14		
56	13314			CMC0295	Flight Equivalent Unit (FEU) Antenna	2	Each	11/04/14		
57	13314			CMC0296	FEU Cable	2	Each	11/04/14		
58	13314			CMC0297	Ground Support Equipment (GSE) Cable	1	Each	11/04/14		
59	13314			CMC0298	Hat Couplers	2	Each	11/04/14		
60	13604				Automated External Defibrillators (AED)	4	Each	9/30/13**		
61	13604				Automated External Defibrillators (AED)	1	Each	1/04/13**	1/04/13	

*LM ID Number is assigned with actual DD250 delivery date.

** No DD250 is required for this item.

ATTACHMENT J-17

Underlimit Pool Changes

CARGO MISSION CONTRACT

Modification #	SSCN	Mod Date	Description	Cost
8	12465	7/5/11	Tasks, Hardware and Cost Impacts Associated with the Move of STS-335 Launch-On-Need (LON) to June 2011	(b) (4)
9	12846	7/6/11	Deliver a Progress Stowage Interface Platform for the Water Processing Assembly Pump Separator (PS) Orbital Replacement Unit (ORU) launch on 45P	
6	12396	7/8/11	Shuttle Urine Funnel Adapter for the Waste and Hygiene Compartment (WHC)	
12	12958	9/7/11	Certify ISS cargo bags and accessories for flight on the Space Exploration Technologies Dragon vehicles	
13	12964	9/13/11	Certify T61p Serial/Parallel Bay Adapters	
14	12853	9/19/11	Build and deliver ISS Plug-In Plan PS-120 Power Strips	
16	12985	10/25/11	Perform return assessments and develop and deliver Integrated Bag Level Hazard Assessments (IBLHAs) in accordance with DRD C-SA-05, Safety Analysis and Hazard Reports for all return/disposal cargo on Commercial Orbital Transportation Services (COTS) and Commercial Resupply Services (CRS) vehicles	
19	12992	12/2/11	Upgrade International Space Station Internal Camera System to Support Provision of High Definition Video for On-orbit and Ground Utilization and Baseline Applicable Requirements Matrix for Commercial Off The Shelf Hardware Certification	
26	13055	2/17/12	Flight Certification Update for the ISS Cargo Bags for the Orbital Sciences Cygnus Vehicles	
27	13125	2/17/12	Deliver a Progress Stowage Interface Platform (PSIP) for Integrated Communication Unit (ICU) launch on 48P	
29	13201	3/20/12	Provide early de-stow support for SpaceX-Demo	
30	13201	3/28/12	Provide an updated SEG33114131 Drawer #2 Assembly, International Space Station (ISS) Intra-Vehicle Activity (IVA) Toolbox and the SEG33113668 IVA Toolbox Assembly Drawings	

CARGO MISSION CONTRACT

Modification #	SSCN	Mod Date	Description	Cost
31	13131	4/10/12	Fabricate 3 new tool pouches (2 flight, 1 training), and modify 1 existing vacuum tool pouch.	(b) (4)
32	13210	5/8/12	Fabricate, assemble, test and deliver an International Space Station (ISS) Food Warmer to replace or supplement one of the current Food Warmers.	
34	13259	5/8/12	Certify and configure Commercial Off The Shelf (COTS) Bose QC-15 communications kit cable for flight.	
37	13302	6/28/12	Assess the feasibility of implementing a simplified Soft Capture System (SCS) for the NASA Docking System and develop a concept to a level of maturity that will enable NASA to determine technical and schedule risks associated with the alternate approach.	
38	13216	6/28/12	Convert the Multi-use Brackets, Flexible Brackets and Heavy Duty Clamps used in the shuttle seat track system to be compatible with the ISS seat track system.	
39	13164	6/29/12	Procure and certify International Space Station (ISS) Tablet PC, MP3 Player and other mobile devices for ISS Crew and Operations Utilization and to Baseline the associated Applicable Requirements Matrix for Commercial-Off-the-Shelf (COTS) Hardware Certification.	
40	13222	6/29/12	Complete required updates to the contents of the Crew Contamination Protective kit (CCPK), update all relevant CCPK engineering, procure new inventory, and create engineering to document the Environmental Control Life Support System (ECLSS) Regen kit currently on orbit.	
43	13179	8/1/12	Procure shipping containers and provide services required to transport manifested ISS cargo to the International Partners' launch facilities for flights Automated Transfer Vehicle (ATV) 4, ATV5, H-II Transfer Vehicle (HTV) 4, and HTV5.	
44	13344	8/22/12	Certify and process Commercial Off The Shelf (COTS) Multi-Port Universal Serial Bus (USB) to Serial Adapter	

CARGO MISSION CONTRACT

Modification #	SSCN	Mod Date	Description	Cost
46	13343	8/28/12	Certify and process Commercial Off The Shelf (COTS) External Universal Serial Bus (USB) Hard Drives, Secure Digital (SD) Card, and Thumb Drives for use on ISS	(b) (4)
48	13382	9/20/12	Add Early Destow Operations to Cargo Mission Contract for SpaceX-1 and SpaceX-2	
50	13333	10/3/12	Perform data collection and management of Launch/Return/On-orbit Data Set (LRODS)	
51	13372	10/22/12	Design and develop an International Space Station (ISS) Food Warmer Mod Kit, and perform a Feasibility Study related to the Future Food Warmer and ISS Galley Table Capabilities	
52	13417	11/30/12	Perform evaluation, development and certification of crew clothing items	
56	13371	12/11/12	Perform additional Request for Support (RFS) Work Scope	
61	13604	3/05/13	Perform Thermal Acceptance Tests on the Automated External Defibrillators (AEDs)	
Underlimit Changes Cost: (04/01/12 thru 03/31/13)				
69	13788	5/16/13	Certify a foam clamshell to protect and restrain the Robotic Refueling Mission (RRM) On-Orbit Transfer Cage (ROTC) Assembly	
Underlimit Changes Cost: (04/01/13 thru 03/31/14)				