FINAL RFP

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, Texas 77058-3696

December 2, 2008

Reply to Attn of: BG-08-180

TO: All Prospective Offerors

FROM: Contracting Officer, International Space Station (ISS) Procurement Office

SUBJECT: Final Request for Proposal (RFP) NNJ09ZBG001R

The National Aeronautics and Space Administration (NASA), Lyndon B. Johnson Space Center (JSC), is pleased to release the Final RFP, number NNJ09ZBG001R, for the ISS Program Integration and Control (PI&C) follow-on acquisition. This replaces the Draft RFP, issued on October 22, 2008, in its entirety. The Final RFP is a solicitation.

The ISS PI&C Contract is a Small Business Set-aside.

This solicitation contains Task Orders (TOs) for the first contract year. The task orders identified in Section L, Appendix 3 are a draft and may be updated throughout the procurement process. NASA intends to award IDIQ Task Orders in accordance with NFS 1852.216-80 TASK ORDERING PROCEDURE (OCT 1996) to fulfill Program requirements. The task orders will not be used as part of the selection criteria; rather, they are provided for informational purposes and will be finalized concurrently with the successful offeror during phase-in.

Proposal Preparation:

An electronic Technical Reference Library (TRL) is available for various types of historical data and other pertinent applicable documents and information regarding this procurement and its requirements. The ISS PI&C follow-on electronic library is available at: http://procurement.jsc.nasa.gov/isspic/default.asp

The current ISS PI&C proposal due date schedule is as follows:

Volume III Past Performance Proposal due	January 22, 2009
Section K, Representations and Certifications due	January 22, 2009
Cognizant Audit Office Template (CAOT) template due	January 22, 2009
Proposal Volume I, II, and IV due	February 9, 2009

It is the offerors responsibility to monitor the acquisition websites as any changes to the schedule will be posted there.

Questions/Comments Related to the Final RFP:

In order for answers to be obtained and disseminated in a timely manner, all questions or comments are requested to be submitted in writing by January 9, 2009. Questions/Comments shall not be marked as confidential, proprietary, competition sensitive, business information, etc. Comments and questions are highly encouraged, and may be submitted anonymously if desired.

Any anonymous inquiries and comments should be submitted to the ISS PI&C Follow-on Acquisition Website at: http://procurement.jsc.nasa.gov/isspic/default.asp. All other questions shall be submitted in writing via e-mail (JSC-Prog-Int-and-Contract-SEB@mail.nasa.gov), fax (281-244-0149) or U.S. Mail to:

Andrea R. Falls
NASA/JSC, SEB- Building 259 (1010)
2101 NASA Parkway
Houston, Texas 77058

Offerors are responsible for obtaining electronic verification that questions have been received.

All Questions and Answers in response to the Final RFP may be found on the PI&C follow-on procurement website at: http://procurement.jsc.nasa.gov/isspic/default.asp. All responses to questions will be provided to all potential offerors.

Questions and Responses to the Final RFP will be separated from, and have no bearing on, subsequent evaluation of proposals submitted in response to the RFP.

Changes to the RFP:

Attached to this letter is a Document Change Log which documents notable changes made to the RFP since the release of the Draft RFP. Although every effort was made to include even minor changes, there may be some edits that are not recorded on the log. Therefore, all potential offerors are advised to carefully read the entire RFP.

Communication with Industry:

Offerors are responsible for monitoring the NASA Business Opportunities Website, http://prod.nais.nasa.gov/cgi-bin/eps/bizops.cgi?gr=D&pin=73, and the ISS PI&C Follow-on Procurement Website, http://procurement.jsc.nasa.gov/isspic/default.asp, for any amendments to the RFP, additional information and/or changes to the schedule. Information will be posted as it becomes publicly available.

Offerors are reminded to ensure their company is listed in the on-line database for the following:

Central Contract Registry: http://www.ccr.gov

VETS 100: http://www.dol.gov/vets/
Data Universal Numbering System (DUNS): http://fedgov.dnb.com/webform

The RFP does not commit the Government to award a contract nor does it obligate the Government for costs incurred in the preparation and submittal of proposals in anticipation of a contract or comments in response to this RFP.

Thank you for your participation and interest in this procurement.

Original signed by

Andrea R. Falls
Contracting Officer

Enclosures:
1) Final RFP Document Change Log
2) Final RFP NNJ09ZBG001R

SECTIONS	CHANGES
A	**Changed the word from Appendix to Addendum**
	FROM: SECTION C - STATEMENT OF WORK Table of Contents Appendix 1 Key Terms Appendix 2 Government Furnished Data Appendix 3 Government Furnished IT Systems Appendix 4 List of Installation – Accountable Property and Services Appendix 5 Statement of Work to Program Work Breakdown Structure Map Appendix 6 ISS Specifications /ICDs/IRDs/PIRNs/DCNs Document List **TO: SECTION C - STATEMENT OF WORK** Table of Contents Addendum 1 Key Terms Addendum 2 Government Furnished Data Addendum 3 Government Furnished IT Systems Addendum 4 List of Installation – Accountable Property and Services Addendum 5 Statement of Work to Program Work Breakdown Structure Map Addendum 6 ISS Specifications /ICDs/IRDs/PIRNs/DCNs Document List
B	**Changed B.2, B.4 and added B.6**
	FROM: **B.2 CONTRACT VALUE** The total contract value is $ TBD (including the Firm Fixed Price Phase-In).

	Authorized Cumulative To date [1]	Guarantee Minimum [2]	Maximum Not-to-Exceed (NTE) [3]
Phase-In (FFP)	TBD	---------	---------
IDIQ	TBD	---------	TBD
IDIQ Travel & Materials[4]	TBD	---------	$6,000,000
TOTAL		$5,000,000	TBD

[1] IDIQ 'Cumulative to Date' contract value is based upon the total cumulative value of IDIQ task orders issued which shall not exceed the Maximum NTE Contract Value.

[2] The minimum amount of IDIQ supplies and services ordered in total and paid for under this contract shall be $5 Million.

[3] For the purpose of placing a maximum Not-To-Exceed (NTE) amount on this contract, the maximum amount of IDIQ supplies and services ordered in total under this contract shall not exceed the maximum NTE amount of $TBD. 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.

[4] The Maximum NTE for Travel and Materials is the maximum authorized value for the total contract period of performance. Each Task Order will have separate authorized NTE amounts and the contractor will be authorized for travel and material pursuant to the Travel and Task Ordering Procedures. The Government will not pay any travel or material costs under this contract except as properly authorized by task orders.

B.4 INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) ORDERS

ITEM # Labor Category

25 Indirect Cost Rate applied to Non-Labor Resources if required by a Task Order

1. Material
   BASE:
2. Travel
   BASE:
3. Equipment
   BASE:
4. Training Materials
   BASE:
5. Overtime (Percentage applied to each labor category if required by a Task Order
6. Special Software, Service Calls for Equipment, Safety Awards
   BASE:

TO:

B.2 CONTRACT VALUE

The current cumulative contract value is $ TBD (including the Firm Fixed Price Phase-In).

The maximum not-to-exceed (NTE) value of this contract is $180,000,000.

	Authorized Cumulative To date [1]	Guarantee Minimum [2]	Maximum Not-to-Exceed (NTE) [3]
Phase-In (FFP)	TBD	---------	---------
IDIQ	TBD	---------	$174,000,000
IDIQ Travel & Materials[4]	TBD	---------	$6,000,000
TOTAL		$2,000,000	$180,000,000

[1] IDIQ 'Cumulative to Date' contract value is based upon the total cumulative value of IDIQ task orders issued which shall not exceed the Maximum NTE Contract Value.

[2] The minimum amount of IDIQ supplies and services ordered in total and paid for under this contract shall be $2 Million.

[3] For the purpose of placing a maximum Not-To-Exceed (NTE) amount on this contract, the maximum amount of IDIQ supplies and services ordered in total under

	this contract shall not exceed the maximum NTE amount of $180 Million. 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. [4] The Maximum NTE for Travel and Materials is the maximum authorized value for the total contract period of performance. Each Task Order will have separate authorized NTE amounts and the contractor will be authorized for travel and material pursuant to the Travel and Task Ordering Procedures. The Government will not pay any travel or material costs under this contract except as properly authorized by task orders. **B.4 <u>INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) ORDERS</u>** ITEM # Labor Category 25 Indirect Cost Rate applied to Non-Labor Resources if required by a Task Order 1. Material BASE: 2. Travel BASE: **B.6 CONTRACT TYPE** This is an Indefinite Delivery/Indefinite Quantity (IDIQ) Fixed Rate contract.
C	**1.4.2.2.1 (Page C-32)** - Added IT language **1.4.2.2.4 (Page C-33)** - Added IT language **2.2.1.3.1 (Page C-42)** - Changed monthly reports to quarterly **2.2.2.1.6 (Page C-46)** – Added language & renumbered 2.2.2.1.6 to 2.2.2.1.7 **6.2.1 (Page C-62)** - Changed a title and added COFR language **Appendix 4 (Page C-A4-1)** – Deleted number of seating from Building 30 and Sonny Carter
	FROM: 1.4.2.2.1 The contractor shall advise ISS Program customers and users on IT security policies and implement approved security and networking solutions. **TO:** 1.4.2.2.1 The Contractor shall assume responsibility for maintaining existing IT System Security Plans for on-site ISS IT systems. The Contractor shall advise ISS Program customers and users on IT security policies and implement approved security and networking solutions. **FROM:** 1.4.2.2.4 Certification and Accreditation Packages and Related Documentation Major re-certifications of IT Systems requiring Certification and Accreditation (C&A) occur every three years, and the contractor must prepare for and support this activity to ensure successful system re-certification. The next major re-certification for the ISS Production Facility system is anticipated to occur in June 2010.

	The contractor shall update and maintain existing C&A packages in accordance with DRD PIC-IT-02. **TO:** 1.4.2.2.4 Certification and Accreditation Packages and Related Documentation Major re-certifications of IT Systems requiring Certification and Accreditation (C&A) occur every three years, and the Contractor must prepare for and support this activity to ensure successful system re-certification. The next major re-certification for the ISS Production Facility system is anticipated to occur in June 2010. The Contractor shall update and maintain existing C&A packages in accordance with DRD PIC-IT-02. 03. In addition, the Contractor shall develop, update and maintain C&A packages for any offsite facilities that contain or process NASA data in accordance with DRD PIC-IT-03 Section 8(II). **FROM:** 2.2.1.3.1 The contractor shall maintain and update Hardware Interfaces Tracking System (HITS) database (or equivalent) identified in Appendix 2, Table 1 to develop PIRN status reports as follows: (a) The contractor shall track and provide "ICD metrics" reports to include issue resolution plans on a monthly basis. (b) The contractor shall track and provide "Element Manager Open PIRN" reports on a weekly basis. (c) The contractor shall track and provide reports identifying "To Be Determined (TBDs)" on a monthly basis. (d) The contractor shall track and provide "Open Issues" reports on a monthly basis. **TO:** 2.2.1.3.1 The Contractor shall maintain and update Hardware Interfaces Tracking System (HITS) database (or equivalent) identified in Addendum 2, Table 1 to develop PIRN status reports as follows: (a) The Contractor shall track and provide "ICD metrics" reports to include issue resolution plans on a quarterly basis. (b) The Contractor shall track and provide reports identifying "To Be Determined (TBDs)" on a quarterly basis. (c) The Contractor shall track and provide "Open Issues" reports on a quarterly basis. **ADDED:** 2.2.2.1.6 The Contractor shall maintain and utilize detailed Beta, Attitude, Significant Events PLAnning TEmplate (BASEPLATE) or equivalent. The

	BASEPLATE shall show the day-to-day timeline of all flights to the ISS vehicle, Shuttle missions and Increment EVAs (calling out Russian Segment and U.S. Segment assembly, maintenance and science EVAs), launch and landing days (flight duration), dock and undock days (docked mission duration), robotics, Increment definition, crew rotation, and ISS vehicle major reconfigurations, including ISS assembly and visiting vehicle relocations. This product will assess the viability of the flight sequence plan and is developed in parallel with the baseline flight plan for the tactical and strategic timeframe. The Contractor shall maintain the BASEPLATE for the baseline ISS Program plan and perform trade studies of assembly sequence options under consideration. The Contractor shall deliver the detailed BASEPLATE electronically and in color printed format.
D	No Changes
E	No Changes
F	No Changes
G	No Changes
H	No Changes
I	**I.1 Listing of Clauses Incorporated by Reference** **(Page I-1)** – Added 52.203-13, Contractor Code of Business Ethics and Conduct **(Page I-4)** - 52.244-6, Subcontracts for Commercial Items changed date from MAR 2007 to DEC 2008 **(Page I-19)** –Added 52.222-54, Employment Eligibility Verification (JAN 2009)
J	Revised DRDs **PIC-CM-01 (Page J-A1-6)** - Changed First Submission date **PIC-PC-01 (Page J-A1-19)** – Added TO, contract summary formats; clarified language **PIC-PC-06 (Page J-A1-31)** - Deleted reference to TO-level schedules **PIC-PM-02 (Page J-A1-38)** – Revised entire DRD **PIC-PR-03 (Page J-A1-43)** – Revised entire DRD **PIC-PR-05 (Page J-A1-54)** – Revised entire DRD **PIC-SI-02 (Page J-A1-86)** - Revised entire DRD **PIC-SI-04 (Page J-A1-90)** - Revised entire DRD
K	No Changes
L	**Revised Section L**
M	**Revised Section M**

Program Integration and Control Contract

International Space Station Program

FINAL Request For Proposal – NNJ09ZBG001R

December 2, 2008

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	PAGE 1 of See sect 11 below

2. CONTRACT NO.	3. SOLICITATION NO.	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NO.
Final RFP	NNJ09ZBG001R	☐ SEALED BID (IFB) X NEGOTIATED (RFP)	12/02/08	

7. ISSUED BY CODE BG	8. ADDRESS OFFER TO *(If other than Item 7)*
NASA Lyndon B. Johnson Space Center **Space Station Procurement Office** **2101 NASA Parkway** **Mail Code: BG** **Houston, TX 77058**	**NASA Lyndon B. Johnson Space Center** **2101 NASA Parkway** **Attn: Andrea R. Falls, Building 259** **Houston, TX 77058**

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 III*, 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	B. TELEPHONE NO. *(NO COLLECT CALLS)* AREA CODE	NUMBER	EXT.	C. EMAIL ADDRESS
	Andrea R. Falls	**(281)**	**483-1862**		**andrea.r.falls@nasa.gov**

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OFFER *(Must be fully completed by offeror)*

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

12. In compliance with the above, the undersigned agrees, if this offer is accepted within calendar days *(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 %

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	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*

15B. TELEPHONE NO. *(Include area code)*	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE – ENTER ☐ SUCH ADDRESS IN SCHEDULE	17. SIGNATURE	18. OFFER DATE

AWARD *(To be completed by Government)*

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN: *(4 copies unless otherwise specified)*	ITEM See Block 7

24. ADMINISTERED BY *(If other than Item 7)* CODE	25. PAYMENT WILL BE MADE BY CODE

26. NAME OF CONTRACTING OFFICER *(Type or print)*	27. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	28. AWARD DATE

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

MODIFICATION AND HISTORY PAGE

MOD. NO.	DESCRIPTION	DATE
-	Draft RFP	10/22/08
1	Final RFP	12/02/08

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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 CONTRACT VALUE

The current cumulative contract value is $ TBD (including the Firm Fixed Price Phase-In).

The maximum not-to-exceed (NTE) value of this contract is $180,000,000.

	Authorized Cumulative To date [1]	Guarantee Minimum [2]	Maximum Not-to-Exceed (NTE) [3]
Phase-In (FFP)	TBD	---------	---------
IDIQ	TBD	---------	$174,000,000
IDIQ Travel & Materials[4]	TBD	---------	$6,000,000
TOTAL		$2,000,000	$180,000,000

[1] IDIQ 'Cumulative to Date' contract value is based upon the total cumulative value of IDIQ task orders issued which shall not exceed the Maximum NTE Contract Value.

[2] The minimum amount of IDIQ supplies and services ordered in total and paid for under this contract shall be $2 Million.

[3] For the purpose of placing a maximum Not-To-Exceed (NTE) amount on this contract, the maximum amount of IDIQ supplies and services ordered in total under this contract shall not exceed the maximum NTE amount of $180 Million. 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.

[4] The Maximum NTE for Travel and Materials is the maximum authorized value for the total contract period of performance. Each Task Order will have separate authorized NTE amounts and the contractor will be authorized for travel and material pursuant to the Travel and Task Ordering Procedures. The Government will not pay any travel or material costs under this contract except as properly authorized by task orders.

(End of clause)

B.3 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 $TBD. The contract phase-in period is from August 3, 2009 through September 30, 2009.

(End of clause)

B.4 INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) ORDERS

The Government may order IDIQ services at any time after contract start, in accordance with the procedures set forth in this contract. The contractor shall utilize the rates shown in the following table for the pricing of IDIQ task orders.

			Base			Option 1	Option 2
Item #	**Labor Category**	**Unit**	**Contract Year 1 Rate**	**Contract Year 2 Rate**	**Contract Year 3 Rate**	**Contract Year 4 Rate**	**Contract Year 5 Rate**
			10/01/2009-9/30/2010	10/01/2010-9/30/2011	10/01/2011-9/30/2012	10/01/2012-9/30/2013	10/01/2013-9/30/2014
1	Program Manager	Hour					
2	Manager I	Hour					
3	Manager	Hour					
4	Supervisor	Hour					
5	Technical Professional I	Hour					
6	Technical Professional II	Hour					
7	Technical Professional III	Hour					

8	Technical Professional IV	Hour					
9	Technician I	Hour					
10	Technician II	Hour					
11	Technician III	Hour					
12	IT Professional I	Hour					
13	IT Professional II	Hour					
14	IT Professional III	Hour					
15	Analyst I	Hour					
16	Analyst II	Hour					
17	Analyst III	Hour					
18	Secretary	Hour					
19	Clerk	Hour					
20	Business Specialist I	Hour					
21	Business Specialist II	Hour					
22	Data/Documents Management Specialist	Hour					
23	Other (As Proposed)	Hour					
24	Overtime (Percentage applied to Labor Category(s) if authorized)	Hour					
25	Indirect Cost Rate applied to Non-Labor Resources if required by a Task Order						
	1. Material						
	BASE:						
	2. Travel						
	BASE:						

(End of clause)

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

(a) For purposes of payment of invoices (inclusive of cost and fee), in accordance with the Limitation of Funds Clause, the total amount allotted by the Government to this contract is **$TBD.** This allotment is for the Program Integration and Control support services and covers the following estimated period of performance: **October 1, 2009 through TBD.**

(End of clause)

B.6 CONTRACT TYPE

This is an Indefinite Delivery/Indefinite Quantity (IDIQ) Fixed Rate contract.

(End of clause)

[END OF SECTION]

SECTION C

STATEMENT OF WORK

PREFACE

The Contractor shall provide Program Integration and Control (PI&C) products and services in support of the continued development and operation of the International Space Station (ISS) whose purpose is to conduct physical, engineering, and life sciences research for the benefit of life on Earth and to advance exploration of our solar system and enable commerce in Space. Thorough knowledge and expertise of the ISS will be necessary to perform this contract. The Contractor is to provide products and services in support of the following functional areas:

- Program Management;
- Business Management;
- Configuration Management (CM)/ Data Management and Integration (DMI);
- Program Information Technology;
- International Integration;
- Human Spaceflight Collaboration;
- Systems Analysis and Integration;
- Engineering and Technical Services;
- Visiting Vehicle Integration and
- Safety and Mission Assurance

The Performance Standards include: the requirements as described in the Statement of Work, Task Orders, metrics described in DRD PIC-PM-02, and will be statused monthly as part of the Program Management Review(s).

The objective of this contract is to assist the National Aeronautics and Space Administration (NASA) in the management of the ISS Program by utilizing effective performance approaches and adequate resources to accomplish PI&C requirements in the most cost-efficient manner.

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1.0 MANAGEMENT INTEGRATION AND CONTROL

The Program Integration and Control (PI&C) Contractor shall provide all necessary program, business management, engineering, technical, administrative skills to accomplish the objectives and outcomes described within this contract. The Contractor shall perform the services and deliver the products described in this Statement of Work (SOW), contract terms and conditions, applicable documents, Data Requirements Descriptions (DRDs), and other plans and sections contained within this contract. These products and services will be in direct support of the International Space Station (ISS) Program to manage and integrate the implementing organizations (National Aeronautics and Space Administration [NASA] Center institutions, other Contractors, and International Partners/Participants [IP/Ps]) and ISS Program customers. This includes the continued development, maintenance, and implementation of top-level Research and Development (R&D) requirements, which flow to the implementing organizations to enable the continued operation and utilization of the ISS R&D facility.

1.1 PROGRAM MANAGEMENT

1.1.1 Program Management and Administration

(a) The Contractor shall perform Program management and administration, including risk management, in order to develop and deliver the required ISS Program products and services as defined for this contract.

(b) The Contractor shall develop and maintain Program management systems, as outlined below, for the planning, organization, control, and reporting of all activities required by this contract.

These products and services will include the development and operation of systems necessary for providing assessments and analysis for the overall R&D, integration, status (e.g., cost, technical, and schedules for the ISS Program) and for providing inputs to the ISS Program for overall strategic planning, policy and risk management of the ISS Program and its R&D of experiments and projects to facilitate the ISS Program in accomplishing its mission.

These systems will assure accomplishment of all outcomes and deliverable products required by this contract.

1.1.1.1 Planning and Reviews

1.1.1.1.1 PI&C Plans

(a) The Contractor shall develop, maintain, and implement the Government approved PI&C Management Plan in accordance with DRD PIC-PM-01.

(b) The Contractor shall provide a PI&C Closeout Plan in accordance with DRD PIC-PR-02.

1.1.1.1.2 Performance Management Reviews (PMRs)

(a) The Contractor shall conduct monthly Performance Management Reviews (PMRs) with NASA.

(b) The Contractor shall provide, in the PMRs, insight into the Contractors', subcontractors', and vendors' overall technical, schedule and price/cost performance and status to the ISS Program.

(c) The Contractor shall present at the PMRs metrics that effectively 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 Statement of Work or elsewhere in this contract.

(d) The Contractor shall depict in PMR presentations a correlation of the metrics to the requirements, and measurements of Contractor management responsiveness to the performance indicated by the metrics.

(e) The Contractor shall depict in PMR presentations performance measurement, accomplishments, issues and corrective actions, contract financial performance-to-plan status, including rates and any other data necessary to status the ISS Program.

(f) The Contractor shall provide Integrated Management Review Products (IMRPs) in accordance with DRD PIC-PM-02 for the work performed on this contract, and present the data in the PMR.

1.1.1.1.3 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.

1.1.1.1.4 PI&C Certification of Flight Readiness

The Contractor shall develop, update and implement a PI&C Certification of Flight Readiness (CoFR) Plan per DRD PIC-PM-03 in accordance with 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 issues dispositioned.

1.1.2 Internal/External Program Review Support

(a) The Contractor shall develop briefing materials and analyses for ISS Program presentations and meetings with various internal and external review groups. These groups include the Aerospace Safety Advisory Panel (ASAP), Space Station Utilization Advisory Subcommittee (SSUAS), Stafford/Anfimov committee, Inspector General/Government Accountability Office (IG/GAO), Space Flight Advisory Committee (SFAC), ISS Management and Cost Evaluation/NASA Advisory Council (IMCE/NAC), Independent Implementation Review (IIR), and Cost Assessments Teams.

(b) The Contractor shall prepare and present various topics, such as ISS Program technical, cost, and schedule status, specific safety or risk issues, and responses to external inquiries.

1.2 BUSINESS MANAGEMENT

1.2.1 RESERVED

1.2.2 RESERVED

1.2.3 Resource Management

As part of the Program management for this contract, including risk management, the Contractor shall support the Resource Management Office in Program Planning and Control (PP&C) of budget funding, contract changes tracking and analysis and reserves management. The Contractor shall perform the following tasks:

1.2.3.1 Financial Management

(a) The Contractor shall develop, implement, maintain, and update a contract financial system which tracks resources by contract Work Breakdown Structure (WBS) including, but not limited to, fully burdened labor and other direct cost, (e.g. materials, travel, and subcontracts).

(b) The Contractor's financial planning system shall support the Government budget process (e.g. Program Planning Budgeting and Execution [PPBE] budget calls), and support special requests for budget impacts. NASA will, in accordance with the budget or special request guidelines and reporting format, specify the format and content of the Contractor's inputs and supporting rationale.

(c) The Contractor shall provide financial reporting in accordance with DRD PIC-PC-01.

1.2.3.2 RESERVED

1.2.3.3 Special Reporting

The Contractor shall develop and provide Workforce Reports in accordance with DRD PIC-PC-03.

1.2.3.4 PI&C Contract Work Breakdown Structure (WBS)

The Contractor shall develop and provide a contract PI&C WBS and Dictionary in accordance with DRD PIC-PC-04. The WBS and Dictionary shall indicate the mapping of the Contractor WBS to the contract SOW WBS and SSP 50659, ISS Program Work Breakdown Structure, at the lowest levels of the ISS Program WBS.

1.2.4 ISS Program Budget Requirements and Assessments

1.2.4.1 ISS Program Budget Database Maintenance and Tracking Contract

The Contractor shall utilize the Space Program Integrated Contract Environment (SPICE) and the Integrated Enterprise Management Program (IEMP) databases to accomplish the following:

(a) The Contractor shall maintain the ISS Program budget database to include tracking of all approved changes.

(b) The Contractor shall answer queries from Contracting Officer (CO), NASA Program Planning and Control (PP&C) managers and resource analysts and provide various financial and workforce reports.

(c) The Contractor shall track all approved purchase requests for the ISS Program Office.

(d) The Contractor shall track funding requirements for the ISS Program Office.

(e) The Contractor shall track monthly cost actuals for the ISS contracts as needed in the IFM database.

(f) The Contractor shall provide data analysis, monthly cost status, and presentations.

1.2.4.2 ISS Program Reserves/Changes Management Database

The Contractor shall use the SPICE and the Integrated Risk Management Application (IRMA) databases to accomplish the following:

(a) The Contractor shall maintain the data in the ISS Program Reserves/Changes Management database to include tracking of all changes.

(b) The Contractor shall answer queries and provide reports.

(c) The Contractor shall provide ad-hoc product support to the Resources Management Office.

(d) The Contractor shall answer queries from NASA PP&C managers and resource analysts and provide reports.

1.2.4.3 Assessments

The contract shall support the Assessments, Cost Estimating and Scheduling (ACES) Office in assessing the ISS Program budget, cost, schedule and technical baseline to provide early warning for possible impacts to the ISS Program cost. The Contractor shall identify, evaluate, analyze, track, and report planning and assessment issues, and risks along with providing recommendations to the ISS Program managers. The Contractor shall coordinate content and formats of all assessments and analyses with the ISS Program prior to delivery of all final products.

(a) The Contractor shall integrate data from the ISS Program cost performance reports, including risks, to assess ISS Program performance. These assessments will be used by the ISS Program ACES Office for the development of overall Program analyses and status.

(b) The Contractor shall identify, evaluate, and report risk issues in a monthly early warning report to the ISS Program Manager. This report provides detailed status of the ISS Program performance against the ISS Program plan and impact of cost, schedule, and technical variances against the plan; and shall recommend actions to abate potential ISS Program impacts.

(c) Prior to the ISS Program Quarterly Review, the Contractor shall identify, evaluate, and report a preview assessment of the ISS Program status and technical health to the ACES office based on the assessment of the most current technical, cost, and schedule reports.

(d) Upon completion of the Quarterly Review, the Contractor shall provide an updated evaluation of the ISS Program status and technical health, based on the results of the data provided and presented as part of the quarterly Program Management Review.

(e) The Contractor shall perform ad-hoc analyses and assessments including, but not limited to, parametric cost estimates, schedule, cost, requirements, and workforce correlations and analyses, life cycle cost (LCC) estimates, and trade studies.

(f) The Contractor shall perform and integrate ad hoc parametric cost estimates, including but not limited to the preparation and documentation of individual cost estimates, the

reconciliation of cost estimates with technical evaluation of Contractor proposals, and the integration of component estimates to produce consolidated estimates and associated reports.

(g) The Contractor shall maintain analytic models associated with the development of parametric cost estimates and related assessments.

(h) The Contractor shall track and identify ISS Program threats for the ACES Office in support of the Program Risk Advisory Board and the monthly Early Warning Reports. The Contractor shall support the ACES office in the generation and development of reports from IRMA which shall provide a probabilistic estimate of the budget threats and a summary of the budget cost impact in current and out years. A Quantitative Risk Assessment tool shall be used to generate the estimate.

1.2.5 Program Scheduling

The Contractor shall provide overall ISS Program schedule management and analysis/assessment to support the continued development and operation of the ISS. The Contractor shall perform schedule analyses/assessment and report findings of those assessments at various levels of the ISS Program. Operation of a scheduling system that supports overall ISS Program objectives and requirements is also within the scope of the Contractor.

1.2.5.1 Schedule Management

(a) The Contractor shall develop and provide PI&C schedules and schedule analysis/assessments for the ISS Program (DRD PIC-PC-06).

(b) The Contractor shall prepare and report program schedule metrics.

(c) The Contractor shall provide reporting and schedule analysis. (DRD PIC-PC-06)

1.2.5.1.1 Program Schedule Management

The Contractor shall integrate schedule information from ISS, IP, ISS Program Contractors and ISS Cost Accounting Manager (CAM) performing organizations into a single ISS Program Integrated Program Flight Schedule.

(a) The Contractor shall provide schedule development and analysis/assessments for all flights and Program level activities.

(b) The Contractor shall provide schedule updates and status reports to ISS Program management.

(c) The Contractor shall maintain and update schedules and Program management information on the ISS Program Web site for the Integrated Program Flight Schedule, ISS Program and schedules for the ONE NASA Management Information System (MIS) (DRD PIC-PC-06).

1.2.5.1.2 Integrated Program Schedules Panel (IPSP) Support

(a) The Contractor shall support the weekly NASA led IPSP meeting.

(b) The Contractor shall support the IPSP by providing deliverables that provide for issue identification, schedule status and assessments and special agenda topics. The Contractor shall provide these deliverables to the IPSP in support of the ISS Program as determined by customer.

1.2.5.1.3 Program Level Schedule Data Management

The Contractor shall lead the ISS Program schedule data acquisition effort from all ISS Program participants in order to acquire the data necessary to support the continued development, evolution, and monthly maintenance of the Integrated Program Flight Schedule and lower level CAM Project schedules. The Contractor shall attend various ISS Program meetings to obtain information that support the effort described in schedule management.

1.2.5.2 Scheduling Systems Support

(a) The Contractor shall operate a scheduling system identified in Addendum 4, Table 1, in support of the ISS Program.

(b) The Contractor shall, with NASA guidance, review or audit other ISS Program Contractors' schedules to ensure compliance with current general Project Management conventions and requirements (e.g. Project Management Institute guidelines) and for indications of positive performance compared to plans. The Contractor shall work through the IPSP to resolve schedule or process issues identified.

1.2.5.3 Schedule Assessments

The Contractor shall perform top level and lower level schedule analyses and assessments for ISS Program organizations, projects, IP Elements, Visiting Vehicles.

(a) The Contractor shall provide a schedule assessment for each Unites States On-Orbit Segment (USOS) flight planned to the ISS. These assessments shall include an independent assessment of the overall flight readiness such as payloads, orbital replacement units (ORU), flight support equipment, and carriers.

(b) The Contractor shall perform risk based schedule assessments for Change Requests, development projects, critical items schedules, and special projects in support of the ISS Program Manager utilizing current Project Management tools and simulation techniques. Management reports shall be developed to support ISS Program decision making.

(c) The Contractor shall monitor and report status of development projects, critical items schedules, and special projects in support of the ISS Program Manager utilizing current Project Management tools and simulation techniques.

1.2.5.4 CAM Schedule Support

(a) The Contractor shall gather schedule updates and provide status reports to ISS Project Engineers/Managers.

(b) The Contractor shall create hardware delivery matrices, delivery schedules and trend charts, as required to show indication of project performance.

1.2.5.5 ISS Program Planning Calendar / Certification of Flight Readiness (CoFR) Review Meeting Matrix

The Contractor shall maintain the ISS Program Planning Calendar and CoFR Meeting Matrix.

(a) The Contractor shall participate in meetings to coordinate Program Calendar updates. The Contractor shall maintain the ISS Program Planning Calendar on the ISS Program Web site and provide updates twice weekly. The Contractor shall also produce copies and deliver them to the customer in support of Program office organizational staff meetings and the Integrated Program Schedule Panel (DRD PIC-PC-06).

(b) The Contractor shall provide maintenance of the CoFR Meeting Matrix by participating in meetings and providing updates and electronic status to Program participants of the CoFR matrix for baselines and working versions (DRD PIC-PC-06).

1.2.5.6 Special Schedule Trade Studies

At the written direction of NASA, the Contractor shall perform Special Schedule Trade Studies or create ad hoc schedules in support of the ISS Program.

1.2.5.7 Propose Alternate Report Formats

The Contractor shall develop and propose alternate report formats, if necessary, for NASA review and concurrence.

1.3 CONFIGURATION MANAGEMENT (CM) / DATA MANAGEMENT AND INTEGRATION (DMI)

1.3.1 Configuration Management

The Contractor shall develop, implement, and administer configuration management operations across the ISS Program as specified in this contract and in accordance with SSP 41170, Configuration Management (CM) Requirements; SSP 50010, Standards for ISS Program Documentation; SSP 50172, Data Management Handbook; and SSP 50123, Configuration Management Handbook. Additionally, the Contractor shall be responsible for contract specific CM functions as described in each of the functional CM areas described below.

1.3.1.1 Management and Administration

The Contractor shall provide for continued establishment and maintenance of the ISS Program CM policies, procedures and requirements, including maintaining an infrastructure for the continued development and baselining of hardware and software. The Contractor shall provide book coordination functions for SSP 41170, SSP 50010, SSP 50123, and SSP 50172, which contain the ISS Program CM/Data Management and Integration (DMI) requirements, policies, standards, and procedures. The Contractor shall maintain SSP 50706, Change Engineer Handbook; SSP 50744, Data Impoundment Processing Procedures; SSP 50421, Program Planning and Control Office CoFR Implementation Plan; SSP 50764, Modification Kit Process; and other ISS Program Configuration Management/Data Management documents.

1.3.1.1.1 The Contractor shall develop and implement a CM Plan in accordance with DRD PIC-CM-01.

1.3.1.1.2 The Contractor shall support Technical Interchange Meetings (TIMs) and ISS Program Milestone Reviews by providing inputs regarding CM.

1.3.1.1.2.1 The Contractor shall participate in the International Configuration Management Telecons (ICMTs) and:

(a) Schedule conference rooms;

(b) Notify attendees;

(c) Request interpretation/translation services;

(d) Schedule and set-up equipment;

(e) Prepare agendas;

(f) Prepare meeting material;

(g) Prepare minutes; and

(h) Track action items.

1.3.1.1.2.2 The contractor shall participate in the annual ICMT Face-to-Face meetings with the IP/Ps providing the same administrative functions described above in paragraph 1.3.1.1.2.1.

1.3.1.1.2.3 The Contractor shall participate in the ISS Program Milestone Reviews and:

(a) Schedule conference rooms;

(b) Notify attendees;

(c) Request interpretation/translation services;

(d) Schedule and set-up equipment;

(e) Prepare agendas;

(f) Prepare meeting material;

(g) Prepare minutes; and

(h) Track action items.

1.3.1.1.3 The Contractor shall develop, maintain, and deliver desk instructions including but not limited to the following areas, in accordance with SSP 50123 and SSP 50172:

- Change Processing
- Configuration Status Accounting
- Audit and Verification
- Engineering Release Unit
- CM Receipt Desk
- Meeting Support
- Board Secretariats
- Change Integrators
- Document Quality Assurance
- Directive Desk
- Program Data Integration Team (PDIT) Help Desk
- Other Programs' Change Request (CR) reviews.

1.3.1.2 Configuration Status Accounting and Verification

The Contractor shall maintain Configuration Status Accounting requirements in accordance with SSP 41170 and assure the requirements and processes are implemented across the ISS Program.

The PI&C Contractor shall perform the following Configuration Status Accounting functions across the ISS Program:

1.3.1.2.1 Participate in ISS hardware and software Functional Configuration Audits (FCA) and Physical Configuration Audits (PCA) by acting as the co-chair of the PCA CM panel as defined in D684-10097-01, Guidelines and Procedures for the conduct of Functional Configuration Audit (FCA) / Physical Configuration Audit (PCA). The Contractor shall:

(a) Determine the acceptability of the panel review items;

(b) Support the audit Chairperson(s) in developing recommended solutions to actions/issues;

(c) Prepare panel summary and minutes, and submit for inclusion in the audit minutes;

(d) Review draft minutes of the audit and sign applicable certification sheets, as appropriate;

(e) Ensure all necessary documentation is compiled and presented in an understandable manner to the customer;

(f) Coordinate panel activities and review/document progress daily;

(g) Determine if the use of sub-panels is necessary due to size/complexity of the Configuration End Item (CEI)/Configuration Item (CI) and/or Computer Software Configuration Item (CSCI); and

(h) Ensure audit action item/issue forms are available for auditors to document issues identified during the audit.

1.3.1.2.2 The Contractor shall participate in ISS Program acceptance reviews and readiness reviews to ensure CM issues are addressed and dispositioned. The Contractor shall:

(a) Identify all open work for the CI and/or CSCI have been closed;

(b) Verify that no unapproved activity has occurred to change the configuration since the PCA was performed;

(c) Provide all preplanned, assigned, unplanned or deferred work associated with the item subject to the acceptance review to be presented in summary at the review; and

(d) Identify any issues or concerns derived from work transfer or deferral and presented to the ISS Program Manager.

1.3.1.2.3 On-Orbit Configuration Working Group (OCWG)

The Contractor shall ensure the application of On-Orbit Configuration Status Accounting requirements and systems result in hardware and software product baselines in accordance with SSP 41170.

The Contractor shall provide support to the OCWG ensuring timely tracking, reporting, analysis, and disposition of on-orbit discrepancies between the as-built and the as-designed hardware configuration.

The Contractor shall provide technical coordination to the OCWG and:

(a) Attend OCWG as a member and facilitate the OCWG as required;

(1) Provide technical assessment of all new, closed and current Configuration Discrepancy Reports (CDRs) according to MGT-OH-018, On-Orbit CDR Resolution Process,

(2) Facilitate the meeting if NASA Chair is not available.

(b) Organize the OCWG Meeting;

(1) Support NASA chair to schedule OCWG meetings,

(2) Establish agendas and schedule meetings based on CDR activity,

(i) Send meeting notice/secure meeting room/set-up conference call-in.

(3) Document and track action items;

(4) Write and publish minutes for the OCWG,

(i) Summarize the essence of discussions surrounding decisions and actions.

(c) Maintain and track all CDR activity in the OCWG Master CDR List;

(d) Review Master CDR List weekly;

(1) To identify stalled CDRs or possible issues,

(2) To ensure that the CM Contractor(s) are providing a current status of on-orbit configuration discrepancies.

(e) Establish and facilitate bi-weekly (or as required) Contractor pre-coordination reviews to evaluate CDR activity;

(f) Coordinate OCWG support for CDRs with high risk or safety impact to the ISS Program by establishing a special topic OCWG or adding it to the agenda of the appropriate Program forum (i.e. System Problem Resolution Team [SPRT], Systems Working Group [SWG], Vehicle Control Board [VCB], etc);

(g) Establish and maintain OCWG website includes current information regarding on-orbit configuration discrepancies;

(h) Maintain the OCWG charter and the OCWG Work Instruction (MGT-OH-018).

1.3.1.2.4 Audit and validate the data residing in the Program status accounting systems (e.g., Space Station Accounting and Verification [SSAV], Configuration Status Management Operations System [COSMOS] and Electronic Document Management System [EDMS]) to ensure accuracy and completeness.

1.3.1.2.5 Validate the ISS Program baseline including the review and evaluation of changes to ensure proper baseline maintenance. The Contractor shall verify that the product and product information are properly updated per Program approved changes.

1.3.1.3 Configuration Control

The PI&C Contractor shall perform the following Configuration Control activities across the ISS Program:

1.3.1.3.1 Ensure execution of the change process in accordance with SSP 50123 and individual ISS Program Contractor CM plans. The Contractor shall:

(a) Ensure changes are thoroughly coordinated prior to submittal;

(b) Reviewed and evaluated;

(c) Implemented by an approved ISS Program Change Directive;

(d) Provide a single focal point for IP/P communication. Contractor shall:

(1) Assist in tracking, status and closure of IP/P changes,

(2) Assist in managing IP/P actions, telecons, and IP/P CM TIMs;

(e) Provide a thorough review of all directive packages to ensure quality packages prior to submittal for NASA CM signature per SSP 50123 and OH-WI-017, International Space Station Configuration Management (CM) Directive Work Instruction.

1.3.1.3.2 Maintain all CM blank forms/templates required for change processing and maintain a quality control function to provide uniform change paper across the Program.

1.3.1.3.3 Provide CM Secretariats for all ISS Program Control Boards and Panels. CM Secretariat functions are to be performed in accordance with ISS Program PPD-522, Space Station Control Board/Panel Operations Policy, and SSP 50123. Board/panel participation shall include:

(a) Participate as a board/panel member;

(b) Provide CM direction to the board chair;

(c) Coordinate with the board chair and CM meeting support personnel on all Space Station Change Notices (SSCNs) processed through the board;

(d) Track and report on all open SSCNs under the board responsibility;

(e) Ensure that complete directive packages are available at the board for concurrence/approval;

(f) Provide technical review and concurrence of the board minutes; and

(g) Notify the Change Integrator in writing of the directive approval status following the board meeting.

1.3.1.3.4 Provide meeting logistics, administration, agendas, action item management, minutes, and archival of all presentation material and decisional paper for all ISS Program Configuration Control Boards and Panels, Bi-lateral and Tri-lateral Program Boards, Acceptance Reviews, IP Assessment Reviews, and ISS Program reviews. In addition, the Contractor shall provide the following administrative functions:

(a) Scheduling conference rooms;

(b) Notifying attendees;

(c) Requesting interpretation and translation services;

(d) Requesting local transportation services for Foreign Nationals, when necessary;

(e) Scheduling and set-up of equipment;

(f) Preparation of meeting materials;

(g) Provide Quality Records Management for Flight Certifications per NPR 1441.1;

(h) Provide Quality Records Management for ISS Boards and panels;

(i) Provide reports and metrics; and

(j) Provide administrative functions for decision documents.

1.3.1.3.5 PP&C CoFR Panel Reviews and Stage Operations Readiness Reviews per SSP 50108 and SSP 50421. The Contractor shall:

(a) Provide charts identifying open work for each flight;

(b) Provide status at lower boards/panels for each flight;

(c) Capture and track CoFR actions and CoFR exceptions to closure for each flight;

(d) Track open paper for each flight; and

(e) Maintain the PP&C CoFR schedule.

1.3.1.3.6 Conduct a Program Change Screening Board (CSB), as described in SSP 50123, to screen all new change requests. The Contractor shall:

(a) Review all new/revised Change Requests (CRs) submitted to the ISS Program system;

(b) Confirm Contractor unit responsible to lead processing of the change;

(c) Verify that all CR information is complete;

(d) Ensure that all affected NASA organizations and Contractors are given the opportunity to evaluate;

(e) Verify evaluation schedules, assessing the urgency of the CR; and

(f) Verify the appropriate board/panel and the board/panel dates.

1.3.1.3.7 The PI&C Contractor shall perform the following Configuration Control activities for changes specific to the PI&C contract:

1.3.1.3.7.1 Process changes specific to the PI&C contract in accordance with SSP 50123. Review and evaluate ISS Program changes originating from outside the PI&C contract to determine if those changes have potential impacts to the PI&C contract.

1.3.1.3.7.2 Maintain and process Program Directives (Management Directives, Joint Program Directives, and Partner Program Directives) in accordance with procedures established in SSP 50123. The Contractor shall:

(a) Prepare redlines to directive,

(b) Initiate CR and release for evaluation to the ISS Program,

(c) Incorporate comments,

(d) Prepare directive for ISS Program signature, and

(e) Release directives in EDMS.

1.3.1.3.7.3 Coordinate the ISS Program review of the Space Shuttle Program and Constellation Program changes. The Contractor shall prepare a consolidated response for the CRs back to the Space Shuttle Program and Constellation Program in writing.

1.3.1.3.7.4 The Contractor shall participate in special projects requiring lifecycle CM knowledge. Activities will include project planning, documentation changes, expedited CM process development and facilitation of new ISS Program requirements development to support expedited processing and ensure traceability of data is available for certification of flight readiness.

1.3.1.3.8 Input, maintain, and validate the COSMOS database to assign CR numbers, track/status changes, and provide accurate information, reports, and monthly metrics.

1.3.1.3.8.1 Process all ISS Change Directive packages in addition to the PI&C changes processed under 1.3.1.3.7.1. Contractor shall:

(a) Obtain, track and status directive packages.

(b) Obtain directive signatures.

(c) Distribute, track and status directive actions to closure.

(d) Change Request/Directive data entry.

1.3.2 Program Data Management and Integration

1.3.2.1 The Contractor shall maintain and implement an SAE AS9100, Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation, and Servicing, compliant data management system in accordance with SSP 50010, SSP 50172 and

SSP 41170, and assure the requirements and processes are implemented across the Program. The Contractor shall:

1.3.2.1.1 Update and maintain the electronic ISS Program Documentation Tree.

1.3.2.1.2 Update and maintain the ISS Program technical documentation baseline in EDMS and COSMOS.

1.3.2.1.3 Maintain the ISS Program Master List of work instructions, processes, and procedures in accordance with SAE AS9100. Upload and post ISS Program work instructions to EDMS.

The Contractor shall provide the following administrative functions:

(a) Assign work instruction numbers;

(b) Upload work instructions to the authorized Program repository;

(c) Update the ISS Program Master List; and

(d) Notify author and Quality Management (OX) of updates/releases.

1.3.2.1.4 Provide Data Requirement (DR) receipt, tracking, monitoring, reporting, validation, evaluation, distribution, status, and storage of ISS Program contracts deliverables and IP/P data deliverables incoming to the ISS Program as identified in the following Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS) and Bilateral Hardware and Software Exchange Agreements, List, and Schedules (BHSEALS) documents: SSP 50124, NASA/CSA BDEALS; SSP 50126, NASA/NASDA BDEALS; SSP 50127, NASA/ESA BDEALS; SSP 50137, NASA/RSA BDEALS; SSP 50407, NASA/ESA BDEALS for Cupola 1; SSP 50611, NASA/ESA BDEALS for ATV; SSP 50614, NASA/NASDA BDEALS for HTV; SSP 50352, NASA/AEB BDEALS.

1.3.2.1.5 The Contractor shall manage and operate the International Partner Library (Integrated Office Management System [IOMS] or equivalent) to track IP/P Program data. The contents of the library shall include, but not limited to the following: translated Russian documents; BDEALS data; NAS15-10110 Contract deliverables; Government Furnished Data (GFD) deliverables; IP/P protocols; IP/P safety data packages; hazard reports; drawings; film; videos; photos; faxes; and letters. The Contractor shall be able to access and provide requested materials/information within two business days.

The Contractor shall perform the following Data Management activities in accordance with SSP 41170, SSP 50010 and SSP 50172 specific to the PI&C contract:

1.3.2.1.6 Provide an Engineering Release Unit (ERU) in accordance with SSP 50123 and SSP 50172 for release of ISS Program baseline documentation.

1.3.2.1.7 Operate a Configuration Management Receipt Desk (CMRD) in accordance with SSP 50123 and SSP 50172.

1.3.2.1.8 Provide Document Quality Assurance (DQA) in accordance with SSP 50010 and SSP 50172 for all ISS Program controlled documentation identified under this contract and NASA owned documents not specified under other existing ISS Program contracts.

1.3.2.1.9 Maintain and deliver SSP 50177, Government Furnished Data (GFD) Description Document. The Contractor shall notify other existing ISS Program Contractors for delivery of United States (U.S.) and IP/P GFD in accordance with SSP 50177.

1.3.2.2 Program Technical Data Access

The Contractor shall integrate and maintain the Orbital Replacement Unit (ORU) data and Flight support Equipment (FSE) data (provided by ISS Vehicle Office/Logistics and Maintenance and the hardware providers) in the Orbital Replacement Unit Data Directory (ORUDD) or equivalent. The ORUDD provides a user-friendly single access point for retrieving technical data regarding ORUs and FSEs.

1.3.2.2.1 Centralized Program Data Requirements

The Contractor shall respond to requests for resolving data workflow process issues that cross ISS Program contractual interfaces and impacts to work performance. Responding to, and resolving requests for issues with data workflow processes shall include:

(a) Identification and documentation of the issue or problem;

(b) Investigation, analysis and documentation of the data workflow processes involved and the associated interfaces;

(c) Development of a resolution plan and schedule;

(d) Facilitation of the implementation of the proposed resolution;

(e) A three-month follow-up to verify resolution is working and provide rework as identified; and

(f) Provision of closeout documentation addressing sub-paragraphs (a) thru (e).

1.3.2.2.1.1 Certification of Flight Readiness Support

The Contractor shall participate in special projects requiring lifecycle Data Management (DM) knowledge. Activities will include project planning, documentation changes, expedited DM process development and facilitation of new ISS Program requirements development to support expedited processing and ensure traceability of data is available for certification of flight readiness.

1.3.2.2.2 Data Management Process Improvements

The Contractor shall assess the state of technology and the Program's data requirements, processes and infrastructure, and propose new process improvement concepts for the Government's consideration. In this assessment, the Contractor shall solicit inputs from customers/users. These proposed concepts may be driven by one or more of the following reasons:

(a) New customer requirements,

(b) Improving performance, efficiency or effectiveness of ISS Program's data requirements and/or processes,

(c) New agency or center policies,

(d) Conforming to current standards and formats,

(e) Reducing operating costs.

1.3.2.2.3 Book Coordination

The Contractor shall provide book coordination functions to include preparation, distribution and processing Document Change Notices (DCNs), Notice of Document Changes (NDCs) and revisions in accordance with SSP 41170 and SSP 50010 for the following documents:

(a) BDEALS/BHSEALS:

(1) SSP 50124, NASA/CSA Bilateral Data Exchange Agreements, Lists, and Schedules,

(2) SSP 50126, NASA/NASDA Bilateral Data Exchange Agreements, Lists, and Schedules,

(3) SSP 50127, NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules,

(4) SSP 50137, NASA/RSA Bilateral Data Exchange Agreements, Lists, and Schedules,

(5) SSP 50407, NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules for Cupola 1,

(6) SSP 50614, NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules for ATV,

(7) SSP 50352, NASA/AEB Bilateral Data Exchange Agreements, Lists, and Schedules,

(b) SSP 50622-03, Operations Data Set Blank Book, and

(c) SSP 50839, ISS Program Operations Description (IPOD).

1.3.2.2.4 Support to ISS Program Data Users

The Contractor shall ensure data which impacts the management and operations of the ISS Program is integrated, valid and accessible to all ISS participants.

The Contractor shall coordinate with all ISS Program organizations and IP/Ps having ISS Program data to resolve immediate ISS Program problems and work towards the long term goal of integrated, valid, and accessible ISS Program data.

The Contractor shall locate data, identify, and resolve data discrepancies, and document data processes associated with ensuring accessibility to available technical ISS Program data for all Program data users.

1.3.2.2.5 Review of Change Request for Data

The Contractor shall assess and concur on ISS Program CRs that contain requests for data in order to ensure no duplication and that delivery of the data is specified to an authorized Program repository.

1.4 PROGRAM INFORMATION TECHNOLOGY (IT)

The Contractor shall provide the IT infrastructure for use by ISS Program participants to support the mission of the ISS Program. Other Contractors within the ISS Program will provide the IT support necessary to perform the requirements as stated in their respective contracts. The other Contractors may request to utilize the ISS Program IT infrastructure provided by the PI&C contract when common products and services provide for increased supportability, commonality, or efficiencies. The Contractor shall provide the IT infrastructure necessary to meet the requirements, as defined in this contract, in accordance with SSP 50013, ISS Information Systems Plan.

Institutional desktop and workstation support for on-site personnel will be provided by NASA, through an Information Resources Directorate (IRD) or Agency IT services contract, in accordance with NFS 1852.245-77 and Mission Focus Review (MFR) 137. Through an IRD or Agency Contractor, NASA will provide the ISS Program with standard office desktop workstation hardware and a standard software load for the provided hardware. Through an IRD or Agency Contractor, NASA will be responsible for support and asset management of all IRD-provided hardware and software.

The Contractor shall obtain system administrator access as necessary from the IRD Contractor to support ISS Program-specific hardware and software requirements on IRD-provided desktops and workstations. The Contractor shall coordinate any depot maintenance of IRD-provided hardware with the IRD Contractor.

1.4.1 IT Management and Administration

Any of the existing ISS Program IT tools defined in Addendum 2, Table 1 are available as GFD which will be utilized by the Contractor to fulfill contract requirements.

1.4.1.1 The Contractor shall report all IT delivered or direct charged to this contract by developing, maintaining and implementing the ISS Program Information Technology (IT)

Capital Investment Plan and associated reports in accordance with SSP 50222, ISS Program Capital Investment Process (CIP).

1.4.1.2 The Contractor shall develop, maintain and implement an IT Management Plan in accordance with DRD PIC-IT-01 for reportable IT. The IT Management Plan shall, at a minimum, address the following functions: system management and operations, project management, configuration management, IT security, technology infusion, procurement, work authorization, and metrics.

1.4.1.3 If the Contractor implements a Public Key Infrastructure (PKI) system, the Contractor system shall be interoperable with the NASA PKI system.

1.4.1.4 The Contractor shall develop and implement IT project plans in accordance with DRD PIC-IT-02 for the following activities:

- Implementation of new hardware and software capabilities,
- Conducting studies, market surveys, and system tests, and
- Developing and supporting proposed system hardware relocation plans as required.

1.4.1.5 Any new projects shall be documented in a business case, using the NASA Office of the Chief Information Officer (OCIO) Strategic Investment Business Case (SIBC) format, and submitted to NASA for approval in accordance with DRD PIC-IT-02.

1.4.1.6 The Contractor shall maintain an IT Performance Management and Capacity Plan in support of performance planning, analysis (e.g., log review, trend analysis, and system utilization), and design activities for new or modified systems capabilities; or for providing system and component-level capacity planning and monitoring to ensure adequate capacity and performance margins. The plan shall be prepared on an annual basis and include the following where applicable:

(a) By system, a summary of systems performance, including charts depicting observations for the current and previous 3 quarters, and a trend line reflecting anticipated performance for the coming 4 quarters. Performance will be quantified in terms of large and small transactions, as well as end-to-end transaction performance as measured from the end-user workstation to the host or data system.

(b) By system, a summary of resource utilization, including Computer Processing Unit (CPU), Disk, Memory, related Equipment (e.g., backup tape systems, off-line/near-line storage systems, physical storage space), and network bandwidth where applicable, with charts depicting observations for the current and previous 3 quarters and a trend line reflecting anticipated improvements or degradation during the coming 4 quarters.

(c) A discussion of the analysis and findings for any systems that have experienced significant performance anomalies or an increase or decrease in resource utilization relative to the previous month's baseline.

(d) Recommendations for improving any outstanding performance issues or capacity shortfalls.

(e) Recommendations for systems reconfiguration or consolidation that reduce operating costs or improve resource availability.

1.4.1.7 The Contractor shall develop and implement an IT Technology Infusion Plan to propose new technology and service concepts for the Government's consideration. The plan will give the government the ability to view the Contractor(s) innovative ideas for solving the technical challenges outlined within this SOW and will address proposed skill mix and "resource requirements."

1.4.1.7.1 Concept for IT Technology Infusion Plan

(a) The Contractor shall assess the state of technology and the Program's requirements, business processes and infrastructure, and propose new technology and service concepts for the Government's consideration. In this assessment the Contractor shall solicit inputs from customers/users. These proposed concepts may be driven by one or more of the following reasons:

- New customer requirements;
- Improving performance, efficiency or effectiveness of ISS Program Office business operations and/or business processes;
- Upgrades to other systems that affect the primary systems functional capabilities, e.g., upgrades to a web browser not compatible with primary systems;
- New product releases;
- Complying with safety requirements;
- New agency or center policies;
- Conforming to current standards and formats;
- Reducing operating costs;
- Limited system enhancements to produce higher quality products;
- System components become obsolete or non-repairable.

(b) The Contractor shall obtain approval for proposed concepts and associated estimated costs prior to initiating a full technology infusion effort.

(c) If the plan is approved by the Government, then an approved IT Project Plan, to be developed in accordance with DRD PIC-IT-02, shall accomplish the implementation.

1.4.1.7.2 Content for IT Technology Infusion Plan

The plans shall address at a minimum and as applicable:

- List price pages (catalog price),
- Description of proposed technology, including integration test results to date,
- Contractor product identification number,
- Model number,
- GSA and commercial catalog unit number, if available,
- Hardware and Software items to be replaced by the new technology product,
- Changes/impacts to ISS Program customers/users and other ISS Program IT providers, and to NASA and Center(s) IT architectures and standards,
- Changes to Agency or Center specific Strategic Plans,
- Implementation plan and schedule,
- System performance improvements as a benefit to the Government,
- Known and anticipated impact on ISS Program and non-ISS Program Contractors,
- Proposed adjustment to transition charges,
- Impacts on Contractor performance, and
- Estimated return on investment.

1.4.2 IT Systems Management and Operations

The Contractor shall ensure that all Contractor-managed IT systems are performing efficiently within their defined life cycles in accordance with NASA requirements, including Safety, IT Security and schedules, as well as industry best practices and applicable standards.

(a) The Contractor shall provide the ISS Program customer community with full life cycle system support for ISS Program IT systems, applications (e.g., web, mainframe, workstation, client/server, utility), platform systems, services, equipment, etc., as defined in Addendum 3 and Addendum 4, Table 1, Table 2, and Table 3. The full life cycle includes planning, requirements definition, design, programming, prototyping, testing, documentation, deployment, training, sustaining engineering, and operations.

(b) The Contractor shall propose a life cycle methodology that encompasses all life cycle phases for IT systems and applications. The proposed methodology shall enable the provisioning of IT systems with the best performance and quality in a cost effective manner.

(c) The Contractor shall address IT security in each phase of the life cycle.

(d) The Contractor shall implement IT system performance standards in accordance with the requirements set forth in Addendum 3.

(e) The Contractor shall function as the property custodian for the Government property assigned to this contract, identified in Addendum 4, Table 3.

1.4.2.1 IT Life Cycle Management

The Contractor shall manage designated production systems, development and integration systems, ongoing and new projects, and functions and activities required to provide products and services to the ISS Program customer community. The Contractor shall adhere to policies and standards, and support information exchange and decision making forums. In support of this effort, the Contractor shall provide the following activities:

1.4.2.1.1 The Contractor shall review Government-provided policies, architectures, standards, and procedures affecting this contract and recommend appropriate modifications and implementation strategies.

1.4.2.1.2 The Contractor shall provide a representative to attend recurring Government-sponsored meetings, such as the Information Resources Directorate Configuration Board, the Chief Information Officer's Network Access Control Board and the ISS IT Working Group.

1.4.2.1.3 The Contractor shall manage the acquisition of commercial off-the-shelf (COTS) software, hardware, and associated maintenance agreements as approved by the Government. The Contractor shall provide all consumables used in operating the systems associated with this contract.

1.4.2.1.4 The Contractor shall use and manage Government Furnished Equipment (GFE), including software and hardware, in the performance of this contract.

1.4.2.1.5 The Contractor shall develop, implement, and maintain IT Standard Operating Procedures in order to sustain products and services defined in this contract. These procedures shall provide guidance for interfacing with other organizations and specific tasks required in the process of meeting customer requirements, and shall instruct technicians, production personnel, and other users in the proper setup and operations of systems. These procedures are not intended to document the details of how the tasks or interfaces are to be accomplished. These procedures shall:

(a) Describe each system in terms of the requirements it fulfills, the equipment comprising the system, and any interconnection to other systems;

(b) Reference system engineering drawing numbers;

(c) Reference manufacturers' operations manuals;

(d) Give specific details on setup configurations related to the intended equipment functions;

(e) Give step-by-step system check instructions that, when performed, verify the system is functioning as designed;

(f) Give step-by-step instructions on how to operate the system equipment to achieve every stated purpose of the system, including references to manufacturers' manuals when appropriate;

(g) List the required customer interfacing tasks;

(h) List other procedures applicable to performing a specific system operation;

(i) Cross reference any corresponding Standard Operating Procedures (SOP);

(j) Reference preventive maintenance procedures; and

(k) Use the ISS Document Management System to store and configuration manage the SOP documents.

1.4.2.1.6 The Contractor shall develop, implement, and maintain an IT Configuration Management Plan as defined below in order to maintain hardware and software specifications and baseline control of IT systems.

1.4.2.1.6.1 Concept for IT Configuration Management Plan

(a) The Contractor shall establish, implement, and comply with a stringent process of configuration management for all systems defined under this contract.

(b) The Contractor shall not change, modify, or relocate Government equipment or systems without prior approval unless otherwise stated in the configuration management plan.

(c) The Contractor shall provide, revise, and maintain a complete set of engineering and exhibit drawings, hardware and software configurations, and specifications and associated change documentation for all IT systems defined in this contract.

(d) Where baseline configuration information does not exist, the Contractor shall define the baseline.

(e) The Contractor shall provide current configuration documentation for all systems under this contract within 6 months after contract phase-in.

1.4.2.1.6.2 Content of IT Configuration Management Plan

The IT Configuration Management Plan shall contain the process to be implemented for control of both engineering (design) configuration, and operational configuration. The IT Configuration Management Plan shall include the following:

(a) Define how configuration control will be recorded and documented,

(b) Identify the specific part of the organization responsible for maintaining the configuration control records,

(c) Identify the documentation and data systems required to provide configuration control for both hardware and software,

(d) Identify the specific equipment, systems, and operational interfaces which are subject to configuration control,

(e) Describe the procedures to be used to coordinate, define, test, monitor, and control all technical and operational interfaces,

(f) Identify individuals responsible for writing and for approving configuration control procedures, and

(g) Define how NASA will be involved with final decisions in the change process.

1.4.2.1.7 The Contractor shall develop IT configuration reports that contain information and status on all equipment and software, which are maintained by and/or operated by the Contractor. The information fields required for each category of equipment or software in the system shall include information on the category's description, location, user, manufacturer, external connections to other systems, maintenance support, and other fields normally contained in an IT configuration management system.

1.4.2.1.8 IT Sustaining Engineering and Operation

The Contractor shall provide sustaining engineering, including preventive maintenance, and operations for IT systems. At a minimum, support will include the following activities.

1.4.2.1.8.1 The Contractor shall provide sustaining engineering for multimedia, computer, and network systems defined in Addendum 3 and Addendum 4, Table 1, Table 2, and Table 3. Sustaining engineering for applications shall include developing limited new capabilities, bug fixes, and coordination and testing support in response to new operating system and program product. For hardware systems and stand-alone equipment, sustaining engineering includes preventive and remedial maintenance, ordering of replacement parts, sparing, end-of life (EOL), and system software and firmware updates and patches.

1.4.2.1.8.2 The Contractor shall manage third party maintenance and license agreements.

1.4.2.1.8.3 IT sustaining engineering shall minimize disruption to system availability during normal working hours. The Contractor shall coordinate and schedule changes that require production outages with the customer in advance of the outage. In the event the outage is an emergency, the Contractor shall immediately notify, via telephone and e-mail, the ISS Program IT Lead and shall provide continuous status of the progress and expected time of availability.

1.4.2.1.8.4 The Contractor shall establish and conduct a preventive maintenance and operational readiness program as defined below to ensure that all identified systems are functioning within required specifications.

1.4.2.1.8.4.1 Remedial Maintenance

The Contractor shall repair or replace failed equipment and restore it to operating condition. The repair and restoration may involve the temporary replacement of the equipment with a like item to allow continuation of the provided service. When failed equipment cannot be removed, the repairs shall be accomplished in a way that minimizes disruption of other operational activities. When repair of a specific item of equipment is not cost effective (when repair costs exceed one third of replacement costs), with the concurrence of the ISS Program IT Lead, the Contractor shall replace the equipment. For equipment used to meet mission requirements, immediately after being notified that equipment is out of service the Contractor shall initiate repair and notify the ISS Program IT Lead via e-mail.

1.4.2.1.8.4.2 Maintenance Agreements and License Management

The Contractor shall create, maintain, and implement plans and schedules for maintenance agreement and license management. For Government-funded renewals, the Contractor shall inform the ISS Program IT Lead via e-mail a minimum of 90 days prior to expiration of agreements.

1.4.2.1.8.4.3 COTS Upgrades and Maintenance

The Contractor shall ensure defects in COTS products are fixed and version upgrades to COTS software are obtained. The Contractor shall coordinate with the Government and application vendors. The Contractor shall assess and implement each new patch or update to be applied for all supported platforms within 90 days of vendor release of the updates or patches. The Contractor shall request a waiver if they find that a release or patch is incompatible with the current institutional environment, would impact data integrity or system stability, or would otherwise cause undue disruption to the user community. The Contractor shall evaluate and update critical security patches within 24 hours of the patches being released by the vendor.

1.4.2.1.8.5 The Contractor shall operate and provide system administration for all systems identified in Addendum 3. System administration processes and procedures shall adhere to

NASA and Johnson Space Center (JSC) policies and procedures. The Contractor shall ensure that system administration support is provided within schedule guidelines. Operation and system administration shall include:

- ID administration and folder setup for access,
- Data transmission among systems,
- Creation/deletion of network printer queues,
- System backups,
- Virus scans,
- Vulnerability scans,
- Problem identification and resolution, and
- Technology upgrades.

1.4.2.1.8.5.1 The Contractor shall provide Return to Service for IT systems as identified in Addendum 3.

1.4.2.1.8.5.2 The Systems Administration functions (excluding facility, network outages, IT incident investigations, and maintenance service not under control of the Contractor) shall be performed to minimize disruption to system availability, with the exception of scheduled outages.

1.4.2.1.8.5.3 The Contractor's system administrators shall ensure that backup, restore, archival, continuous monitoring, continuity of operations and contingency operations are performed as per the System Security Plan and associated documentation.

1.4.2.2 IT Security Support

1.4.2.2.1 The Contractor shall assume responsibility for maintaining existing IT System Security Plans for on-site ISS IT systems. The Contractor shall advise ISS Program customers and users on IT security policies and implement approved security and networking solutions.

1.4.2.2.2 The Contractor shall monitor production capabilities and respond to requests for IT security support by providing consultation and direct technical assistance to assist customers with the development of requirements for secure firewall and networking solutions.

1.4.2.2.3 Response to IT Security Issues and Incidents

(a) The Contractor shall report all IT security issues, security incidents, problems and resolutions to the ISS Program Organization Computer Security Official (OCSO) and ISS Program IT Lead. The Contractor shall provide real-time incident status reports as required, beginning within twenty-four (24) hours after a security incident has been discovered. The

Contractor shall provide a final status report within twenty-four (24) hours after the conclusion of any incident investigation.

(b) The Contractor shall process security-related incidents, including identifying network attacks (denial of service, viruses, worms, etc.), identifying and analyzing cases of misuse of IT resources, securing computing resources as required, and providing 24-hour response to computer security incidents and notification of appropriate personnel.

(c) The Contractor shall provide analysis of security incidents relating to misuse of IT resources or incorrectly configured systems, securing computing resources as required or working with system owners to properly reconfigure affected systems.

1.4.2.2.4 Certification and Accreditation Packages and Related Documentation

Major re-certifications of IT Systems requiring Certification and Accreditation (C&A) occur every three years, and the Contractor must prepare for and support this activity to ensure successful system re-certification. The next major re-certification for the ISS Production Facility system is anticipated to occur in June 2010.

The Contractor shall update and maintain existing C&A packages in accordance with DRD PIC-IT-03. In addition, the Contractor shall develop, update and maintain C&A packages for any offsite facilities that contain or process NASA data in accordance with DRD PIC-IT-03 Section 8(II).

1.4.2.3 Work Authorization and User Support

1.4.2.3.1 The Contractor shall gather, organize, and disseminate IT information to the customer community in formats appropriate to the information. Subject matter content will vary but will always focus on keeping the ISS Program community informed in a timely and accurate manner, providing them ready knowledge of products and services available, the mechanisms for acquiring those services, and information intended to help the customer. Services also entail reviewing and coordinating responses to e-mail traffic received in centralized electronic mailboxes intended for customer communication. The Contractor shall manage user accounts for access to ISS applications including additions, modifications, expiration, and deletion as defined in SSP 50013.

1.4.2.3.2 User Requirements/Analysis

(a) The Contractor shall perform data gathering, entry, and analysis of requests to ensure that the customer requirement for products and services is documented and processed.

(b) As approved by the ISS Program IT Office, the Contractor shall document and coordinate implementation of IT requirements requested by institutional and international IT service providers.

(c) The Contractor shall serve as the primary point of contact for ISS Program IT services required to support end users.

1.4.2.3.3 ISS Program Loan Pool

(a) The Contractor shall serve as the primary point of contact for ISS Program loan pool services required to support end users.

(b) The Contractor shall develop and maintain user guides/desktop instructions for services that require user self-installation.

(c) The Contractor shall develop and maintain procedures for appropriate property management of the ISS Program loan pool products for check-in/check-out and regular inventorying.

(d) The Contractor shall report property losses on a per-incident basis and as soon as possible following an incident.

(e) The Contractor shall develop, implement, and maintain a standard laptop software load consistent with the approved JSC laptop load and any related policies and practices for the loan pool laptops.

(f) The Contractor shall augment standard load configuration in order to support specific user requirements. Activities typically include configuration for tunneling, data transfers, and loading requested software.

1.4.2.3.4 The Contractor shall receive work authorizations via Information Resources Directorate Customer Service System Service Requests (SRs) and ISS Program Action Service Requests (ASRs), loan pool requests, and external access requests in addition to the IT project plans. The Contractor shall ensure that its internal work management and tracking systems interface seamlessly with the Information Resources Directorate Customer Service System for the purpose of receiving work authorizations and providing order status and tracking information.

1.4.2.3.5 The Contractor shall track, resolve, and report on problems associated with systems, products, and services. Problem resolution includes accepting transferred calls from the various JSC Help Desks or ISS Program Help Desks for systems under this contract and reporting resolutions back to the appropriate Help Desk or end user, as appropriate. The Contractor shall develop and maintain an on-line web-based Application Service Request Database (ASDB).

1.4.2.3.6 The Contractor shall provide desktop support services for ISS Program IT and IT services not supported by other institutional providers. Desktop support are those services which support the users' desktop environment; such as, but not limited to, loading/configuring local and network software, drivers, printers, peripherals, and data migration.

1.4.2.3.7 The Contractor shall conduct customer satisfaction surveys on all IT Operations SRs and ASRs servicing end users.

1.4.2.3.8 The Contractor shall provide assistance in space utilization, coordination / facilitation, and planning for ISS Program physical space requirements at JSC. This includes assessing requests, coordinating with the requestor(s), making recommendation, facilitating request through the implementing organization, tracking requirements through closure, and reporting.

1.4.2.3.9 The Contractor shall manage interconnection access between ISS IP/Ps and ISS Program resources. The Contractor shall work with JSC sponsors to process requests from ISS IP/Ps for access to ISS Program servers and applications. The Contractor shall coordinate processing of Access Control Plan (ACP) requests, IRD Service Requests (SRs) for JSC accounts, Identification (ID) management requests and other center/agency required forms for ISS IP/Ps.

1.4.2.3.10 The Contractor shall provide liaison support between the ISS Program and ISS IP/Ps. The Contractor shall coordinate with the ISS Program External Relations Office and the JSC Legal Office as required to facilitate the completion of ISS International Agreements.

1.4.2.3.11 The Contractor shall facilitate and support meetings to resolve application and network connectivity technical issues between IP/Ps and ISS Program systems.

1.5 INTERNATIONAL INTEGRATION

1.5.1 RESERVED

1.5.2 RESERVED

1.5.3 IP Elements Integration Management

The Contractor shall perform the tasks identified below to the support of IP Element Integration Management. For the purposes of this contract, "IP Elements" are defined as:
H-II Transfer Vehicle (HTV), Automated Transfer Vehicle (ATV), Mobile Servicing System (MSS), Special Purpose Dexterous Manipulator (SPDM), Unpressurized Docking Module (UDM), Service Module (SM), Docking Compartment (DC), Soyuz, Multipurpose Logistics Module (MLM), Docking Compartment Module (DCM), Progress, and visiting vehicles.

The NASA IP Element Integration Manager (EIM) provides overall management and oversight of the tasks that are necessary to integrate the IP Element into the ISS. The primary goal of IP Element Integration is to confirm the IP Element meets its ISS Program requirements (e.g., system- and segment-level specifications, Interface Requirements Documents [IRDs], Interface Control Documents [ICDs]) and is ready for flight. The NASA IP EIM also ensures that NASA

meets applicable ISS requirements in support of the integration of the IP Element and complies with bilateral agreements.

The Mission Integration, Cargo Integration, and Vehicle sustaining engineering teams provide the technical expertise and resources required to execute the tasks associated with IP Element integration (e.g., subsystem-level technical review of IP Element designs) and support the NASA IP EIM in performing the tasks necessary to integrate the IP Element and deliver on-orbit to the ISS.

1.5.3.1 Systems Engineering and Integration of IP Elements

1.5.3.1.1 Engineering Integration and Communication

(a) The Contractor shall interface with the Program Data Integration Team to provide the book coordination function; to facilitate the technical development, coordination with IPs, management approval, and implementation of the following IP BDEALS documents: SSP 50124, NASA/CSA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS); SSP 50137, NASA/RSA BDEALS; SSP 50611, NASA/ESA BDEALS for ATV; and SSP 50614, NASA/JAXA BDEALS for HTV. The data submittals provided by the IPs via these BDEALS documents will be made available as GFD to the Contractor as defined in Addendum 2, Table 2.

(b) The Contractor shall interface with the Mission Integration Team to provide the book coordination function; to facilitate the technical development, coordination with IPs, management approval, and implementation of the following IP BHSEALS documents: SSP 50136, NASA/RSA Bilateral Hardware and Software Agreements, List and Schedules (BHSEALS); SSP 50220, NASA/CSA Bilateral Hardware and Software Exchange Agreements, Lists and Schedules (BHSEALS); SSP 50615, NASA/NASDA BHSEALS for the H II Transfer Vehicle (HTV).

(c) The Contractor shall distribute Element technical, programmatic and operations data for review by ISS Program teams identified in the IP Element Integration Team Lists.

(d) The Contractor shall collect assessments and comments to the distributed Element data in (c) to ensure application of engineering and programmatic expertise in all aspects of the integration process including evaluation and definition of: bilateral documentation, interfaces, requirements changes, exchanges of data and hardware/software, development and testing, and special information requests.

(e) The Contractor shall facilitate ISS Program Teams communications with IPs and their Contractors.

(f) The Contractor shall maintain cognizance and technical knowledge of Element design, associated issues, and planning and schedule status.

(g) The Contractor shall provide responses to communications and data requests from IP and ISS Program Teams in accordance with teams' schedules.

(h) The Contractor shall coordinate shipment of items to and from the IPs with the ISS Program Shipping Coordinator in the Mission Integration Team.

1.5.3.1.2 Issue Resolution

The Contractor shall coordinate issue resolution with the IP Element Integration Teams as follows:

(a) Collect information for issue definition and document integration and compatibility issues and actions.

(b) Provide inputs to teams, and track issue resolution and action items closure for all phases of IP Element integration activities through on-orbit activation and checkout.

(c) Develop proposals, assess risks and recommend schedule for technical issues resolution.

(d) Chair technical forums, telecons and meetings required for issue resolution.

(e) Provide regular technical status inputs to action items database for open actions;

(f) Provide regular technical status inputs to Schedule Management Team;

(g) Provide regular technical status inputs to NASA IP EIM; and

(h) Provide regular technical status inputs to other teams, boards and panels in support of the NASA IP EIM.

1.5.3.1.3 Change Engineering

The Contractor shall initiate CRs to maintain and update the ISS design and requirements baseline for IP Elements. The Contractor shall perform Change Engineering functions for IP-related CRs and other activities necessary to maintain and update the ISS design and requirements baseline for IP Elements.

1.5.3.1.4 IP Elements Acceptance and CoFR

The Contractor shall support development, coordination and maintenance of the IP CoFR implementation plans. The Contractor shall review and provide inputs to Assessment Review Plans for all IP Elements. The Contractor shall coordinate and implement the Acceptance Review Plans and Assessment Review Plans with IPs and within the ISS Program.

1.5.3.2 IP Milestone Reviews

1.5.3.2.1 Milestone Review Planning and Coordination

The Contractor shall plan and track the ISS Program teams' participation in the IP design, qualification, certification, and pre-shipment reviews to ensure compliance with ISS Program requirements and policies. The Contractor shall develop ISS Program support plans for IP Milestone Reviews in accordance with DRD PIC-II-01. The Contractor shall obtain concurrences for scheduling and support of the milestone reviews from ISS Program disciplines, teams and organizations and present for NASA approval. The Contractor shall track the implementation of the approved ISS Program Support Plan.

1.5.3.2.2 IP Milestone Review Participation

The Contractor shall participate in all stages of the Milestone Review, including:

(a) Development of the Milestone Review Plan to be bilaterally concurred by NASA and the IP and post-review action closure.

(b) Review of IP Design, Qualification and Certification Review data packages for compliance with ISS Program requirements and policies defined in IP Elements Specifications, IRDs/ICDs and other applicable bilateral and multilateral documentation.

(c) Identification and documentation of non-compliance issues.

1.5.3.3 ISS and Mission Integration

1.5.3.3.1 Participation in ISS Program Reviews

The Contractor shall participate in the ISS Program Milestone and Launch Package reviews identified in SSP 50200-02, Station Program Implementation Plan Volume 2: Program Planning and Manifesting, and SSP 50489, ISS Mission Integration Template, by providing inputs to reviews and planning documentation. The Contractor shall coordinate implementation of NASA Element Team functions in support of these reviews.

1.5.3.3.2 Launch Package and Increment Teams Support

The Contractor shall provide consolidated Element Team inputs to mission requirements, increment definition requirements, and manifest requirements for IP Element flights. The Contractor shall review the IP Element applicable flight and increment documentation (e.g. Increment Definition and Requirements Documents [IDRDs], manifest) and coordinate with the Launch Package Manager (LPM) and Increment Manager (IM) Teams to ensure incorporation of these requirements. The Contractor shall participate in LPM and IM teams negotiations of the

requirements with the IP. For data that supports the IDRD development, the Contractor shall provide inputs to the Mission Integration Team via Requirements Request Forms as defined in SSP 50622-02, Mission Integration Data Sets Blank Book. For data that supports the IP flight manifest development, the Contractor shall provide inputs to the Mission Integration team via Manifest Requests as defined in SSP 50622-02.

1.5.3.3.3 Element Ground Processing Coordination

The Contractor shall coordinate with Kennedy Space Center (KSC) and IP regarding IP Element hardware processing in the Space Station Processing Facility (SSPF), to provide programmatic coordination including review of integrated IP Element schedules, status of hardware processing, status of action items, and development and coordination of meeting agendas. After handover of the IP Element hardware to Shuttle Integration, the Contractor shall support the Launch Package Management Teams to coordinate Element related processing issues.

1.5.3.3.4 Element Flight Operations Support

The Contractor shall coordinate with ISS Program and IP Operations Teams, the planning and implementation of IP Elements flight operations, which includes participation in ISS Program Stage Integration Reviews (SIRs) and review of the IP Element operations documentation, such as operational timelines, procedures and flight rules.

1.5.3.3.5 Mission Support

1.5.3.3.5.1 Increment Management Center (IMC) Support

The Contractor shall staff the ISS Increment Management Center console during IP Elements assembly flights, flights involving Canadian Space Agency (CSA) robotics missions, and first-time IP visiting vehicle flights (e.g. HTV and ATV) to provide a single point of contact for Element Team coordination and resolution of mission related issues on a real time basis. The Contractor shall meet the process requirements identified in the ISS Management Center Operations Handbook (IMCOH).

1.5.3.3.5.2 Mission Evaluation Room (MER) Support

The Contractor shall staff an ISS Mission Evaluation Room (MER) console during IP assembly flights, involving CSA robotics missions, and first-time IP visiting vehicle flights (e.g. HTV and ATV) to provide a single point of contact for Element Team coordination and resolution of mission related issues on a real time basis. The Contractor shall also staff an ISS MER console on an as-needed basis after the initial IP assembly flights and first-time IP visiting vehicle flights to facilitate Element Team coordination in resolving in-flight anomalies associated with the IP Element. The Contractor shall meet the process requirements identified in OB-MER-006, ISS MER Handbook.

1.6 HUMAN SPACE FLIGHT COLLABORATION

The Contractor shall accomplish all work necessary to accommodate commercial customers to the ISS. The work will be the same or similar scope already required elsewhere in this contract SOW but will be performed in support of a NASA Reimbursable Space Act Agreement or a NASA contract.

2.0 ISS SYSTEMS ENGINEERING, ANALYSIS, AND INTEGRATION

2.1 RESERVED

2.2 SYSTEMS ANALYSIS AND INTEGRATION

The Contractor shall provide the ISS Program with long term strategic planning for the development and operation of the ISS. The Contractor shall provide the ISS Program with Program level requirement and interface development, integration, documentation and analysis. The Contractor shall provide multi-level increment strategic, tactical and real-time operations planning. The Contractor shall manage system and segment level integration of the ISS.

The Contractor shall perform the tasks below in accomplishing ISS systems analysis and integration. The Contractor shall use the coordinate systems defined in SSP 30219, Space Station Reference Coordinate Systems, for analysis, products, or data that is produced for ISS Program and requires the use of coordinate systems.

2.2.1 Program Requirements and Interfaces

2.2.1.1 ISS Specifications and ICDs Maintenance and IRDs

(a) The Contractor shall provide book coordination functions for ISS specifications, ICDs, and IRDs identified in Addendum 6 in accordance with DRDs PIC-SI-01, PIC-SI-02, and PIC-SI-03. The Contractor shall provide book coordination functions for SSP 30459, ISS Interface Control Plan, SSP 50135, ISS Interface Control Plan – NASA/RSA, and SSP 41174, ISS Interface Control Working Group (ICWG) Operating Procedures.

(b) The Contractor shall maintain the contents of the Master File for all specifications and ICDs/ IRDs.

(c) The Contractor shall maintain tracking logs of specifications, CRs and ICD/IRD revisions and history.

(d) The Contractor shall perform requirements traceability for SSP 41000, System Specification for the International Space Station; SSP 41160, ESA Segment Specification for Columbus; SSP 41162, Segment Specification for the United States On-Orbit Segment; SSP 41165, Segment Specification For The Japanese Experiment Module; SSP 50273, HTV Segment Specification; SSP 50312, CAM Segment Specification; SSP 50333, Cupola Segment Specification; and SSP 50439, ESA Segment Specification For The Automated Transfer Vehicle (ATV) in accordance with DRD PIC-SI-04 utilizing the Requirements Traceability Management (RTM) application identified in Addendum 4, Table 1.

(e) The Contractor shall identify and track non-incorporated CRs to all retired, or no longer actively maintained, ISS specifications and ICDs.

(f) The Contractor shall review and evaluate ISS Program changes to determine if those changes impact the documents supported in paragraph 2.2.1.1(a). When impacted, appropriate change description text shall be provided to the CM function.

2.2.1.2 Coordination and Review of ISS Specifications, ICDs, and IRDs

(a) The Contractor shall provide technical review of specifications, ICDs, and IRDs identified in Addendum 6 during ISS Program Milestone Reviews to ensure the requirements reflect the current ISS Program baseline.

(b) The Contractor shall provide technical review and coordination of Preliminary Interface Revision Notices (PIRNs) for the documents identified in Addendum 6 and Document Change Notices (DCNs) for SSP 41150, IRD SSMB To Columbus APM; SSP 41151, IRD SSMB To JEM; SSP 41151-Appendix D, IRD SSMB To JEM, Appendix D; and SSP 41152, IRD ISPR ICD in accordance with SSP 30459, SSP 50135, and SSP 41174.

2.2.1.3 Interface Control Working Group (ICWG)

The Contractor shall perform the following ICWG technical administrative functions in accordance with SSP 41174, SSP 30459, and SSP 50135.

2.2.1.3.1 The Contractor shall maintain and update Hardware Interfaces Tracking System (HITS) database (or equivalent) identified in Addendum 2, Table 1 to develop PIRN status reports as follows:

(a) The Contractor shall track and provide "ICD metrics" reports to include issue resolution plans on a quarterly basis.

(b) The Contractor shall track and provide reports identifying "To Be Determined (TBDs)" on a quarterly basis.

(c) The Contractor shall track and provide "Open Issues" reports on a quarterly basis.

2.2.1.3.2 The Contractor shall prepare, distribute, maintain and track Interface Memorandums to document official correspondence.

2.2.1.3.3 PIRN and DCN Development and Maintenance

The Contractor shall process and maintain ICD PIRNs and IRD DCNs as follows:

(a) The Contractor shall prepare, distribute, process, maintain, and track PIRNs for the documents identified in Addendum 6 to update ICDs.

(b) The Contractor shall prepare, distribute, process, maintain, and track DCNs for SSP 41150, SSP 41151, SSP 41151-Appendix D, and SSP 41152 to update IRDs.

2.2.2 System Performance Analysis and Integration

The Contractor shall provide recommendations to the ISS Program management on the strategic implications of the ISS Program launch schedules, manifests, and ISS on-orbit operations, and assist in NASA's development of strategic requirements. To meet the full scope of this requirement, the Contractor shall provide systems engineering and integration support for development of the ISS Program strategic planning as described below, and shall report the results in accordance with DRD PIC-SI-05.

2.2.2.1 Mission Analysis and Integration

2.2.2.1.1 Attitude Requirements

(a) The Contractor shall develop, coordinate and obtain ISS Program approval of the flight attitude requirements for the ISS operations. These requirements balance the needs of power, thermal, propellant, Guidance, Navigation, and Control (GN&C) momentum management capability, micro-gravity, natural and induced environmental factors, communications, visiting vehicle, and other factors. The GFD tools Channelized Energy Balance Tool (CEBT) and Integrated Energy Balance Tool (IEBT) are available to support this function.

(b) The Contractor shall input and maintain approved attitude requirements in SSP 50699-03, The Space Station Certification Baseline Document.

2.2.2.1.2 Altitude Strategy

The Contractor shall develop and coordinate the ISS altitude strategy. The altitude strategy will include:

- Analysis for inadvertent entry risk,
- Projected on-orbit lifetime,
- ISS propellant availability,
- ISS propellant delivery requirements and capabilities,

- Micro-gravity environment,
- Natural and induced environmental factors (including crew radiation exposure) as analyzed by NASA institutional resources and by the Vehicle Sustaining Engineering Team, and
- Launch vehicle performance.

Such analysis will also verify that ISS performs within hardware certifications, through consultation with the Vehicle Sustaining Engineering Team and the Cargo Mission Team.

The ISS Altitude Strategy is documented in SSP 50110, Multi-Increment Manifest Document, and SSP 50112, Operations Summary Document (OSD), and is implemented through the individual IDRD for each increment. If strategic conditions change after the baselining of the OSD, the Contractor shall update the OSD and provide the applicable ISS Altitude Strategy data to the Mission Integration Team via Requirement Request Forms as defined in SSP 50622-02, Section 4.0. The GFD tools Strategic Planning Evaluation And Resource Model Analysis (SPEARMAN), Station Reboost Analysis Program (STRAP) and Total Propellant Summary (TPS) are available to support this function. The work process and data exchanges by which altitude and propellant are forecast are maintained within the Vehicle Integrated Performance and Resources (VIPER) Interface Document (VID) Volume 1: Altitude and Propellant: a routinely-updated bilateral process agreement with IP Russia that is maintained within the PI&C contract.

2.2.2.1.3 The Contractor shall integrate the rendezvous, proximity, and other special operations requirements and constraints (e.g., contamination issues from liquid or gas venting) related to attitudes and system configurations for joint operations between the ISS and all ISS Visiting Vehicles, including but not limited to the Russian Progress and Soyuz, U.S. Space Shuttle, European Space Agency's (ESA's) ATV, Japan Aerospace Exploration Agency's (JAXA's) HTV, the Crew Exploration Vehicle (CEV), the Commercial Orbital Transfer Services (COTS) vehicles and the ISS Commercial Resupply Vehicles. "Integrate" is defined as the coordination (between visiting vehicle providers and the ISS Program) of requirements for attitudes for docking, undocking, and special operations, array and radiator positioning, resultant power balances, visiting vehicle power demands from the ISS, operations restrictions for contamination and structural loads, and other similar issues.

2.2.2.1.3.1 Comply with U.S. requirements for information security to assess analyses and data incorporating the classified capabilities of the U.S. national technical means, wherever necessary to complete the assigned special operations assessments.

2.2.2.1.4 The Contractor shall provide predictions for the ISS solar beta angle, based on the ISS altitude strategy and atmospheric variations bounded by the Marshall Space Flight Center (MSFC) 5% and 95% atmospheres. In addition, the Contractor shall

develop and maintain the BASEPLATE report (as defined in 2.2.2.1.6) using the atmospheric variation bounded by the Russian Planning Atmosphere.

2.2.2.1.5 The Contractor shall develop, track, and maintain the strategic and track, and maintain the tactical allocation of Vehicle technical resources, including establishment of Program technical reserves of propellant, water, oxygen, and nitrogen. The process by which consumables are forecast is maintained within the VIPER Interface Document (VID) Volume 2: Consumables: a routinely-updated multilateral process agreement with IP Russia, ESA, and JAXA that is maintained within the PI&C contract.

2.2.2.1.5.1 Taking into account the strategic needs of the ISS Program and the predicted flight sequence, the Contractor shall coordinate projected water delivery and usage rates with ISS Program suppliers and users of water, including the Vehicle Sustaining Engineering Team and the ISS Payloads Integration Team.

2.2.2.1.6 The Contractor shall maintain and utilize detailed Beta, Attitude, Significant Events PLAnning TEmplate (BASEPLATE) or equivalent. The BASEPLATE shall show the day-to-day timeline of all flights to the ISS vehicle, Shuttle missions and Increment EVAs (calling out Russian Segment and U.S. Segment assembly, maintenance and science EVAs), launch and landing days (flight duration), dock and undock days (docked mission duration), robotics, Increment definition, crew rotation, and ISS vehicle major reconfigurations, including ISS assembly and visiting vehicle relocations. This product will assess the viability of the flight sequence plan and is developed in parallel with the baseline flight plan for the tactical and strategic timeframe. The Contractor shall maintain the BASEPLATE for the baseline ISS Program plan and perform trade studies of assembly sequence options under consideration. The Contractor shall deliver the detailed BASEPLATE electronically and in color printed format.

2.2.2.1.7 Applications and Data Systems

The Contractor shall maintain the applications identified below to support strategic planning and in response to differences or anomalies between the expected performance data and on-orbit performance data as provided by the Vehicle Sustaining Engineering Team.

- Station Reboost Analysis Program (STRAP),
- Total Propellant Summary (TPS),
- Station Channelized Electrical Power Transfer and Energy Resources (SCEPTER),
- External Configuration Tracking Tool (ExCATT),
- Traffic Resource Analysis Model (TRAM) or any upgraded traffic modeling tool,
- Beta, Attitude, Significant Events PLAnning TEmplate (BASEPLATE), and
- SIR Issue Tracking (SIT) database.

2.2.2.2 Mission Requirements and Support

2.2.2.2.1 The Contractor shall provide strategic mission requirements, concepts, constraints, and resource allocations to the ISS Mission Integration Team and NASA Mission Operations Directorate (MOD) to support development of mission planning, flight rules, and training.

2.2.2.2.2 Review of Operations Products

(a) The Contractor shall review (via ongoing technical interactions and reviews of CRs) the ISS operations plans and procedures to ensure that all ISS Program strategic technical constraints are satisfied, such as equipment operating and non-operating thermal limits, time phased power generation and demands, fault tolerance and recovery capability, structural loads, control authority of the attitude control systems, and mechanical interferences.

(b) The Contractor shall review crew procedures that are related to systems activation or rechannelization, or to environment interactions including (but not limited to) plasma, plumes, contamination, or meteoroid debris to ensure that all strategic technical constraints are satisfied.

(c) The Contractor shall review flight rules CRs to ensure that all strategic technical constraints are satisfied.

2.2.2.2.3 Stage Integration Reviews (SIRs)

The Contractor shall report to ISS Program management the issues and closure plans identified during SIRs.

2.2.2.2.4 The Contractor shall provide technical support as needed to MOD and to the ISS Program through assessment of strategic ISS Program (including IP/P) impacts during resolution of significant in-flight anomalies. Such support includes provision of technical assessments that individual specialists within the Contractor's employ may be able to provide to the MER, working with the Vehicle Sustaining Engineering Team on a temporary basis to resolve mission or life-critical issues.

2.2.2.3 System Analysis and Integration

The Contractor shall provide manage the technical assumptions to support mission analysis and integration. The Contractor shall provide overall system and segment level analysis and integration of the ISS and associated interfaces, as described below, including: the USOS, IP/Ps, Government Furnished Equipment (GFE) and ISS ground systems. This includes the ISS external interfaces, such as the ISS/National Space

Transportation System (NSTS), other visiting vehicles, and the ISS/Payloads interfaces (does not penetrate beyond the interface to the Space Shuttle for the payloads).

2.2.2.3.1 The Contractor shall facilitate and coordinate the development of ISS operational procedures that ensure each external component's thermal survivability from launch to its activation on the ISS.

2.2.2.3.2 The Contractor shall provide recommendations to ISS Program management for approval in the development and prioritization of tasks performed by NASA institutional resources for the following analyses, as warranted by changing conditions or assumptions:

- Shuttle/ISS induced loads, and
- Plume heating analyses.

2.2.2.3.3 The Contractor shall develop and provide strategic assessments of ISS Thermal System Performance (TSP) throughout assembly phases and other significant ISS operations.

2.2.2.3.4 The Contractor shall develop and provide heat load allocations for the ISS Program end-user community, based upon active heat rejection margin analysis.

2.2.2.3.5 The Contractor shall develop and provide power allocations for the ISS Program end-user community, based upon Integrated Energy Balance margin analysis. The process by which energy balance is forecast is maintained within the VIPER Interface Document (VID) Volume 3: Energy Balance: a routinely-updated bilateral agreement with IP Russia that is maintained within the PI&C contract.

2.2.2.3.6 The Contractor shall provide systems integration support for assembly, off-nominal situations, and strategic operations that involve the Electrical Power Subsystem.

2.2.3 Strategic Planning, Assembly and Configuration Engineering

The Strategic Planning and Configuration Engineering function provides the ISS Program with long term flight and external configuration planning including the ISS Strategic Flight Program (SFP), crew rotation plans, ISS external configuration, drawings, and Computer Aided Design (CAD) models for launch and on-orbit configurations.

2.2.3.1 Strategic Planning and Integration

The NASA Strategic Planning and Integration Team function is responsible for the evaluation and integration of the total set of programmatic, schedule, technical, and cost factors impacting the SFP; documenting the resulting SFP requirements and constraints;

and developing a flight plan in consideration of the aforementioned factors. The strategic flight planning activity includes all tasks associated with the definition of a viable SFP.

The Contractor shall maintain a technical knowledge of the requirements, capabilities, and constraints and their interrelationships necessary to develop the SFP. The requirements, constraints, and allocations include:

- Up-mass and down-mass requirements and strategic mass and volume allocations for propellant, crew support (food, water, air, etc.), research, and maintenance;
- Capabilities and scheduling constraints of visiting vehicles that berth robotically or dock to the ISS vehicle;
- Top-level manifesting requirements and constraints of pressurized and unpressurized cargo carriers;
- Crew rotation requirements and constraints;
- Cargo element assembly and manifest requirements and constraints;
- Flight and increment Extravehicular Activity (EVA) content, quantity, and scheduling constraints;
- Other operational requirements and constraints such as robotics, viewing, clearances, etc.; and
- On-orbit vehicle assembly flows and the associated on-orbit hardware configuration for flight, intermediate, and stage configurations.

The detailed tasks necessary to implement the functions described above are defined below.

2.2.3.1.1 The Contractor shall develop and maintain the Integrated Flight Schedule (IFS) showing the baseline (per SSP 54100, IDRD Flight Program, and SSP 50110) and planned (as documented in open SSP 54100 and SSP 50110 ISS Program CRs) launch, dock, undock and landing dates for all tactical and strategic flights to the ISS vehicle. This product documents the increment definition, durations and the baseline directive numbers. The Contractor shall maintain and update the Reference Flight Plan Overview. This product, a combination of the tactical (as defined by SSP 54100) and strategic baselined SFP (as defined by SSP 50110) that provides an integrated ISS Program schedule. This product also shows the proposed updates to all flights, which are contained, in open ISS Program CRs under review.

2.2.3.1.2 The Contractor shall develop and maintain the ISS Program Crew Rotation Plan Assessments in accordance with SSP 50261-01, Generic Groundrules, Requirements, and Constraints Part I: Strategic and Tactical Planning. The Crew Rotation Plan Assessments trade the documented crew rotation requirements against mission manifest and operational impacts.

2.2.3.1.3 The Contractor shall utilize BASEPLATE or equivalent.

2.2.3.1.4 The Contractor shall develop and maintain a summary Flight Program Figure that is an overview of the detailed BASEPLATE. The Flight Program Figure shall be capable of incorporation into Microsoft Word and PowerPoint.

2.2.3.1.5 Strategic Flight Program (SFP) Development

(a) The Contractor shall collect requirements and constraints and develop a SFP implementing the requirements for ISS Program approval. The Contractor shall identify issues and requirement conflicts and develop options for ISS Program resolution.

(b) SSP 50110 is the document that baselines the SFP. For Multi-Increment Manifest (MIM) development, the Contractor shall collect inputs, develop the revised document, conduct document reviews, resolve technical issues and actions, prepare the ISS Program CR and board presentations, and prepare the final document for approval. The MIM baselines the strategic assembly sequence, docking port utilization, crew rotation plan, flight schedule, top-level launch and return manifest, sub-element number, altitude, ISS carrier attach system and carrier utilization plan, and launch vehicle.

(c) The Contractor shall revise and maintain the SFP Overview. This is the strategic flight plan that is sometimes developed prior to the Mission Integration and Operations for development of IDRDs and Flight Integration products.

2.2.3.1.6 The Contractor shall integrate the inputs and provide the ISS Program approved Flight and Increment Overview Guidelines to the MOD for development of Flight Overviews to support SFP development.

2.2.3.1.7 The Contractor shall assess proposed tactical and strategic mission updates and identify issues and/or impacts to the SFP.

2.2.3.1.8 The Contractor shall integrate and coordinate the strategic ISS Program/Space Shuttle Program (SSP) flight inputs and provide these flight inputs to the SSP.

2.2.3.1.9 The Contractor shall represent the Strategic Planning and Integration Team as a technical expert at boards and panels.

2.2.3.1.10 The Contractor shall provide technical inputs and review assessments for other ISS Program documents or reviews such as:

- SSP 50112, Operations Summary Document

- SSP 50261-01, Generic Groundrules, Requirements, and Constraints Part 1: Strategic and Tactical Planning
- SSP 540XX, Increment Definition and Requirements Documents (IDRDs);
- SSP 50200-01, Station Program Implementation Plan, Volume 1: Station Program Management Plan, and SSP 50200-02, Station Program Implementation Plan Volume 2: Program Planning and Manifesting;
- SSP 54100, IDRD Flight Program (FP);
- Flight Specific Data Files (Payload Development Retrieval System [PDRS]/EVA and Rendezvous) for Flight Operations Review (FOR); and
- Post-Increment Evaluation Reports (PIERs).

2.2.3.1.11 The Contractor shall coordinate and resolve issues and actions that impact the SFP manifest, configuration, and flight sequence that do not occur during the MIM development timeframe. The Contractor shall perform ISS strategic studies by identifying issues and developing the technical strategic plans, resolution plans, and conducting necessary trade studies and analyses required for formulating recommended solutions to complex multidiscipline and programmatic issues.

2.2.3.1.12 The Contractor shall maintain and update SSP 50112 and provide inputs to the specific IDRD to establish strategic allocations of resources for operations planning. The Contractor shall provide updates to the Mission Integration Team for inclusion in the appropriate IDRD via Requirements Request Forms as defined in SSP 50622-02, Section 4.0. Details of the contents of this task are outlined in SOW subordinate paragraphs.

2.2.3.1.13 The Contractor shall develop and provide launch vehicle ascent and descent strategic mass and volume allocations to the ISS Program end-user community.

2.2.3.1.14 The Contractor shall perform the ISS strategic resupply/logistics (traffic model) analyses, which are the integrated feasibility assessments to ensure strategic resupply, payload, and return cargo requirements using the planned international fleet of vehicles.

2.2.3.1.15 Applications and Data Systems

The Contractor shall maintain the applications and data systems identified below in response to differences or anomalies between the expected performance data and on-orbit performance data as provided by the Vehicle Sustaining Engineering Team.

- Strategic Planning Evaluation And Resource Model Analysis (SPEARMAN)
- Traffic Model Spreadsheets
- Action Item Tracking Database
- CR Tracking Database

2.2.3.1.16 The Contractor shall maintain the Strategic Flight Plan website to record and communicate Strategic Planning and Integration activities to the NASA community.

2.2.3.2 External Configuration Analysis Modeling and Mass Properties

The NASA External Configuration Team function is responsible for managing the definition and documentation of the integrated strategic and tactical external vehicle configuration plans and assessing any changes to the baseline. This responsibility includes working with the Vehicle Sustaining Engineering Team to develop on-orbit stage docking configurations, develop the ISS System Top-Level Assembly drawings for each stage of the ISS vehicle, and prepare, maintain, and submit mass properties drawings.

2.2.3.2.1 The Contractor shall maintain a technical understanding of the on-orbit vehicle assembly flows and the associated on-orbit hardware configuration for flight, intermediate, and stage configurations. The Contractor shall also maintain a technical understanding of the assembly and configuration constraints necessary to manage the strategic, tactical, and real-time external vehicle configuration.

2.2.3.2.2 The Contractor shall assess, integrate, and coordinate requirements associated to the ISS external vehicle's configuration, including evaluating change requests that impact the external configuration for flight, intermediate, and/or stage configurations.

2.2.3.2.3 The Contractor shall maintain and update the Assembly Matrix. The Contractor shall collect inputs, develop the revised matrix, conduct matrix reviews, resolve technical issues and actions, prepare the ISS Program CR, prepare board presentations, and prepare the final matrix for approval.

The Multi-Increment Manifest provides the Strategic Flight Plan and manifest. SSP 54100 contains the tactical Flight Plan.

2.2.3.2.4 The Contractor shall maintain and update SSP 30219, which documents the ISS reference coordinate systems for major elements and robotically handled items. The Contractor shall collect inputs, develop the revised document, conduct document reviews, resolve technical issues and actions, prepare the ISS Program CR and board presentations, and prepare the final document for approval.

2.2.3.2.5 CAD Model Development Support

(a) The Contractor shall support the CAD Model User Technical Interchange Meetings (TIMs) and the Measurement TIMs hosted by the ISS USOS Sustaining Engineering Contract. These TIMs determine which element and cargo element components in the 3D CAD models, in the launch and on-orbit configurations, are validated to

drawings and determine the required as-built measurements. The Contractor shall provide inputs necessary to get validated and as-built CAD models.

(b) The Contractor shall ensure that the external physical configuration data needed by the ISS Program/SSP users is provided by interfacing with the Vehicle Sustaining Engineering Team to gather physical configuration data from detailed CAD models.

2.2.3.2.6 The Contractor shall develop and gain concurrence of external configuration protocols with the IP and any other affected teams.

2.2.3.2.7 The Contractor shall develop and review the mission-specific ISS/SSP On-Orbit ICD, Section 3, Physical Configuration, for each Shuttle flight. The ISS Program/SSP ICD documents the ISS and Shuttle data from the Orbiter rendezvous through the Orbiter departure. The blank book format is contained in NSTS-21000-IDD-ISS, Shuttle Orbiter/International Space Station Interface Definition Document, Section S.3. The Contractor shall update the Section S.3 blank book to incorporate the mission specific configuration data and figures.

2.2.3.2.8 The Contractor shall develop and distribute the Vehicle Configuration Joint Technical Working Group (JTWG) mission-specific vehicle configuration data source letters to the ISS Program/SSP community. These letters are produced at the L-9/10 months, in support of the SSP Cargo Integration Review (CIR), and L-4 months.

2.2.3.2.9 The Contractor shall track the location of external configuration items. The Contractor shall track the current and planned locations, as well as the historical hardware movement of needed configuration items such as external Logistics and Maintenance ORUs (spares stowed on orbit), EVA equipment/hardware, visiting vehicles, attach point utilization, standard and non-standard external stowage, utilization, and internal items that stowed externally. The Contractor shall perform 3D CAD model analysis to determine stowage of new or relocated external configuration items and determine any impact to follow-on assembly or flight activities. The Contractor shall utilize the ExCATT, or equivalent, and provide web-based reports accessible by the ISS Program.

2.2.3.2.10 The Contractor shall develop revisions of JSC 26557 Volumes 1 and 2, On-orbit Assembly Modeling and Mass Properties Data Book (Blue Book), in accordance with DRD PIC-SI-04.

2.2.3.2.11 The Contractor shall convert launch and return mass properties provided by the Vehicle Sustaining Engineering Team to on-orbit mass properties for the development of JSC 26557 Volumes 1 and 2, Blue Book. The Contractor shall review the Vehicle Sustaining Engineering Team L-30 day delivery of pre-flight on-orbit ISS Program mass properties prior to every ISS flight docking, undocking and redocking. The Contractor shall coordinate and resolve issues due to mass properties differences between the L-30 day data delivery and JSC 26557.

2.2.3.2.12 The Contractor shall perform ISS clearance, external stowage and mass properties analysis using approved 3D CAD models. The Contractor shall perform clearance analysis for docking vehicles assessing the clearance of dynamic docking envelopes and verifying docking requirements.

2.2.3.2.13 The Contractor shall develop and deliver simplified 3D CAD models to the IPs in Pro-E and STEP formats. These models shall be delivered to other parties such as universities, NASA centers, and other commercial interests, as required. The files shall be delivered in the user's format using the Contractor's 3D CAD tool capability.

2.2.3.2.14 The Contractor shall provide electronic dimensioned and non-dimensioned hidden line or shaded drawings to support the development of ISS Program documentation. These drawings shall be provided in TIFF, GIF, and/or PICT formats.

2.2.3.2.15 The Contractor shall provide launch vehicle ascent and descent weight assessments to support manifest assessments in the strategic timeframe.

2.2.3.2.16 The Contractor shall participate in the OM2 Working Group.

The Contractor shall provide technical inputs and review for ISS Program documents or reviews.

The Contractor shall provide technical support as needed to MOD and to the ISS Program through assessment of strategic ISS Program (including IP/P) impacts during resolution of significant in-flight anomalies. Such support includes provision of technical assessments that individual specialists within the Contractor's employ may be able to provide to the MER, working with the Vehicle Sustaining Engineering Team on a temporary basis to resolve mission or life-critical issues.

2.2.3.2.17 The Contractor shall maintain the External Configuration Analysis Modeling and Mass Properties website to record and communicate External Configuration Analysis Modeling and Mass Properties to the NASA community.

2.2.3.3 Internal Volume Configuration (IVC)

2.2.3.3.1 The Contractor shall update and maintain SSP 50261-01, paragraph 3.12, Interior Volume Configuration. The Contractor shall provide criteria for evaluating and prioritizing ISS internal volume demands in accordance with these requirements. Such criteria are put into practice in cooperation with the Internal Volume Configuration Working Group (IVCWG), Mission Integration Team, and IP/Ps and in accordance with SSP 50005, ISS Flight Crew Integration Standards. Examples of such volume criteria include minimum Intravehicular Activity (IVA) translation path clearance, worksite operational volumes, emergency module safing and crew health stabilization

requirements, access to routine maintenance locations, and the clearance around air duct openings and utility outlets when selecting nominal on-orbit locations for ISS cargo.

2.2.3.3.2 The Contractor shall update and maintain the planned ISS IVA topology in SSP 50564, ISS Interior Volume Configuration Document, to include Vehicle, payloads, systems, racks and select GFE items. The Contractor shall coordinate and provide modified topologies, as required, to allow for IVC studies due to changes to the ISS assembly sequence or changes to the ISS configuration.

2.2.3.3.3 The Contractor shall develop and maintain a unified and validated 3D CAD model of the ISS interior, in accordance with DRD PIC-SI-05, to support graphic analysis of the ISS interior configuration at every stage documented in SSP 50564.

2.2.3.3.4 The Contractor shall graphically analyze the acceptability of the ISS planned configurations based on the documented pass/fail criteria identified in SSP 50261-01. The Contractor shall document the results, including any exception closures, and review with the IVCWG and the ISS Program. The Contractor shall provide and maintain an IVC stage analysis verification plan via coordination of the ISS graphic analysis with the IP/P community, the Mission Integration Team and the IVCWG.

2.2.3.3.5 The Contractor shall develop situation unique analyses, as required, to provide inputs to ISS Program planning and issue resolution.

2.2.3.3.6 The Contractor shall maintain the IVCWG website to record and communicate IVC activities to the NASA community.

2.2.3.3.7 The Contractor shall participate in hardware design reviews to ensure identification and resolution of potential issues regarding design features that, if not resolved, would result in SSP 50261-01 IVC exceptions. This activity includes review of hardware design drawings, volume envelopes, and assessment of protrusions into the crew and/or other hardware operational volumes as defined in SSP 50261-01.

2.2.3.3.8 The Contractor shall participate in the OM2 Working Group.

2.2.3.3.9 The Contractor shall provide technical inputs and review for Payload Protrusion PIRNS and other ISS Program documents or reviews.

2.2.3.3.10 The Contractor shall provide management and technical support to ISS Program to maintain an ISS IVA physical environment integration function. This includes chairing the IVCWG and documenting the IVC Program processes.

3.0 SPACECRAFT

3.1 ISS SPACECRAFT MANAGEMENT

3.1.1 Vehicle Technical Integration

The Contractor shall perform Engineering and Technical Services and Technical Integration Support to the offices within the ISS Program.

3.1.1.1 Meeting Support

The Contractor shall coordinate and schedule meetings and telecons for the ISS Program Offices. The Contractor shall coordinate meeting logistics, including:

(a) Scheduling conference rooms,

(b) Notifying attendees,

(c) Requesting interpretation and translation services,

(d) Requesting local transportation services for Russian Foreign Nationals, when necessary,

(e) Scheduling and set-up of equipment, and

(f) Preparation of meeting materials.

3.1.1.2 The Contractor shall develop and distribute meeting agendas and minutes. The Contractor shall submit the meeting minutes to the meeting chair for approval within 2 business days following the meeting.

3.1.1.3 The Contractor shall maintain and track action items for each meeting and meeting series. The Contractor shall capture any assigned actions items and the associated actionees and notify the actionees. The Contractor shall document action closure and provide status and disposition of actions.

3.1.1.4 The Contractor shall develop and maintain Points of Contact (POC) lists, distribution lists and team calendars of events. The Contractor shall distribute event notifications, and other pertinent information.

3.1.1.5 CoFR Process Support

The Contractor shall provide CoFR support for all vehicles to include:

(a) Development and maintenance of CoFR flight products.

(b) GFE verification review/paper closure.

(c) Participation in all certification reviews. Includes both meeting support and presentation of status.

(d) Flight integration support including manifest review and integration of products necessary to support CoFR signature.

3.1.1.6 Program Review Support

(a) The Contractor shall track and report open paper/actions in support of configuration audits, acceptance reviews, and other major ISS Program milestones. The Contractor shall collect all open actions, open Verification Closure Notices (VCNs), and open issues for each assigned element/end-item and provide a summary report of open items and their status for each review to support the ISS Program Office engineering acceptance of the end item.

(b) The Contractor shall coordinate review of data packages, coordinate action item development and acquisition from the ISS Program teams, and coordinate and track action item dispositions and closures. The Contractor shall provide open action status during reviews. The Contractor shall track action item status and closure. The Contractor shall prepare in-brief and out-brief presentations for ISS Program management.

3.1.1.7 Coordinate Office CR Evaluations

The Contractor shall serve as points of contact for CR processes and evaluations and manage the Office-specific CR review process including tracking of evaluations, comments and issues. The Contractor shall facilitate processing of CRs originating from, or evaluated by, the Office. The Contractor shall:

(a) Identify appropriate Office evaluators and distribute the evaluation packages for internal review,

(b) Contact evaluators to obtain status of their review and inform them of overdue evaluations,

(c) Consolidate completed evaluations, comments, and issues and submit to the Office signatory for approval, and

(d) Forward approved evaluation packages to the CM Receipt Desk.

3.1.1.8 Office Metrics

The Contractor shall gather specified data, as required, and develop integrated office metrics package, in support of both internal and external reporting.

3.1.1.9 Office Web Content

The Contractor shall develop and maintain web page content for specified ISS Program teams and offices. The Contractor shall provide website administration, website design, and post new information to the websites. The Contractor shall develop and provide web pages in accordance with the requirements and guidelines defined in Section 1.4, Information Technology.

3.1.1.10 Engineering Services, Issue Resolution, Engineering Evaluation and Integration

The Contractor shall provide technical capabilities as requested to:

(a) Recommend approval and acceptance of integration, operations, and system performance plans, procedures, analyses, tests, and reports;

(b) Review documents, procedures, plans, and reports for discrepancies;

(c) Provide assessments of the products to ensure they are in accordance with the Program baseline;

(d) Perform impact assessments of ISS CRs against the Program baseline; and

(e) Recommend solutions to technical issues.

3.1.1.11 Systems Engineering and Test and Verification (T&V) Support

The Contractor shall provide Systems Engineering and T&V support to include:

(a) Integration and verification planning.

(b) Joint test planning and implementation, in conjunction with systems teams.

(c) Requirement verification.

(d) Coordination of interfacing hardware and fit checks.

(e) Book and documentation/data management.

(1) Book management – Maintain, as required, SSP 50033, NASA/CSA Bilateral Integration and Verification Plan (BIVP); SSP 50034, NASA/ESA BIVP; SSP 50035, NASA/NASDA BIVP; SSP 50101, NASA/RSA BIVP; SSP 50281, Node 2 BIVP; SSP 50334, ESA/RSA BIVP; SSP 50406, NASA/ESA BIVP for Cupola. Develop and maintain SSP 50420, NASA/NASDA BIVP for HTV.

(2) Documentation/data management – Perform data capture of Visiting Vehicles documentation to ensure ISS cognizance of vehicle baselines.

(f) Cargo/hardware integration support including process development.

(g) Integrated system level planning including integrated scheduling, risk assessments, and common processes.

The Contractor shall perform Operational Maintenance Requirements and Specification (OMRS) functions including:

(a) Maintenance of the NSTS 08171, OMRS File 10 database [DRD PIC-VT-01, Operations and Maintenance Requirements and Specifications Database (OMRSD)], including software updates required to ensure the system operates properly.

(b) Change processing for requirements in NSTS 08171, OMRS. Ensure NSTS 08171, File 2 Volume 2 requirements are in place to support for launch vehicles ICDs/IRDs.

(c) Track requirement and change paper closure.

3.1.1.12 Project Management Support

The Contractor shall support the development of hardware and software systems by providing project management support to ensure that ISS Program needs are met; these needs include technical, cost, and schedule requirements. The Contractor shall ensure that assigned projects are developed in accordance with ISS Program processes. The Contractor shall produce project documentation as requested. The Contractor shall evaluate and track development issues and schedule issues from project inception through initial flight of the hardware/software system. The Contractor shall work closure of technical and schedule issues with the hardware/software providers. The Contractor shall coordinate processes and lead issue resolutions between the provider organizations, launch integration organizations, and the ISS Program. The Contractor shall identify threats to key milestone completions and corresponding ISS Program impacts. The Contractor shall prepare a weekly status report of technical issues and schedule compliance. The Contractor shall assist with risk management, including the coordination of budget, schedule, metrics, risks associated with individual development projects, and the rollup and trend analysis associated with the set of all development projects.

3.1.1.13 Hardware Delivery Support

The Contractor shall support NASA in the acceptance of hardware purchased through the Vehicle Sustaining Engineering Team and hardware purchased under other contracts for the External Carriers Office. Tasks shall include providing concurrence for certification and DD250 prior to shipment of hardware to the flight preparation facility (typically KSC), monitoring and participating in schedule and manufacturing reviews related to the delivery schedule of hardware, and participating in design and requirement reviews to ensure that hardware needs to support ISS carriers are properly identified. The Contractor shall maintain a database to track all hardware deliverables between the ISS Program and its Contractors that support ISS carriers. The Contractor shall review ISS Program CRs involving ISS carriers to ensure that equipment requirements are properly identified and meet ISS Program requirements.

The Contractor shall coordinate deliveries of GFE, including hardware supplied by the JSC EVA Projects Office, and ensure that deliveries meet manufacturing, assembly, and test schedules. The Contractor shall implement requests and justify needs for EVA hardware deliveries to support ISS carriers.

3.1.1.14 Book Coordination Support

The Contractor shall provide Book Coordinator functions to support the NASA Book Managers in the development and maintenance of assigned documentation. This support includes:

(a) Coordinating inputs and tracking communications from the IP/Ps regarding the documents.

(b) Coordinating and conducting meetings to evaluate the changes, documenting and distributing the minutes and actions, and tracking action closures.

(c) Developing and making presentations to the appropriate control board/panel as required to obtain approvals for document release.

3.1.1.15 Special Studies

The Contractor shall conduct special studies within the scope of the PI&C SOW as requested. The scope of the study, products, and schedule will be defined in an Indefinite Delivery/Indefinite Quantity (IDIQ) task order.

3.2 VISITING VEHICLE

The Contractor shall accomplish all work necessary to accommodate commercial customers to the ISS Program. The contactor shall ensure development of hardware and software systems by providing project management support to ensure that ISS Program needs are met; these needs include technical, cost, and schedule requirements. The contactor shall plan and coordinate ISS Program participation in the COTS design qualification and certification reviews. The Contractor shall ensure that assigned tasks are developed and worked within ISS Program processes. The Contractor shall evaluate and track development issues and schedule issues from project inception. The Contractor shall work closure of technical and schedule issues with hardware and software providers. This work will be performed in support of a NASA Reimbursable Space Act Agreement or another NASA Contract.

4.0 RESERVED

5.0 RESERVED

6.0 SAFETY AND MISSION ASSURANCE (S&MA)

The Agency Safety Initiative establishes the NASA safety hierarchy, which is the order NASA will use to prioritize its safety efforts. The safety hierarchy is as follows:

(a) Safety for the public - NASA absolutely must protect the public from harm.

(b) Safety for astronauts and pilots - NASA has to protect them as they expose themselves to risk in high hazard flight regimes.

(c) Safety for NASA workforce - NASA is responsible for providing a safe and healthful workplace.

(d) Safety for high-value equipment and property - NASA is a steward of the public's trust.

By focusing on the safety of NASA's mission and operations, NASA will improve quality and decrease cost and schedule.

6.1 S&MA MANAGEMENT AND ADMINISTRATION

6.1.1 Mission Assurance and Risk Management (MA&RM) Plan

The Contractor shall develop, maintain, and implement the Mission Assurance and Risk Management (MA&RM) Plan in accordance with DRD PIC-SA-01.

6.1.2 Quality Management System

The Contractor shall establish and maintain a Quality Management System (QMS) that complies with SAE AS9100. Third party certification/registration is not required. If the Contractor is SAE AS9100 registered and subsequently changes registrars, loses registration status, or is put on notice of losing registration status, the Contractor shall notify the NASA Contracting Officer within three (3) days of receiving such notice from the registrar.

The Contractor shall maintain the ISS Program S&MA quality records system in accordance with SSP 41173, Space Station Quality Assurance Requirements, and SAE AS9100.

6.1.3 Audit/Surveillance

The Contractor shall provide access to data, personnel, and facilities for Government audit/surveillance of the Contractor's plans, procedures, and processes when deemed necessary by the Government. The Contractor shall provide written responses to audit/surveillance findings that are delivered to and accepted by the Government.

6.1.4 Safety and Health

The Contractor shall develop and implement a process to identify how personnel and property will be protected from injury or harm and ensure the safety of all working conditions throughout the performance of the contract. The process shall provide for hazardous operation surveillance, hazardous procedure review, and risk assessments associated with deviations from procedures or safety and health requirements. The Contractor shall comply with NASA-Installation safety and health requirements and related processes when performing Contractor work onsite at NASA installations. The Contractor shall develop, implement and maintain a Safety and Health (S&H) Plan in accordance with DRD PIC-SA-02. Upon approval, the S&H Plan shall be incorporated into the contract as Attachment J-3. The Contractor shall document the assessments in monthly safety and health metrics in accordance with DRD PIC-SA-03 and perform an annual Safety and Health Self-Evaluation in accordance with DRD PIC-SA-04.

6.1.4.1 Mishap Investigating and Reporting

(a) The Contractor shall investigate and report mishaps, in accordance with NPR 8621.1, NASA Procedural Requirements for Mishap Reporting, Investigating, and Record Keeping, and NPR 8715.3, NASA General Safety Program Requirements. All investigation reports shall include a human factors assessment, root cause analysis and any remedial/corrective actions performed. These reports shall encompass mishaps occurring during the contracted period as follows:

(1) All mission failures and type A and B mishaps resulting in injury to Contractor personnel or equipment damage occurring onsite at NASA facilities and offsite at Contractor facilities.

(2) Type C mishaps resulting in equipment damage onsite at NASA facilities and offsite at Contractor facilities.

(3) Type C mishaps resulting in injury to Contractor personnel located onsite at NASA facilities.

(4) Incidents and close calls occurring onsite at NASA facilities.

(b) The Contractor shall develop and implement a call tree with Government contacts for the reporting of a mishap, near-miss incident, equipment problem or a system going out of specification. The Contractor shall use the call tree to report incidents and problems within four hours of the occurrence. Type C injury mishaps occurring offsite at Contractor facilities shall be reported in a monthly summary of such injuries.

(c) The Contractor shall enter mishap reporting and provide summary data as instructed on the JSC Safety Homepage http://www6.jsc.nasa.gov/safety/ and per JPR 1700.1, JSC Safety and Health Handbook.

6.1.5 Lessons Learned

The Contractor shall participate in the Lessons Learned in accordance with NPR 7120.5, NASA Program and Project Management Processes and Requirements, and JPR 2310.1, JSC Organizational Learning Program. The Contractor shall enter the lessons learned into the Government provided Lessons Learned per DRD PIC-SA-08.

6.2 S&MA INTEGRATION

6.2.1 Technical Integration

(a) The Contractor shall perform S&MA technical integration of IP Elements, visiting vehicles, cargo, and payloads. This includes participation in Safety Reviews, Milestone Reviews and TIMs. Technical integration includes participating in the identification and resolution of technical issues affecting S&MA, receiving and distributing S&MA data between NASA and IPs, tracking of open issues and actions resulting from the Milestone Reviews and TIMs that impact the safety, reliability, and quality assurance aspects for each flight and supplying the data to the Mission Integration Team.

(b) The Contractor shall periodically status S&MA issues and open action items for the IP Elements, visiting vehicles, cargo and payloads to ISS Program boards and panels.

The Contractor shall coordinate reporting and ensure dispositioning of applicable S&MA issues by the IP/P).

(c) The contractor shall support NASA in the implementation of bilateral agreements.

(d) The Contractor shall evaluate ISS Program and assigned Shuttle CRs, participate in the development of requirements and processes and support working groups, and telecons.

(e) The contractor shall provide CoFR related support to the SMAP, S&MA Readiness Review (SMARR), and applicable ISS Program boards to include presentation development, administrative support, and status integration.

6.2.2 International Partner/ Visiting Vehicle Integration

The Contractor shall prepare agendas, minutes and protocols, letters of invitation, and work logistics in support of the Joint American/Russian Safety Working Group (JARSWG) telecoms, TIMs, and meetings. The Contractor shall provide Safety and Mission Assurance (S&MA) support to the ISS IP and Visiting Vehicle (VV) communities. The Contractor shall coordinate ISS IP/VV S&MA processes in support of TIMs, telecons, and major reviews by reviewing team inputs, resolving discrepancies, and representing the organization locally and overseas. The Contractor shall provide support in closure of requirements, open issues/Review Item Discrepancies (RIDs). The Contractor shall review of CRs, and Safety Analysis Reports (SARs). The Contractor shall work jointly with the SAIC Safety Review Panel (SRP) Organization for the review and update of ISS IP/VV SARs. The Contractor shall perform S&MA assessments and evaluations of the IP/VV Elements systems and hardware design, safety data analysis, integration, requirements and processes development, anomaly/failure investigation, procedures and operations to ensure the safe operation of ISS. Additionally, the Contractor shall coordinate interpretation and translation support for Bilateral Mission Assurance and Multilateral Safety meetings and faxes.

6.2.3 Document Maintenance

The Contractor shall provide book coordination functions for the following ISS Program S&MA documents:

- SSP 50062, NASA/CSA Bilateral Safety and Mission Assurance Requirements
- SSP 50145, NASA/NASDA Bilateral Safety and Product Assurance Requirements
- SSP 50146, NASA/RSA Bilateral Safety and Mission Assurance Process Requirements for ISS
- SSP 50182, NASA/ASI Bilateral Safety and Product Assurance Requirements

- SSP 50191, NASA/ESA Bilateral Safety and Product Assurance Requirements
- SSP 50346, NASA/ASI Nodes Bilateral Safety and Product Assurance Requirements

6.3 PROGRAM RISK MANAGEMENT

6.3.1 Management of Risk Process

The Contractor shall maintain the risk management process and the ISS Risk Database in accordance with SSP 50175, ISS Risk Management Plan; JPD 306, Establishment of the Program Risk Management System (PRMS); and NPR 8000.4, Risk Management Procedural Requirements. This includes ensuring the integration of all data and data integrity of the Risk Management Database and associated linkage with the MIS. The Contractor shall identify S&MA risks and provide input to the risk process utilizing the ISS Risk Database in accordance with SSP 50175 and JPD 306 as well as coordinate risks with NASA counterparts.

The Contractor shall provide the necessary training and tools to the appropriate employees to affectively identify threats and possible risks to successful completion of the mission.

The Contractor shall facilitate any ISS Program S&MA corrective action/preventative action responses in accordance with JPD 328, ISS Corrective Action Plan/Preventive Action Process, including coordinating responses and entering updates into the JSC Quality Process Improvement Database. The process requires the identification and mitigation of adverse trends, potential events, or significant anomalies that may adversely affect multiple programs, projects, or divisions.

The Contractor shall coordinate risks in support of risk advisory boards in accordance with JPD 306 and SSP 50175.

6.3.2 Probabilistic Risk Assessment (PRA)

The Contractor shall perform the PRA modeling and trade studies in accordance with NPR 8705.5, Probabilistic Risk Assessment (PRA) Procedures for NASA Programs and Projects. Modeling and trade studies may include the ISS and any visiting vehicle, including those that are in a conceptual design phase. The Contractor shall use Systems Analysis Programs for Hands-on Integrated Reliability Evaluations (SAPHIRE) PRA modeling/development application identified in Addendum 4, Table 2.

The Contractor shall perform trade and sensitivity analyses using the Probabilistic Risk Assessment and make recommendations as appropriate. Trade studies and analyses will

include (i) background on problem, (ii) assumptions and constraints, (iii) scope of analysis, (iv) methodology, (v) detailed analysis, (vi) results, and conclusion.

6.3.3 Document Maintenance

The Contractor shall provide book coordination functions for the following ISS Program S&MA documents:

- JPD 306, Establishment of the Program Risk Management System (PRMS)
- SSP 50175, ISS Risk Management Plan

6.4 ISS SAFETY PROGRAM

In support of the CoFR, the Contractor shall develop safety assessments in accordance with SSP 30309, Safety and Risk Assessment Requirements Document, and hazard reports in accordance with Hazard Reports and System Description (DRD PIC-SA-07). Safety assessments and hazard reports shall include actual and/or planned cable, hose and duct drag-through; IVA hardware and/or cargo stowage; and internal volume configuration.

The Contractor shall obtain Program approval in accordance with SSP 30599, Safety Review Process. This requires supporting the appropriate Safety Review Panels, ISS boards and panels, teleconferences and working groups.

6.5 RESERVED

6.6 QUALITY ASSURANCE

6.6.1 Problem Reporting System Maintenance

The Contractor shall maintain the ISS Program Problem Reporting and Corrective Actions (PRACA) process and database in accordance with SSP 30524 and SSP 30223. This activity includes the coordination of the PRACA process with the problem resolution teams to facilitate issue resolution.

6.6.2 Reserved

6.6.3 Document Maintenance

The Contractor shall provide book coordination functions for the following ISS Program S&MA documents:

- JPD 328, ISS Corrective Action Plan/Preventive Action Process
- JPD 315, Limited Life Item (LLI) Tracking and Control
- SSP 30223, Problem Reporting and Corrective Action (PRACA) for Space Station Program
- SSP 30524, Problem Reporting and Corrective Action (PRACA) – Data System (PDS) Requirements Definition Document (RDD) for ISS Program
- SSP 30695, Acceptance Data Package Requirements Specification
- SSP 41173, Space Station Quality Assurance Requirements
- SSP 50190, ISS Program Contingency Action Plan
- SSP 50200-01-ANX E, Station Program Implementation Plan Volume 1, Station Program Management Plan, Annex E: S&MA/Program Risk Plan; ISS Risk Management Plan
- SSP 50287, Hardware/Software Acceptance Process

6.7 OPERATIONS SAFETY

The Contractor shall perform Operations Safety requirements in support of IP/Ps and ISS Safety Program as follows:

6.7.1 Documentation Verification

For all flights, the Contractor shall perform flight and/or stage specific integrated safety assessments for Mission Integration in accordance with ISS safety requirements of SSP 50261-01 and -02; SSP 50021, Safety Requirements Document; and SSP 30309, Safety Analysis and Risk Assessment Requirements Document; and Flight Rules. In addition to the requirements of paragraph 6.4, the safety assessments shall also focus on manifest priorities and documentation (hazard toxicity and safety certification), increments, mission templates and planning periods.

6.7.2 Mission Integration and Operations Planning

The Contractor shall provide technical expertise in the development of S&MA requirements, operations, and mission plans for integrated ISS Program increments, flights, stages and generic planning.

The Contractor shall participate by providing technical expertise and S&MA representation in the strategic and tactical planning activities and ensure that safety, mission success and potential risks are included in the development of planning periods, increments, flights, and/or stage requirements (see Table 6.7.H-1 Additional Resource Documents). The Contractor shall provide representation at the appropriate ISS Program level boards, panels, and working groups which address generic requirements for strategic and tactical planning.

The Contractor shall provide representation and participation during the programmatic planning and development of ISS Program generic requirements for the overall tactical and strategic plan development.

TABLE 6.7.H-1 ADDITIONAL RESOURCE DOCUMENTS

#	Document #	Document Title
1	SSP 50200-xx	SPIP documents (specifically documents Volume 1, 2, and 8)
2	SSP 50489	Mission Integration Templates
3	SSP 50261-01	Generic Groundrules, Requirements, and Constraints Part 1: Strategic and Tactical Planning
4	SSP 50261-02	Generic Groundrules and Constraints Part 2: Execute Planning
5	SSP 50021	Safety Requirements Document
6	SSP 50005	ISS Flight Crew Integration Standard (NASA-STD-3000/T)
7	SSP 41000 Series	System Specifications for the ISS
8	SSP 50562	ISS Program Off-Nominal Situation Plan
9	SSP 54100	IDRD Flight Program
10	SSP 50448	Station Development Test Objectives

6.7.3 RESERVED

6.7.4 Launch Package Management Team Representative

The Contractor shall serve as a technical member of the LPM Team, actively participate on LPM Team to ensure Flight IDRDs and sub-products (annexes, etc.) are developed to include safety requirements and priorities; identify safety issues and closure recommendations; negotiate with the ISS Program community; perform special assessments, and perform integration of safety-related issues.

6.7.5 ISS Program CRs

The Contractor shall coordinate and facilitate S&MA CRs as assigned. The Contractor shall evaluate CRs for S&MA impacts, complete the needed evaluation forms and make any needed presentation material and presentations, if required, to the various boards, panels and teams.

The Contractor shall review Mission Integration and Operations' plans, On-Orbit Stowage Capabilities and Requirements (OSCARs), manifests and flight planning change requests and participate in CR meetings as needed.

6.7.6 Document Maintenance

The Contractor shall provide book coordination functions which include preparation, distribution, and processing for the following ISS Program S&MA documents:

- SSP 30234, Failure Modes and Effects Analysis and Critical Items List (FMEA/CIL) Requirements for Space Station
- SSP 30309, Safety Analysis and Risk Assessment Requirements Document
- SSP 30599, Safety Review Process
- SSP 50021, Safety Requirements Document
- SSP 50038, Computer-Based Control System Safety Requirements
- SSP 50145, NASA/NASDA Bilateral S&MA Requirements
- SSP 50231, Safety and Mission Assurance Certification of Flight Readiness Implementation Plan

Addendum 1 - Key Terms

Assembly Complete (AC) Vehicle. The on-orbit Space Station configuration exclusive of the external interfaces defined in SSP 41000, System Specification for the International Space Station.

Book Coordinator. A function that provides for the development of new documents or updates to existing documents and has the following responsibilities:

- Integrating inputs from technical experts, coordinating updates between submitters and reviewers, documenting resolutions, and maintaining the technical consistency of the document.
- Be responsible for the technical content of the document.
- Coordinating inputs, tracking communications from the IP/Ps regarding the documents (including the development of Notice of Document Changes [NDCs] for documents that affect Russia), and coordinating translations.
- Updating the document using CRs, interfacing with CM and performing DQA, in accordance with the ISS Program CM approved process and schedule.
- Coordinating and conducting coordination meetings, production and distribution of minutes and actions, tracking closures.
- Developing and making presentations to the appropriate control board/panel as required to obtain approval.
- Ensure that an electronic and hard copy of the conformed document is delivered to ERU for baseline release.

Cargo Element. A flight element that has physical and/or functional interfaces to the launch vehicle.

Change Screening Board (CSB). A change screening group that meets weekly to screen all new CRs to:

- ensure the assignment to the appropriate board/panel,
- establish change evaluation due dates,
- identify mandatory evaluators, and
- identify Change Engineers if none are noted.

The CSB also has authority to reject unacceptable or inappropriate CRs.

Control Board. A management forum which establishes and control changes to the baseline and associated documentation and provides a forum for resolving related technical and schedule issues. The specific board scope, responsibilities, authority, and membership are defined in their charter.

Control Panel. A subordinate forum to a parent control board with delegated responsibility and control as defined in their charter.

Document Quality Assurance (DQA). An administrative function to ensure documentation and documentation updates are prepared in accordance with document standards contained in SSP 50010, Standards for ISS Program Documentation.

Element. An integrated, assembled set of hardware and/or software capable of supporting an operational role such as the U.S. Lab module. It is the primary subdivision of the ISS Vehicle for purpose of accommodation in a launch vehicle.

Engineering Release Unit (ERU). A position within CM/DM that track, control, and release configuration managed drawings and documents. ERU provides a controlled archival system for all reproduced drawings and documents, including the maintenance of engineering release records.

Flight. The sequence of events that take place between lift-off and landing of a launch vehicle.

Flight Support Equipment (FSE). An item required to integrate 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).

Increment Definition Requirements Document (IDRD). Documentation of ISS Program requirements for the flights and increments within an increment. These include the launch dates, traffic plans, top-level manifest, resource allocations, and specific flight/increment requirements and priorities.

Increment. The time frame is defined by each crew expedition. The duration of an increment is the time period from the launch of a designated flight crew to the landing of the return vehicle for that crew.

International Partners/Participants. Those non-U.S. space agencies that formally participate in the ISS. The International Partners are the CSA, ESA, JAXA, and the Roscosmos. ASI is an International Participant.

ISS Program Offices. The programmatic organizations that report to the ISS Program Manager. Some examples of the current offices are Mission Integration and Operations Office/OC, Vehicle Office/OB, Program Integration Office/OM, etc.

Launch Package. Full complement of ISS hardware and software delivered or returned on a flight to the ISS.

Launch Package Manager (LPM). The LPM provides leadership and technical direction of teams responsible for the development, integration, readiness for flight, and on-orbit

checkout of a Launch Package. Teams led are multidisciplinary, involving systems engineering, systems and element development, verification, operations, launch processing, logistics, IP integration, and payload integration.

Master File. The contents of the Master File will contain all original signatures (e.g. Interface Memorandums [IFMs], PIRNs, DCNs, CRs, and minutes) that are associated with all ICD and specification products approved by the ICWG members and Program participants.

Mission Evaluation Room (MER). The MER provides on-console engineering support during real time operations.

Milestone Reviews. A generic term used in place of listing major programmatic reviews such as but not limited to design reviews, acceptance reviews, launch integration reviews, CoFR reviews, Pre-shipment reviews, etc. It may apply to some or all of these reviews based on the context in which it is used.

Mission Integration Plan (MIP). ISS Program/SSP joint document that captures the inter-program requirements and constraints for Shuttle operations support to ISS increment operations including ascent and descent, flight requirements for ISS Cargo Elements (CEs), and joint operations while the Shuttle is attached to the ISS.

Management Information System (MIS). A computerized information-processing system designed to keep ISS Program and other personnel apprised of the most current ISS technical, financial, workforce, schedule and operational information, including issues and risks. MIS links ISS core business issues and goals with the technical aspect of the Program.

Notice of Document Change (NDC). Process developed specifically for Russia to enable documentation updates to proceed with interim approval from the contractor while formal Roscosmos approval is pending. Form used when processing document changes with Rocket Space Corporation – Energia (RSC-E) with details all from/to changes. This process is documented in SSP 50123, Configuration Management Handbook.

Nominal. The expected value or condition, as measured in terms of functional or performance characteristics, of a component, subsystem, or system operating normally in its intended environment.

Orbital Replacement Unit (ORU). Equipment that may be removed from the on-orbit ISS and replaced with a like unit for maintenance activities.

Orbital Replacement Unit Data Dictionary (ORUDD). The ORUDD is a web portal that accesses ORU data within existing ISS Program approved data repositories, such as Vehicle Master Database (VMDB), Hardware History Retrieval System (HHRS), and Problem Reporting and Corrective Action (PRACA).

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).

Payload. If not otherwise modified, "payload" in this document refers to an ISS Program scientific or technology payload. Also referred to as utilization or experiment.

Program authorized repository. A NASA owned database/repository that is accessible by all ISS Program participants.

Resources. Identifies a particular subset of ISS on-orbit capabilities used in support of system and utilization operations (e.g., power, heat rejections, communications, crew time, etc.)

Return to Service. The time between when a computer or system fails or becomes unavailable and the time when the system has been repaired or restored and is available again to users.

Secretariat. A senior CM person supporting configuration control boards/panels as the CM representative. Responsibilities include controlling the flow/schedule of the meeting, ensuring all actions are properly captured, reviewing meeting minutes, ensuring any change paper requiring signature is signed if approved, and answering any CM specific issues or questions.

Segment. A grouping of elements that are functionally related and often physically interface (e.g., U.S. On-Orbit Segment or U.S. Ground Segment).

Stage. The on-orbit configuration of the ISS after each flight that adds capability to the ISS. This can also refer to a designated period between launch vehicles defined by the ISS Program for requirement documentation and planning purposes.

Strategic Flight Program. The Strategic Flight Program is a strategic integrated plan for the assembly sequence, EVA plan, integrated flight schedule of all vehicles docking to the ISS Vehicle, crew rotation plan, and the cargo element flight assignments in the strategic timeframe.

Strategic timeframe. Long term planning that generally transitions to the tactical timeframe approximately two years prior to the flight or real-time operations.

Sub-element Number. The Sub element Number is used to track data in the VMDB for cargo elements, delivered on a carrier, visiting vehicles (other than the Orbiter), and any individual items that is deploy/retract, rotate/translate, or any major item that relocates

from the original installed location and can have a significant impact to the ISS mass properties.

Subsystem. A functional grouping of components that combine to perform a major function (e.g., electrical power, attitude control, propulsion, etc.).

Sustaining Engineering. Sustaining Engineering (SE) is the design engineering expertise provided after the development of hardware/software items is completed and these items have been provisionally accepted.

Systems Analysis. The performance of integrated, multidisciplinary engineering and analysis to assure:

- the required performance or survival of subsystems before, during, and after installation on-orbit,
- the minimized consumption of expendable resources,
- the optimization of Program goals for schedule and scientific requirements,
- the meeting of constraints and requirements of attached, approaching, and, departing vehicles, and
- the continued performance of all of the above in the induced and natural environments, which pertain to the ISS under well defined, operating regimes and assumptions.

Systems Analysis is complementary to, does not duplicate, and requires syntheses of data from: subsystems engineering, specialty engineering, and sustaining engineering, which are maintained under the ISS Sustaining Engineering Contract and in some cases under separate Government contracts and internal capabilities, as specified.

Tactical timeframe. A period of time from approximately 2 years prior to the launch or real-time operations.

Technical Interchange Meeting. Meetings between two or more ISS Program technical teams to exchange information, develop processes, and work issues.

Validation. The process of formally approving the developed process, services, or products at the conclusion of operational test and evaluation. This approval indicates developed processes, services, or products satisfy their intended operational mission.

Vehicle. The Vehicle includes the whole, integrated, on-orbit station (including hardware and software) as it exists today and the future station configuration as it evolves to the Assembly Complete (AC) configuration. The vehicle configuration is defined by the particular point in time under assessment or discussion.

Verification. The activities which assure that each level of requirements (including test requirements) or specifications correctly echoes the intentions of the immediately superior level of requirements.

PROGRAM INTEGRATION AND CONTROL

Addendum 2 - Government Furnished Data
Table 1 Government Furnished Applications

Current Contractor	Application Name	Acronym	Size of Effort	Complexity	DBMS*	Development Language or COTS Dependencies	OS*	# of Userids
PIC	ExCATT	ExCATT	Small	Small	Access	N/A	Windows	N/A
PIC	SCROALE	SCROALE	Small	Small	Access, Visio	N/A	Windows	N/A
PIC	Traffic Resource Analysis Model	TRAM	Small	Small	Access	N/A	Windows	N/A
PIC	Station Reboost Analysis Program	STRAP	Small	Small	N/A	C++	Windows	N/A
PIC	Total Propellant Summary	TPS	Small	Small	N/A	Excel	Windows	N/A
PIC	Integrated Energy Balance Tool	IEBT	Small	Small	N/A	Excel	Windows	N/A
PIC	Channelized Energy Balance Tool	CEBT	Small	Small	N/A	Excel	Windows	N/A
PIC	Hardware Interfaces Tracking System	HITS	Small	Small	Access	N/A	Windows	N/A
PIC	MODel GENerator	MODGEN	Small	Small	N/A	C++, Fortran	Unix	N/A
PIC	ISS Program Scheduling System		Small	Small	Oracle	AMSRealtime	Windows	25
PIC	Integrated Office Management System	IOMS	Small	Medium	Oracle	Cold Fusion, Oracle PL/SQL, JavaScript, cgi	Solaris	12
PIC	Bulletin Board Tool Suite	BB Tools	Small	Medium	Oracle	Cold Fusion, Perl, JavaScript, cgi	Solaris	380
PIC	Review and Audit Database	RADB	Small	Small	Access	Cold Fusion	Solaris, Windows	17
PIC	ISS Analytical Cost Model	ISSAC	Small	Small	N/A	Excel	Window	12

* DBMS – Data Base Management System
OS – Operating System

PROGRAM INTEGRATION AND CONTROL

Addendum 2 - Government Furnished Data
Table 2 Government Furnished Applications

The data submittals provided by the IPs via the following BDEALS documents listed in the table below will be made available as GFD to the contractor in support of execution of the Program Integration and Control contract. The specific content, format and schedule of the data submittals are contained in the Data Item Descriptions (DID) in the IP BDEALS documents.

Document No.	Document Title
SSP 50124	NASA/CSA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)
SSP 50126	NASA/NASDA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)
SSP 50127	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS)
SSP 50137	NASA/RSA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)
SSP 50407	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for Cupola 1
SSP 50611	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for ATV
SSP 50614	NASA/JAXA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for HTV

ADDENDUM 3 – GOVERNMENT FURNISHED IT SYSTEMS

Systems are in bold type with system elements listed below	Bldg. Location	Room	*Performance Standards Principle Period Of Performance (PPP)*	Performance Standards Minimum Availability (%)	Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)	Operations Required, Shifts/Wk	S/W Release Support (Y/N)	User Support (Y/N)	ID/Account Mgmt (Y/N)
JSC-ISS File or Windows institutional servers									
Kibo2	**B46**	**300**	*24X7*	**99.0%**	**4 hrs, 24x7**	**8am to 5pm**	**Y**	**Y**	**Y**
Kibo3	**B46**	**300**	*24X7*	**99.0%**	**4 hrs, 24x7**	**8am to 5pm**	**Y**	**Y**	**Y**
JSC-ISS-06 (Print/App)	**B4S**	**5403A**	*24X7*	**99.0%**	**8 hrs, M-F**	**8am to 5pm**	**Y**	**Y**	**Y**
JSC-ISS-OCE (Print)	**B4S**	**3805**	*24X7*	**99.0%**	**8 hrs, M-F**	**8am to 5pm**	**Y**	**Y**	**Y**
Kibo (File sharing)	**B46**	**300**	*24X7*	**99.0%**	**4 hrs, 24x7**	**8am to 5pm**	**Y**	**Y**	**Y**
Jsc-iss-dc1	**B46**	**300**	*24X7*	**99.0%**	**8 hrs, 24x7**	**8am to 5pm**	**Y**	**Y**	**Y**
Jsc-iss-dc2	**B46**	**300**	*24X7*	**99.0%**	**8 hrs, 24x7**	**8am to 5pm**	**Y**	**Y**	**Y**
Jsc-iss-10	**B46**	**300**	*N/A*	**N/A**	**N/A**	**N/A**	**N**	**N**	**Y**
Jsc-iss-sao	**B46**	**300**	*N/A*	**N/A**	**N/A**	**N/A**	**N**	**N**	**Y**
ISS Production Facility (IPF)									
jsc-ISS Programrd01	**B46**	**300**	*24x7*	**99.0%**	**4Hr, M-F**	**8AM-5PM**	**Y**	**Y**	**Y**
jsc-isscm01	**B46**	**300**	*24x7*	**99.0%**	**4Hr, M-F**	**8AM-5PM**	**Y**	**Y**	**Y**

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	Bldg. Location	Room	*Performance Standards Principle Period Of Performance (PPP)*	Performance Standards Minimum Availability (%)	Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)	Operations Required, Shifts/Wk	S/W Release Support (Y/N)	User Support (Y/N)	ID/Account Mgmt (Y/N)
iss-cff-p01	**B46**	**300**	*24x7*	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
columbus1	**B46**	**300**	*24x7*	99.0%	8Hr, 24x7	8AM-5PM	Y	Y	Y
quest1	**B46**	**300**	*24x7*	99.0%	8Hr 24x7	8AM-5PM	Y	Y	Y
isrtm01	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-ftp-p01	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
liberty1	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
liberty2	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
hale1	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
hale2	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-pob-p01	**B46**	**300**	*24x7*	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
ISS Programrtp1	**B46**	**300**	*24x7*	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
iss-dir-p01	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-dir-p03	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Kepler2	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Kepler1	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Iss-aff-p01 (Adlib)	**B46**	**300**	*24x7*	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards* Principle Period Of Performance (PPP)**	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
JSC-ISS File or Windows institutional servers									
Kibo2	B46	300	24X7	99.0%	4 hrs, 24x7	8am to 5pm	Y	Y	Y
Kibo3	B46	300	24X7	99.0%	4 hrs, 24x7	8am to 5pm	Y	Y	Y
JSC-ISS-06 (Print/App)	B4S	5403A	24X7	99.0%	8 hrs, M-F	8am to 5pm	Y	Y	Y
JSC-ISS-OCE (Print)	B4S	3805	24X7	99.0%	8 hrs, M-F	8am to 5pm	Y	Y	Y
Kibo (File sharing)	B46	300	24X7	99.0%	4 hrs, 24x7	8am to 5pm	Y	Y	Y
Jsc-iss-dc1	B46	300	24X7	99.0%	8 hrs, 24x7	8am to 5pm	Y	Y	Y
Jsc-iss-dc2	B46	300	24X7	99.0%	8 hrs, 24x7	8am to 5pm	Y	Y	Y
Jsc-iss-10	B46	300	N/A	N/A	N/A	N/A	N	N	Y
Jsc-iss-sao	B46	300	N/A	N/A	N/A	N/A	N	N	Y
ISS Production Facility (IPF)									
jsc-ISS Programrd01	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
jsc-isscm01	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
iss-cff-p01	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
columbus1	B46	300	24x7	99.0%	8Hr, 24x7	8AM-5PM	Y	Y	Y
quest1	B46	300	24x7	99.0%	8Hr 24x7	8AM-5PM	Y	Y	Y
isrtm01	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-ftp-p01	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
liberty1	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
liberty2	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
hale1	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards Principle Period Of Performance (PPP)***	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
hale2	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-pob-p01	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
ISS Programrtp1	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	Y
iss-dir-p01	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
iss-dir-p03	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Kepler2	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Kepler1	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
Iss-aff-p01 (Adlib)	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	Y
IPF for development efforts									
oort	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
Quest3	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
destiny1	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
destiny2	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
ISS Programrtd1	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
jsc-issdev01	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
Iss-cff-d01 (CFF App)	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
IPF for Integration/Test efforts									
quest2	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
Iss-cff-i01 (Adlib & CFF App)	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards Principle Period Of Performance (PPP)***	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
Unity1	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
Unity2	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
ISS Programrti1	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
jsc-iss-int01	B46	300	24x7	99.0%	8Hr, M-F	8AM-5PM	Y	Y	Y
Storage Devices									
Iss-cab03 (Dev) (network attached storage)	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	N
iss-cab02 (prd) (network attached storage)	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	N
iss-cab04 (prd) (network attached storage)	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	N
iss-cab01 (int) (network attached storage)	B46	300	24x7	99.0%	4Hr, M-F	8AM-5PM	Y	Y	N
emc-san (storage array network)	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	N
Sun 3960 SAN	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	N
Sun a5000 arrays	B46	300	24x7	99.0%	4Hr, 24x7	8AM-5PM	Y	Y	N
Support to Institutional Systems									
EDMS	N/A	N/A	N/A	N/A	4hr,24x7	8am-5pm	Y	Y	Y
Ads-dds	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards Principle Period Of Performance (PPP)***	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
nmconversion	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
goldprd	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
goldtst	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
Jsc-iss-ctxa	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
Jsc-iss-ctxb	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
Jsc-iss-ctxc	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
Jsc-iss-ctxd	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
hpsgprd	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
hpsgtst	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
xboard	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
xspace	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
pgnasda	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
boba	B46	300	N/A	N/A	N/A	8AM – 5PM	N	N	N
Network Devices and Security									
Red-dog	B46	300	N/A	N/A	8Hr, M-F	8am-5pm	Y	N	N
Cisco6513 Switch	B46	300	24X7	N/A	4Hr, 24x7	8am-5pm	Y	N	N
Cisco 6506	B46	300	24X7	N/A	4 Hr, 24x7	8am-5pm	Y	N	N
Cisco 3524 (qty 2)	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	N	N
Cisco 3750	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	N	N
Cisco 4912 (qty 3)	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	N	N
Intrusion Detection System	B46	300	24X7	N/A	4Hr, 24x7	8am-5pm	Y	N	N
PIX Firewall	B46	300	N/A	N/A	8Hr, M-F	8am-5pm	Y	N	N

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards Principle Period Of Performance (PPP)***	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
Cisco 6513 Router	B46	300	24X7	N/A	4Hr, 24x7	8am-5pm	Y	N	N
Issdirector2	B46	300	N/A	N/A	8Hr, M-F	8am-5pm	Y	N	N
netmgr	B46	300	N/A	N/A	8Hr, M-F	8am-5pm	Y	N	N
Infinistream Forensic Analysis	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	N	N
Network General Sniffer	B46	300	N/A	N/A	8Hr, M-F	8am-5pm	Y	N	N
Cisco 2621	Armand Plaza A		24X7	N/A	4 Hr, 24x7	8am-5pm	Y	N	N
Iss-termsrv1	B46	300	24X7	99.0%	8 hrs, M-F	8am to 5pm	Y	Y	Y
Engineering Servers									
Borg00	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	Y	Y
Nslapp01	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	N	Y	Y
eureka	B46	300	24X7	N/A	8Hr, M-F	8am-5pm	Y	Y	Y
Ditapp02	B46	300	24x7	99.0%	4Hr, 24x7	8am-5pm	Y	Y	Y
UNIX Institutional Servers									
Blade193	B46	300	24X7	N/A	4 hrs, 24X7	8am to 5pm	Y	N	N
SpectraLogic 64K Tape Robot	B46	300	24X7	N/A	Next Day	8am to 5pm	Y	N	N
logmgr	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Hale3	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Hale4	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
donatelo	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
oracon	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Sc1-aws	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N

PROGRAM INTEGRATION AND CONTROL

Systems are in bold type with system elements listed below	**Bldg. Location**	**Room**	***Performance Standards Principle Period Of Performance (PPP)***	**Performance Standards Minimum Availability (%)**	**Performance Standards Hardware Maximum Time to Service Time (i.e. 4 hours)**	**Operations Required, Shifts/Wk**	**S/W Release Support (Y/N)**	**User Support (Y/N)**	**ID/Account Mgmt (Y/N)**
Sc2-aws	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Sc3-aws	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
paratroop	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Liberty4	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Issauth1	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Issauth2	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
Issauthd1	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
ruthere	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
pilobolus	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N
neo	B46	300	24X7	N/A	8Hr, M	8am to 5pm	Y	N	N

Addendum 4 - LIST OF INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY

The Government will provide the production and development environments including networks, hardware, system software, commercial-off-the-shelf (COTS) tools, databases and application software, and documentation available at contract award and depicted in the attached tables.

In addition, NASA's estimate of office space available (including computer workstations and other services listed in Section G, Clause G.5, NFS 1852.245-71, Installation-Accountable Government Property (SEPT 2007) Alternate I Deviation (SEPT 2007), for on-site Program Integration and Control contract personnel for the following building:

Building 4 South: **149**

PROGRAM INTEGRATION AND CONTROL

List of Installation-Accountable Property and Services
Table 1 - COTS Software

Current Contractor *	Category	COTS Product	Version	Platform	Maintenance Type	Maintenance Expiration Date
NASA	Scheduling Database Software	Oracle Application Server	9.0.2.2	Unix	full	NOLA
ITSSC	Web Development/Deployment Tools	Cold Fusion Server	6 & 4.5.1	Windows	Full	6/30/07
ITSSC	Web Development/Deployment Tools	IIS	current	Windows	Time & Mtls	NONE
ITSSC	DBMS Development Tools	Seagate Crystal Reports	7.0	Windows	Full	9/14/07
ITSSC	Microsoft Developer Network Applications	MS Project 2000	latest	Windows	NONE	NONE
ITSSC	System Tools	Storage Central		Windows	NONE	NONE
ITSSC	System Tools	Oce Office Exec		Widows	FULL (ODIN)	OPEN
ITSSC	Application Software	Imagenation		Windows	NONE	NONE
ITSSC	Application Software	Office Tracker Server	5.0	Windows	NONE	01-Nov-02
ITSSC	Application Software	OfficeExec Client	current	Windows	FULL (ODIN)	OPEN
ITSSC	Desktop Tools	Ghost Corporate Edition		Windows	NONE	NONE
ITSSC	Desktop Tools	Zone Alarm Pro	current	Windows	NONE	NONE
ITSSC	Desktop Tools	MS Office 2000 Standard	current	Windows	NONE	NONE
ITSSC	Desktop Tools	WS-FTP LE	current	Windows	NONE	NONE
ITSSC	Desktop Tools	Speedy CD Creator	current	Windows	NONE	NONE
ITSSC	Desktop Tools	InterVideo DVD player	current	Windows	NONE	NONE
ITSSC	Desktop Tools	ATI TV Wonder MMC	current	Windows	NONE	NONE
ITSSC	PDA Tools	Palm OS	current	PALM	NONE	NONE
ITSSC	PDA Tools	Windows CE	current	Windows	NONE	NONE
ITSSC	PDA Tools	Palm Desktop	3.0.1	Windows	NONE	NONE
ITSSC	PDA Tools	Hotsync Manager	3.0.2	Windows	NONE	NONE
ITSSC	PDA Tools	Microsoft Pocket PC	current	Pocket PC	NONE	NONE
PI&C/ITSSC	Microsoft Developer Network Applications	MS Access	latest	Windows	NONE	NONE
PI&C/ITSSC	Microsoft Developer Network Applications	Windows 2000	latest	Windows	NONE	NONE
PI&C	Web Development/Deployment Tools	J Initiator	1.1.8.16			Freeware
PI&C	Web Development/Deployment Tools	Java Development Toolkit	1.1.6-007			Comes with O.S

PROGRAM INTEGRATION AND CONTROL

Current Contractor *	Category	COTS Product	Version	Platform	Maintenance Type	Maintenance Expiration Date
PI&C	Web Development/Deployment Tools	Visual Café For JAVA	3.0			9/30/07
PI&C	Web Development/Deployment Tools	Cold fusion MT	6.1			6/30/07
PI&C	Web Development/Deployment Tools	J Builder	Latest			
PI&C	Web Development/Deployment Tools	JAVA Runtime Environment	1.1.6-007			
PI&C	Web Development/Deployment Tools	Apache Web Server	01/03/29	Windows and Unix		Freeware
PI&C	Web Development/Deployment Tools	Apache Web Server	2.0.xx	Windows and Unix		Freeware
PI&C	Web Development/Deployment Tools	Count	2.2	Unix		Freeware
PI&C	Web Development/Deployment Tools	HTDig	3.1.5	Unix		Freeware
PI&C	Web Development/Deployment Tools	Cold fusion MT	6.1and 4.5.1	Windows and Unix	full	9/30/07
PI&C	Web Development/Deployment Tools	Oracle Application Server	9.0.2.2	Unix	full	NOLA
PI&C	Web Development/Deployment Tools	Web logic	4.0.2		None	
PI&C	Web Development/Deployment Tools	Macromedia Dream weaver	latest	Windows		
PI&C	Web Development/Deployment Tools	Macromedia Contribute	latest	Windows		
PI&C	DBMS Development Tools	Fox Pro	2.6			
PI&C	DBMS Development Tools	Spell Checker for Fox Pro	2.6			
PI&C	DBMS Development Tools	Query Maker for Fox Pro	2.6			
PI&C	DBMS Development Tools	Microsoft Access	7.0			
PI&C	DBMS Development Tools	Microsoft SQL Server	2000-SP4		full	9/16/07
PI&C	DBMS Development Tools	Oracle Client Software	9.2.0.1		full	NOLA
PI&C	DBMS Development Tools	Oracle Designer	9.0.2		full	NOLA
PI&C	DBMS Development Tools	Oracle Forms	6.0.8.17.1		full	NOLA
PI&C	DBMS Development Tools	Oracle Reports	6.0.8.17.0		full	NOLA
PI&C	DBMS Development Tools	Oracle RDBMS	9.2.0.4		full	NOLA
PI&C	Operational/Development Support Tools	Visio Enterprise	Latest			
PI&C	Operational/Development Support Tools	Canvas	Latest			
PI&C	Operational/Development Support Tools	Adobe Acrobat Distiller	3.0	Unix		Freeware
PI&C	Operational/Development Support Tools	Ghost view	3.5.8	Unix		Freeware
PI&C	Operational/Development Support Tools	Ghost script	7.04	Unix		Freeware
PI&C	Operational/Development Support Tools	GNU Zip, Unzip	1.2.4	Unix		Freeware
PI&C	Operational/Development Support Tools	HP Jet Admin	D.05.15	Unix		Freeware
PI&C	Operational/Development Support Tools	Xemacs	19.14	Unix		Freeware
PI&C	Operational/Development Support Tools	XpixMap	3.49	Unix		Freeware
PI&C	Operational/Development Support Tools	Jpeg	6b	Unix		Freeware
PI&C	Operational/Development Support Tools	Acme Crypto	1.0	Unix		Freeware
PI&C	Operational/Development Support Tools	Diff Utilitities	2.1	Unix		Freeware

PROGRAM INTEGRATION AND CONTROL

Current Contractor *	Category	COTS Product	Version	Platform	Maintenance Type	Maintenance Expiration Date
PI&C	Operational/Development Support Tools	Expect	5.3	Unix		Freeware
PI&C	Operational/Development Support Tools	rtftohtml	2.7.5	Unix	None	
PI&C	Microsoft Developer Network Applications	MS Office Premium	latest			
PI&C	Microsoft Developer Network Applications	PhotoDraw	latest			
PI&C	Microsoft Developer Network Applications	Publisher	latest			
PI&C	Microsoft Developer Network Applications	MS Project	latest			
PI&C	Microsoft Developer Network Applications	Visual J++	latest			
PI&C	Programming Tools	Visual Basic Professional	2.5		None	
PI&C	Programming Tools	GNU C++	2.8.1 and 3.x	Unix		Freeware
PI&C	Programming Tools	Perl	5.004_004	Unix & Windows		Freeware
PI&C	Programming Tools	GNU Debugger	4.16	Unix		Freeware
PI&C	Programming Tools	GNU Make	3.74	Unix		Freeware
PI&C	Programming Tools	RCS	5.7	Unix		Freeware
PI&C	Programming Tools	GNU Ggcov	1.5	Unix		Freeware
PI&C	Programming Tools	Xaw3d	1.5	Unix		Freeware
PI&C	System Tools	Solaris	8, 9, & 10	Unix	full	09/30/05
PI&C	System Tools	HP-UX	11.2	Unix	full	5/31/06
PI&C	System Tools	Patchdiag	1.0.2	Unix		Free
PI&C	System Tools	StorTools	3.0	Unix		Free
PI&C	System Tools	Sun Cluster	3.0	Unix	full	08/30/05
PI&C	System Tools	Veritas Volume Manager	3.0.4	Unix		Free w/arrays
PI&C	System Tools	Protocol	2.6.1	Unix		Free
PI&C	System Tools	Top	3.5	Unix		Freeware
PI&C	System Tools	Oracle Enterprise Manager	9.2.0.1	Unix	full	NOLA
PI&C	System Tools	Sun Cluster	2.3	Unix	NASA wide lic.	
PI&C	System Tools	TeamQuest Suite	9	Unix and Windows	full	9/5/06
PI&C	System Tools	Vertias Net backup	5.1	Unix	full	9/28/06
PI&C	System Tools	SarCheck	5.00.01	Unix	full	6/28/07
PI&C	Security Tools	ASET	11.7.0	Unix		Free

PROGRAM INTEGRATION AND CONTROL

Current Contractor *	Category	COTS Product	Version	Platform	Maintenance Type	Maintenance Expiration Date
PI&C	Security Tools	FTP Wrappers	7.6	Unix		Freeware
PI&C	Security Tools	Tripwire	1.2	Unix		Freeware
PI&C	Application Software	AdLib		Windows	full	5/31/06
PI&C	Application Software	Crystal Reports			full	9/15/07
PI&C	Application Software	DPS Compare	5.0.3	Unix	full	5/13/06
PI&C	Application Software	Interleaf	7.0.1	Unix	full	12/31/07
PI&C	Application Software	Leads	2a			
PI&C	Application Software	RTM	2.3.4	Unix	none	
PI&C	Application Software	RDD-100	4.1.1	Unix	None	None. May be removed…in discussion.
PI&C	Application Software	SDRC I-deas	6.0	Unix		
PI&C	Application Software	Matlab	5.0	Unix	none	None - cannot upgrade
PI&C	Application Software	NetCharts			full	4/19/06
PI&C	Application Software	Raynoise	2.0	Unix	full	12/31/05
PI&C	Application Software	CafeSoft			full	9/30/07

* For RFP use only

Addendum 4 - List of Installation-Accountable Property and Services
Table 2 - ISS Prescribed Applications

Current Contractor	Application Name	Acronym	Size of Effort	Complexity	DBMS	Development Language or COTS Dependencies	OS	# of Userids
PIC	Application Support Data Base (Common Applications Utilities - CAU)	ASDB	Small	Small	Oracle	Java, Cold Fusion, JavaScript, Oracle PL/SQL	Solaris	50
PIC	Common Filter Facility (CAU)	CFF	Small	Medium	N/A	Java, Cold Fusion, JavaScript, Oracle PL/SQL, Perl, cgi	Windows/Solaris	1813
PIC	Common Java Utility (CAU)[1]	CJU	Small	Medium	N/A	Java, Cold Fusion, JavaScript, Oracle PL/SQL	Solaris	1825
PIC	Common Print Facility (CAU)[2]	CPF	Small	Medium	Oracle	Oracle PL/SQL, Perl, cgi	Solaris	1445
PIC	Shopping Cart Utility (CAU)[3]	SCU	Small	Small	N/A	Java, Cold Fusion, JavaScript, Oracle PL/SQL, cgi	Solaris	12
PIC	User Tracking System (UTS)	UTS	Medium	Small	Oracle	Java, Cold Fusion, JavaScript, PL/SQL	Solaris	13
PIC	SAPPHIRE	SAPPHIRE	Small	Small	N/A	N/A	Windows	N/A
PIC	Common Schedules Database	CSD	Medium	Large	Artemis	N/A	MVS	100
PIC	COSMOS	COSMOS	Medium	Medium	Oracle	Cold Fusion/Crystal Reports, Oracle PL/SQL	Windows	400
PIC	Problem Reporting and Corrective Action	PRACA	Medium	Medium	Oracle	Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL	Solaris	675
PIC	Integrated Risk Management Application	IRMA	Medium	Medium	SQL Server	JavaScript	Windows	250

[1] Hosting only
[2] Hosting only
[3] Hosting only

PROGRAM INTEGRATION AND CONTROL

Current Contractor	Application Name	Acronym	Size of Effort	Complexity	DBMS	Development Language or COTS Dependencies	OS	# of Userids
PIC	Action Tracking Application	ATA	Small	Small	Oracle	Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL	Solaris	90
PIC	Correspondence Tracking System	CTS	Small	Small	Oracle	Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL, Perl, cgi	Solaris	30
PIC	Lesson Learned Data Base	LLDB	Small	Medium	Oracle	Cold Fusion, Oracle PL/SQL	Solaris	300
PIC	ORU Data Dictionary	ORUDD	Small	Small	Oracle	Java, JavaScript, Oracle PL/SQL	Solaris	150
PIC	Support Applications for NASA MIS	SANMIS	Medium	Medium	Oracle	~~Cold Fusion,~~ Java~~Script~~, Oracle Forms 6i, Oracle PL/SQL	Solaris	150
PIC	Design – Knowledge Capture	DKC	Small	Small	Oracle	Real Player	Windows, Solaris	195
PIC	Hardware History Retrieval System	HHRS	Small	Medium	Oracle	Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL, Java	Solaris	200
PIC	Electronic Document Management System[4]	EDMS	High	High	Oracle	Windchill, Java	Solaris	5000
PIC	ISS Web Pages		High	Medium	N/A	HTML, Cold Fusion, Perl, Dream Weaver, Contribute, PHP, JavaScript	Windows	unknown
PIC	Vehicle Master Data Base[5]	VMDB	High	High	Oracle	Java, Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL	Solaris	1445
PIC	Mission Integration Database Application System[6]	MIDAS	High	High	Oracle	Java, Oracle Forms 6i, Oracle Reports 6i, Oracle PL/SQL	Solaris	300
PIC	Bulletin Board Posting Tool	BBPT	Medium	Medium	Oracle	Java, Cold Fusion, Perl, Javascript, cgi	Solaris	200

[4] Storage only
[5] Hosting only
[6] Hosting only

PROGRAM INTEGRATION AND CONTROL

Current Contractor	Application Name	Acronym	Size of Effort	Complexity	DBMS	Development Language or COTS Dependencies	OS	# of Userids
PIC	Agenda Calendar Tool (BBPT)	ACT	Small	Medium	Oracle	Cold Fusion, Perl, Javascript, cgi	Solaris	50
PIC	Items for Investigation[7]	IFI	Small	Small	Oracle	Cold Fusion, Javascript, Oracle, php	Solaris	200
PIC	Review and Audit Database	RADB	Small	Medium	Oracle	Cold Fusion	Solaris	30

[7] Hosting Only

PROGRAM INTEGRATION AND CONTROL

List of Installation-Accountable Property and Services
Table 3 - COTS Hardware Tables

COMMON HARDWARE

MANUFACTURER	MODEL	SERIAL	DESCRIPTION	NEMS_TAG	CPU_TAG	BLDG	ROOM	SYSID	MAINT TYPE	Warranty/ Maint Expiration
Compaq	Proliant 6400R	D939CJQ2K215	Server	1988765	1988765	46	300	JSC-ISS-07	Time & Materials	Expired, being replaced w/new
Compaq	Fibre Channel Array	D932HUQ10226	Disk Array	1988764	1988764	46	300		Time & Materials	Expired, being replaced w/new
Compaq	Proliant	D225JZG1F327	Server	1652230	1652230	46	300	JSC-ISS-APP02	Full	3 years (11/2005) , being replaced w/new
Compaq	DLT Library	B930CBG20056	Compaq DLT Tape unit	1995557	1995558	46	300		Time & Materials	Expired, being replaced w/new
Compaq	Proliant 1850R	D940CNH1K781	JSC-ISS-06 (Print/App)	1995558	1995558	46	300	JSC-ISS-06	Time & Materials	Expired, being replaced w/new
Compaq	TFT450	937FA34HA125	Monitor (shared w/06, 07,Disk Array, & Tape Unit)	1988767	1988767	46	300		Time & Materials	Expired, being replaced w/new
Compaq	NA	NA	Compaq Switch w/ Keyboard, Mouse, Monitor	1988766	1988766	4S	3805		Time & Materials	Expired, being excessed
Compaq	Proliant	D735HWA30269	Server	1854509	1854509	4S	5403A	JSC-ISS-04	Time & Materials	Expired, being excessed
Compaq	V50	727DC050D	Monitor	1854504	1854509	4S	5403A		Time & Materials	Expired, being excessed
Compaq	Proliant	D715BHM1D133	Disk array	1854505	1854509	4S	5403A		Time & Materials	Expired, being excessed
Compaq	Proliant	18843970	Server	1446719	1446719	4S	5403A	JSC-ISS-02	Time & Materials	Expired, being excessed

PROGRAM INTEGRATION AND CONTROL

MANUFACTURER	MODEL	SERIAL	DESCRIPTION	NEMS_TAG	CPU_TAG	BLDG	ROOM	SYSID	MAINT TYPE	Warranty/ Maint Expiration
NEC	316E	48H0B803A	Monitor	1446730	1446719	4S	5403A		Time & Materials	Expired, being excessed
Compaq	Proliant	652HNM10154	Disk array	1446728	1446719	4S	5403A		Time & Materials	Expired, being excessed

Addendum 4 - List of Installation-Accountable Property and Services

Table 4 - ISS PRODUCT FACILITY

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
Hewlett-Packard	9000/735	1549306	6541A00040									
Sun Microsystems, Inc.	Ultra Enterprise 4000	1847139	718F120B	Sun Microsystems, Inc.	GDM-5410	1985785	0010968-0015LB3244	donatelo	J1	Solaris 2.8		
Sun Microsystems, Inc.	Ultra Enterprise 4000	1847140	718F120A	Sun Microsystems, Inc.	GDM-5410	1985783	0010968-0015LB3797	iss-trg-p01	J1	Solaris 2.8		
Compaq	Proliant 2500	1918240	D806BPT10442	Compaq	620	1918243	748CB03EG066	issnt04	G1	NT4.0 SP6A		
Compaq	Proliant 2500	1918241	D806BPT10471	Compaq		1918242	752CB03EB599	jsc-isscb01	30A/1080C	NT4.0 SP6A		
Sun Microsystems, Inc.	Ultra 1	1918304	811FC043					iss01u	FF1	Solaris 2.6		
								iss02u	B30A/1084b	Solaris 2.6		
								iss03u	B226/103	Solaris 2.6		
								iss04u	B226/148	Solaris 2.6		
Sun Microsystems, Inc.	Ultra 1	1918308	810FC243	Sun Microsystems, Inc.		1918291	9806GI3856	Not in use	L3	Solaris 2.6		
								iss06u	B226/123	Solaris 2.6		

PROGRAM INTEGRATION AND CONTROL

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
Sun Microsystems, Inc.	Ultra 1	1918310	802FC9CC	Sun Microsystems, Inc.	GDM-20E20	1918285	0010968-9806GI3637	netmgr	K3	Solaris 2.6		
									GG1			
								iss09u	B30A/1084b	Solaris 2.6		
Sun Microsystems, Inc.	Ultra 1	1918314	802FCFD3	Sun Microsystems, Inc.	GDM-20E20	1918288	0010968-9806GI3633	isbkup02	K3	Solaris 2.6		
				Sun Microsystems, Inc.		2081130	0137LB0008	iss12u	B30A/1080	Solaris 2.6		
Sun Microsystems, Inc.	Ultra 1	1918316	811FC04F					iss13u	GG1	Solaris 2.6		
										Solaris 2.6		
										Solaris 2.8		
										Solaris 2.6		
				Sun Microsystems, Inc.		2080265	0144LB0232	iss18u	B30A/1080	Solaris 2.6		
Sun Microsystems, Inc.	Ultra 1	1918323	810FC191	Sun Microsystems, Inc.		1985786	0015LB3795	iss20u	B226/106	Solaris 2.6		
							0010968-9806GI3639	iss21u	B30A/1084a	Solaris 2.6		
				Sun Microsystems, Inc.		2081135		iss22u	B30A/1080c	Solaris 2.6		

PROGRAM INTEGRATION AND CONTROL

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
								iss23u	B30A/1080c	Solaris 2.6		
Sun Microsystems, Inc.	E4000	1918392	811FC603	Sun Microsystems, Inc.		1918394	9808GI0974	eureka	EE2	Solaris 2.6		
Compaq	Proliant 5500	1918471	D745BRZ10364	Viewsonics, Inc.	1782DC	1552729	3365102980	issnt01	G2	NT4.0 SP6A		
Compaq	Proliant 5500	1918472	D805BRZ10104					issnt02	G2	NT4.0 SP6A		
Sun Microsystems, Inc.	Sun Fire v880	2084399	235V006E	Sun Microsystems, Inc.	GDM-20D10	1449100	0010968-9438FC5263	leonardo	J2	Solaris 8		
Sun Microsystems, Inc.	Ultra Enterprise 4000	1847138	718F1208	Sun Microsystems, Inc.	GDM-5410	1985778	0010968-0015LB3240	isrtm01	I3	Solaris 2.5.1		
Sun Microsystems, Inc.	Enterprise 4500	1922608	919H2AD8	N/A	N/A	N/A	N/A	Destiny2	I3	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1919081	825F3060	N/A	N/A	N/A	N/A	Destiny1	I3	Solaris 8		
Sun Microsystems, Inc.	Ultra 2	1922611	919H30C6	Sun Microsystems, Inc.	GDM-5010PT	1919088	0010968-9815KH2841	Sc1-aws2	I1	Solaris 8		
				Sun Microsystems, Inc.	GDM-5010PT	1922612	0010968-9903KN2426	sc1-aws	H3	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1922607	919H2ADA	N/A	N/A	N/A	N/A	Zarya1	H3	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1922609	919H2AD9	N/A	N/A	N/A	N/A	Zarya2	H3	Solaris 8		

PROGRAM INTEGRATION AND CONTROL

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
				N/A		N/A	N/A					
Sun Microsystems, Inc.	E4500	1984723	944H4005	Sun Microsystems, Inc.		1984724	9942KH1120	ditapp01	FF2	Solaris 2.6		
				Sun Microsystems, Inc.		1918290	001968-9806GI3857	iss-ftp-p01	FF3	Solaris 2.7		
Sun Microsystems, Inc.	Sun Fire v880	2084398	234U02AD	Sun Microsystems, Inc.	GDM-5410	1985387	0010968-0010LB1927	Sc1-aws3	J2	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1985775	027H2494	N/A	N/A	N/A	N/A	Unity2	I1	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1985776	027H2495	N/A	N/A	N/A	N/A	Unity1	I1	Solaris 8		
				N/A		N/A	N/A	emc-nas-a & b	H1	N/A		
Dell Computer Corp.	Precision 420	1991375	CNRKNC1	Dell Computer Co.	UltraScan P991	Not tagged	MX08376T4774115130YX		H1			
Compaq	Compaq	2082328	6940CR23K469					cffpc-integration	30A/1080C	Windows 98, Office 2000		
Sun Microsystems, Inc.	SunBlade 1000	2079019	128C00F8	Sun Microsystems, Inc.	GDM-5410	1985777	0010968-0015LB3791	blade1	K4	Solaris 2.8		
None	None	2082327	None	Shamrock	SRC1703LD	1545793	64TTC0235940	ISS-CF-P01	G1	Windows 98		
Sun Microsystems, Inc.	Ultra Enterprise 2	1985386	943H2A4C	Sun Microsystems, Inc.	GDM-5010PT	1919087	0010968-981KH2979	sc3-aws	H1	Solaris 8		

PROGRAM INTEGRATION AND CONTROL

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
Sun Microsystems, Inc.	Enterprise 4500	1985773	027H2492	N/A	N/A	N/A	N/A	Liberty2	H1	Solaris 8		
Sun Microsystems, Inc.	Enterprise 4500	1919082	825F3061	N/A	N/A	N/A	N/A	Liberty1	H1	Solaris 8		
Dell Computer Corp.	PowerEdge 4600	2152103	7JPKR11	Dell Computer Co.	E551	Not tagged	CN-095WUP-46633-267-22TV	kibo	K1			
Dell Computer Corp.	PowerEdge 6600	2152004	92K6Q11	Dell Computer Co.	E551	Not tagged	CN-095WUP-46633-26D-91KM	columbus1	K1			
Dell Computer Corp.	PowerEdge 6600	2152003	72K6Q11	Dell Computer Co.	E551	Not tagged	CN-09WUP-46633-272-80JS	columbus2	K1			
Dell Computer Corp.	PowerEdge 1500SC	2152005	83K6Q11	Dell Computer Co.	E551	Not tagged	CN-095WUP-46633-26I-90D4	quest1	K2			
Dell Computer Corp.	PowerEdge 1500SC	2152006	93K6Q11	Dell Computer Co.	E551	Not tagged	CN-95WUP-46633-26I-90D7	quest2	K2			
				N/A	N/A	N/A	N/A					
				N/A	N/A	N/A	N/A					
									30A/1084			
				Sun Microsystems, Inc.		1922613	9917KN6123					

PROGRAM INTEGRATION AND CONTROL

CPU Manufacturer	CPU model	CPU NEMS	CPU serial number	Monitor Manufacturer	Monitor model	Monitor NEMS	Monitor Serial Number	Host name	Rack Location	O/S Level	Maintenance Type	Maintenance Expiration Date
				Sun Microsystems, Inc.		1985787	0015LB3801					
				Sun Microsystems, Inc.		1985784	0015LB3793		K1			
									46/300			
				Sun Microsystems, Inc.		1985774	0015LB3236		30A/1080C			

Addendum 4 - List of Installation-Accountable Property and Services

Table 5 - ISS PRODUCT FACILITY PERIPHERALS

Peripheral Description	Rack location	Peripheral Manufacturer	Peripheral NEMS	Peripheral Serial	Peripheral Model #	Parent Host (s)	Maintenance Type	Maintenance Expiration Date
						jsc-isscm01		
Printer	46/300	Hewlett-Packard	1346978	USFC047918				
						ISS Programrtd1		
						ISS Programrti1		
						borg00		
						borg00		
Sparc Storage Array	K3	Sun Microsystems	1348296	442K0023	1010	netmgr		
						Not in use		
						NONE		
						Not in use		
						nslapp01		
						rddapp03		
B226/148	Hewlett-Packard	1448543	6448A70332			rddws04		
EE1	Hewlett-Packard	1448544	6448A70283			borg00		
						rddapp03		
						ISS Programrti1		
						rddws04		
						borg00		
						borg00		
						borg24		

PROGRAM INTEGRATION AND CONTROL

Peripheral Description	Rack location	Peripheral Manufacturer	Peripheral NEMS	Peripheral Serial	Peripheral Model #	Parent Host (s)	Maintenance Type	Maintenance Expiration Date
						rddapp03		
						N/A		
						rddws04		
						ditapp01		
						isbkup03		
						ISS Programrti1		
						ditapp01		
						emc-nas-a & b		
						emc-nas-a & b		
Fiber Channel Switch	I	EMC2	1653469	None	DS16B	EMC-SAN		
Fiber Channel Switch	I	EMC2	1653470	118031740	DS16B	EMC-SAN		
	L4	not in quarterly report	1846560			nslapp01		
Exabyte Tape Unit	K3	Exabyte Corp.	1847385	12700371	EXB-440	isbkup02		
Exabyte Tape Unit	K3	Exabyte Corp.	1847386	12700463	EXB-440	netmgr		
						ditapp01		
Plotter	46/300	Hewlett-Packard	1849796	ESB7305508				
Sparc Storage Array	K3	Sun Microsystems	1918395	809F0115	1010	sc2-node1 or sc2-node2		
A5000 Cabinet w/ 4 arrays	H2	Sun Microsystems	1919083	824HD74C		A5000-MSC1-MSC4		
Array, Mass Storage	I2	Sun Microsystems	1919084	825h3094	595-4421-02	A5000-PSC1-PSC4		
A5000 Cabinet w/ 4 arrays	H2	Sun Microsystems	1919085	824HD913		A5000-PSC1-PSC4		
Array, Mass Storage	I2	Sun Microsystems	1919086	825h3091	5945-4421-02	A5000-MSC1-MSC4		
Printer	226/143	Hewlett-Packard	1921624	USBB05242				
Terminal Concentrator	H2	Bay Network	1922614	MIC0016173		zarya cluster		
Terminal Concentrator	I1	Bay Networks, Inc.	1922615	MIC0015995	AXM-D-8-S-173	Unity-TC		
Server, Multipurpose network	H1	Bay Networks, Inc.	1922616	MIC0016095	AXM-D-8-S-173	Liberty- TC		
A5100 Disk Array	FF3	Sun Microsystems	1984725	NONE		iss-ftp-p01		
A5100 Disk Array	FF3	Sun Microsystems	1984726	944H3051		iss-ftp-p01		

PROGRAM INTEGRATION AND CONTROL

Peripheral Description	Rack location	Peripheral Manufacturer	Peripheral NEMS	Peripheral Serial	Peripheral Model #	Parent Host (s)	Maintenance Type	Maintenance Expiration Date
Storage, Disk	J1	Sun Microsystems	1985779	025H3649	A5100	michelangelo, donatelo		
A5100 Disk Array	EE2	Sun Microsystems	1985780	025H3636		eureka		
A5100 Disk Array	EE2	Sun Microsystems	1985781	025H3645		eureka		
Storage, Disk	J1	Sun Microsystems	1985782	025H3635	A5100	michelangelo, donatelo		
Fiber Channel SPS	I	EMC2	1988065	None	FC4700	EMC-SAN		
						emc-nas-a & b		
						emc-nas-a & b		
						emc-nas-a & b		
cluster concentrator	I3	Nortel Networks	1997155	MIC0051488	AXM-D-8-S-173	Destiny1		
						emc-nas-a & b		
Tape Backup Unit	J2		NONE	126062		blade1		
Spectra Logic Tape Library	J2		NONE	126062		blade1		
Array, Mass Storage Library	J	Sun Microsystems	2084477	236H3BID	2212687-5	N/A		
Array, Mass Storage Library	J	Sun Microsystems	2084478	236H3C7C	2212687-6	N/A		
						issCS1		
						issCS2		
						issCS3		
						issCS4		
Spectralogic	K4	Spectralogic	not tagged	126062	Spectra 12000	pri. backup		
Processor Central, ADP		Hewlett-Packard	2084425	SG23720236	B2600SPU			
Processor Central, ADP		Hewlett-Packard	2084426	SG23720253	B2600SPU			

PROGRAM INTEGRATION AND CONTROL

Peripheral Description	Rack location	Peripheral Manufacturer	Peripheral NEMS	Peripheral Serial	Peripheral Model #	Parent Host (s)	Maintenance Type	Maintenance Expiration Date
Processor Central, ADP		Hewlett-Packard	2084427	SG23720259	B2600SPU			
Processor Central, ADP		Hewlett-Packard	2084428	SG23720272	B2600SPU			
Processor Central, ADP		Compaq	2084458	6J26KH38H014	267623-002			
Rack, Workstation		Network Appliance, Inc.	2084557	None	X861A			
Server, ADP		Network Appliance, Inc.	2084624	1020343	NET-APP-F840C			

Addendum 4 - List of Installation-Accountable Property and Services

Table 6 - ISS PROGRAM LOAN POOL

MANUFACTURER	MODEL	SERIAL	DESCRIPTION	PROPERTY TAG	BLDG	ROOM	MAINT TYPE	Warranty/ Maint Expiration
COMPAQ	N800C-EVO	5Y28KLMZR0H2	COMPUTER, NOTEBOOK	2084485	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZC0K2	COMPUTER, NOTEBOOK	2084486	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61GE	COMPUTER, NOTEBOOK	2084487	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61GK	COMPUTER, NOTEBOOK	2084488	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61GS	COMPUTER, NOTEBOOK	2084489	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61HA	COMPUTER, NOTEBOOK	2084490	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61HF	COMPUTER, NOTEBOOK	2084491	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61HK	COMPUTER, NOTEBOOK	2084492	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61HS	COMPUTER, NOTEBOOK	2084493	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZ61H0	COMPUTER, NOTEBOOK	2084494	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H5	COMPUTER, NOTEBOOK	2084495	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H9	COMPUTER, NOTEBOOK	2084496	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZR0H6	COMPUTER, NOTEBOOK	2084497	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZC0K3	COMPUTER, NOTEBOOK	2084498	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GF	COMPUTER, NOTEBOOK	2084499	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GL	COMPUTER, NOTEBOOK	2084500	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GV	COMPUTER, NOTEBOOK	2084501	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HB	COMPUTER, NOTEBOOK	2084502	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HG	COMPUTER, NOTEBOOK	2084503	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HV	COMPUTER, NOTEBOOK	2084505	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H2	COMPUTER, NOTEBOOK	2084506	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H6	COMPUTER, NOTEBOOK	2084507	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y28KLMZT0AX	COMPUTER, NOTEBOOK	2084508	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZC0K4	COMPUTER, NOTEBOOK	2084509	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GH	COMPUTER, NOTEBOOK	2084510	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GN	COMPUTER, NOTEBOOK	2084511	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GX	COMPUTER, NOTEBOOK	2084512	4S	3900D	3 yr NBD on site	09/27/2005

PROGRAM INTEGRATION AND CONTROL

MANUFACTURER	MODEL	SERIAL	DESCRIPTION	PROPERTY TAG	BLDG	ROOM	MAINT TYPE	Warranty/ Maint Expiration
COMPAQ	N800C-EVO	5Y29KLMZ61HC	COMPUTER, NOTEBOOK	2084513	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HH	COMPUTER, NOTEBOOK	2084514	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HN	COMPUTER, NOTEBOOK	2084515	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HW	COMPUTER, NOTEBOOK	2084516	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H3	COMPUTER, NOTEBOOK	2084517	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61H7	COMPUTER, NOTEBOOK	2084518	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZC0JJ	COMPUTER, NOTEBOOK	2084519	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GC	COMPUTER, NOTEBOOK	2084520	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GJ	COMPUTER, NOTEBOOK	2084521	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GR	COMPUTER, NOTEBOOK	2084522	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61GZ	COMPUTER, NOTEBOOK	2084523	4S	3900D	3 yr NBD on site	09/27/2005
COMPAQ	N800C-EVO	5Y29KLMZ61HX	COMPUTER, NOTEBOOK	2084527	4S	3900D	3 yr NBD on site	09/27/2005
Kodak	DX3700		Digital Camera		4S	3403		
Kodak	DX3700		Digital Camera		4S	3403		
COMPAQ	1600		Projector		4S	3403		
COMPAQ	1600		Projector		4S	3403		
COMPAQ	1800		Projector		4S	3403		
COMPAQ	1800		Projector		4S	3403		
BackPack			BackPack CD Writer		4S	3403		
Various			International Power Adapters		4S	3403		

Addendum 4 - List of Installation-Accountable Property and Services

Table 7 -MISCELLANEOUS HARDWARE

MANUFACTURER	MODEL	SERIAL	DESCRIPTION	PROPERTY TAG	BLDG	ROOM	MAINT TYPE	Warranty/ Maint Expiration
Oce	3165	14492	High speed printer/copier/scanner	1986476	4S	3801	full (govt)	
Oce	3165	19392	High speed printer/copier/scanner	227692	4S	3315	full (ODIN)	n/a
Oce	3165	30625	High speed printer/copier/scanner	227693	4S	4403	full (ODIN)	n/a
Oce	3165	30623	High speed printer/copier/scanner	227694	4S	5403	full (ODIN)	n/a
Xerox	470		High speed printer/copier/scanner	n/a	4S	hall	full (ISD)	n/a
Xerox	470		High speed printer/copier/scanner	n/a	4S	hall	full (ISD)	n/a
Xerox	470		High speed printer/copier/scanner	n/a	1	hall	full (ISD)	n/a
ATI	multiple	multiple	TV Card	n/a	MER	multiple	none	n/a
Compaq IPAQ	multiple	multiple	Computer Handheld	n/a	multiple	multiple	none	n/a
Palm V	multiple	multiple	Computer Handheld	n/a	multiple	multiple	none	n/a
Visor	multiple	multiple	Computer Handheld	n/a	multiple	multiple	none	n/a
Cannon		AA306039	scanner	1921897	4S	3805	none	n/a
Cannon		AA306041	scanner	1921900	4S	5318	none	n/a
Cannon		AA306042	scanner	1921898	4S	3905	none	n/a

Addendum 4 - List of Installation-Accountable Property and Services
Table 8 – GFE / Alternate Location

ECN	Item Name	Manufacturer	Model No	Serial No	FSC/NSN	Custodian Account	Business Area	Sub-Installation	Location Building/Room	Maintenance Type	Warranty/ Maintenance Expiration
2523142	ROUTER, SYSTEM	CISCO SYSTEMS INC	2811	FTX1011OXC	7025	ITCIN	72	9	TBD		

Addendum 5 - Statement of Work to Program Work Breakdown Structure Map

	Program Integration and Control		ISS WBS (SSP 50659, Rev C)
SOW	Title	PWBS	Title
1.0	Management Integration and Control	1.0	Management Integration and Control
1.1	Program Management	1.1	Program Management
1.1.1	Program Management and Administration	1.1.1	Program Management and Administration
1.1.1.1	Planning and Reviews		
1.1.2	Internal/External Program Review Support	1.5.7	Advisory and Oversight
1.2	Business Management	1.2	Business Management
1.2.1	Reserved	1.2.1	Management and Administration
1.2.2	Reserved	1.2.2	Procurement
1.2.3	Resource Management	1.2.3	Resources Management
1.2.3.1	Financial Management		
1.2.3.2	Reserved		
1.2.3.3	Special Reporting		
1.2.3.4	PI&C Contract Work Breakdown Structure (WBS)		
1.2.4	ISS Program Budget Requirements and Assessments	1.2.4	Assessments
1.2.4.1	ISS Program Budget Database Maintenance and Tracking Contract		
1.2.4.2	ISS Program Reserves/Changes Management Database		
1.2.4.3	Assessments	1.2.4	Assessments
1.2.5	Program Scheduling	1.2.5	Program Scheduling
1.2.5.1	Schedule Management		
1.2.5.2	Scheduling System Support		
1.2.5.3	Team Schedule Support		
1.2.5.4	ISS Program Planning Calendar/Certification of Flight Readiness (CoFR) Review Meeting Matrix		
1.2.5.5	Schedule Risk Assessment		
1.2.5.6	Special Schedule Trade Studies		
1.2.5.7	Propose Alternate Report Formats		
1.3	Configuration Management (CM) / Data Management and Integration (DMI)	1.3	Configuration Management / Data Integration
1.3.1	Configuration Management	1.3.1	Configuration Management
1.3.1.1	Management and Administration		
1.3.1.2	Configuration Status Accounting and Verification		
1.3.1.3	Configuration Control		

	Program Integration and Control		ISS WBS (SSP 50659, Rev C)
SOW	Title	PWBS	Title
1.3.1.4	Software Configuration Management Requirements		
1.3.2	Program Data Management and Integration	1.3.2	Program Data Integration/Vehicle Data Integration (VDI)
1.3.2.2	Program Technical Data Access		
1.4	Program Information Technology (IT)	1.4	Program Information Technology (IT)
1.4.1	IT Management and Administration	1.4.1	Information Technology Management
1.4.2	IT Systems Management and Operations	1.4.2	Systems Management and Operations
1.4.2.1	IT Life Cycle Management		
1.4.2.2	IT Security Support		
1.4.2.3	Work Authorization and User Support		
1.5	International Integration	1.5	International and External Integration
1.5.1	Reserved	1.5.1	Management and Administration
1.5.2	Reserved	1.5.2	International Programmatic Integration
1.5.3	IP Elements Integration Management	1.5.3	International Elements Integration
1.5.3.1	Systems Engineering and Integration of IP Elements		
1.5.3.2	IP Milestone Reviews		
1.5.3.3	ISS and Mission Integration		
1.6	Human Space Flight Collaboration	1.6	Human Space Flight Collaboration
2.0	ISS Systems Engineering, Analysis, and Integration	2.0	ISS Systems Engineering, Analysis, and Integration
2.1	Reserved	2.1	Management and Administration
2.2	Systems Analysis and Integration	2.2	Systems Analysis and Integration
2.2.1	Program Requirements and Interfaces	2.2.1	Requirements and Interfaces
2.2.1.1	ISS Specifications and ICDs Maintenance		
2.2.1.2	Coordination and Review of ISS Specifications, ICDs and IRDs		
2.2.1.3	Interface Control Working Group (ICWG)		
2.2.2	System Performance Analysis and Integration	2.2.2	System Performance Analysis and Integration
2.2.2.1	Mission Analysis and Integration		
2.2.2.2	Mission Requirements and Support		
2.2.2.3	System Analysis and Integration		
2.2.3	Strategic Planning, Assembly and Configuration Engineering`	2.2.3	Assembly and Configuration Definition/ Analysis
2.2.3.1	Strategic Planning and Integration		
2.2.3.2	External Configuration Analysis Modeling and Mass Properties		
2.2.3.3	Internal Volume Configuration (IVC)		

	Program Integration and Control		ISS WBS (SSP 50659, Rev C)
SOW	**Title**	**PWBS**	**Title**
3.0	Spacecraft	3.0	Spacecraft
3.1	ISS Spacecraft Management	3.1	ISS Spacecraft Management
3.1.1	Vehicle Technical Integration	3.1.1	Vehicle Management and Administration
3.1.1.1	Meeting Support		
3.2	Visiting Vehicle		
4.0	Reserved	4.0	Operations
5.0	Reserved	5.0	ISS Research Program
6.0	Safety and Mission Assurance (S&MA)	6.0	Safety and Mission Assurance (S&MA)
6.1	S&MA Management and Administration	6.1	Management and Administration
6.1.1	Mission Assurance and Risk Management (MA&RM) Plan		
6.1.2	Quality Management System		
6.1.3	Audit/Surveillance		
6.1.4	Safety and Health		
6.1.4.1	Mishap Investigating and Reporting		
6.1.5	Lessons Learned		
6.2	S&MA Integration	6.2	S&MA Integration
6.2.1	Technical Integration		
6.2.2	International Partner/Visiting Vehicle Integration		
6.2.3	Document Maintenance		
6.3	Program Risk Management	6.3	Risk Management
6.3.1	Management of Risk Process		
6.3.2	Probabilistic Risk Assessment (PRA)		
6.3.3	Document Maintenance		
6.4	ISS Safety Program	6.4	Safety
6.5	Reserved	6.5	Reliability and Maintainability (R&M)
6.6	Quality Assurance	6.6	Quality Assurance
6.6.1	Problem Reporting System Maintenance		
6.6.2	Reserved		
6.6.3	Document Maintenance		
6.7	Operations Safety	6.7	S&MA Operations
6.7.1	Documentation Verification		
6.7.2	Mission Integration and Operations Planning		
6.7.3	Reserved		
6.7.4	Launch Package Management Team Representative		
6.7.5	ISS Program Change Requests		

	Program Integration and Control		ISS WBS (SSP 50659, Rev C)
SOW	**Title**	**PWBS**	**Title**
6.7.6	Document Maintenance		

Addendum 6 – ISS Specifications / ICDs / IRDs /PIRNs / DCNs Documents List

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
NSTS-21000-IDD-ISS	Shuttle Orbiter/ International Space Station Interface Definition Document	L	X		PIRNs
SSP 30256:001	EVA Standard ICD	L	X		PIRNs
SSP 30459	ISS Interface Control Plan	L		X	CRs
SSP 41000	ISS System Spec	H		X	Compliance reports & CRs
SSP 41002	ISPR to NASA/ESA /JAXA Modules ICD (ISPR ICD)	L		X	CRs
SSP 41004, Part 1	CBM To Pressurized Elements ICD, Part 1	L	X		PIRNs
SSP 41004, Part 2	CBM To Pressurized Elements ICD, Part 2	L	X		PIRNs
SSP 41015, Part 1	Common Hatch And Mechanisms To Pressurized Elements ICD, Part 1	L	X		PIRNs
SSP 41015, Part 2	Common Hatch And Mechanisms To Pressurized Elements ICD, Part 2	L	X		PIRNs
SSP 41017, Part 1	Rack To Mini Pressurized Logistics Module ICD, Part 1	L	X		PIRNs
SSP 41017, Part 2	Rack To Mini Pressurized Logistics Module ICD, Part 2	L	X		PIRNs
SSP 41140 Part 1	Node 1 to Node 3 ICD (Part 1)	L		X	CRs
SSP 41140 Part 2	Node 1 to Node 3 ICD (Part 2)	L		X	CRs
SSP 41142 Part 1	Node Elements to Cupola Element ICD (Part 1)	L		X	CRs
SSP 41142	Node Elements to Cupola	L		X	CRs

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
Part 2	Element ICD (Part 2)				
SSP 41143, Part 1	Node Element 2 To U.S. Laboratory Element ICD, Part 1	L	X		PIRNs
SSP 41143, Part 1, Appendix D	Node 2 To Node 1 ICD, Part 1	L	X		PIRNs
SSP 41143, Part 2	Node Element 2 To U.S. Laboratory Element ICD, Part 2	L	X		PIRNs
SSP 41143, Part 2, Appendix C,	Node 3 To USL ICD	M	X		PIRNs
SSP 41147 Part 1	Node 2 to CAM ICD (Part 1)	L		X	CRs
SSP 41147 Part 2	Node 2 to CAM ICD (Part 2)	L		X	CRs
SSP 41148, Part 1	Active CBM To Passive CBM ICD, Part 1	L	X		PIRNs
SSP 41148, Part 2	Active CBM To Passive CBM ICD, Part 2	L	X		PIRNs
SSP 41150	IRD SSMB To Columbus APM	L		X	CRs
SSP 41150, Appendix D	SSMB to Columbus IRD	L		X	CRs
SSP 41151	IRD SSMB to JEM (core)	L		X	CRs
SSP 41151, Appendix D	IRD SSMB to JEM	M		X	CRs
SSP 41152	IRD ISPR ICD	L		X	CRs
SSP 41155, Part 1	Refrigerator/Freezer Rack To Mini Pressurized Logistics Module ICD, Part 1				
SSP 41155, Part 2	Refrigerator/Freezer Rack To Mini Pressurized Logistics Module ICD, Part 2				
SSP 41160	ESA Segments Specification for Columbus	L		X	Compliance reports & CRs

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
SSP 41163	Russian Segment Specification	H		X	Compliance reports & CRs
SSP 41165	Segment Specification for the JEM	L		X	Compliance reports & CRs
SSP 41167	Mobile Servicing System Segment Specification	L		X	CRs
SSP 41168:2:2	ISS System Spec Traceability Report	M		X	Traceability
SSP 41168:3:1	Columbus Segment Spec Traceability Report	L		X	Traceability
SSP 41168:3:10	CAM Segment Spec Traceability Report	L		X	Traceability
SSP 41168:3:11	ATV Segment Spec Traceability Report	L		X	Traceability
SSP 41168:3:12	N3 Spec Traceability Report	L		X	Traceability
SSP 41168:3:13	Cupola Segment Spec Traceability Report	L		X	Traceability
SSP 41168:3:4	Russian Segment Traceability Report	M		X	Traceability
SSP 41168:3:6	JEM Segment Spec Traceability Report	L		X	Traceability
SSP 41168:3:7	MSS Segment Traceability Report	L		X	Traceability
SSP 41168:3:9	HTV Segment Spec Traceability Report	L		X	Traceability
SSP 41174	ISS ICWG Operating Procedures	L		X	CRs
SSP 42000	SSMB To JEM ICD	L		X	CRs
SSP 42001	SSMB To Columbus APM ICD	L		X	CRs
SSP 42003, Part 1	SSMB To MSS ICD, Part 1	L	X		PIRNs
SSP 42003, Part 2	SSMB To MSS ICD, Part 2	L	X		PIRNs
SSP 42004, Part 1	MSS To User (Generic) ICD, Part 1	L	X		PIRNs
SSP 42004,	MSS To User (Generic)	L	X		PIRNs

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
Part 2	ICD, Part 2				
SSP 42007 Part 1	USOS Segment to Italian MPLM ICD (Part 1)	M		X	CRs
SSP 42007 Part 2	USOS Segment to Italian MPLM ICD (Part 2)	M		X	CRs
SSP 42097, Part 1, App E	PMA to Node 3 ICD (Part 1)	L		X	CRs
SSP 42097, Part 2, App E	PMA to Node 3 ICD (Part 2)	L		X	CRs
SSP 42097, Part 1	PMA 2 & 3 To U.S. Pressurized Elements Core (Node 2 To PMA2) ICD, Part 1	L	X		PIRNs
SSP 42097, Part 2	PMA 2 & 3 to U.S. Pressurized Elements core (Node 2 to pma2) ICD, Part 2	L	X		PIRNs
SSP 42121, Part 1	USOS PMA-1 to FGB Part 1	L		X	CRs
SSP 42121, Part 2	USOS PMA-1 to FGB Part 2	L		X	CRs
SSP 42124, Part 1	ITS S0 To Node 2 ICD, Part 1	L	X		PIRNs
SSP 42124, Part 2	ITS S0 To Node 2 ICD, Part 2	L	X		PIRNs
SSP 42137 Part 1	ITS S0 to Node 3 ICD (Part 1)	L		X	CRs
SSP 42137 Part 2	ITS S0 to Node 3 ICD (Part 2)	L		X	CRs
SSP 50094	NASA/RSA Joint Specs/Standards for the Russian Segment	M		X	CRs
SSP 50104	Portable Breathing Apparatus Standard ICD	L	X		PIRNs
SSP 50129	Interface Requirements Document International Space Station (ISS) To Automated Transfer Vehicle (ATV)	M		X	CRs
SSP 50135	ISS Interface Control	L		X	CRs

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
	Plan – NASA/RSA				
SSP 50227, Part 1	Russian Segment (SSP, SM, And FGB) To PDGF/SSRMS ICD, Part 1	M		X	CRs
SSP 50227, Part 2	Russian Segment (SSP, SM, And FGB) To PDGF/SSRMS ICD, Part 2	M		X	CRs
SSP 50251, Part 1	ARIS To Pressurized Element ICD, Part 1	L	X		PIRNs
SSP 50251, Part 2	ARIS To Pressurized Element ICD, Part 2	L	X		PIRNs
SSP 50273	HTV Segment Specification	M		X	Compliance reports & CRs
SSP 50309 Part 1	Node 3 to Hab ICD (Part 1)	L		X	CRs
SSP 50309 Part 2	Node 3 to Hab ICD (Part 2)	L		X	CRs
SSP 50310	Atmosphere Revitalization Subsystem (ARS) Rack To Node 3 ICD	L		X	CRs
SSP 50312	CAM Segment Specification	Zero		X	Compliance reports & CRs
SSP 50318	PIDS for Node 3	L		X	Compliance reports & CRs
SSP 50333	Cupola Segment Specification	L		X	CRs
SSP 50357	Node 2 to Crew Quarters ICD	L		X	CRs
SSP 50438 Part 1	ISS to HTV ICD (Part 1)	M		X	CRs
SSP 50438 Part 2	ISS to HTV ICD (Part 2)	M		X	CRs
SSP 50439	ESA Segment Specification for the ATV	M		X	CRs

Document Number	Title	Activity Level	Prime Man-aged	PI&C Man-aged	Work Type
SSP 50469	OCS to RWS ICD	M		X	CRs
SSP 50699-03	ISS Certification Baseline Document, Volume 3	M		X	CRs
SSP 50722	HTV to Battery ICD	M		X	CRs
SSP 50786 Part 1	USOS to MLM ICD (Part 1)	M		X	CRs
SSP 50786 Part 2	USOS to MLM ICD (Part 2)	M		X	CRs
SSP 50808	ISS to COTS IRD	H		X	CRs
SSP 50809	ISS to COTS ICD for SpaceX	H		X	CRs
SSP 50831	CUCU IRD	H		X	CRs
SSP 50832	COTS Cargo IRD	H		X	CRs
SSP TBD	ISS to OBSS ICD	M	X		PIRNs
SSP TBD	ISS to External Carrier (TBD) ICD	M	X		PIRNs
SSP XXXXX	New Partner ICDs (Orbital)	H		X	CRs
SSP XXXXX	New Partner ICDs (TBD December 2009)	H		X	CRs
SSP XXXXX	CEV ICD	H		X	CRs

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]

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
52.246-4	AUG 1996	INSPECTION OF SERVICES—FIXED-PRICE

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

CLAUSE NUMBER	DATE	TITLE
None included by reference		

E.2 FAR 52.246-11 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below:

Quality Standard	Description of Quality Standard
SAE AS 9100	Quality Systems-Aerospace-model for Quality Assurance in Design, Development, Production, Installation and Servicing

(End of clause)

E.3 NFS 1852.246-72 MATERIAL INSPECTION AND RECEIVING REPORT (AUG 2003) *(Not applicable to reports that are to be delivered)*

(a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in 6 (including original) copies, 1 original and 5 copies.

(b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 1846.6. The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope, which shall be securely attached to the exterior of the package in the most protected location.

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

(End of clause)

E.4 SURVEILLANCE PLAN

In accordance with FAR 46.103(a), Contracting Office Responsibilities, and FAR 37.604, Quality Assurance Surveillance Plans:

A Surveillance Plan will be developed and implemented by the Contracting Officer's Technical Representative as a part of the contract administration and monitoring activities conducted to ensure that the Government receives products and services that conform to contract requirements. The nature and extent of surveillance contemplated in this plan will be based, in part, on the content described in the Annual Performance Feedback Plan (Evaluation of: Price, Schedule, Quality, and Timeliness) (reference Section H.7) and the Surveillance Plan (Invoices, Program Management Reviews, Performance Standards/Metrics, Contract Deliverables) (reference Attachment J-5).

(End of clause)

[END OF SECTION]

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
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		

F.2 PERIOD OF PERFORMANCE

The period of performance of this contract shall be from **October 1, 2009, through September 30, 2012.** 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.

(End of clause)

F.3 PLACE OF PERFORMANCE

The primary effort required under this contract shall be performed at or near the Lyndon B. Johnson Space Center (JSC) and at other locations as covered by the Statement of Work (SOW).

(End of clause)

F.4 FAR 52.217-9OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within **30 days prior to the date set forth in Clause F.2, Period of Performance**; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least **60 days** before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed **5 Years**.

(End of clause)

OPTION 1: (October 1, 2012 – September 30, 2013)

A. Clause B.2, Contract Value, will be modified as follows:

1. Indefinite Delivery Indefinite Quantity (IDIQ) – Limitations not to exceed amount is increased by $XX M.

2. Indefinite Deliver Indefinite Quantity (IDIQ) Travel and Materials not to exceed amount is increased by $1,000,000.

B. Clause F.2 is hereby deleted and replaced by the following Clause F.2:

F.2 PERIOD OF PERFORMANCE

The period of performance of this contract shall be from **October 1, 2009, through September 30, 2013.** 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.

OPTION 2: (October 1, 2013 – September 30, 2014)

A. Clause B.2, Contract Value, will be modified as follows:

1. Indefinite Delivery Indefinite Quantity (IDIQ) – Limitations not to exceed amount is increased by $XX M.

2. Indefinite Deliver Indefinite Quantity (IDIQ) Travel and Materials not to exceed amount is increased by $1,000,000.

B. Clause F.2 is hereby deleted and replaced by the following Clause F.2:

F.2 PERIOD OF PERFORMANCE

The period of performance of this contract shall be from **October 1, 2009, through September 30, 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.

(End of clause)

F.5 SHIPPING INSTRUCTIONS

All documentation shall be shipped to the addresses cited in Attachment J-1, 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: __TBD___
For reissue to:	_____ (Name)(Mail Code)(Bldg.)(Rm.)

(End of clause)

F.6 PHASE-IN AND CLOSE-OUT

(a) Contractor Phase-In. 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 not exceed 60 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 period. The Contractor shall provide a Phase-In Plan in accordance with Section L, Part II – Instructions For Proposal Preparation.

The total firm fixed price of Phase-In is identified in Clause B.2 "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.

(b) 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. The Contractor shall accomplish Close-Out in accordance with DRD PIC-PR-02, Contract Close-out Plan. Contractor's cooperation and compliance with this clause will be considered as part of the final Annual Performance Feedback pursuant to Clause H.7, Annual Performance Feedback.

(End of clause)

[END OF SECTION]

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
52.232-1	APR 1984	PAYMENTS

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

CLAUSE NUMBER	DATE	TITLE
1852.227-86	DEC 1987	COMMERCIAL COMPUTER SOFTWARE LICENSING

G.2 FAR 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (SEPT 2007)

(a) The Contractor shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.

(b) The Contractor shall insert this clause in all subcontracts when the subcontractor is required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system.

(End of clause)

G.3 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 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.4 NFS 1852.242-70 TECHNICAL DIRECTION (SEPT 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.

(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.5 NFS 1852.245-71 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (SEPT 2007) ALTERNATE I (SEPT 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 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 user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.

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

(i) The Contractor shall not utilize the installation's central receiving facility for receipt of Contractor-acquired property. However, the Contractor shall provide listings suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.

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

(iii) The Contractor shall establish a record of the property as required by FAR 52.245-1, Government Property, and furnish to the Industrial Property Officer a DD Form 1149, Requisition and Invoice/Shipping Document, (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the Contractor. The Contractor is accountable for all Contractor-acquired property until the property is transferred to the Government's accountability.

(iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the Contracting Officer and notification of the Industrial Property Officer. The property shall be considered Government furnished and the Contractor shall assume accountability and financial reporting responsibility. The Contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR 52.245-1, Government Property, until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by Contractors.

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

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

__X__(1) Office space, work area space, and utilities. Government telephones are available for official purposes only.

__X__(2) Office furniture.

__X__(3) Property listed in Section C, Addendum 4, List of Installation Accountable Property and Services Table(s) 1 – 7.

(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.

__X__ (5) Publications and blank forms stocked by the installation.

__X__(6) Safety and fire protection for Contractor personnel and facilities.

__X__ (7) Installation service facilities: Section C, Addendum 4 – List of Installation Accountable Property and Services, page C-A4-1.

_X_ (8) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

_X_ (9) Cafeteria privileges for Contractor employees during normal operating hours.

_X_ (10) Building maintenance for facilities occupied by Contractor personnel.

_X_ (11) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

(End of clause)

G.6 NFS 1852.245-73 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (SEPT 2007)

(a) The Contractor shall submit annually a NASA Form (NF) 1018, NASA Property in the Custody of Contractors, in accordance with the provisions of 1845.505-14, the instructions on the form, subpart 1845.71, and any supplemental instructions for the current reporting period issued by NASA.

(b) (1) Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.

(2) The Contractor shall mail the original signed NF 1018 directly to the cognizant NASA Center Deputy Chief Financial Officer, Finance, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(3) One copy shall be submitted (through the Department of Defense [DoD] Property Administrator if contract administration has been delegated to DoD) to the following address: [Insert name and address of appropriate NASA Center office], unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(c) (1) The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. Some activity may be estimated for the month of September, if necessary, to ensure the NF 1018 is received when due. However, Contractors' procedures must document the process for developing these estimates based on

planned activity such as planned purchases or NASA Form 533 (NF 533 Contractor Financial Management Report) cost estimates. It should be supported and documented by historical experience or other corroborating evidence, and be retained in accordance with FAR Subpart 4.7, Contractor Records Retention. Contractors shall validate the reasonableness of the estimates and associated methodology by comparing them to the actual activity once that data is available, and adjust them accordingly. In addition, differences between the estimated cost and actual cost must be adjusted during the next reporting period. Contractors shall have formal policies and procedures, which address the validation of NF 1018 data, including data from subcontractors, and the identification and timely reporting of errors. The objective of this validation is to ensure that information reported is accurate and in compliance with the NASA FAR Supplement. If errors are discovered on NF 1018 after submission, the Contractor shall contact the cognizant NASA Center Industrial Property Officer (IPO) within 30 days after discovery of the error to discuss corrective action.

(2) The Contracting Officer may, in NASA's interest, withhold payment until a reserve not exceeding $25,000 or 5 percent of the amount of the contract, whichever is less, has been set aside, if the Contractor fails to submit annual NF 1018 reports in accordance with 1845.505-14 and any supplemental instructions for the current reporting period issued by NASA. Such reserve shall be withheld until the Contracting Officer has determined that NASA has received the required reports. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(d) A final report shall be submitted within 30 days after disposition of all property subject to reporting when the contract performance period is complete in accordance with (b)(1) through (3) of this clause.

(End of clause)

G.7 NFS 1852.245-75 PROPERTY MANAGEMENT CHANGES (SEPT 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.8 NFS 1852.245-76 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (SEPT 2007) (DEVIATION)

(a) For performance of work under this contract, the Government will make available Government property identified below or in, Section C, Addendum 4 – List of Installation Accountable Property and Services, Table 8 – GFE / Alternate Location, of this contract on a no-charge-for-use basis pursuant to the clause at FAR 52.245-1, Government Property. The Contractor shall use this property in the performance of this contract within the physical borders of the installation which may include buildings and space owned or directly leased by NASA in close proximity to the installation, 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		
See Section C Addendum 4 – List of Installation Accountable Property and Services, Table 8 – GFE / Alternate Location				Manufacturer	Model	Serial Number

(End of clause)

G.9 NFS 1852.245-82 OCCUPANCY MANAGEMENT REQUIREMENTS (SEPT 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

[*Insert any additional Center occupancy requirements here*]

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

(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 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 (NFNMS) for acceptance, review, concurrence and approval purposes. When an authorized company official requests a JSC or WSTF badge for site access, he/she is certifying that steps have been taken to ensure that its Contractor or subcontractor employees, visitors, or representatives will not be given access to export-controlled or classified information for which they are not authorized. 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 NFNMS. Unescorted access will not be granted unless a favorable National Agency Check (NAC) has been completed by the JSC Security Office, and an approved NASA Foreign National Visitor Security/ Technology Control Plan (STTCP), (previously called the Access Control Plan) has been submitted and approved.

(c) The Contractor agrees that it will not employ for the performance of work onsite at 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 manner in accordance with instructions provided by JSC or any other Center to be visited.

(End of clause)

G.11 JSC 52.242-92 IDENTIFICATION OF EMPLOYEES (OCT 2006)

At all times while on Government property, the Contractor, subcontractors, their employees, and agents shall wear badges which will be issued by the NASA Badging 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.

(End of clause)

G.12 ADVANCED AGREEMENT ON PAYMENT OF PHASE-IN PRICE

The Contractor shall be entitled to payment for the phase-in/transition period (from the date of contract award through contract start date) in the Firm-Fixed Price amount specified in Clause B.2 to be received in payments for the following milestones upon concurrence from the Contracting Officer that each milestone has been accomplished:

Milestone 1: Staffing **$TBD**

The Contractor has hired all personnel proposed as *key* personnel and all of these personnel are performing phase-in work (at the levels proposed); and at least 90% of all personnel proposed to perform all contract requirements (e.g. full time, half time, etc.) have provided written acceptance of firm job offers.

EVIDENCE: Summary report shall be provided with the invoice. Summary report shall consist of acceptance letters for the key personnel and summary of offers made and accepted by labor category for all other personnel proposed to perform all contract requirements.

Milestone 2: ISS Applications Competency **$TBD**

The Contractor has operational competency with the following ISS Applications or equivalent.

Reference: Section C, Addendum 4	Reference: Section C, Addendum 2
1. SAPHIRE	9. ExCATT
2. CSD	10. BASEPLATE
3. EDMS	11. TRAM
4. COSMOS	12. STRAP
5. PRACA	13. TPS
6. IRMA	14. IEBT
7. ORUDD	15. CEBT
8. SANMIS	16. HITS
	17. MODGEN

EVIDENCE: Summary report shall be provided with the invoice. Summary report shall identify names of individuals competent with each corresponding application. A minimum of one individual shall be provided for each application. Competency is defined as training, certification, and/or equivalent experience on each system.

Milestone 3: Major Subcontracts **$TBD**

The Contractor has all major subcontracts in place and ready to perform contract requirements.

EVIDENCE: Copies of the signature page of all major subcontracts for the PI&C follow-on contract shall be submitted with the invoice.

Milestone 4: Plans and Other Data Deliverables **$TBD**

The Contractor has completed and submitted all of the following plans and other Data Deliverables for NASA review and/or approval (per Data Requirements Description [DRD]):

1. PIC-CM-01, Configuration Management Plan
2. PIC-IT-03, Information Technology (IT) Security Plan
3. PIC-PM-01, PI&C Management Plan
4. PIC-PM-03, Certification of Flight Readiness (CoFR) Plan
5. PIC-PR-03, Wage/Salary and Fringe Benefit
6. PIC-SA-01, Mission Assurance and Risk Management Plan

EVIDENCE: Government acceptance of above DRDs.

Milestone 5: Financial Report **$TBD**

The Contractor has implemented financial reporting system fully capable of accurately reporting in accordance with DRD PIC-PC-01 and submitting proper invoices for payment of completed work.

EVIDENCE: Government acceptance of DRD PIC-PC-01 deliverable.

Milestone 6: Definitization of Contract Year 1 (FY 2010) Task Orders **$TBD**

The Contractor has provided all task order plans in accordance with DRD PIC-PR-05, and complied with clause NFS1852.216-80, Task Order Procedures.

EVIDENCE: Government acceptance of DRD PIC-PR-05 and contract year 1 (FY 2010) task orders.

(End of clause)

G.13 PAYMENTS - FIXED RATE IDIQ

The Contractor is authorized to submit invoices directly to the NASA Contracting Officer. The Contracting Officer will approve and forward the approved invoice to the NASA Paying Office:

NASA Shared Services Center (NSSC)
Financial Management Division (FMD) – Accounts Payable
Bldg 111, C. Road
Stennis Space Center, MS 39529
Email: NSSC-AccountsPayable@nasa.gov **(ENCRYPTED ONLY)**
Fax: 866-209-5415

As prescribed in 52.232-1, Payments, the Government will pay the Contractor upon the submission of invoice approved by the Contracting Officer as follows:

(a) Direct Labor

(1) Direct Labor is defined as the direct hours delivered which meet the labor categories specified in the contract that are –

(i) Performed by the Contractor;

(ii) Performed by the subcontractors;

(iii) Transferred between divisions, subsidiary, or affiliates of the Contractor under a common control.

(2) The amounts shall be computed by multiplying the appropriate hourly fixed rates prescribed in the schedule by the number of direct labor hours performed.

(3) Direct labor shall be paid for all direct labor performed on the contract that meets the labor qualifications specified in the contract authorized in each IDIQ task order. Labor hours incurred in completion of the IDIQ tasks for which labor qualifications were specified in the contract will not be paid to the extent the work is performed by employees that do not meet the qualifications specified in the contract, unless specifically authorized by the Contracting Officer.

(4) The hourly rates shall be invoiced in accordance with rates identified in B.4, Indefinite Delivery/Indefinite Quantity (IDIQ) Orders, and fractional parts of an hour shall be payable on a prorated basis.

(5) Invoices may be submitted once each month (or at more frequent intervals, if approved by the Contracting Officer), to the Contracting Officer.

(6) The Contractor shall substantiate invoices (including any subcontractor hours reimbursed at the hourly rate in the schedule) by evidence of actual payment and by -

(i) Individual daily job timekeeping records;

(ii) Records that verify the employees meet the qualifications for the labor categories specified in the contract; or

(iii) Other substantiation approved by the Contracting Officer.

(7) Promptly after receipt of each substantiated invoice, the Government shall, except as otherwise provided in this contract, and subject to the terms of paragraph (d) of this clause, pay the invoice as approved by the Contracting Officer.

(8) Unless the schedule prescribes otherwise, the hourly rates in the schedule shall not be varied by virtue of the Contractor having performed work on an overtime basis. Overtime rates are provided in the schedule in Clause B.4, Indefinite Delivery/Indefinite Quantity (IDIQ) Orders. Overtime work shall be approved in advance by the Contracting Officer. The premium portion of the overtime rates shall be reimbursable only to the extent the overtime is approved by the Contracting Officer.

(9) The Contractor shall provide evidence to the Government that required Payroll taxes have been paid, semi-annually (beginning 6-months after contract award), to the Contracting Officer, or upon the request of the Contracting Officer.

(b) Travel and Materials (Allowable and Allocable)

(1) The Contracting Officer will determine allowable payments for material and travel cost in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract.

(2) The Government will reimburse the Contractor for allowable cost of materials and travel provided that the Contractor:

(i) Obtained materials at the most advantageous prices with due regard to securing prompt delivery of satisfactory service;

(ii) Takes all cash and trade discounts, rebates, allowances, credits, salvage, commissions, and other benefits;

(iii) Excludes profit to the Prime Contractor.

(iv) Cost incurred does not exceed the authorized NTE amount authorized in each IDIQ task order.

(v) Includes a summary of travel and material expenditures during the invoice period and cumulative to date by task order number. Detailed records shall be maintained by the Contractor.

(c) Ceiling Price

(1) The Government will not be obligated to pay the Contractor any amount in excess of the ceiling price in each IDIQ task order, and the Contractor shall not be obligated to continue performance if to do so would exceed the ceiling price set forth in the IDIQ task order(s), unless and until the Contracting Officer notifies the Contractor in writing that the ceiling price has been increased and specifies in the notice a revised ceiling that shall constitute the ceiling price for performance.

(d) Contractor's Invoice

(1) The Contractor shall prepare and submit invoices to the Contracting Office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(3)(i) through (a)(3)(x) of 52.232-25, Prompt Payment.

(End of clause)

G.14 TRAVEL

Domestic and International travel may be required in performance of this contract. Specific travel requirements will be identified and funded in each IDIQ task order as such need arises. The Contractor has no authority to incur travel costs without explicit written approval of the Contracting Officer. The Government shall include the applicable NTE travel amount in each IDIQ task order. Under no circumstance shall the travel cost be paid by the Government other than that authorized in writing by the Contracting Officer.

Prior to departure for Domestic and/or International travel, the Contractor shall obtain written (electronic approval acceptable) approval from the Technical Monitor Representative (TMR) and/or Contracting Officer Technical Representative (COTR) respectively, and ensure that written authorization from the Contracting Officer has been obtained.

All travel costs shall be supported with details such as arrival and departures, locations, number of trips, number of people per trip, duration of trip, and any other miscellaneous travel costs. The Contractor shall attempt to utilize the General Services Administration (GSA) travel rates found at www.gsa.gov whenever possible.

(End of clause)

G.15 RUSSIAN TRAVEL

The Contractor shall comply with Management Directive, ISSP-MD-114, Guidelines for Travel Support of ISS Program Meetings.

(End of clause)

G.16 ADMINISTRATIVE PROVISIONS RELATING TO INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY AND SERVICES

(a) Requests for specific support to be furnished by the Government pursuant to the "Installation-Provided Government Property" clause and the "List of Installation-Accountable Government Property and Services" clause shall be made by the Contractor to the Contracting Officer in accordance with the current issue of JPG 5151, Support Contractor Handbook. The completion of forms, needed to obtain support, shall be accomplished by the Contractor.

(b) If the Contractor requests property or services which are not available or cannot be made available from the Government to meet the Contractor's schedule needs, the requesting document will be canceled and returned to the Contractor. The Contractor will thereafter be responsible for acquiring the needed items or services.

(c) If the Contractor initiates a transfer of accountability (DD Form 1149) from the Contractor to the Government, the Contractor shall continue to account for the property in question until Contractor receives notification that the form has been signed by the JSC SEMO or his/her authorized representative. If the Contractor does not receive such notice in a reasonable time, Contractor will make inquiry through the Property Administrator as to the status of the transfer.

(End of clause)

G.17 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)

[END OF SECTION]

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

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 AND ALTERNATE 1 (FEB 2000) AND PARA (B) [INSERT: "JOHNSON SPACE CENTER"]
1852.228-76	DEC 1994	CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES
1852.246-70	MAR 1997	MISSION CRITICAL SPACE SYSTEMS PERSONNEL RELIABILITY PROGRAM

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 informtaion
- Reference Clause H.8, ISS Contract Strategy Conflict of Interest Agreement.

(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.

(c) Within 10 calendar days after receipt of the Contracting Officer's request, the Contractor shall submit a task plan conforming to the request.

(d) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as a minimum, the following:

(1) Date of the order.

(2) Contract number and order number.

(3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.

(4) Performance standards, and where appropriate, quality assurance standards.

(5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.

(6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.

(7) Delivery/performance schedule including start and end dates.

(8) If contract funding is by individual task order, accounting and appropriation data.

(e) The Contractor shall provide acknowledgment of receipt to the Contracting Officer within 3 calendar days after receipt of the task order.

(f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.

(g) The Contracting Officer may amend tasks in the same manner in which they were issued.

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

(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.

(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 not required to include in any report an expression of opinion as to the fault or negligence of any employee. In addition, service Contractors (excluding construction contracts) shall provide quarterly reports

specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract schedule.

(e) The Contractor shall investigate all work-related incidents, accidents, and Close Calls, to the extent necessary to determine their causes and furnish the Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.

(f)(1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. When the Contracting Officer becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. The Contractor shall promptly take and report any necessary corrective action.

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

(g) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (g) and any applicable schedule provisions and clauses, with appropriate changes of designations of the parties, in all solicitations and subcontracts of every tier, when one or more of the following conditions exist:

(1) The work will be conducted completely or partly on premises owned or controlled by the Government.

(2) The work includes construction, alteration, or repair of facilities in excess of the simplified acquisition threshold.

(3) The work, regardless of place of performance, involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value equipment or property, and the hazards are not adequately addressed by Occupational Safety and Health Administration (OSHA) or Department of Transportation (DOT) regulations (if applicable).

(4) When the Contractor (or subcontractor or supplier) determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.

(h) The Contractor (or subcontractor or supplier) may exclude the provisions of paragraph (g) from its solicitation(s) and subcontract(s) of every tier when it determines that the clause is not necessary because the application of the OSHA and DOT (if applicable) regulations constitute adequate safety and occupational health protection. When a determination is made to exclude the provisions of paragraph (g) from a solicitation and subcontract, the Contractor must notify and provide the basis for the determination to the Contracting Officer. In subcontracts of every tier above the micro-purchase threshold for which paragraph (g) does not apply, the Contractor (or subcontractor or supplier) shall insert the substance of paragraphs (a), (b), (c), and (f) of this clause.

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

(j) The Contractor shall continually update the safety and health plan when necessary. In particular, the Contractor shall furnish a list of all hazardous operations to be performed, and a list of other major or key operations required or planned in the performance of the contract, even though not deemed hazardous by the Contractor. NASA and the Contractor shall jointly decide which operations are to be considered hazardous, with NASA as the final authority. Before hazardous operations commence, the Contractor shall submit for NASA concurrence --

(1) Written hazardous operating procedures for all hazardous operations; and/or

(2) Qualification standards for personnel involved in hazardous operations.

(End of clause)

H.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 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.

List here the personnel and/or facilities considered essential:

FACILITIES:
TBD

KEY PERSONNEL:
TBD

(End of clause)

H.6 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 [insert date of offer] are hereby incorporated by reference in this resulting contract.

(End of clause)

H.7 ANNUAL PERFORMANCE FEEDBACK

(a) As part of the Government's surveillance activities, a periodic performance feedback will be conducted under this contract. This information will be provided to the Contractor for corrective actions and performance improvement. In addition, performance feedback may be used by the Government to provide a basis for decisions leading to the exercising of options for continued performance.

(b) The Government will provide the Contractor with the performance feedback annually at the end of each contract fiscal year, in accordance with NFS 1842.15 (NASA Form 1680) and DRD PIC-PM-02, Integrated Management Review Products (IMRPs).

(c) In the Price performance area, the efficient use of skill mix utilized and hours expended in performance of task orders will be rated more favorably.

(End of clause)

H.8 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 implementation.

(2) The Contractor will perform no more than 49% (total contract costs) of the work as a subContractor under any of the implementing contracts.

(3) The Contractor shall not, and will not, make the day-to-day Program Management decisions under any of the implementing 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)

H.9 ASSOCIATE CONTRACTOR AGREEMENT FOR ISS

(a) The success of the ISS Program is dependent on the efforts of multiple Contractors. The PI&C Contractor is a key participant. The other contracts of the key participating Contractors are:

- Mission Integration Contract
- Cargo Mission Contract
- United States On-Orbit Segment (USOS) Completion and Sustaining Engineering Contract
- Space Program Operations Contract (SPOC)

- Checkout, Assembly, and Payload Processing Services (CAPPS)
- Integrated Mission Operations Contract (IMOC)

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.

(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 performance feedback process, as defined in the Annual Performance Feedback process for the PI&C contract.

(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.10 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 Johnson Space Center (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:

(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 (JSC, Marshall Space Flight Center [MSFC] or Kennedy Space Center [KSC]) 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

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 Sates Munitions List regulations	X		X
9) The technical rationale	X		X

Required Information	License Application	Use of License	Use Exemption/Exception
used to support the classification			
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 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.11 GOVERNMENT INSIGHT

(a) Definitions. For the purpose of this contract, the following definitions apply:

"Insight," as used in this clause, means technical visibility into the Program, maintained through audit, surveillance, assessment of trends and metrics, software independent verification and validation, the flight readiness review process, and review or independent assessment of out-of-family anomalies occurring in any phase of the Program.

"Surveillance," as used in this clause means continual monitoring and verification of the status of manufacturing, testing, and processing of Station hardware, software and operations preparations to ensure that requirements are being fulfilled. Items to be monitored and verified are selected—this is not an all inclusive activity.

"Audit," as used in this clause, means the implementation of procedures and requirements of the NASA Engineering Quality Audit (NEQA) or other equivalent audit techniques used to perform periodic audit of all aspects of processes and procedures required to manufacture, assemble, test, and process hardware for flight. Audits may include an examination of all disciplines and tasks which are involved with or support ISS, hardware and software production and maintenance, safety and quality assurance, logistics, procurements and operations. These descriptions are illustrative only and shall not be construed as any limitation on the Government's right to conduct an audit of the Contractor and subcontractors to determine performance on this contract.

(b) The Government shall have the right to audit the Contractor and subcontractors in accordance with applicable clauses within this contract. One purpose of these audits is to afford the Government insight into and understanding of Contractor and selected subcontractor processes and procedures to determine whether the processes or procedures (1) adversely affect safety; (2) are not within contract performance standards; or (3) adversely affect future launch schedules.

(c) The Government may schedule fact-finding meetings with the Contractor and subcontractors as necessary to discuss issues requiring Government insight. Scheduling and format of these meetings shall indicate whether exchange of information will be required, and the number and expertise of Contractor/subcontractor personnel who shall attend the meetings. When

requested by the Contracting Officer or designee, the Contractor and subcontractors shall provide necessary support to the Government when it audits the Contractor or subcontractor and for the Government-Contractor/subcontractor meetings. The purpose of these meetings is to understand the findings of the Government audits. The parties understand and agree that no direction from the Government or constructive change to the contract shall result from any of these meetings.

(End of clause)

H.12 REPROCUREMENT DATA PACKAGE

The Contractor shall provide a Data Reprocurement Package in accordance with DRD PIC-PR-04.

(End of clause)

H.13 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)

H.14 SUBCONTRACTING WITH RUSSIAN ENTITIES FOR GOODS OR SERVICES

(a) Definitions: In this provision:

(1) The term "Russian entities" includes 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 "Organization or entity under the jurisdiction or control of Roscosmos" means an organization or entity that:

(i) Was made part of the Russian Federal Space Agency upon its establishment on February 25, 1992;

(ii) Was transferred to the Russian Federal Space Agency by decree of the Russian Government on July 25, 1994, or May 12, 1998;

(iii) Was or is transferred to the Russian Aviation and Space Agency or Russian Federal Space Agency by decree of the Russian Government at any other time before, on, or after March 14, 2000; or

(iv) Is a joint stock company in which the Russian Aviation and Space Agency or Russian Federal Space Agency has at any time held controlling interest.

(3) The term "extraordinary payments" means payments in cash or in kind made or to be made by the U.S. Government prior to January 1, 2012, for work to be performed or services to be rendered prior to that date necessary to meet U.S. 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 provision implements the Iran and Syria Nonproliferation Act (the Iran Nonproliferation Act as amended by the Iran Nonproliferation Amendments Act of 2005) to allow extraordinary payments prior to January 1, 2012 to Russian entities

in connection with the ISS. 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 consent from the Contracting Officer. In order to obtain this written consent to subcontract with any Russian entity as defined in paragraphs (a), the Contractor shall provide the Contracting Officer with the following information related to each planned new subcontract and any change to an existing subcontract with entities that fit the description in paragraphs (a):

(i) 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.

(ii) The Contractor shall provide certification that the subcontracting entity is not on any of the denied parties, specially designated nationals and entities of concern lists found at: http://www.hq.nasa.gov/office/oer/nasaecp/Welcome.html

Denied Parties, Specially Designated Nationals and Entities of Concern
BIS's Listing of Entities of Concern
BIS's List of Denied Parties
Debarred Parties Listing
OFAC's List of Specially Designated Nationals *(Adobe PDF format)*
List of Unverified Persons in Foreign Countries

(2) Unless relief is granted by the Contracting Officer, the information necessary to obtain consent to subcontract shall be provided to the Contracting Officer 20 business days prior to executing any planned subcontract with entities defined in paragraph (a).

(d) After receiving consent to subcontract, the Contractor shall provide the following information to the Contracting Officer each time an extraordinary 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

(4) The date of the payment

(e) The Contracting Officer may direct the Contractor to provide additional information for any other prospective or existing subcontract at any tier. The Contracting Officer may direct the Contractor to terminate for the convenience of the Government any subcontract at any tier with an entity described in paragraphs (a), subject to an equitable adjustment.

(f) Notwithstanding FAR 52.216-7, Allowable Cost and Payments, on or after January 1, 2012, the Contractor shall be responsible to make payments to entities defined in paragraphs (a) of this provision. Any subcontract with entities defined in paragraph (a), therefore, should be completed in sufficient time to permit the U.S. Government to make extraordinary payments on subcontracts with Russian entities on or before December 31, 2011.

(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 consent from the Contracting Officer to enter into any tier subcontract that involves entities defined in paragraph (a).

(End of clause)

H.15 TASK ORDER AMENDMENTS

Contracting Officer approval must be obtained by way of an approved task order amendment in cases where the Contractor will either (1) exceed the maximum authorized dollars or, (2) exceed total authorized hours or, (3) the task order does not contain a specified skill type, or skill level needed to perform the task order. Additional criteria for task order amendments may be provided by the Contracting Officer in each individual task order.

(End of clause)

H.16 NFS 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992) ALTERNATE I (SEPTEMBER 1989)

(a) The on-site Government personnel observe the following holidays:

New Year's Day

Labor Day

Martin Luther King, Jr.'s Birthday

Columbus Day

President's Day

Veterans Day

Memorial Day

Thanksgiving Day

Independence Day

Christmas Day

Any other day designated by Federal statute, Executive order, or the President's proclamation.

(b) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(c) On-site personnel assigned to this contract shall not be granted access to the installation during the holidays in paragraph (a) of the clause, except as follows: 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. If the Contractor's on-site personnel work during a holiday other than those in paragraph (a) of this clause, no form of holiday or other premium compensation shall be reimbursed as either a direct or indirect cost. However, this does not preclude reimbursement for authorized overtime work that would have been overtime regardless of the status of the day as a holiday.

(d) The Contractor shall place identical requirements, including this paragraph, in all subcontracts that require performance of work on-site, unless otherwise instructed by the Contracting Officer.

(End of clause)

JSC 52.242-94 ADMINISTRATIVE LEAVE (SEP 2008)

(a) When the NASA installation grants administrative leave to its Government employees (e.g., as a result of inclement weather, potentially hazardous conditions, or other special circumstances), the following personnel should also be dismissed upon notification of a center closure provided by the Contracting Officer:

(1) Contractor personnel working on-site; and

(2) Contractor personnel dedicated to the contract effort who are

(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.).

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 recommence.

(c) The Contractor shall include this clause in all services subcontracts that include personnel in the categories described in paragraph (a) above.

(End of clause)

[END OF SECTION]

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	SEPT 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
52.203-11	SEPT 2007	CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
52.203-12	SEPT 2007	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
52.203-13	DEC 2008	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT
52.204-2	AUG 1996	SECURITY REQUIREMENTS
52.204-4	AUG 2000	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER
52.204-7	APR 2008	CENTRAL CONTRACTOR REGISTRATION
52.204-9	SEPT 2007	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL
52.209-6	SEPT 2006	PROTECTING THE GOVERNMENT'S INTEREST

CLAUSE NUMBER	DATE	TITLE
		WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
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
52.215-15	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) [INSERT ALT III: 3.5" DISK(s), USB Port(s), OR CD-ROM(s)]
52.216-7	DEC 2002	ALLOWABLE COST AND PAYMENT
52.216-18	OCT 1995	ORDERING [See Clause F.2 Period of Performance]
52.216-19	OCT 1995	ORDER LIMITATIONS [(a) $1,000, (b)(1) $100,000,000, (b)(2) $100,000,000 (b)(3) 5, (d) 5]
52.216-22	OCT 1995	INDEFINITE QUANTITY [See Clause F.2 Period of Performance]
52.219-6	JUN 2003	NOTICE OF SMALL BUSINESS SET-ASIDE
52.219-8	MAY 2004	UTILIZATION OF SMALL BUSINESS CONCERNS
52.219-14	DEC 1996	LIMITATIONS ON SUBCONTRACTING
52.219-28	JUN 2007	POST-AWARD SMALL BUSINESS PROGRAM REPRESENTATION
52.222-1	FEB 1997	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES
52.222-3	JUN 2003	CONVICT LABOR
52.222-21	FEB 1999	PROHIBITION OF SEGREGATED FACILITIES

CLAUSE NUMBER	DATE	TITLE
52.222-26	MAR 2007	EQUAL OPPORTUNITY AND ALTERNATE I (FEB 1999)
52.222-29	JUN 2003	NOTIFICATION OF VISA DENIAL
52.222-35	SEPT 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	SEPT 2006	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS
52.222-41	NOV 2007	SERVICE CONTRACT ACT
52.223-5	AUG 2003	POLUTION PREVENTION & RIGHT-TO-KNOW INFORMATION
52.223-6	MAY 2001	DRUG FREE WORKPLACE
52.223-10	AUG 2000	WASTE REDUCTION PROGRAM
52.225-13	JUN 2008	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	DEC 2007	AUTHORIZATION AND CONSENT AND 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 ALTERNATE II AND ALTERNTE III
52.227-16	JUN 1987	ADDITIONAL DATA REQUIREMENTS
52.228-7	MAR 1996	INSURANCE—LIABILITY TO THIRD PERSONS
52.232-9	APR 1984	LIMITATION ON WITHHOLDING OF PAYMENTS
52.232-17	OCT 2008	INTEREST

CLAUSE NUMBER	DATE	TITLE
52.232-18	APR 1984	AVAILABILITY OF FUNDS
52.232-23	JAN 1986	ASSIGNMENT OF CLAIMS
52.232-25	OCT 2008	PROMPT PAYMENT
52.232-34	MAY 1999	PAYMENT BY ELECTRONIC FUNDS TRANSFER – OTHER THAN CENTRAL CONTRANCTOR REGISITRATION
52.233-1	JUL 2002	DISPUTES AND ALTERNATE I (DEC 1991)
52.233-3	AUG 1996	PROTEST AFTER AWARD AND (ALTERNATE I) (JUN 1985)
52.237-2	APR 1984	PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION
52.237-3	JAN 1991	CONTINUITY OF SERVICES
52.242-13	JUL 1995	BANKRUPTCY
52.243-1	AUG 1987	CHANGES-FIXED PRICE ALTERNATE II (APR 1984)
52.244-2	JUN 2007	SUBCONTRACTS
52.244-6	DEC 2008	SUBCONTRACTS FOR COMMERCIAL ITEMS
52.245-1	JUN 2007	GOVERNMENT PROPERTY
52.245-9	JUN 2007	USE AND CHARGES
52.246-25	FEB 1997	LIMITATION OF LIABILITY -- SERVICES
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
52.248-1	FEB 2000	VALUE ENGINEERING
52.251-1	APR 1984	GOVERNMENT SUPPLY SOURCES
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
1852.209-72	DEC 1988	COMPOSITION OF THE CONTRACTOR

CLAUSE NUMBER	DATE	TITLE
1852.216-89	JUL 1997	ASSIGNMENT AND RELEASE FORMS
1852.219-74	SEPT 1990	USE OF RURAL AREA SMALL BUSINESSES
1852.219-76	JUL 1997	NASA 8 PERCENT GOAL
1852.223-74	MAR 1996	DRUG-AND-ALCOHOL -FREE WORKPLACE
1852.227-11	DEC 2007	PATENT RIGHTS--RETENTION BY THE CONTRACTOR (SHORT FORM) MODIFIES FAR CLAUSE 52.227-11
1852.228-75	OCT 1998	MINIMUM INSURANCE COVERAGE
1852.235-70	DEC 2006	CENTER FOR AEROSPACE INFORMATION
1852.237-70	DEC 1988	EMERGENCY EVACUATION PROCEDURES
1852.243-70	OCT 2001	ENGINEERING CHANGE PROPOSALS
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.

(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 52.252-2 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.5 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 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

I.6 NFS 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (MAY 2008) DEVIATION

(a) The Contractor shall be responsible for Information Technology (IT) security for all systems connected to a NASA network or operated by the Contractor for NASA, regardless of location. This clause is applicable to all or any part of the contract that includes information technology resources or services in which the Contractor must have physical or electronic access to NASA's sensitive information contained in unclassified systems that directly support the mission of the Agency. This includes information technology, hardware, software, and the management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems. Examples of tasks that require security provisions include:

(1) Computer control of spacecraft, satellites, or aircraft or their payloads;

(2) Acquisition, transmission or analysis of data owned by NASA with significant replacement cost should the Contractor's copy be corrupted; and

(3) Access to NASA networks or computers at a level beyond that granted the general public; e.g., bypassing a firewall.

(b) The Contractor shall provide, implement, and maintain an IT Security Plan (DRD PIC-IT-03). 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. The plan shall describe those parts of the contract to which this clause applies. The Contractor's IT Security Plan shall be compliant with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.) and the Government Information Security Reform Act of 2000.

The plan shall meet IT security requirements in accordance with Federal and NASA policies and procedures that include, but are not limited to:

(1) OMB Circular A-130, Management of Federal Information Resources, Appendix III, Security of Federal Automated Information Resources;

(2) NASA Procedural Requirements (NPR) 2810.1, Security of Information Technology;

(3) NPR 1600.1, NASA Security Program;

(4) NPR 1600.2, NASA Security Policy;

(5) NPR 1620.1, NASA Security Procedures and Guidelines;

(6) NPR 1620.2, Physical Security Vulnerability; and

(7) NPR 1620.3, Physical Security Requirements for NASA Facilities and Property.

(c) Within the 30 days after contract award, as specified in DRD PIC-IT-01, the Contractor shall submit for NASA approval an IT Security Plan. This plan must be consistent with and further detail the approach contained in the offeror's proposal or sealed bid that resulted in the award of this contract and in compliance with the requirements stated in this clause. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.

(d) (1) Contractor personnel requiring privileged access or limited privileged access to systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPR 2810.1, Section 4.5; NPR 1620.1, Chapter 3; and paragraph (d)(2) of this clause. Those Contractor personnel with non-privileged access do not require personnel screening. NASA shall provide screening using standard personnel screening National Agency Check (NAC) forms listed in paragraph (d)(3) of this clause, unless Contractor screening in accordance with paragraph (d)(4) is approved. The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of the government, interim access may be granted pending completion of the NAC.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk):

(i) **IT-1** -- Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) **IT-2** -- Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on

spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" data whose cost to replace exceeds one million dollars.

(iii) **IT-3** -- Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the Contractor for NASA whose function or data has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as follows:

(i) IT-1: Fingerprint Card (FC) 258 and Standard Form (SF) 85P, Questionnaire for Public Trust Positions;

(ii) IT-2: FC 258 and SF 85, Questionnaire for Non-Sensitive Positions; and

(iii) IT-3: NASA Form 531, Name Check, and FC 258.

(4) The Contracting Officer may allow the Contractor to conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate that the procedures used by the Contractor are equivalent to NASA's personnel screening procedures. As used here, equivalent includes a check for criminal history, as would be conducted by NASA, and completion of a questionnaire covering the same information as would be required by NASA.

(5) Screening of Contractor personnel may be waived by the Contracting Officer for those individuals who have proof of –

(i) Current or recent national security clearances (within last three years);

(ii) Screening conducted by NASA within last three years; or

(iii) Screening conducted by the Contractor, within last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer under paragraph (d)(4) of this clause.

(e) The Contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPR 2810.1, Section 4.3 requirements. The Contractor may use web-based training available from NASA to meet this requirement.

(f) The Contractor shall afford NASA, including the Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime.

(g) The Contractor shall incorporate the substance of this clause in all subcontracts that meet the conditions in paragraph (a) of this clause.

(End of clause)

I.7 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. This statement is for information only. It is not a Wage Determination.

Employee Class	Monetary Wage-Fringe Benefits
Program Manager	SES, $91.97
Manager I	GS-15, $45.71
Manager	GS-13, $32.88
Supervisor	GS-13, $32.88
Technical Professional IV	GS-15, $45.71
Technical Professional III	GS-13, $32.88
Technical Professional II	GS-12, $27.65
Technical Professional I	GS-7, $15.59

Employee Class	Monetary Wage-Fringe Benefits
IT Professional III	GS-14, $38.86
IT Professional II	GS-13, $32.88
Analyst III	GS-13, $32.88
Analyst II	GS-12, $27.65
Analyst I	GS- 9, $19.07
Business Specialist II	GS-14, $38.86
Business Specialist I	GS-12, $27.65
Business Specialist	GS- 7, $15.59
Other (additional Labor categories that proposed by the offeror which are not listed within the wage determination)	TBD

(End of clause)

I.8 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, Lucy V. Kranz, address 2101 NASA Parkway, Houston, Texas, 77058, at 281-483-0490, facsimile 281-483-2200, and e-mail lucy.v.kranz@nasa.gov. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA Ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail james.a.balinskas@nasa.gov. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical

requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

(End of clause)

I.9 NFS 1852.237-72 ACCESS TO SENSITIVE INFORMATION (JUNE 2005)

(a) As used in this clause, "sensitive information" refers to information that a Contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.

(b) To assist NASA in accomplishing management activities and administrative functions, the Contractor shall provide the services specified elsewhere in this contract.

(c) If performing this contract entails access to sensitive information, as defined above, the Contractor agrees to –

(1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in another procurement.

(2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(3) Allow access to sensitive information only to those employees that need it to perform services under this contract.

(4) Preclude access and disclosure of sensitive information to persons and entities outside of the Contractor's organization.

(5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.

(6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(d) The Contractor will comply with all procedures and obligations specified in its

Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.

(e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of Government contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a Government Contractor.

(f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information.

(End of clause)

I.10 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 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:

(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.

(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.11 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.12 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 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.13 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 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.14 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. _____TBD__ (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 non-Government 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.

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

(End of clause)

I.15 FAR 52.222-54 EMPLOYMENT ELIGIBILITY VERIFICATION (JAN 2009)

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

Commercially available off-the-shelf (COTS) item—(1) Means any item of supply that is—(i) A commercial item (as defined in paragraph (1) of the definition at 2.101); (ii) Sold in substantial quantities in the commercial marketplace; and modification, in the same form in which it is sold in the commercial marketplace; and (2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 (46 U.S.C. App. 1702), such as agricultural products and petroleum products. Per 46 CFR 525.1(c)(2), ''bulk cargo'' means cargo that is loaded and carried in bulk onboard ship without mark or count, in a loose unpackaged form, having homogenous characteristics. Bulk cargo loaded into intermodal equipment, except LASH or Seabee barges, is subject to mark and count and, therefore, ceases to be bulk cargo. *Employee assigned to the contract* means an employee who was hired after November 6, 1986, who is directly performing work, in the United States, under a contract that is required to include the clause prescribed at 22.1803. An employee is not considered to be directly performing work under a contract if the employee— (1) Normally performs support work, such as indirect or overhead functions; and (2) Does not perform any substantial duties applicable to the contract.

Subcontract means any contract, as defined in 2.101, entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract. It includes but is not limited to purchase orders, and changes and modifications to purchase orders.
Subcontractor means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime Contractor or another subcontractor.

United States, as defined in 8 U.S.C. 1101(a)(38), means the 50 States, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands.

(b) ***Enrollment and verification requirements.***

(1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall—

(i) ***Enroll.*** Enroll as a Federal Contractor in the E-Verify program within 30 calendar days of contract award;

(ii) ***Verify all new employees.*** Within 90 calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); and

(iii) ***Verify employees assigned to the contract.*** For each employee assigned to the contract, initiate verification within 90 calendar days after date of enrollment or within 30 calendar days of the employee's assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of—

(i) ***All new employees.***

(A) ***Enrolled 90 calendar days or more.*** The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(B) ***Enrolled less than 90 calendar days.*** Within 90 calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(ii) ***Employees assigned to the contract.*** For each employee assigned to the contract, the Contractor shall initiate verification within 90 calendar days after date of contract award or within 30 days after assignment to the contract, **whichever date is later** (but see paragraph (b)(4) of this section).

(3) If the Contractor is an institution of higher education (as defined at 20 U.S.C. 1001(a)); a State or local government or the government of a Federally recognized Indian tribe; or a surety performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements at (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.

(4) ***Option to verify employment eligibility of all employees.*** The Contractor may elect to verify all existing employees hired after November 6, 1986, rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986, within 180 calendar days of—

(i) Enrollment in the E-Verify program; or

(ii) Notification to E-Verify Operations of the Contractor's decision to exercise this option, using the contact information provided in the E-Verify program Memorandum of Understanding (MOU).

(5) The Contractor shall comply, for the period of performance of this contract, with the requirements of the E-Verify program MOU.

(i) The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor will be referred to a suspension or debarment official.

(ii) During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the Contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official etermines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.

(c) ***Web site.*** Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: *http://www.dhs.gov/E-Verify.*

(d) ***Individuals previously verified.*** The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee—

(1) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;

(2) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or

(3) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD)–12, Policy for a Common Identification Standard for Federal Employees and Contractors.

(e) ***Subcontracts.*** The Contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for identification of the parties), in each subcontract that—

(1) ***Is for—***

(i) **Commercial or noncommercial services** (except for commercial services that are part of the purchase of a COTS item or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for hat COTS item); or

(ii) **Construction;**

(2) Has a value of more than $3,000; and

(3) Includes work performed in the United States.

(End of clause)

[END OF SECTION]

SECTION J - LIST OF ATTACHMENTS

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Data Requirements List
and
Data Requirements Descriptions

DATA REQUIREMENTS LIST (DRL) AND DATA REQUIREMENTS DESCRIPTIONS

The following pages set out the documentation requirements of this contract, starting with a DRL, which is an index to the DRDs. Each DRD prescribes the required data product content, schedule, type, and other particulars for specific data submission requirements.

DRD #	Data Type	DRD Title
CM		**CM = Configuration Management**
PIC-CM-01	1	Configuration Management Plan
II		**II = International Integration**
PIC-II-01	2	ISS Program Support Plans for International Partner Milestone Reviews
PIC-II-02	2	Export Control Audit Results
IT		**IT = Information Technology**
PIC-IT-01	1	IT Management Plan
PIC-IT-02	1	IT Project Plan
PIC-IT-03	1	IT Security Plan and Reports
PC		**PC = Program Control & Business Management**
PIC-PC-01	3	Financial Report
PIC-PC-02	3	RESERVED
PIC-PC-03	3	Workforce Reports
PIC-PC-04	3	Work Breakdown Structure (WBS) and Dictionary
PIC-PC-05	2	RESERVED
PIC-PC-06	2 / 3	Integrated Program Schedules
PM		**PM = Program Management**
PIC-PM-01	1	PI&C Management Plan
PIC-PM-02	2	Integrated Management Review Products (IMRP)
PIC-PM-03	1	Certification of Flight Readiness (CoFR) Plan
PR		**PR = Procurement**
PIC-PR-01	2	Patent Rights – Retention
PIC-PR-02	1	Contract Close-out Plan
PIC-PR-03	3	Wage/Salary and Fringe Benefit Data
PIC-PR-04	2	Data Reprocurement Package
PIC-PR-05	3	Task Order Plan
SA		**SA = Safety & Mission Assurance**
PIC-SA-01	1	Mission Assurance and Risk Management (MA&RM) Plan
PIC-SA-02	1	Safety and Health (S&H) Plan
PIC-SA-03	3	Monthly Safety and Health Metrics
PIC-SA-04	3	Safety and Health Program Self-Evaluation
PIC-SA-05	3	Probabilistic Risk Assessment (PRA)
PIC-SA-06	1	RESERVED
PIC-SA-07	2	Hazard Reports and System Description
PIC-SA-08	1	Lessons Learned Program Plan and Lessons Learned
SI		**SI = Systems Integration**
PIC-SI-01	1	ISS Documents Maintenance and Assessment
PIC-SI-02	2	Specification Traceability and Compliance Reports
PIC-SI-03	3	Systems Engineering Technical Assessments
PIC-SI-04	2	On-Orbit Assembly, Modeling, and Mass Properties Data Book (Blue Book)
PIC-SI-05	3	ISS Interior 3D CAD Models
VT		**VT = Vehicle Technical Integration**
PIC-VT-01	1	Operations and Maintenance Requirements and Specifications Database (OMRSD)

Subject to the Clause 52.227-14, Rights in Data - General, this document sets forth the data requirements in each Data Requirements Description (DRD) and shall govern that data required for this contract. The Contractor shall furnish data defined by the DRD's listed on the Data Requirements List (DRL) by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this document. 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 this document, per FAR 52.215.8, Order of Precedence – Uniform Contract Format. 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. 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 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 Program Data Management.

Documents included as applicable documents in the data requirements form a part of this document to the extent specified herein. References to documents other than applicable documents in the data requirements of this document 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 Data Requirement (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 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 45 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 1 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 formally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 days of receipt of comments.

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

NUMBER OF COPIES AND DISTRIBUTION REQUIREMENTS

The Contractor shall provide one copy of each DR to the standard distribution list shown in Block 12 of the DRDs. Additional distribution shall be made as directed, in writing, by the Contracting Officer. The number of copies required will not exceed the limits set forth in Clause 1852.208-81, Restrictions on Printing and Duplicating, without prior Contracting Officer approval. All deliverables shall be made through the GFD workflow in the Program authorized Document Management System.

ELECTRONIC FORMAT

DRDs shall be maintained electronically.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Configuration Management Plan **1b. Data Type: 1**	**2. Date of Current Version**	**3a. DRD No.** **PIC-CM-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) This plan is prepared by the contractor to describe 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** __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 1.3		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: This CM plan defines the requirements, responsibilities, and procedures for the CM system pursuant to SSP 41170 and as it applies to this contract.

CONTENT: The CM plan shall address, as a minimum, the following:

A. Management Organization, (including reference documents)

1. Identification, Relationships and Integration of Contractor's proposed organization
2. Responsibility and authority for CM including roles in configuration control boards and technical reviews
3. Interfaces between Contractor's CM organization and NASA, subcontractors, and other Contractor's/contracts
4. Training plans

B. Configuration Identification

1. Selection of Configuration Items (CIs) (Hardware, Computer Software Configuration Items [CSCIs], and firmware)
2. Establishment of the functional, allocated and product baselines for hardware and software
3. Assignment and application of configuration identifiers including serial numbers, part numbers, lot codes, software and firmware identifiers

C. Configuration Control

1. Establishment of internal configuration and contractual baselines
2. Implementation of Internal and NASA configuration control
3. Establishment of configuration control boards and processes
4. Identification of processes to control changes, deviations, and waivers to program baselines

D. Configuration Status Accounting

1. Hardware/Software Configuration Status Accounting processes and provisions for reports and/or access to Configuration Status Accounting data
2. Description and methods of processes and tools to provide:
   i. Identification of current approved configuration documentation and configuration identifiers associated with each CI
   ii. Status of proposed engineering changes from initiation to implementation
   iii. Waiver/deviation status and processing
   iv. Results of configuration audits; status and disposition of discrepancies
   v. Traceability of changes and confirmation of change incorporation
   vi. Methods of access to information
3. Retention of historical data
4. Systems and tools (including data elements)

E. Configuration Verification/Audits

1. Audit conduct, policies, procedures, documentation, access, and support
2. Processes, plans, schedules for internal CM audits and subcontractor CM audits

F. Data Management

1. Development, approval, release and submittal of configuration data/documentation (including drawings) in relation to program and contractual events (DRD's, technical reviews, FCA/PCA, Acceptance Reviews, COFR, etc.)
2. Plan for subcontractor data management deliveries/control access
3. Establishment and operation of Engineering Release Unit and CM receipt desk
4. Process for Documentation control (i.e., DCNs)
5. Retention of historical data
6. Systems and tools

FORMAT: Electronic.

9. OPR: OH2/NASA ISS Configuration Management Office

10. FIRST SUBMISSION DATE: Thirty (30) days after Contract Award. Final due sixty (60) days after contract start.

Frequency of Submission: After initial approval - Annually
Additional Submissions: Updated if major systems or processes are changed

11. MAINTENANCE: Electronic, as required (see additional submissions)

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
1 electronic copy: Program Authorized Repository

13. REMARKS: None

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

1a. DRD Title: ISS Program Support Plans for International Partner Milestone Reviews 1b. Data Type: 2	2. Date of Current Version	3a. DRD No. PIC-II-01	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) Establish necessary planning and commitment for ISS Program teams' participation in the IP Reviews compatible with schedule, procedure and workload constraints applicable on both sides, ISS Program and IP. This deliverable governs the process and the scope of ISS participation in the review.			5. DRD Category X_ Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 1.5.3.2.1		7. Interrelationships (e.g., with other DRDs)	

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

SCOPE: This DR contains the content, format, maintenance, and submittal requirements for the ISS Program Support Plans for IP Design, Qualification and Acceptance Reviews.

CONTENT: The Plans shall define ISS Program objectives, bilateral agreements on requirements baseline, ISS Program teams' participation, Milestone Review planning and process, and support schedule for the ISS Program teams. The Plans shall identify specific Data Package content, including IP data provided via IP Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS) documents, and distribution information as well as Review Item Discrepancies (RID) review process, including development and screening procedures. The release of these documents will be via signatures of appropriate NASA ISS Program organization managers and the ISS Program Manager or delegated representative.

FORMAT: Electronic. These Plans will be team documents and will not be ISS Program CM controlled.

9. **OPR**: OM/Program Integration Office

10. **FIRST SUBMISSION DATE:** 1 month prior to the IP Milestone Review, as directed

Frequency of Submission: Once.
Additional Submissions: N/A

11. **MAINTENANCE:** Electronic

12. **COPIES/DISTRIBUTION:**
Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OM/Program Integration Office
1 electronic copy: Program Authorized Repository

13. **REMARKS**: None

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

1a. DRD Title: Export Control Audit Results 1b. Data Type: 2	2. Date of Current Version	3a. DRD No. PIC-II-02	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
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 __ Technical X_ Administrative __ SR&QA
6. References (SOW, Clause, etc.) NFS 1852.225-70 and clause H.10		7. Interrelationships (e.g., with other DRDs)	

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

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 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.

CONTENT:

A. Define 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 of when the correction of any non-conformances has been completed.

FORMAT: Electronic, compatible with the Program authorized repository

9. **OPR**: JSC Export Control Office or Center Export Administrator

10. **FIRST SUBMISSION DATE:** September 30, 2009

Frequency of Submission: Annually, at the end of each fiscal year
Additional Submissions: N/A

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

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: Export Control Office/Center Export Administrator (CEA)
Program Authorized Repository Upload Notification: Contracting Officer
Program Authorized Repository Upload Notification: COTR
1 copy (electronic): Program Authorized Repository

13. REMARKS: None

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

1a. DRD Title: IT Management Plan 1b. Data Type: 1	2. Date of Current Version	3a. DRD No. PIC-IT-01	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
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 PI&C, to manage interfaces with other ISS Program users/customers and to manage interfaces with institutional IT providers.			5. DRD Category __ Technical X_ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 1.4.1, 1.4.2		7. Interrelationships (e.g., with other DRDs)	

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 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 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

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: IT Project Plan **1b. Data Type: 1**	**2. Date of Current Version**	**3a. DRD No.** **PIC-IT-02**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) IT Project Plans are required to baseline activities to be performed for all activities for which detailed project management is required to ensure the Contractor implement requirements within costs and schedule.			**5. DRD Category** **X_** Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 1.4.2.1, NPR 7120.5, NPR 7120.7		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: The Contractor shall prepare project plans for coordination and execution of all developmental, sustaining engineering, and technology infusion projects submitted and implemented as part of the contracted work scope under the PI&C contract. For projects, the Contractor shall submit a project plan, which shall be used to assure: requirements are adequately communicated, the proposed design satisfies user operational and performance requirements, the proposed project costs are within budgetary constraints, and the completion schedule is reasonable. For project proposals, the Contractor shall include a preliminary project plan, which shall present the budgetary and technical aspects of the proposed work. Sections of the preliminary project plan may be incomplete or contain rough estimates. A project plan is considered preliminary until submitted in response to a written request for a project plan from the Information Technology Lead or their delegated representative.

CONTENT: For development projects performed under this contract, the Contractor shall provide the following items as directed by the Government:

- Project Plan – see below
- Developed or configured and tested system, ready for use.
- Additional documentation: – see below

FORMAT: The Contractor shall prepare the Project Plan in accordance with NPR 7120.7. If after initial delivery of the plan, the Government issues a change in the requirements, the Contractor shall revise the Project Plan to reflect those changes and resubmit it to the Contracting Officer.

The main body of the project plan provides an overview of the technical need, definition, schedule, and budget for the work. Contained in appendices are the operational concept and the top-level requirements and design. Since these appendices specify the knowledge and constraints at the time the project plan was written they are intended to be superseded by separate requirements and design documents produced during performance of the project. The appendices are retained since they represent the initial baseline for the project. The Project Plan is generated in accordance with P-IM-114, Project Planning Process.

PROJECT PLAN

1.0 INTRODUCTION

If the proposal or project is the result of a service request, then this section restates the operational and performance requirements contained in the service request. If the proposal or project is not the result of a service request then this section states the need and requirements which determined this proposal or project. If this section contains only general requirements, the Contractor shall expand those requirements to comprehensively identify the total requirements in Appendix C. Environmental considerations and requirements should be identified here if needed for special processing and operations and expanded in Appendix C.

The following text is inserted as the first sentence of the introduction:
"The purpose of this proposal or project plan is to provide the proposal information or project evaluation regarding the <proposal or project name> for the ISS PI&C contract. This plan defines the objectives, deliveries, schedule and stakeholder's responsibilities for the subject project. "

1.1 BACKGROUND

This is a short narrative describing the historical perspective that necessitated the proposal or project.

1.2 SCOPE

This is a short narrative stating the boundaries of the proposal or project in terms of the organizations or systems affected and how the result of this plan is beneficial.

2.0 OBJECTIVES

This is a short narrative stating, the goals and objectives of the project and proposal. This paragraph can refer to the project operational concept, requirements and design details that are documented as appendices to this document. It states why the resultant project is needed, which organization requested it, and who the equipment end users are. This paragraph also identifies whether the plan is for a developmental, sustaining engineering or technology infusion project. If the plan is the result of a service request, then usually, this information can be taken directly from the service request.

The plan shall include the additional information identifying the deliverables that are to be included in the scope of the work planned, as defined by the Contractor and approved by the Government's Representative:

- Requirements Document - defines functional and performance requirements for the system.
- Design Document and Drawings – defines the design rationale, approach, and system cost elements. Includes diagrams depicting system elements, process and logic flows, and platform and networking architecture. Also includes sustaining engineering and integration requirements.
- User Documentation (e.g., Quick Reference Guide, Users Guide, Administrators Guide)
- Operations Plan – defines operational requirements for supporting the deployed system.

- Deployment Plan – defines the approach and procedures for deploying the system into production.
- Security Plan – Must conform to JSC standard format for security plans.
- Verification of compliance with Section 508 of the Rehabilitation Act of 1974.
- Profile for Out Year Sustaining Engineering Costs – defines operations, sustaining engineering and consumables costs for the 5 year period beginning at the time of deployment.
- Test Plan – defines the testing methodology and test scenarios used to verify that the system functions as required. Test scenarios shall be correlated to each system requirement-by-requirement number.
- Customer Acceptance Testing Results - documents the results of testing performed by system customers, including their concurrence that the system is ready for deployment.
- Requirements Traceability Matrix – defines how each requirement is addressed.
- As-built Design Document and Drawings – describes the system as built and deployed.
- Studies and Market Survey Results – describes the results of studies and market surveys requested by the Government or initiated by the Contractor.
- Training Plans - training on systems capabilities, operations, and architectures, as required, and training materials

Other information may identified by the Contractor and approved by the Government's Representative

3.0 SCHEDULE

The project schedule shall identify tasks, durations, completion dates, their dependencies, milestones, and critical path. For projects with multiple deliveries this information shall be provided for each delivery. Each deliverable identified in the OBJECTIVES above shall be identified on the schedule. The schedule milestones may include the following, referenced to the date of approval of the plan: 1) submission of initial design drawings, 2) submission of acceptance test procedures, 3) completion of system testing, 4) day system becomes operational, and 5) submission of final report. Additional milestones, as defined by the Contractor and approved by the Government's Representative, may be added to the schedule.

4.0 STAKEHOLDER RESPONSIBILITIES

This is a narrative identifying the organizations, and their roles and responsibilities, which are associated with the project.

5.0 BUDGET

The project budget shall identify the costs associated with performing the project including developing, installing, and maintaining the project. The budget shall identify costs such as the following: 1) direct labor personnel-hours and dollar costs for engineering, technician support, drafting, and other direct labor; 2) indirect labor hours and dollar costs; 3) material costs; 4) equipment costs, and 5) other direct costs (ODC) such as travel or training All dollar costs shall be stated as probable total costs to the Government and shall include G&A, indirect costs, and maximum performance award fee. Additional costs, as defined by the Contractor and approved by the Government's Representative, may be added to the budget.

APPENDIX A – ACRONYMS

This appendix lists and identifies each of the acronyms used in the project plan. If necessary, an additional glossary defining terminology may be added.

APPENDIX B – OPERATIONAL CONCEPT

This section provides the operational concept performed by the system delivered to the government. If the project plan is for proposed work, then this appendix provides a preliminary operational concept and identifies the appropriate documents which will include the comprehensive operational concept. The operational concept documents the functional processing of data with emphasis on user roles. This definition may be depicted as a data or process flow or depicted in several snapshot views of distinct business area functions.

APPENDIX C – REQUIREMENTS

This section provides the requirements of the system to be delivered to the government. If the project plan is for proposed work, then this appendix may provide preliminary requirements and identifies the appropriate documents which will include the comprehensive requirements. Where applicable, include the following: application requirements, system requirements, testing requirements.
For projects with multiple deliveries, a cross reference shall be provided that identifies the requirements satisfied by each delivery.

APPENDIX D - DESIGN

This section provides the design and identifies the verification methods. Where applicable, include the following:

- Design approach
- Application design
- Data design
- Hardware, operating system and communications
- External interfaces
- Requirements traceability
- Test and verification methods

If the project plan is for proposed work, then this appendix provides a preliminary design and identifies the design documents which will include the comprehensive design.

In this section the Contractor provides a narrative description and design diagram of the proposed design that will satisfy the operational concept. If the design contains brand name hardware equipment or software, then the design will include the rationale stating why the specific brand name is required.

Additionally, in this section, the Contractor identifies methods of verifying the completed design. Methods can include analyses, tests, or a combination of tests. This section includes or defines the results and data, which are submitted in the final report

to verify the system design. For routine tasks and projects, the Contractor may propose using generic or existing test procedures.

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

10. **FIRST SUBMISSION DATE:** Within 2 weeks of assignment of a task to develop a Project Plan

    Frequency of Submission: Once
    Additional Submissions: As required

11. **MAINTENANCE:** Electronically, changes shall be incorporated by change page or complete reissue

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

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

1a. DRD Title: IT Security Plan and Reports 1b. Data Type: 1	2. Date of Current Version	3a. DRD No. PIC-IT-03	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) To meet IT security reporting requirements			5. DRD Category X_ Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 1.4.2.2.4, NPR 2810.1A, NPD 2810.1A, NFS 1852.204-76, FIPS-PUB-199, NIST SP 800-18, 800-30, 800-34, 800-37, 800-53A, ITS-SOP-0005B, SOP-0009, SOP-0019B, SOP-0030C, SOP-0032, SOP-0033, SOP-0040, SOP-0043		7. Interrelationships (e.g., with other DRDs)	

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 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. The next major re-certification for the ISS Production Facility system is anticipated to occur in June 2010.

(1) The Contractor shall map types of ISS information and ISS Program IT systems to security categories as per NPR 2810.1A, ITS-SOP-0019B, 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, ITS-SOP-0032 and NIST 800-18 Rev 1, assessing security controls as per NIST 800-53A.

(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

The Contractor shall follow the instructions in ITS-SOP-0033 for any external systems that are managed under this contract.

INFORMATION ON EMPLOYEES IN SENSITIVE AIS POSITIONS/ASSIGNMENTS REPORT: The Information on Employees in Sensitive ITS Positions/Assignments Report shall provide information for personnel screening as required by NPR 2810.1A.

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

9. **OPR**: OH/ISS Chief Information Officer

10. **FIRST SUBMISSION DATE:** Thirty (30) 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.

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

1a. DRD Title: Financial Management Reporting **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-PC-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide a basis for reporting and evaluating contract cost performance. Financial data contained in the reports must be auditable using Generally Accepted Accounting Principles.			**5. DRD Category** __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.) H.3 NFS 1852.216-80 Task Ordering Procedure (OCT 1996)		**7. Interrelationships** (e.g., with other DRDs) PIC-PM-02 Integrated Management Review; PIC-PC-3 Workload Reports; PIC-PR-05 Task Order Plan	

8. PREPARATION INFORMATION:

SCOPE:

Contract financial management reports shall identify all task order cost elements and include baseline plan, actuals, and variance analysis. Variances greater than -+ 5% shall include an explanation for the variance and identify contractor actions to address the variance. Financial reporting formats shall include:

Format 1 - Task Order Report
Format 2 - Contract Summary Report (Task Order)
Format 3 - Contract Summary Report (Work Breakdown Structure)
Format 4 - Safety & Mission Assurance Report (Work Breakdown Structure)
Format 5 - Program Integration Report (Work Breakdown Structure)

CONTENT: Financial Management Report Formats and Instructions are included in Attachment 1. Financial management reporting shall reconcile to DRD PIC-PM-02 Integrated Management Review, DRD PIC-PC-03 Workload Reports, and DRD PIC-PR-05 Task Plan.

FORMAT: Financial Management Reports shall be submitted in Microsoft Excel file (.xls) format, with narrative summaries provided in Microsoft Word file (.doc) format. Note: Alternate contractor formats will be considered.

9. OPR: BG/Contracting Officer - Formats1 & 2.
LO/Contract Analyst - Formats 3, 4 & 5.

10. **FIRST SUBMISSION DATE:** Initial report shall be submitted 30 days after authorization to proceed has been granted.

Financial Management Report Frequency of Submission:

a. **Hardcopy** due not later than 10 working days following the close of the contractor's monthly accounting period.
b. **Electronic Copy:** Financial Management Reports shall be loaded into ISS Data Management System (IDMS) no later than 10 working days following the close of the contractor's monthly accounting period. The date of the electronic submittal shall be used to determine the timeliness of delivery.
c. **Monthly reporting** will not be required after the contract is physically complete, provided that the final financial report includes actual hours, associated costs, and WYEs, only (no estimates or forecasts). Monthly financial management reporting will be required as long as estimates for the following period are included.
d. **Cost reported** after the submission of the final contractor financial report, will require the contractor must submit a revised report in the month the cost change is recognized.

11. **MAINTENANCE:** Financial management reports shall be revised to reflect prior period adjustments, or correct errors when deemed necessary by the Contracting Officer. The revised financial report shall be delivered prior to closure of the current JSC accounting system for the month.

12. **COPIES/DISTRIBUTION:**

1 electronic copy to Program Repository via IDMS workflow

1 original signed hardcopy to BG/Contracting Officer

1 hardcopy to LO/Contract Analyst, and 1 hardcopy to LF6/Cost Accounting

Program Authorized Repository Upload Notification: BG/Contracting Officer, OA/COTR LO, LF6, OH3/Assessment Office, OH2/Data Management.

13. **REMARKS:** None

DRD PIC-PC-01
Attachment 1

The Financial Management Report provides data necessary for the following:

1. Projecting hours, associated costs, and WYEs to ensure that dollar and labor resources realistically support project and program schedules.

2. Tracking contractors' actual hours and associated costs in relation to negotiated contract value, negotiated rates, projected 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.

Financial Management Reporting

The due dates reflect the date the financial management reports are loaded into IDMS, not the date the reports are generated or mailed by the contractor. It is critical that the financial management reports are submitted in a timely manner to ensure adequate time for NASA to analyze and record the cost into the NASA accounting system.

Variance explanation computation is Planned Monthly Hours and Associated Costs –Monthly Actual Hours and Associated Costs / Planned Monthly Hours and Associated Costs. Variance explanations shall include insight to the 3rd level WBS and shall detail the root cause of the variance (i.e., ISS Program change in direction, unexpected problems, etc.). Variance explanations shall address any impact to delivery and/or schedule and the contractor's plan for resolving the impact of the variance. Forecast plans shall be updated to be consistent with the task order schedule.

Work Year Equivalent (WYE)

Work Year Equivalents (WYE) is a full time equivalent defined as the proposed productive hours needed to comprise one average full time employee. This may be one employee or several part time employees. Productive hours are defined as the total available hours for productive work in a year, excluding overtime, less paid time off.

Format 1

Error! Not a valid link.

Format 2

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(Task Order)

Format 3

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Format 4

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Format 5

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DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Workforce Reports 1b. Data Type: 2	2. Date of Current Version	3a. DRD No. PIC-PC-03	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide workforce information by geographic location.			5. DRD Category __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.)		7. Interrelationships (e.g., with other DRDs) All PIC-PC and PIC-PM DRDs	

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

SCOPE: The reports provide workforce data by geographic location. There are two types of reports: 1) a Workforce Report by location, and 2) an As Requested Workforce Report.

CONTENT: The Workforce Report shall provide:

A. Workforce Year Equivalent (WYEs) by location, specifically:

(1) By NASA Center

(2) By State

(3) Tailored as request by NASA Headquarters

B. Estimated indirect hours and percent of fiscal year contract.

C. Estimated minor subcontractor hours not reported as WYEs in item 1 and percent of fiscal year contract.

The content of the As Requested Workforce Report will vary based on specific direction provided by NASA Headquarters to support congressional inquires. There is the potential requirement to provide workforce by Zip Code.

FORMAT: Specific formatting to be tailored by LO/Contractor.

9. **OPR**: LO

10. **FIRST SUBMISSION DATE:** Ten (10) Workdays after end of fiscal year

Frequency of Submission: Annual
Additional Submissions: As required for the As Requested Workforce Report

11. **MAINTENANCE:** Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: LW
Program Authorized Repository Upload Notification: LO
Program Authorized Repository Upload Notification: OH/Resources Management Office

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: COTR, BG
1 electronic copy: Program secure repository

13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Work Breakdown Structure (WBS) and Dictionary **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-PC-04**	**3b. RFP/Contract No.** **Final RFP NNJ09ZBG001R**
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** __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.)		**7. Interrelationships** (e.g., with other DRDs) All PIC-PC and PIC-PM DRDs	

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

SCOPE: Contains the contractual Work Breakdown Structure (WBS), the WBS Dictionary, and a map to the ISS Program WBS.

CONTENT: Contains the contractual WBS, its Dictionary, and ISS Program map as follows:

The WBS and Dictionary shall indicate the mapping of the Contractor WBS to the contract SOW WBS and the ISS Program WBS at the lowest levels of the ISS Program WBS.

A. 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.

B. WBS Dictionary: The WBS Dictionary shall define the scope of each WBS element and narratively describe the tasks included in each element

C. Program WBS Map: The Contractor shall provide a mapping of the contract WBS to the ISS Program WBS.

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: Thirty (30) days after contract start date.

Frequency of Submission: As required
Additional Submissions: N/A

11. MAINTENANCE: Electronically. Information shall be updated as required by the Contractor.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: LW
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Program Authorized Repository Upload Notification: OH2/Data Management

1 electronic copy: COTR and BG
1 electronic copy: Program secure repository

13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Program Schedules **1b. Data Type:** 2 (Initial), 3 (Subsequent)	**2. Date of Current Version**	**3a. DRD No.** **PIC-PC-06**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use: The schedules and schedule assessments are needed to support program cost, technical and schedule control activities performed within the Program Planning and Control (PP&C) Office and other Control Account Manager (CAM) Offices. These products will be used in multiple Program reviews and/or reports			**5. DRD Category** __ Technical X_ Administrative __ SR&QA
6. References SOW 1.2.5		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: The contractor shall provide individual schedules at the level necessary to support the requirements of PP&C office and other CAM offices as denoted below. The contractor shall provide monthly schedule assessments for projects or activities identified by the PP&C office. The contractor shall provide schedule assessments for ISS Program change requests exceeding $1M. The contractor shall provide a Program Level calendar of significant events.

CONTENT: All schedules provided shall utilize an approach (see Attachment A) that shall provide the ability to identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical path activities; and allow its users to easily measure the progress toward achieving the intended plan in ISS Projects. The schedules and schedule assessments outlined in Table 1 provided by the Contractor shall include:

<u>SCHEDULE MANAGEMENT</u>:

A. *Integrated Program Flight Schedule* – The contractor shall provide an integrated flight schedule that contains all flights scheduled to the ISS.

B. *Integrated Program Schedule Panel (IPSP) Schedules* – The contractor shall provide schedules, schedule status, agendas, charts and meeting minutes that include the details necessary to accomplish weekly IPSP meetings.

C. *30-60-90 Calendar* – The contractor shall maintain and provide a program calendar that encompasses a rolling 90 days. This calendar shall display the current planned dates for ISS Program Management activities, program meetings, significant events, etc.

D. *CAM Specific Schedules* – The contractor shall provide integrated schedules for CAM identified activities or projects in a format suitable for each schedule that includes the milestones necessary for management to access the progress of those activities. These schedules shall incorporate data from outside sources (e.g. International Partners) where required.

E. *Certification of Flight Readiness (CoFR Matrix)* – The contractor shall maintain and provide a CoFR matrix that contains the most current dates for all readiness related meetings (both pre and post flight) for those missions scheduled to fly to the ISS.

F. *Ad hoc Schedules* – The contractor shall submit schedules for special projects when required to support special taskings from NASA Headquarters or other external agencies.

SCHEDULE ASSESSMENTS:

A. *Flight Specific Assessments* – The contractor shall provide a schedule assessment for each flight planned to the ISS. These summary assessments shall include an independent assessment of the readiness of each ISS payload, orbital replacement unit (ORU), flight support equipment item and carrier to meet the program need dates to support the launch date. The contractor shall submit these assessments in a format consolidated by flight that can be utilized within the ISS Monthly Program Review (IMPR) and Early Warning System (EWS) Report.

B. *Critical Item Assessments* – The contractor shall provide independent schedule assessments for the remaining development work on the ISS Program. These assessment shall include a current schedule status for each development item. Develop ISS Program schedules and charts for the IPSP/IMPR monthly. The contractor shall submit these assessments in a consolidated format that can be utilized within the IMPR and EWS.

C. *Change Request (CR) Assessments* – The contractor shall provide an independent schedule assessment (where applicable) for each CR presented at the Space Station Program Control Board (SSPCB). These assessments shall include an evaluation of the likelihood that the proposed CR will meet the schedule supporting the CR..

FORMAT: See Table 1.

9. **OPR**: OH3

10. **FIRST SUBMISSION DATE:** See Table 1.

Frequency of Submission: See Table 1.
Additional Submissions: See Table 1.

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION:

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13. REMARKS: None.

TABLE 1 PIC-PC-06 DELIVERABLE SUMMARY

SOW Paragraph	Deliverable	First Submission	Frequency	Additional Submissions	Format
SCHEDULE MANAGEMENT					
1.2.5.1.1b	Month-end PIC Schedule	Two months after contract start	Monthly	Informal Updates	E-mail. Electronic. Contractor format acceptable
1.2.5.1.1	Integrated Program Flight Schedule	First month after contract start, on the first Monday of the month	Monthly	5 business days after last day of reporting month	E-mail. Electronic (uploaded to ISS Webpage). Contractor format acceptable
1.2.5.1.2	IPSP Schedules Package	N/A	Twice per month	Informal Updates	Electronic (uploaded to ISS Webpage). 1 color copy delivered to IPSP. Contractor format acceptable
1.2.5.5a	The 30-60-90 ISS Planning Calendar	N/A	Twice per week	Informal Updates	Electronic (uploaded to ISS Webapge)
1.2.5.4	CAM Specific Schedules	N/A	Monthly	Informal Updates	E-mail. Electronic (uploaded to ISS Webpage). Contractor format acceptable
1.2.5.5b	CoFR Matrix	N/A	Weekly	Informal Updates	E-mail. Electronic (uploaded to ISS Webpage). 1 color copy delivered to IPSP. Contractor format acceptable
1.2.5.6	Ad hoc schedules	N/A	N/A	Informal Updates	E-mail. Electronic. Contractor format acceptable
SCHEDULE ASSESSMENTS					
1.2.5.3a, b, & c	Flight Specific Assessments	N/A	Monthly	5 business days after last day of reporting month	E-mail. Electronic. Contractor format acceptable
1.2.5.3b & c	Critical Items Assessments	N/A	Monthly	5 business days after last day of reporting month	E-mail. Electronic. Contractor format acceptable
1.2.5.3b	CR Assessment	N/A	Weekly	Informal Updates	E-mail. Electronic. Contractor format acceptable

DRD PIC-PC-06
Attachment A

Scheduling approaches shall address, but not be limited to, the following information:

Scheduling methodology that is consistent with the current Project Management Institute standards.
Predicted task duration derived from accurate and objective prediction methodologies
Indications of activities by appropriate nomenclature that clearly delineates the task to be performed
Identification of who is responsible for doing the actual work
Required supporting activities or support from other contractors, outside organizations, agencies, or center.
Identification of critical resource requirements.
Clear depiction of the interrelationships and constraints among related tasks
Identification of the critical path, priorities, high risk activities and other significant activities
Special test activities or requirements.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: PI&C Management Plan 1b. Data Type: 1	2. Date of Current Version	3a. DRD No. PIC-PM-01	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) To enable NASA to evaluate the Contractor's management organization, approach, processes and systems.			5. DRD Category __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.) RFP Clause H.10, Additional Export Control Requirements F.6, Phase-In and Close-Out		7. Interrelationships (e.g., with other DRDs) All PIC-PC and PIC-PM DRDs	

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

SCOPE: The PI&C Management Plan shall describe the basis for the Contractor's management organization, approach, and processes. It shall provide a comprehensive integration of all management systems of the prime and subcontractors. The plan will include those processes specifically required to accomplish the Statement of Work, as well as those systems and procedures that are to be set in place by the contractor. The PI&C Management Plan shall describe the Contractor's approach for accomplishing contract functions while adhering to export laws, regulations and directives.

CONTENT: The PI&C Management Plan shall address the Contractor's plan for work definition and authorization, scheduling, budgeting, data accumulation, Safety and Mission Assurance, Program recovery process, subcontract, material control, indirect cost management, baseline control, and organization structure.

FORMAT: Contractor's format is acceptable.

9. **OPR**: COTR

10. **FIRST SUBMISSION DATE:** Draft within thirty (30) days after contract award. Final within ninety (90) days after contract start.

Frequency of Submission: See below
Additional Submissions: Within 45 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 processes.

11. **MAINTENANCE:** Electronic. Changes shall be incorporated as required by change page or complete reissue.

12. **COPIES/DISTRIBUTION:**

Program Authorized Repository Upload Notification: OH2/Data Management

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13. REMARKS: None

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

1a. DRD Title: Integrated Management Review (IMR) 1b. Data Type: 2	2. Date of Current Version	3a. DRD No. PIC-PM-02	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides contract performance summary status including analysis of cost, schedule, and technical performance.			5. DRD Category __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.) NPR 7120.5B NPR 9501.2 SOW 1.1.1.1.2 Performance Management Reviews H.3 NFS 1852.216-80 Task Ordering Procedure (Oct 1996), Task Order Progress Reports		7. Interrelationships (e.g., with other *PIC-PC-1 Financial Management Reporting* PIC-PC-3 Workload Reports; PIC-PR-05 Task Order Plan	

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

SCOPE: Provides contract performance summary status including analysis of cost, schedule, and technical performance.

CONTENT:

The contractor shall present a summary contract performance report at a monthly IMR. IMRs shall address technical issues and accomplishments; provide analysis of cost and schedule performance, and include corrective action plan status as appropriate. IMR reports shall be consistent with PIC-PC-1 Financial Management Reporting; PIC-PC-3 Workload Reports; and PIC-PR-05 Task Order Plan. IMR reporting shall include subcontracts performance data for subcontracts that have the potential to impact the successful fulfillment of this contract.

Metrics

The contractor shall develop, maintain, and report contract performance metrics, which demonstrate progress against task order cost, schedule, safety, and technical performance objectives. NASA approved metrics shall reflect meaningful measures of contract performance, which demonstrate successful execution of task order requirements against appropriate performance objectives. NASA approved metrics shall also provide linkage to Program level metrics in the Management Information System.

Integrated Management Review Report

Integrated Management Review Reports shall include the following:

- **Contract Summary Performance Report** - Status of fiscal year contract level costs, schedule, and technical performance. Includes cumulative variance explanations (to fiscal year plan) and End-Of-Year trend variance explanations..
- **Task Order Summary Performance Report -** Status of fiscal year task order level costs, schedule, and technical performance.
- **Metric Performance Chart** - Status metrics plan, actual, variances.
- **Budget Performance Report** - Fiscal year costs and workforce summaries; status of fiscal year reserves, risks, and opportunities, and budget variance explanations.

FORMAT: Specific format to be tailored by the Contracting Officer and the contractor.

9. **OPR:** BG/Contracting Officer; OA/COTR

10. **FIRST SUBMISSION DATE:** The first Monthly input should support a review 20 working days after the initial financial month end.

    Frequency of Submission: Monthly

11. **MAINTENANCE:** Changes shall be incorporated as required by change page or complete reissue.

12. **COPIES/DISTRIBUTION:**

    Hard Copies: 2 each BG/Contracting Officer
    1 each OA/COTR
    2 each LO
    Program Authorized Repository Upload Notification: LW
    Program Authorized Repository Upload Notification: OH3/Assessment Office
    Program Authorized Repository Upload Notification: OH2/Data Management
    Program Authorized Repository Upload Notification: LO
    Program Authorized Repository Upload Notification: BG,OA, LO
    1 electronic copy: Program secure repository

13. **REMARKS: None**

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	3a. DRD No. PIC-PM-03	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
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** __ Administrative X_ Technical __ SR&QA
6. **References** (SOW, Clause, etc.) SOW 1.1.1.1.4 SSP 50108		7. **Interrelationships** (e.g., with other DRDs)	

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

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

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

FORMAT: Electronic

9. **OPR:** COTR

10. **FIRST SUBMISSION DATE:** Draft within 30 days after contract award. Final within 60 days from contract start.

Frequency of Submission: Annually, as required.
Additional Submissions: Update as required. If there are no changes since the last update, the Contractor shall re-certify the CoFR Plan 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:**

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: COTR
1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Patent Rights-Retention **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-PR-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) Identification of any subject inventions including information on patent applications and related filings.			**5. DRD Category** __ Technical **X** Administrative __ SR&QA
6. References (SOW, Clause, etc.) NFS Clause 1852.227-11		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: Inventions by the Contractor as part of their performance on this government contract.

CONTENT: The content of the deliverable shall include:

A. A listing every twelve (12) months of all subject inventions required to be disclosed during the period.

B. A final report prior to closeout of the contract listing all subject inventions or certifying that there were none.

C. Upon request, the filing date, serial number and title, a copy of the patent application, and patent number and issue date for any subject invention in any country in which the Contractor has applied for patents.

FORMAT: The electronic or paper version of NASA form 1679, Disclosure of Invention and New Technology (Including Software) to disclose subject Invention

9. OPR: BG

10. FIRST SUBMISSION DATE: 12 months after contract start

Frequency of Submission: Once a year
Additional Submissions: Final report at contract closeout.

11. MAINTENANCE: Updated annually by the Contractor and submitted in printed form.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: BG
1 electronic copy: Program Authorized Repository

13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Contract Close-out Plan **1b. Data Type: 1**	**2. Date of Current Version**	**3a. DRD No.** **PIC-PR-02**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) Manage and control contract close-out.			**5. DRD Category** __ Technical X Administrative __ SR&QA
6. References (SOW, Clause, etc.) RFP Clause F.6		**7. Interrelationships** (e.g., with other DRDs)	

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

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

CONTENT: The content of the deliverables shall include:

A. Implementation Strategy

B. Task description and schedule

C. Staffing profile

D. Cost Estimate

FORMAT: Contractor's format is acceptable

9. OPR: BG

10. FIRST SUBMISSION DATE: Six months prior to the end of the contract

Frequency of Submission: Once
Additional Submissions: N/A

11. MAINTENANCE: Electronically.

12. COPIES/DISTRIBUTION:

1 copy (electronic): Program authorized repository
Program Authorized Repository Upload Notification: OH2/Data Management for distribution to Contracting Officer and COTR
Program Authorized Repository Upload Notification: BG

13. REMARKS: None

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**	**3a. DRD No.** **PIC-PR-03**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
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** __ Technical X Administrative __ 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, 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) days after contract award.

Frequency of Submission: Annually, 90 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
Program Authorized Repository Upload Notification: CO
Program Authorized Repository Upload Notification: COTR
Program Authorized Repository Upload Notification: BA2/Contract Labor Relations Officer
1 copy: BA2/Contract Labor Relations Officer

13. REMARKS: Sample Work Sheet

Attachment to PIC-PR-03
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)

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.)

Item	Coverage Provided	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical & Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

	Service Requirement	Days per Year
a. Vacation		
b. Holidays		
c. Sick Leave		
d. Jury Leave		
e. Funeral Leave		
f. Military Leave		
g. Other (Describe)		

_____ _____
Signature of Company Representative Date

(Continue on a blank page if necessary)

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.)

Item	Coverage Provided	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical & Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

	Service RequirementDays 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)

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)

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. Severence 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)

FORM 4

DESCRIPTION OF FRINGE BENEFITS **FORM 4**

[ ] Prime Contractor:
[ ] 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			

(Continue on a blank page if necessary)

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

1a. DRD Title: Data Reprocurement Package **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-PR-04**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
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** **X** Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) Section H.12		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: **Analytical models, unique tools, supporting documentation, equipment and resource/cost information shall be submitted in accordance with this DR.**

CONTENTS:

A. A catalog of models and tools provided according to any DR on this contract shall be developed which contains the following:

1) Unique name of item,

2) Version number, revision number, or release date as appropriate,

3) Abstract which describes purpose or use of item,

4) Location of electronic copy.

B. Models and tools to be submitted include:

1) 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.

C. 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:

1) Purpose of the model or tool;

2) Inputs required;

3) Governing assumptions or constraints, including definition of the Vehicle configuration if pertinent to the model definition or its use;

4) Model or tool certification history, including description of validation methods used and results of correlation activities;

5) Association with other models, such as connection between an integrated ISS model and a supporting element model;

6) For models, necessary tools such as a specific software modeling environment required to operate the model;

7) For tools, necessary platforms such as computer processor requirements or operating system limitations.

D. Data package containing the following:

1) Labor resources.

E. List of all direct labor skills by labor category, segregated by current work breakdown structure (WBS).

F. 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.

G. 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.

H. The number of Work Year Equivalents (WYEs) and the estimated number of productive hours for each labor category currently on contract, segregated by current WBS.

I. Seniority level of all skills on the current contract:

1) Non-labor resources.

J. List of all materials, equipment, travel, supplies, etc., and the incurred annual cost by WBS.

K. 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.

1) 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.

2) 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.

FORMAT: Electronic

9. OPR: COTR

10. FIRST SUBMISSION DATE: 1 year prior to contract end or at the CO's direction.

Frequency of Submission: No periodic submissions required per this DR (this does not relieve the requirement for periodic or incremental deliveries per other DRs).

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:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: COTR
1 electronic copy: Program Authorized Repository

13. REMARKS: It is only intended that unique models and tools developed for the ISS Program be delivered per this DRD. Unmodified commercially available tools should not be delivered, but must be referenced in the supporting documentation.

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

1a. DRD Title: Task Order Plan 1b. Data Type: 3	2. Date of Current Version	3a. DRD No. PIC-PR-05	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide content and format requirements for task order negotiations.			5. DRD Category X Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) Section H, Clause H.3 NFS 1852.216-80 Task Ordering Procedure		7. Interrelationships (e.g., with other DRDs) PIC-PM-02 Integrated Management Review Products; PIC-PC-01 Financial Report; PIC PC-06 Program Schedules	

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

SCOPE: Task order plans shall be submitted to the Contracting Officer for the negotiation and definitizing of task orders in accordance with this DRD and NFS 1852.216-80, Task Ordering Procedure.

CONTENTS: The contractor shall develop and maintain a task order plan that documents the reasonableness of the contractor task order proposals and/or revisions.

I. INTRODUCTION

The purpose of the task order plan is to identify the technical approach, period of performance, resource and schedule requirements, and other information necessary to determine the reasonableness of the contractor's task order proposal.

A. BASIS-OF-ESTIMATE (BOE)

The contractor shall develop a task order BOE which shall document the reasonableness of the contractor's task order proposal. The BOE shall identify the technical approach, task scope, assumptions, exclusions, and cost risks and opportunities. The BOE may also reference agreements with the customer if the proposed effort was developed on a partnered basis. The BOE shall identify the resources needed to accomplish the proposed scope of work including:

1. Identify specific labor resources, supporting rationale, and technical approach to meet task order labor requirements.
2. Identify direct labor resources by breakdown structure (WBS) including types and quantities of proposed labor resources. Note: Proposed labor categories shall be consistent with Clause B.4 – Indefinite Delivery/Indefinite Quantity Orders.
3. Identify proposed resources by WBS including loaded labor rates, materials, travel, other direct costs/price, and subcontractor cost/price.
4. Identify threats or constraints that may require work scope restructure or reassessment of the resource-loading requirements.

Task order BOE shall be maintained throughout the task order period of performance without revision. Proposed changes to the BOE will be consistent with the above requirements. Historical BOE pricing data shall be maintained by the contractor, and shall be used to develop the resource baseline of future task orders.

B. RESOURCE-LOADED SCHEDULE (RLS)

The contractor shall develop and maintain a resource-loaded schedule for each approved task order. The RLS shall identify time-phased task order deliverables, milestones, and work activities. The RLS shall assign resources to task order activities, monitor progress of activities toward project objectives, and forecast future schedule performance. RLS shall include the following:

1. Period of performance including start and end dates.
2. Time-phased resource loading by task order.
3. Task order deliverables and milestones.
4. Revisions to resource baseline.

Note: All performance and variance analysis reporting shall be traceable to the RLS. (Reference PIC-PM-02 Integrated Management Review Products, PIC PC-06 Program Schedules, and PIC-PC-01 Financial Report).

C. ADDITIONAL INFORMATION

The Contracting Officer may require the contractor to provide additional information to determine the reasonableness of the contractor's task order proposals.

FORMAT: Hard Copy / Electronic - NASA Standard Load (Note: Alternate contractor formats will be considered)

9. OPR: BG/ Contracting Officer

10. FIRST SUBMISSION DATE: Initial submittal due within 1 week of request; final due within 30 days of task order definitization; and with each task order revision.

11. MAINTENANCE: The document shall be delivered and maintained electronically and in the official contract file. Changes shall be incorporated as required by change pages or complete reissue.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: COTR
Program Authorized Repository Upload Notification: BG/Contracting Officer/Contract Specialist
1 electronic copy: Program Authorized Repository

13. REMARKS:

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**	**3a. DRD No.** **PIC-SA-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The plan is used to identify the Contractor processes for establishing and maintaining a Quality Management System (QMS), S&MA integration function, Risk Management and meeting quality assurance requirements.			**5. DRD Category** __ Technical __ Administrative X S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.1.1		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: Applicable to all NASA Centers and sites where the Contractor is operational.

CONTENT: The plan shall demonstrate the Contractor's compliance with Section 6.0 of the SOW:

A. S&MA Management (SOW 6.1) - Description of the Contractor's processes for establishing and maintaining a quality records system in accordance with SSP 41173 and SAE AS9100, a Quality Management System in accordance with SAE AS9100, Mishap Investigation and Reporting in accordance with NPR 8621.1.

B. S&MA Integration (SOW 6.2) - Description of the Contractor's process for developing and maintaining S&MA requirements in IP agreements, identifying and resolving issues affecting S&MA, and coordinating and facilitating S&MA review of change requests.

C. Program Risk (SOW 6.3) - Description of the Contractor's process for compliance with SSP 50175, NPR 8000.4, JPD 306, JPD 328, NPR 8705.4 and NPR 8705.5.

D. Quality Assurance (SOW 6.6) - Description of the Contractor's processes for compliance with SAE AS9100, SSP 41173, SSP 30695, SSP 50287, SSP 30223 and SSP 30524 for both hardware and software.

FORMAT: Electronic

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 days after contract start.

Frequency of Submission: The MA&RM plan shall be reviewed at least annually thereafter and updated as required.

Additional Submissions: 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.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OE
1 electronic copy: Program Authorized Repository

13. REMARKS: The MA&RM Plan requires approval of the Manager, S&MA/Program Risk Office.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title:	2. Date of Current Version	3a. DRD No.	3b. RFP/Contract No.
Safety and Health (S&H) Plan **1b. Data Type: 1**		**PIC-SA-02**	**Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The plan is used to establish Safety, Health, and Environmental Compliance for the contractor in meeting NASA and OSHA Standards.			**5. DRD Category** __ Technical __ Administrative X S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.1.4 OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual JSC 17773, Instructions for Preparation of Hazard Analysis for JS Ground Operations JPR 1700.1 JSC Safety and Health Handbook		**7. Interrelationships** (e.g., with other DRDs) Safety and Health Program Self-Evaluation Monthly Safety and Health Metrics	

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

SCOPE: Applicable to safety and health activity at all NASA Centers and sites where the Contractor is operational under this contract.

CONTENT: The requirements for this plan as detailed in the instructions on plan content below include instructions for specific reports and data to be submitted to the Government. These instructions are to be included in the plan and represent contractual commitments by the Contractor to provide this information.

FORMAT:

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.

Details:

1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION

1.1 Policy: Provide the Contractor's safety and health compliance policy statement with the plan. Compare the Contractor's policy statement with those of NASA and OSHA and discuss any differences.

1.2 Goals and Objectives. Describe your approach to the following:

1.2.1 Specific annual safety and health goals and objectives to be met.

1.2.2 Methods to be used, if any, to improve on the Days Away Case Rate (DACR), the Total Recordable Injury Rate (TRIR), and the total Days Away plus Restricted Duty plus Job Transfer (DART).

1.3 Management Leadership. Describe management's procedures for implementing its sustaining commitment to safety and health compliance through visible management activities and initiatives including a commitment to exercise management prerogatives to ensure workplace safety and health. Describe processes and procedures to making this visible in all Contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

1.4 Employee Involvement. Describe procedures to promote, implement, and sustain employee (e.g., non-supervisory) involvement in safety and health compliance program development, implementation and decision-making. Describe the scope and breadth of employee participation to be achieved so that approximate safety and health risk areas of the Contract are equitably represented. Describe methods to be used to obtain employee buy in and address the behavioral aspects of safety.

1.5 Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other Contractors, or other 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 data to Contractor management. Prompt notification to the JSC Occupational Medicine Clinic shall be given of any changes that occur in the identity of the point of contact.

1.5.3 Building Fire Wardens - provide a roster of fire wardens at the start of each Contract year (their names, telephone numbers and pagers, and mail codes). Contractor fire wardens are needed to facilitate the JSC fire safety program, including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives. Fire wardens will be trained in accordance with JPR 1700.1. The Roster shall be maintained by letter to the JSC Safety and Test Operations Division, mail code NS2, with copies to the Contracting Officer and the Contracting Officers Technical Representative. The initial letter shall be received by the Government not later than 15 days after contract start.

1.5.4 Designated Safety Official - identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.

1.6 Provision of Authority. Describe consistency of the plan for compliance with applicable NASA and JSC requirements and contractual direction as well as applicable Federal, State, and Local regulations and how compliance will be maintained throughout the life of the contract.

1.7 Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe, healthful, and environmentally compliant manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.

1.8 Program Evaluation. Describe your approach to safety and health program evaluation. The program evaluation consists of:

1.8.1 [RESERVED]

1.8.2 A written self-evaluation report to be delivered once per year. The self evaluation shall be provided for the Contractor performance evaluation. The self-evaluation shall follow the VPP program evaluation report format found in OSHA CSP 03-01-003, Voluntary Protection Program (VPP): Policies and Procedures Manual, Appendix C, "Format for Annual Submissions", as mandated by the cognizant OSHA regional office. Contractors who have submitted a written self-evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self-evaluation provided that all action plans and status are updated. The self-evaluation shall as a minimum cover the elements of the approved safety and health plan.

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

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

a. Date of report, Contractor identity, and Contract number.

b. For each person listed, provide name, social security number, and date of termination.

c. Name, address, and telephone number of Contractor representative to be contacted for questions or other information.

1.9.2 Material Safety Data Sheets (MSDS). The Contractor shall prepare and/or deliver MSDS for hazardous materials brought onto Government property or included in products delivered to the Government. This data is required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication", EPA "Emergency Planning and Community Right-to-Know (EPCRA, ref. 40 CFR 302, 311, 312); and the Texas Department of Health (TDH, ref. Chapters 505-507 of the Health and Safety Code), and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. This inventory is also required by JPR 1700.1, "JSC Safety and Health Handbook", as revised. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central MSDS Repository, maintained by the JSC Occupational Medicine Occupational Health contractor, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrive with the material and is needed for immediate use, the MSDS shall be delivered to the Central MSDS Repository by close of business of the next working day after it enters the site.

1.9.3 Hazardous Materials Inventory. The Contractor shall compile an inventory report of all hazardous materials it has located on Government property quarterly, and which is within the scope of 29 CFR 1910.1200, "Hazard Communication"; and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. This inventory is also required by JPR 1700.1, "JSC Safety and Health Handbook", as revised. The call for this inventory and instructions for delivery will be issued by the JSC Occupational Medicine Occupational Health contractor, mail code SD33. This information shall use the format used by JSC for chemical inventory compilation to provide the following:

a. The identity of the material (product number, chemical, manufacturer, and NSN as available.

b. The location of the material by building, room and area/cabinet number.

c. The quantity of each material normally kept at each location (number of containers, container size, type container, unit of measure, conversion factor, storage temp and pressure, physical state/form, specific gravity, total pounds).

d. Peak quantity stored.

e. Actual or estimated rate of annual usage of each chemical.

1.10 Government Access to Safety and Health Program Documentation. The Contractor shall recognize, in its plan, that all safety and health documentation (including relevant personnel records) be available for inspection or audit at the Government's request. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For Contractor activities conducted on NASA property,

the Contractor will identify what records will made available to the Government in accordance with the criteria of OSHA as implemented in JPR 1700.1, "JSC Safety and Health Handbook", as revised. For the purpose of this plan, safety and health documentation includes but is not limited to: logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, or emergency preparedness.

1.11 Review and Modification of Safety Requirements. The Contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative (COTR) in accordance with established contractual procedures.

1.12 Procurement. Identify procedures used to assure that procurements are reviewed for safety and health compliance considerations and that specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.

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

2. WORKSITE ANALYSIS

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.

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. Includes assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The Contractor will describe administrative requirements and procedures for control of regularly scheduled inspections for fire and explosion hazards. The Contractor has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify:

a. Discrepancies between observed conditions and current requirements, and,

b. New (not previously identified) or modified hazards.

c. Use of JSC's Hazard Abatement Tracking System to manage hazards onsite at JSC (see paragraph 3.12 below).

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

2.6 Employee Reports of Hazards - Identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The Contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation/awareness activities.

2.7 Accident and Record Analysis

2.7.1 Mishap Investigation – identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The Contractor will describe the methods to be used to report and investigate mishaps on NASA property and on Contractor or third party property. The Contractor will describe its procedures for implementing immediate notification of NASA using the call tree in 2.7.1.a below. The use of the quick incident reports found at the lower center of the home page of the NASA Incident Reporting Information System (IRIS) at https://nasa.ex3host.com/iris/newmenu/login.asp and use of NASA forms as specified in JPR1700.1 or any alternate forms used by Contractor. The contingency plan will emphasize timely notification of NASA; preliminary and formal investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; preparation and submission of a formal report to NASA; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The Contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The Contractor will include appropriate details to address the following:

Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form is NOT available from JSC or NASA forms management; it can be obtained from the following link: http://jschandbook.jsc.nasa.gov/ .

a. The Contractor will include a mishap contingency plan as part of the Safety and Health Plan which meets the requirements of NPR 8621.1, 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 plan will clearly identify the Government investigation as taking precedence over any contractor investigation.

b. For Type C injuries and all lower level mishaps, the Contractor will perform its own investigation and submit a report to NASA in accordance with the requirements of NPR 8621.1. The Contractor will ensure that NASA is promptly notified of any Type D mishap so that NASA provides a civil servant to oversee the investigation in an ex officio capacity prior to start of any formal investigation. All initial reports and selected follow up reporting will be accomplished using IRIS.

c. When a NASA investigation is required, witnesses will be identified and their names and contact information provided to NASA investigator but witness statement must be requested and collected by NASA. Such statements will be retained by the Government as part of the mishap file in accordance with NPR 8621.1.

d. The Contractor will deliver to NASA mishap reports which shall include the data specified in NPR 8621.1 for the level of mishap. NASA approval and endorsements will be required as specified in NPR 8621.1 and included in the approved Safety and Health Plan.

2.7.2 Trend Analysis – Describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.). Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the Contractor will discuss method of providing data as follows.

a. Accident/Incident Summary Report - The Contractor shall prepare and deliver Accident/Incident Summary Reports as specified on JSC Form 288, "Accident/Incident Statistics" as revised. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and close calls shall be described in summary form along with current status. Negative reports are also required monthly. Report frequency is monthly; date due is the 10th days of the month following each month reported. Report to be delivered to the JSC S & MA Directorate through the Safety and Test Operations Division, mail code NS2, by fax to 281-244-0426 or by attaching to an e-mail and transmitting to JSC-Safety-Report-Submittals@mail.nasa.gov.

b. Log of Occupational Injuries/Illnesses

i. For each establishment on and off NASA property that performs work on this Contract, the Contractor shall deliver, to the Government, a copy of its annual summary of occupational injuries and illnesses (OSHA 300 and OSHA 300A or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5 If the Contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in Contractor's format is acceptable (such as loss runs from insurance carrier) which contains the data required by JSC Form 288.

ii. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g. not later than February 15 of the year following).

3. HAZARD PREVENTION AND CONTROL

3.1 Identified hazards must be eliminated or controlled. In the multiple employer environment of the Center, it is required that hazards including discrepancies and corrective actions be collected in a Center wide information system Hazard Abatement Tracking System (HATS) for risk management purposes. Describe your approach to implementing this requirement.

3.2 Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence (see JPR 1700.1). Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, energies, etc.). Discuss need for coordination with safety, health, and emergency authorities at NASA.

3.3 Hazardous Operations and Processes. Establish methods for notification of personnel when hazardous operations and processes are to be performed in their facilities or when hazardous

conditions are found to exist during the course of this Contract. JPR 1700.1 will serve as a guide for defining, classifying, and prioritizing hazardous operations; 29 CFR 1910.119 will be the guide for hazardous processes when the material or process meets the requirements therein. Develop and maintain a list of hazardous operations and processes to be performed during the life of this Contract. The list of hazardous operations and processes will be provided to JSC as part of the plan for review and approval. JSC and the Contractor will decide jointly which operations and processes are to be considered hazardous, with JSC as the final authority. Before hazardous operations or processes commence, the Contractor will develop a schedule to develop written procedures with particular emphasis on identifying the job safety steps required. NASA will have access on request to any Contractor data necessary to verify implementation. For all identified operations or processes that may have safety or health implications outside Contract operations, the Contractor shall identify such circumstances to the JSC Safety and Test Operations Division and Occupational Health Officer who will provide additional instructions for further NASA management review and approval.

3.4 Written Procedures. Identification of methods to assure that the relevant hazardous situations and proper controls are identified in documentation such as inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.

3.5 Hazardous Operations Permits. Identify facilities, operations and/or tasks where hazardous operations permits will be required as specified in JPR 1700.1 such as confined space entry, hot work, etc. Set forth guidance to adhere to established 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.

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).

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.

FORMAT: Electronic and hard copies

9. OPR: OE

10. FIRST SUBMISSION DATE: The Safety and Health plan shall be submitted in final form with the proposal. Upon NASA approval, the Contractor's Safety and Health Compliance Plan becomes a Contractual Requirement.

Frequency of Submission: The plan shall be reviewed at least annually thereafter and updated as required.

Additional Submissions: The plan shall be updated with the changes highlighted to meet the latest OSHA, JSC, and VPP requirements. If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT October 1 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.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification:
OE/Safety and Mission Assurance/Program Risk Office
NS/Safety and Test Operations Division
1 electronic copy: Program Authorized Repository

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 (1 hard copy)

13. REMARKS: The Safety and Health Plan requires approval of the Manager, S&MA/Program Risk Office. The final plan, as approved by the Contracting Officer, shall be incorporated in the contract as Attachment J-3.

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	3a. DRD No. PIC-SA-03	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) Establishes selected Safety and Health Program metrics in accordance with OSHA Requirements			5. DRD Category __ Technical __ Administrative _X_ S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.1.4 JPR 1700.1, JSC Safety and Health Handbook		7. Interrelationships (e.g., with other DRDs)	

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

SCOPE: The scope of the information required is limited to NASA Centers and sites where the Contractor is operational under this contract.

CONTENT: The Safety and Health Metrics shall be in accordance with the Safety and Health Plan and JPR 1700.1.

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												

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

Instructions for Completing JSC Form 2341

General. JSC Form 2341 will be prepared to describe the content and provide preparation information for data required to support of JSC programs. For more detailed instructions, see JSC STD-123.

1. **DRD Title.** Enter the title of data or document required. The title should include a principal noun which best establishes the basic concept of the data.

2. **Date of current DRD version.** If an existing DRD is revised, enter the revision date. For a new DRD, enter origination date.

3. **DRL Line Item.** Enter the individual line item number from block 1 of JSC Form 2323, "JSC Data Requirements List," as completed for a specific procurement.

RFP/Contract No. The assigned procurement office enters the number of the specific procurement document to which the DRD is attached.

4. **Use.** Enter a synopsis of the intended use of the document. Include the reason for the requirement and identify the using organization if necessary.

5. **DRD Category.** Check the type of information described. SR&QA DRDs must be approved by a representative of the JSC Safety, Reliability, and Quality Assurance Office.

6. **References** *(Optional).* List applicable documents (NASA or JSC manuals, military specifications, Federal standards, NASA procurement regulations, etc.) containing additional information concerning the data requirements. If original DRD refers to obsolete documents, these should be deleted when the DRD is revised.

7. **Interrelationships** *(Optional).* Enter other data requirements or passages in the same SOW that will affect or be affected by this DRD. References to paragraphs in the SOW may not be substituted for the information in block 8.

8. **Preparation Information.** Provide instructions for preparation of the data required. JSC STD-123 contains suggestions for completing this section. If additional pages are required, use blank 8 1/2 X 11 inch sheets.

Note: For definitions refer to JPR 1700.1 and OSHA requirements for definitions of terms.

FORMAT: Electronic, Excel spreadsheet or in tables compatible with MS Word.

9. OPR: OE

10. FIRST SUBMISSION DATE: Monthly by 10th of month following month being reported.

Frequency of Submission: Monthly by the 10th day of the month following the month being reported
Additional Submissions: N/A

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification:
OE/Safety and Mission Assurance/Program Risk Office
NS/Safety and Test Operations Division
SD3/Occupational Health Officer
1 electronic copy: Program Authorized Repository

13. REMARKS: None

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**	**3a. DRD No.** **PIC-SA-04**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
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** __ Technical __ Administrative X S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.1.4		**7. Interrelationships** (e.g., with other DRDs) Safety and Health Program Self-Evaluation	

8. PREPARATION INFORMATION: TheContractor shall prepare the deliverable as follows:

SCOPE: The scope of the information required is limited to NASA Centers and sites where the Contractor is operational under this contract.

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.

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, 2010

    Frequency Of Submission: Annually on September 30th of each year.
    Additional Submissions: N/A

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

12. **COPIES/DISTRIBUTION:**

    Program Authorized Repository Upload Notification: OH2/Data Management
    Program Authorized Repository Upload Notification:
    OE/Safety and Mission Assurance/Program Risk Office
    NS/Safety and Test Operations Division
    1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Probabilistic Risk Assessment (PRA) **1b. Data Type: 3**	**2. Date of Current Version** MOD 1	**3a. DRD No.** **PIC-SA-05**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The PRA provides an analytical capability to quantify safety and risk issues and is designed to support strategic decisions. As an integral part of risk assessment, PRA helps determine, (i) what can go wrong that could lead to an undesired outcome, (ii) how likely is this to happen, and (iii) if it happens, what consequences are expected. Effective resource allocation depends on a good, thorough risk model, like PRA.			**5. DRD Category** __ Technical __ Administrative **X** S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.3.2		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: Risk model capable of assessing risks due to changes in ISS configuration, operations, or environmental factors. The Risk model will address ISS systems and visiting vehicles.

CONTENT: PRA analyses and reports shall be in accordance with NPR 8705.5, PRA Guidelines for NASA Programs and Projects. There shall be a PRA final report for each configuration modeled which contains:

(i) An introductory section,

(ii) PRA Development Approach,

(iii) a detailed section describing the model including end state definitions, master logic diagram, event sequence diagrams, fault trees, data collection and analysis methods, ground rules and assumptions,

(iv) Results of the modeling effort, and

(v) Future work and recommendations.

FORMAT: Electronic

9. **OPR**: OE

10. **FIRST SUBMISSION DATE:** As required by Task Order.

Frequency of Submission: As required
Additional Submissions: As required

11. MAINTENANCE: The documents shall be maintained electronically.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OE
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13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Hazard Reports and System Description **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SA-07**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The Contractor shall ensure the safety of crew and ISS by using the Hazard Reports and System Description to assess mission integration and operation of ISS.			**5. DRD Category** __ Technical __ Administrative _X_ S&MA/PR
6. References (SOW, Clauses, etc) SOW, Paragraph 6.4 SSP 30309, Safety Analysis and Risk Assessment Requirements Document SSP 30599, ISS Safety Review Process	**7. Interrelationships**		

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

SCOPE: Submittals shall consist of Hazard Reports and System Descriptions (as defined in "Content") on flight and/or stage specific integrated safety assessments for operation of the ISS vehicle for compliance with Section C, Statement of Work, paragraph 6.4.

CONTENT: The Hazard Reports and System Descriptions shall document the program approach for executing the safety process in accordance with SSP 30309, Safety Analysis and Risk Assessment Requirements Document.

A. System Description: The Contractor shall provide a description of the on-orbit ISS Operations in accordance with SSP 30599, Safety Review Process. Functional diagrams shall be submitted and supplemented with descriptions of interfaces and operations.

B. Hazard Report: Hazard Reports shall include the following data fields:

- Hazard Report Number
- Hazard Title
- Review Level
- Revision Date
- Scope
- Hazard Description
- Cause Summary
- Program Stage
- Interfaces
- Status of Work
- Remarks
- Submittal Concurrence
- Approval

- Mission Phase
- Severity Category
- Likelihood of Occurrence
- Controls
- Method for Verification of Controls
- Safety Requirements
- Detection and Warning Method
- Cause Remarks
- CIL Reference
- Point of Contact

Note: The Hazard Reports and System Descriptions for "Mission Integration" do not follow submittal and approval of the typical Phase I, Phase II, and Phase III deliveries. The uniqueness of the safety assessments requires a "content level" commensurate with the maturity of a Phase III submittal, including verification of the established controls. This is required as the "System Description" needed to process the hazard report is finalized only months before flight.

FORMAT: These deliverables shall be in the format described in SSP 30599.

9. **OPR**: OE

10. **FIRST SUBMISSION DATE:** 60 days prior to the first flight where the Contractor takes responsibility for Mission Integration

Frequency of Submission: Each report will be submitted for approval and resubmitted, as required, until approved by the ISS Safety Review Panel (SRP). Reports being submitted for ISS SRP approval shall be sent to the ISS SRP Coordination Office.

Additional Submissions: Submittal of the Hazard Report and System Description will be based the Contractor's periodic reassessment of the hazards and controls. At a minimum, each operational stage shall be assessed 60 days in advance. Results of this assessment shall be provided to the ISS SRP Coordination Office.

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:** (post ISS SRP approval)

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification:
OE/Safety and Mission Assurance/Program Risk Office
NE/ISS SRP Coordination Office
1 electronic copy: Program Authorized Repository

13. REMARKS: The Hazard Reports and System Description shall be prepared in accordance with SSP 30309 in support of the ISS safety review and the ISS CoFR processes.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Lessons Learned Program Plan and Lessons Learned **1b. Data Type: 1**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SA-08**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
C. Use (Define need for, intended use of, and/or anticipated results of data) Establishes Process for obtaining Lessons Learned from Contractor for possible publication in JSC Lessons Learned Database and NASA Lessons Learned Information System (LLIS)			**5. DRD Category** __ Technical __ Administrative X S&MA/PR
6. References (SOW, Clause, etc.) SOW 6.1.5		**7. Interrelationships** (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The Contractor will develop and implement a lessons learned program plan consistent with the areas defined in the statement of work and/or the work breakdown structure.

Lessons Learned Program Plan. The lessons learned program plan will include:

A. Lessons learned program structure and management responsibility for lessons learned.

B. Lessons Learned advocacy throughout the contracted effort.

C. Approach to selection, review, and validation of lessons learned using contract and Government assets.

D. Approach used to balance trade secret and security imperatives vice Government rights in data and the need to capture lessons for publication in Government information systems and processes.

E. The dissemination of lessons learned throughout appropriate NASA Programs including the retrieval and dissemination of lessons published in the JSC Lessons Learned Database and the NASA Lessons Learned Information System.

F. Information on the successful use of retrieved lessons including how they were used, by whom, for what purposed, and implementation detail delivered to the Government as additional recommendations for previously published lessons.

G. Goals for the Contractor's lessons learned program including schedules, scope, breadth, quality, and quantity of lessons the Government can expect as delivered lessons. Appropriate metrics for identification, publication, and dissemination are highly desirable.

H. The approach to the selection of media to be used for of supporting data inclusion with each lesson learned (such as photographs, analyses, diagrams, schematics, drawings, and streamed video.)

Access to the JSC Lessons Learned Database (LLDB) and the NASA Lessons Learned Information System (LLIS).

1. To obtain access privileges to the JSC Lesson learned Database, JSC Domain Internet access is required to enter and review lessons learned information. The JSC lessons learned databases is accessible at http://lldb.jsc.nasa.gov/ .

2. To obtain access to the NASA Lessons Learned Information System, go to http://nen.nasa.gov/portal/site/llis/menuitem.41d2c6248694d611b649cc1036793ea0/ and follow instructions.

Criteria for Selecting Lessons Learned. Uncommon insight arising from any event or observation that will benefit from sharing with a larger community of interested parties. Lessons learned are intended to prevent recurrence of undesirable events and to allow NASA and its team members to capitalize to the greatest extent practical on unique successes requiring documented insight for retrieval on demand. Sharing of lessons with other Government agencies is also expected.

Frequency of submission for lessons learned. As follows (in order of decreasing Government preference):

A. Data entry to the JSC LLDB or NASA LLIS within 30 days of a triggering event;

B. Within 30 days of a program milestone, mishap investigation, or hazard or other engineering analysis / evaluation is completed; or

C. 30 days prior to end of contract evaluation period or 45 days prior to end of contract, whichever is applicable.

Distribution of Lessons.
Lessons are distributed by entry into the JSC Lessons Learned Database which submits lessons to the NASA Lessons learned Information System once approved and published. The NASA Lessons Learned Information System may be used directly if the contractor is outside the JSC domain or firewall.

Content of Lessons.

1. Subject - one line subject of the lesson.
2. Lesson Learned - usually one sentence that describes insight gained
3. Description of Event - narrative that describes what happened.
4. Recommendations - may be an action plan, suggestion, etc., that was adopted at event source.
5. Supporting documentation – submit as needed to augment understanding of lesson (photographs with or without pointers and text labels), illustrations, drawings, etc.)

6. Contact name and e-mail address (for follow up by Government prior to publication of lesson).

Evaluation of Contactor Lessons Learned Program performance.
The following characteristics are evaluated by the Government in order of decreasing importance:

1. Effectiveness of approach to lessons learned advocacy.
2. Ability to recognize and capitalize on lessons learned in a timely manner.
3. Breadth of participation by the contracted effort to include from where lessons originate for publication and to whom lessons are disseminated for use by contract assets.
4. Technical quality of lessons submitted including thoroughness and readiness of supporting documentation for publication.

FORMAT: Electronic

9. OPR: OE and JSC Office of the Chief Engineer

10. FIRST SUBMISSION DATE: Draft Lessons Learned Program Plan by the end of the phase-in period. Final Lessons Learned Program Plan within 90 days after contract start.

Frequency of Submission: The Lessons Learned Program Plan shall be reviewed at least annually thereafter and updated as required.

Additional Submissions: 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.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OE and JSC Office of the Chief Engineer
1 electronic copy: Program Authorized Repository

13. REMARKS: The Lessons Learned Program Plan requires approval of the Manager, S&MA/Program Risk Office with concurrence by the JSC Office of the Chief Engineer.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: ISS Documents Maintenance and Assessment **1b. Data Type: 1**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SI-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) Maintain technical integrity and traceability of systems and interface requirements and implementations for the ISS			**5. DRD Category** _**X** Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 2.2.1 SSP 41171		**7. Interrelationships** (e.g., with other DRDs) PIC-SI-02	

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

SCOPE: This DRD establishes the content, format, maintenance, and submittal requirements for the International Space Station System Specification, Partner Segment Specifications, IRDs, and ICDs.

CONTENT: The administered documents shall contain the top-level design, performance, and interface requirements for the ISS System, including requirements allocations and traceability reporting of requirements to all segments (e.g., U.S.O.S, Russian, JAXA JEM and CAM, ESA Columbus, ASI Node 2), and design details of all inter-system and inter-module interfaces affecting more than just the prime Contractor's internal interfaces. Content shall be sufficient to assure software, mechanical, and functional compatibility of all elements and segments that must be integrated to form the ISS System. PIRNs or Change Requests add technical updates to the ISS Program through these documents. Book management responsibility, PI&C technical activity level, and modification process (PIRN or CR) are noted in Addendum 6.

FORMAT: All ICDs shall be maintained and updated in two parts: Part I shall contain interface requirements and Part II shall contain the interface design implementation. The IRDs shall be maintained and updated in one part. The format of all interface documents shall be in accordance with SSP 41174. Requirements Specification Documents shall meet the standards specified in SSP 41171, except as modified in IP specifications by negotiations with the International Partner/Participant.

9. **OPR**: OM/Program Integration Office

10. **FIRST SUBMISSION DATE:** 6 months after contract start

Frequency of Submission: Update as required, with initial frequency indicated by the 2010 activity level, generally moving to fewer updates as the station matures and systems

are activated on-orbit. High activity levels will indicate initial quarterly submission; Low activity levels may require less than one update per year for most documents. Final submission shall be prior to the end of the contract period of performance. After documents supplied under this DRD are added to the Applicable Documents List of this contract (Attachment J-8), updates will be accomplished in accordance with SSP 41170.
Additional Submissions: N/A

11. **MAINTENANCE:** Specifications shall be maintained electronically and in accordance with SSP 41171, or as modified by negotiations with the Partner/Participant. ICDs/IRDs shall be maintained electronically in accordance with SSP 30459 and SSP 41174.

12. **COPIES/DISTRIBUTION:**

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OM/Program Integration Office
1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Specification Traceability and Compliance Reports **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SI-02**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) Document specification traceability to support closure for the ISS System Specification, U.S. On-Orbit Segment Specification, and IP/Ps Segment Specifications. Document traceability from the ISS System Specification, the U.S. On-Orbit Segment Specification, and to the IP/Ps Segment Specifications.			**5. DRD Category** _X Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 2.2.1		**7. Interrelationships** (e.g., with other DRDs) PIC-SI-01	

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

SCOPE: The Specification Traceability and Compliance Reports document the requirements traceability flowdown and support verification closure for:

A. SSP 41000, ISS System Specification

B. SSP 41160, ESA Segment Specification for Columbus

C. SSP 41162, U.S. On-Orbit Segment Specification

D. SSP 41163, Russian Segment Specification

E. SSP 41165, Segment Specification for the Japanese Element Module (JEM)

F. SSP 41167, Mobile Servicing System Segment Specification

G. SSP 50273, HTV Segment Specification

H. SSP 50333, Cupola Segment Specification

I. SSP 50439, ESA Segment Specification For The Automated Transfer Vehicle (ATV)

J. SSP 50318, Prime Item Development Specification for Node 3

CONTENT:

A. The Specification Traceability Report shall contain the following for each of the specifications identified above:

(1) Requirements with no lower level requirements.

(2) Requirements with no parent requirements.

FORMAT: Electronic

9. **OPR**: OM/Program Integration Office

10. **FIRST SUBMISSION DATE:** 6 months after contract start

    Frequency of Submission: Twice annually update as required and to support Stage Integration Review (SIR). Final submission shall be prior to the end of the contract period of performance.
    Additional Submissions: N/A

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

12. **COPIES/DISTRIBUTION:**

    Program Authorized Repository Upload Notification: OH2/Data Management
    Program Authorized Repository Upload Notification: OM/Program Integration Office
    1 electronic copy: Program Authorized Repository

13. **REMARKS:** None.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Systems Engineering Technical Assessments **1b. Data Type: 3**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SI-03**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide recommendations to the ISS Program management on the strategic implications of the ISS Program launch schedules, manifests, and ISS on-orbit operations, and assist in the NASA's development of strategic requirements.			**5. DRD Category** **X** Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 2.2.2		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: Each technical assessment shall specify the stage(s) or configuration(s) for which the assessment is valid. Each assessment shall also include clear definition of assumptions (including bounding operational constraints and configuration assumptions) invoked in the assessment.

CONTENT: The technical assessment documentation shall include the SOW requirement(s) being addressed by the assessment, if applicable, and the following:

A. Coordination list

B. Background information sufficient to inform a cognizant ISS customer of the applicability of this analysis to their discipline

C. Summary of methodology and rationale for confidence in the results

D. Summary of findings and recommendations

E. Supporting data

FORMAT: Contractor supplied web-based format, compatible with ISS document standards. Format includes but is not limited to briefing charts in electronic form.

9. **OPR**: OM

10. **FIRST SUBMISSION DATE:** As needed by direction of the OPR

Frequency of Submission: As required
Additional Submissions: Technical assessments are required on most Systems Engineering and Integration (SE&I) deliverables.

11. **MAINTENANCE:** Electronically, as required

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
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13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: On-Orbit Assembly, Modeling, and Mass Properties Data Book (Blue Book) **1b. Data Type: 2**	**2. Date of Current Version**	**3a. DRD No.** **PIC-SI-04**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The data book provides the ISS Program on-orbit mass properties, geometric, and aerodynamic data of the ISS mated, intermediate assembly, and stage configurations. This data is utilized by ISS Program/SSP subsystem teams (e.g. GN&C) that require on-orbit stage mass properties. The figures are also used in other ISS/SSP documents where ISS on-orbit figures are required.			**5. DRD Category** X Technical __ Administrative __ SR&QA
6. References SOW 2.2.3.2.2 SOW 2.2.3.2.11 SOW 2.2.3.2.12 JSC 26557 SSP 30219		**7. Interrelationships** (e.g., with other DRDs)	

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

SCOPE: This DR establishes the content for the development of On-Orbit Assembly, Modeling and Mass Properties Data Book (*Blue Book*) (JSC 26557). It will define the data sources for the development and the content of the Blue Book.

CONTENT: This *Blue Book* (named so because of the blue book covers) provides comprehensive assembly, mass and aerodynamic properties data for the full range of the ISS construction activities for the 18 months from the document release. Volume I contains free flying and Orbiter-attached configuration properties. In Volume II the mass property and aerodynamic data are organized into a multi-body system utilized by analysts. Volume II provides data used by a limited number of customers within the ISS analysis community. The reference document JSC 26557 is the current On-orbit Assembly, Modeling, and Mass Properties Data Book. The tool MODGEN was used extensively for the data book development and is available for use by the contractor as identified in Section C, Addendum 2, Table 1.

ISS geometry, mass properties, and on-orbit orientation information is obtained from the ISS Sustaining Engineering Contract. The coordinate systems are defined in SSP 30219, Space Station Reference Coordinate Systems.

Elements moments of inertia, products of inertia and centers of pressure reported in this document shall be given with respect to the specific element, body, or vehicle center of mass. The center of mass and other significant points shall be reported with respect to the SSACS frame.

Vehicle configurations and dimensions shown in this document shall be derived from data for static, on-orbit element configurations. Dynamic conditions due to applied loads, including

internal pressure deformations of individual elements, and thermal effects will not be depicted or dimensioned in this document.

Orbiter specific mass properties shall be obtained from mission specific Shuttle Operations Data Books (SODBs).

The following information shall be provided for each configuration as defined by the Configuration List and the Assembly Matrix. Data will be given in the Space Station Analysis Coordinate System (SSACS) as defined in SSP 30219:

Detailed description
Solid model isometric hidden line drawing illustration
Reference point in SSACS and RSA Analysis Coordinate Systems
Total ISS on-orbit mass (lb, kg)
Center of mass location (X, Y, Z in ft, m)
Inertia tensor* (slug*ft**2, kg*m**2)
Principal moments of inertia (IXX, IYY, IZZ in slug*ft**2, kg*m**2).
The origin of the principal axes coordinate system is located at the configuration center of mass.
Principal to body Euler rotation angles
Projected areas (X, Y, Z in ft**2, m**2)
Aerodynamic centers of pressure are referenced in the SSACS frame to specific element, body, or vehicle center of mass and not the modeling origin.
Center of pressure offset matrix (with respect to the center of mass)
* Inertia matrix off-diagonal elements are negative integrals on these pages.
Configurations shall contain other extra data sets, including these items:
Element interfaces
Element properties*
The mass properties are given when the element either (a) initially is delivered to ISS, (b) increases or decreases in mass, (c) moves to a new location on the ISS, or (d) changes configuration [such as mechanism deployment or retraction].
Element dimensioned four-view drawings
Orbiter attach point location
Mass properties for an attached Orbiter vehicle*
Mass properties for mated ISS - Orbiter stack*
Dimensioned hidden line illustration of the final *Blue Book* ISS stage configuration showing interface to interface dimensions and other ISS key dimensions, such as solar array area or radiator location. Dimensions shall be in mm (inches).
* Inertia matrix off-diagonal elements are negative integrals on these pages.
Additional drawings shall be provided:
J-size drawing showing all the *Blue Book* configurations
C-size exploded isometric of the final *Blue Book* stage configuration
C-size dimensioned drawing of the final *Blue Book* stage configuration
Other drawings as required.

FORMAT: Delivery to NASA of the document volumes shall be made available electronically in Microsoft Word and Acrobat. Hardcopies will be available for users as required. The illustrations shall also be available individually in tif, gif, and pic formats. The individual mass property sets

will also be available separately in the user's required format. All electronic files will be available from an ftp server from JSC and non-JSC users (including International Partners) and are subject to the export control regulations.

9. **OPR:** OM2, External Configuration, Analysis, Modeling and Mass Property Team

10. **FIRST SUBMISSION DATE:**

Frequency of Submission: The individual electronic files of the Blue Book (JSC 26557) shall be delivered every June and December. Volumes I and II shall be delivered electronically and in hard copy every January and July. Construction of one data book per year is scheduled to address flight and operation plan modifications affecting missions close to launch. Users will be notified by mail notification to the user distribution list of document deliveries and updates.

Additional Submissions: Change pages shall be produced if a significant change is the assembly sequence or mission timeline occurs. Prior approval by the OPR is required.

11. **MAINTENANCE:** All versions of the deliveries must be maintained electronically and must be accessible by the ISS Program/SSP users.

12. **COPIES/DISTRIBUTION:**

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OM2/External Configuration, Analysis, Modeling and Mass Property Team
1 electronic copy: Program Authorized Repository

13. **REMARKS:** None

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: ISS Interior 3D CAD Models 1b. Data Type: 3	2. Date of Current Version	3a. DRD No. PIC-SI-05	3b. RFP/Contract No. Final RFP NNJ09ZBG001R
4. Use (Define need for, intended use of, and/or anticipated results of data) Input to vehicle integration to support the development of the on-orbit stage models to perform internal volume configuration analyses of the USOS. The models will be used for performing analyses related to IVA operations and Station interior integration included but not limited to crew translation paths, worksite operational volumes, visibility and access to critical equipment and controls, and other IVA-related functions.			5. DRD Category X_ Technical __ Administrative __ SR&QA
6. References (SOW, Clause, etc.) SOW 2.2.2.1.4.4.3		7. Interrelationships (e.g., with other DRDs)	

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

SCOPE: USOS pressurized elements, systems racks, payloads, payload racks, and significant GFE items that are part of the IVA environment and impact the Station crew's habitable environment. Best available and as-designed validated models for the planned interior are required.

CONTENT: Validated 3-D CAD models with sufficient detail that the internal geometry shows an accurate depiction of the ISS stage configuration. High fidelity models of modules, racks, payloads, and significant GFE items should be provided for on-orbit configurations. CAD models of interior features are required that may include the following: internal pressure shell, standoffs, hatches, ports, stowage compartments, rack attachments, vents, lights, handrails, racks, seat track, emergency equipment, and significant GFE (i.e Cycle Ergometer with Vibration Isolation and Stabilization [CEVIS], Interim Resistive Exercise Devise [IRED], Crew Medical Restraint System [CMRS], etc.). All objects that deploy, rotate or otherwise move shall be documented and modeled with location and limit parameters described.

FORMAT:

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

B. Models shall be constructed to nominal dimensions.

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

D. Models shall be maintained in Pro-Engineer (or equivalent)

E. Translation: STEP AP203 neutral file format acceptable only if Pro-Engineer formats are not available.

F. Solid Models Only—Models may be unparameterized "dumb solids" meaning tolerance data; model history, material properties, etc. need not be included.

G. 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.

H. Description on movement limits for any articulating items should be provided.

I. As-designed and As-built (validated and final) models shall be validated to released engineering MBD data sets/drawings. MBD data sets/drawings shall be located in the VMDB.

K. 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.

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

M. Models shall be under configuration management so that the pedigree and source of models, including validation data, are documented and retained.

N. 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: See below

Frequency of Submission: High fidelity best available 3-D CAD model required at L-16 months. High fidelity validated 3-D CAD model required at L-9 months

Additional Submissions: N/A

11. MAINTENANCE: Models must be maintained electronically.

12. COPIES/DISTRIBUTION:

Program Authorized Repository Upload Notification: OH2/Data Management
Program Authorized Repository Upload Notification: OM
1 electronic copy: Program Authorized Repository

13. REMARKS: All ISS interior CAD models shall be deliverables to NASA and be made available to the ISS community or other users. Individual models shall be available at the level of modules, racks, and GFE.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Operations and Maintenance Requirements and Specifications Database (OMRSD) **1b. Data Type: 1**	**2. Date of Current Version:** March 6, 2008	**3a. DRD No.** **PIC-VT-01**	**3b. RFP/Contract No.** **Final RFP** **NNJ09ZBG001R**
4. Use (Define need for, intended use of, and/or anticipated results of data) The OMRSD contains the requirements for processing the International Space Station components at KSC for flight readiness.			**5. DRD Category** _X_ Technical Administrative __ SR&QA
6. References (SOW, Clause, etc.) OMRS File 10 Database - SOW 3.1.1.1.2.3, Systems Engineering and Test and Verification (T&V) Support OMRS File 10 Database - NSTS 08171		**7. Interrelationships** (e.g., with other DRDs) N/A	

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

   SCOPE: The requirements, specifications and criteria in the OMRSD apply to pre-launch, launch, in-flight, recovery and turnaround operations of the International Space Station elements and payloads.

   CONTENT: Approved/closed requirements for certification of flight readiness. Database houses active requirements for possible utilization on future flights.

   FORMAT: Electronic.

9. **OPR**: Vehicle Office (OB)

10. **FIRST SUBMISSION DATE:** As needed following Shuttle retirement

    Frequency of Submission: As required per Requirement Change Notice updates.
    Additional Submissions: Procedures and Requirements Allocation Matrix for closed loop tracking.

11. **MAINTENANCE:** Electronic, as required (see additional submissions)

12. **COPIES/DISTRIBUTION:** N/A

    Program Authorized Repository Upload Notification: OMRSD Facilitator at KSC

13. **REMARKS:** None

Attachment J-2

DOL WAGE

DETERMINATION

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

(See Instructions on Reverse)

1. NOTICE NO.
64455
NASA

MAIL TO:

Administrator
Wage and Hour Division
U.S. Department of Labor
Washington, DC 20210

2. Estimated solicitation date *(use numerals)*

Month	Day	Year
10	17	08

3. Estimated date bids or proposals to be opened or negotiations begun *(use numerals)*

Month	Day	Year
02	03	09

4. Date contract performance to begin *(use numerals)*

Month	Day	Year
01	01	09

5. PLACE(S) OF PERFORMANCE

HARRIS COUNTY, TX

6. SERVICES TO BE PERFORMED *(describe)*

IV: International Space Station Program Integration and Control Contract NNJ04AA01C
WD Contract Period: 10/01/09 to 09/30/10

7. INFORMATION ABOUT PERFORMANCE

A. [X] Services now performed by a contractor
B. [ ] Services now performed by Federal employees
C. [ ] Services not presently being performed

8. IF BOX A IN ITEM 7 IS MARKED, COMPLETE ITEM 8 AS APPLICABLE

a. Name and address of incumbent contractor

Applied Research & Engineering Sciences (ARES)
16441 Space Center Blvd, Bldg. A
Houston, TX 77058

b. Number(s) of any wage determination(s) in incumbent's contract
WD 2005-2516

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
(by Department of Labor)

A. [X] The attached wage determination(s) listed below apply to procurement.
WD 2005-2516 Rev 8

B. [ ] As of this date, no wage determination applicable to the specified locality and classes of employees is in effect.

9. OFFICIAL SUBMITTING NOTICE

SIGNED:	DATE
Original signed by	10-03-08

TYPE OR PRINT NAME	TELEPHONE NO.	
Connie R. Pritchard Contract Labor Relations Officer	281-483-4121	C. ☐ From information supplied, the Service Contract Act does not apply *(see attached explanation).*
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** **Connie R. Pritchard, Mail Code BA2** **2101 NASA Parkway** **Houston, TX 77058**		D. ☐ Notice returned for additional information *(see attached explanation)* Signed:_____ *(U.S. Department of Labor)* _____ *(Date)*
98-103		COMPUTER-GENERATED 1/96

STANDARD FORM e98a February 1973 U.S. DEPARTMENT OF LABOR Employment Standards Administration	NOTICE OF INTENTION TO MAKE A SERVICE CONTRACT AND RESPONSE TO NOTICE (Attachment A)	11. Notice No. NASA 64455
12. CLASSES OF SERVICE EMPLOYEES TO BE EMPLOYED ON CONTRACT Harris County, TX; 2005-2516, Occupations included in "SCA Directory of Occupations"	13. NUMBER OF EMPLOYEES IN EACH CLASS	14. HOURLY WAGE RATE THAT WOULD BE PAID IF FEDERALLY EMPLOYED
Secretary, I	3	GS-4 $14.33
General Clerk, II	1	GS-3 $12.76
Computer Operator, I	5	GS-4 $14.33
Document Preparation Clerk	1	GS-3 $12.76

REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT
STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Wage Determination No.: 2005-2516

William W. Gross
Director

Division of
Wage Determinations

Revision No.: 8
Date of Revision: 07/23/2008

State: Texas

Area: Texas Counties of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Grimes, Harris, Houston, Jackson, Lavaca, Liberty, Madison, Matagorda, Montgomery, San Jacinto, Trinity, Walker, Waller, Washington, Wharton

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

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support And Clerical Occupations	
01011 - Accounting Clerk I	14 .58
01012 - Accounting Clerk II	16 .38
01013 - Accounting Clerk III	18 .32
01020 - Administrative Assistant	23 .55
01040 - Court Reporter	21 .79
01051 - Data Entry Operator I	11 .67
01052 - Data Entry Operator II	14 .32
01060 - Dispatcher, Motor Vehicle	15 .40
01070 - Document Preparation Clerk	13 .41
01090 - Duplicating Machine Operator	13 .41
01111 - General Clerk I	10 .80
01112 - General Clerk II	12 .97
01113 - General Clerk III	14 .88
01120 - Housing Referral Assistant	20 .55
01141 - Messenger Courier	11 .95
01191 - Order Clerk I	13 .52
01192 - Order Clerk II	15 .24

01261 - Personnel Assistant (Employment) I	14 .74
01262 - Personnel Assistant (Employment) II	16 .50
01263 - Personnel Assistant (Employment) III	18 .38
01270 - Production Control Clerk	19 .10
01280 - Receptionist	12 .02
01290 - Rental Clerk	14 .75
01300 - Scheduler, Maintenance	15 .92
01311 - Secretary I	15 .92
01312 - Secretary II	17 .73
01313 - Secretary III	20 .55
01320 - Service Order Dispatcher	14 .63
01410 - Supply Technician	23 .55
01420 - Survey Worker	16 .59
01531 - Travel Clerk I	13 .17
01532 - Travel Clerk II	14 .22
01533 - Travel Clerk III	15 .20
01611 - Word Processor I	12 .27
01612 - Word Processor II	14 .75
01613 - Word Processor III	16 .59
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer, Fiberglass	24 .80
05010 - Automotive Electrician	22 .66
05040 - Automotive Glass Installer	21 .68
05070 - Automotive Worker	20 .91
05110 - Mobile Equipment Servicer	19 .27
05130 - Motor Equipment Metal Mechanic	24 .53
05160 - Motor Equipment Metal Worker	20 .91
05190 - Motor Vehicle Mechanic	24 .53
05220 - Motor Vehicle Mechanic Helper	18 .48
05250 - Motor Vehicle Upholstery Worker	19 .84
05280 - Motor Vehicle Wrecker	20 .91
05310 - Painter, Automotive	22 .66
05340 - Radiator Repair Specialist	22 .88
05370 - Tire Repairer	14 .40

05400 - Transmission Repair Specialist	25 .17
07000 - Food Preparation And Service Occupations	
07010 - Baker	10 .04
07041 - Cook I	8 .65
07042 - Cook II	9 .89
07070 - Dishwasher	8 .11
07130 - Food Service Worker	8 .87
07210 - Meat Cutter	12 .36
07260 - Waiter/Waitress	7 .97
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	16 .65
09040 - Furniture Handler	11 .74
09080 - Furniture Refinisher	16 .09
09090 - Furniture Refinisher Helper	13 .74
09110 - Furniture Repairer, Minor	15 .29
09130 - Upholsterer	16 .65
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	9 .90
11060 - Elevator Operator	8 .17
11090 - Gardener	14 .52
11122 - Housekeeping Aide	8 .17
11150 - Janitor	8 .17
11210 - Laborer, Grounds Maintenance	10 .93
11240 - Maid or Houseman	7 .73
11260 - Pruner	8 .99
11270 - Tractor Operator	12 .82
11330 - Trail Maintenance Worker	10 .93
11360 - Window Cleaner	8 .92
12000 - Health Occupations	
12010 - Ambulance Driver	14 .22
12011 - Breath Alcohol Technician	15 .64
12012 - Certified Occupational Therapist Assistant	19 .58
12015 - Certified Physical Therapist Assistant	20 .48
12020 - Dental Assistant	15 .64

12025 - Dental Hygienist	32 .49
12030 - EKG Technician	23 .56
12035 - Electroneurodiagnostic Technologist	23 .56
12040 - Emergency Medical Technician	14 .22
12071 - Licensed Practical Nurse I	18 .29
12072 - Licensed Practical Nurse II	20 .52
12073 - Licensed Practical Nurse III	22 .09
12100 - Medical Assistant	12 .40
12130 - Medical Laboratory Technician	15 .25
12160 - Medical Record Clerk	13 .21
12190 - Medical Record Technician	16 .02
12195 - Medical Transcriptionist	16 .40
12210 - Nuclear Medicine Technologist	31 .94
12221 - Nursing Assistant I	7 .08
12222 - Nursing Assistant II	9 .82
12223 - Nursing Assistant III	10 .62
12224 - Nursing Assistant IV	12 .40
12235 - Optical Dispenser	15 .26
12236 - Optical Technician	13 .90
12250 - Pharmacy Technician	17 .44
12280 - Phlebotomist	13 .30
12305 - Radiologic Technologist	24 .27
12311 - Registered Nurse I	28 .55
12312 - Registered Nurse II	33 .22
12313 - Registered Nurse II, Specialist	35 .29
12314 - Registered Nurse III	42 .25
12315 - Registered Nurse III, Anesthetist	42 .25
12316 - Registered Nurse IV	50 .64
12317 - Scheduler (Drug and Alcohol Testing)	19 .86
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19 .30
13012 - Exhibits Specialist II	24 .74
13013 - Exhibits Specialist III	28 .94
13041 - Illustrator I	18 .07

13042 - Illustrator II	22 .56
13043 - Illustrator III	27 .38
13047 - Librarian	26 .69
13050 - Library Aide/Clerk	10 .00
13054 - Library Information Technology Systems Administrator	24 .09
13058 - Library Technician	14 .58
13061 - Media Specialist I	17 .39
13062 - Media Specialist II	19 .46
13063 - Media Specialist III	21 .68
13071 - Photographer I	13 .93
13072 - Photographer II	17 .60
13073 - Photographer III	22 .56
13074 - Photographer IV	26 .40
13075 - Photographer V	30 .06
13110 - Video Teleconference Technician	15 .21
14000 - Information Technology Occupations	
14041 - Computer Operator I	16 .26
14042 - Computer Operator II	18 .19
14043 - Computer Operator III	20 .28
14044 - Computer Operator IV	22 .60
14045 - Computer Operator V	24 .95
14071 - Computer Programmer I (1)	23 .23
14072 - Computer Programmer II (1)	
14073 - Computer Programmer III (1)	
14074 - Computer Programmer IV (1)	
14101 - Computer Systems Analyst I (1)	
14102 - Computer Systems Analyst II (1)	
14103 - Computer Systems Analyst III (1)	
14150 - Peripheral Equipment Operator	16 .26
14160 - Personal Computer Support Technician	22 .60
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	30 .06
15020 - Aircrew Training Devices Instructor (Rated)	36 .39

15030 - Air Crew Training Devices Instructor (Pilot)	43 .20
15050 - Computer Based Training Specialist / Instructor	28 .27
15060 - Educational Technologist	29 .02
15070 - Flight Instructor (Pilot)	43 .20
15080 - Graphic Artist	23 .11
15090 - Technical Instructor	20 .99
15095 - Technical Instructor/Course Developer	25 .68
15110 - Test Proctor	18 .43
15120 - Tutor	18 .43

16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations

16010 - Assembler	9 .03
16030 - Counter Attendant	9 .03
16040 - Dry Cleaner	10 .89
16070 - Finisher, Flatwork, Machine	9 .03
16090 - Presser, Hand	9 .03
16110 - Presser, Machine, Drycleaning	9 .03
16130 - Presser, Machine, Shirts	9 .03
16160 - Presser, Machine, Wearing Apparel, Laundry	9 .03
16190 - Sewing Machine Operator	12 .26
16220 - Tailor	13 .20
16250 - Washer, Machine	9 .91

19000 - Machine Tool Operation And Repair Occupations

19010 - Machine-Tool Operator (Tool Room)	18 .32
19040 - Tool And Die Maker	21 .12

21000 - Materials Handling And Packing Occupations

21020 - Forklift Operator	12 .84
21030 - Material Coordinator	18 .58
21040 - Material Expediter	18 .58
21050 - Material Handling Laborer	12 .26
21071 - Order Filler	11 .46
21080 - Production Line Worker (Food Processing)	12 .84
21110 - Shipping Packer	13 .82

21130 - Shipping/Receiving Clerk	13 .82
21140 - Store Worker I	10 .53
21150 - Stock Clerk	14 .93
21210 - Tools And Parts Attendant	13 .58
21410 - Warehouse Specialist	12 .84

23000 - Mechanics And Maintenance And Repair Occupations

23010 - Aerospace Structural Welder	28 .07
23021 - Aircraft Mechanic I	26 .73
23022 - Aircraft Mechanic II	28 .07
23023 - Aircraft Mechanic III	29 .47
23040 - Aircraft Mechanic Helper	20 .93
23050 - Aircraft, Painter	24 .39
23060 - Aircraft Servicer	23 .28
23080 - Aircraft Worker	24 .53
23110 - Appliance Mechanic	17 .26
23120 - Bicycle Repairer	13 .91
23125 - Cable Splicer	24 .90
23130 - Carpenter, Maintenance	18 .58
23140 - Carpet Layer	16 .21
23160 - Electrician, Maintenance	26 .51
23181 - Electronics Technician Maintenance I	19 .33
23182 - Electronics Technician Maintenance II	23 .28
23183 - Electronics Technician Maintenance III	24 .48
23260 - Fabric Worker	15 .97
23290 - Fire Alarm System Mechanic	18 .14
23310 - Fire Extinguisher Repairer	14 .78
23311 - Fuel Distribution System Mechanic	19 .17
23312 - Fuel Distribution System Operator	16 .33
23370 - General Maintenance Worker	17 .01
23380 - Ground Support Equipment Mechanic	26 .73
23381 - Ground Support Equipment Servicer	23 .28

23382 - Ground Support Equipment Worker	24 .53
23391 - Gunsmith I	14 .78
23392 - Gunsmith II	17 .07
23393 - Gunsmith III	19 .16
23410 - Heating, Ventilation And Air-Conditioning Mechanic	20 .06
23411 - Heating, Ventilation And Air Conditioning Mechanic (Research Facility)	20 .93
23430 - Heavy Equipment Mechanic	17 .68
23440 - Heavy Equipment Operator	18 .14
23460 - Instrument Mechanic	21 .38
23465 - Laboratory/Shelter Mechanic	18 .23
23470 - Laborer	10 .97
23510 - Locksmith	17 .26
23530 - Machinery Maintenance Mechanic	20 .81
23550 - Machinist, Maintenance	20 .16
23580 - Maintenance Trades Helper	13 .58
23591 - Metrology Technician I	21 .38
23592 - Metrology Technician II	22 .31
23593 - Metrology Technician III	23 .25
23640 - Millwright	20 .48
23710 - Office Appliance Repairer	17 .26
23760 - Painter, Maintenance	17 .26
23790 - Pipefitter, Maintenance	19 .44
23810 - Plumber, Maintenance	18 .98
23820 - Pneudraulic Systems Mechanic	19 .16
23850 - Rigger	19 .47
23870 - Scale Mechanic	17 .07
23890 - Sheet-Metal Worker, Maintenance	18 .14
23910 - Small Engine Mechanic	17 .07
23931 - Telecommunications Mechanic I	23 .20
23932 - Telecommunications Mechanic II	24 .23
23950 - Telephone Lineman	23 .20
23960 - Welder, Combination, Maintenance	19 .16

23965 - Well Driller	19 .16
23970 - Woodcraft Worker	19 .16
23980 - Woodworker	13 .67
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	9 .68
24580 - Child Care Center Clerk	12 .06
24610 - Chore Aide	6 .55
24620 - Family Readiness And Support Services Coordinator	11 .43
24630 - Homemaker	15 .41
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21 .14
25040 - Sewage Plant Operator	17 .00
25070 - Stationary Engineer	21 .14
25190 - Ventilation Equipment Tender	14 .33
25210 - Water Treatment Plant Operator	16 .65
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14 .82
27007 - Baggage Inspector	10 .14
27008 - Corrections Officer	18 .04
27010 - Court Security Officer	18 .04
27030 - Detection Dog Handler	17 .90
27040 - Detention Officer	18 .04
27070 - Firefighter	17 .90
27101 - Guard I	10 .14
27102 - Guard II	17 .90
27131 - Police Officer I	23 .33
27132 - Police Officer II	25 .99
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	10 .69
28042 - Carnival Equipment Repairer	11 .24
28043 - Carnival Equpment Worker	8 .25
28210 - Gate Attendant/Gate Tender	13 .90

28310 - Lifeguard	12 .38
28350 - Park Attendant (Aide)	15 .55
28510 - Recreation Aide/Health Facility Attendant	11 .35
28515 - Recreation Specialist	17 .83
28630 - Sports Official	12 .38
28690 - Swimming Pool Operator	15 .85
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	17 .78
29020 - Hatch Tender	17 .78
29030 - Line Handler	17 .78
29041 - Stevedore I	16 .63
29042 - Stevedore II	18 .93
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (2)	38 .22
30011 - Air Traffic Control Specialist, Station (HFO) (2)	26 .36
30012 - Air Traffic Control Specialist, Terminal (HFO) (2)	29 .02
30021 - Archeological Technician I	19 .34
30022 - Archeological Technician II	23 .15
30023 - Archeological Technician III	28 .91
30030 - Cartographic Technician	28 .67
30040 - Civil Engineering Technician	27 .30
30061 - Drafter/CAD Operator I	19 .18
30062 - Drafter/CAD Operator II	23 .15
30063 - Drafter/CAD Operator III	25 .80
30064 - Drafter/CAD Operator IV	29 .47
30081 - Engineering Technician I	16 .59
30082 - Engineering Technician II	20 .41
30083 - Engineering Technician III	22 .83
30084 - Engineering Technician IV	28 .28
30085 - Engineering Technician V	36 .15
30086 - Engineering Technician VI	41 .85
30090 - Environmental Technician	27 .24
30210 - Laboratory Technician	23 .55

30240 - Mathematical Technician	28 .67
30361 - Paralegal/Legal Assistant I	19 .94
30362 - Paralegal/Legal Assistant II	24 .71
30363 - Paralegal/Legal Assistant III	30 .22
30364 - Paralegal/Legal Assistant IV	35 .81
30390 - Photo-Optics Technician	28 .67
30461 - Technical Writer I	20 .79
30462 - Technical Writer II	25 .43
30463 - Technical Writer III	29 .06
30491 - Unexploded Ordnance (UXO) Technician I	24 .29
30492 - Unexploded Ordnance (UXO) Technician II	29 .39
30493 - Unexploded Ordnance (UXO) Technician III	35 .23
30494 - Unexploded (UXO) Safety Escort	24 .29
30495 - Unexploded (UXO) Sweep Personnel	24 .29
30620 - Weather Observer, Combined Upper Air Or Surface Programs (2)	23 .95
30621 - Weather Observer, Senior (2)	27 .71
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	10 .55
31030 - Bus Driver	15 .48
31043 - Driver Courier	12 .73
31260 - Parking and Lot Attendant	8 .34
31290 - Shuttle Bus Driver	13 .87
31310 - Taxi Driver	10 .49
31361 - Truckdriver, Light	13 .87
31362 - Truckdriver, Medium	17 .23
31363 - Truckdriver, Heavy	18 .99
31364 - Truckdriver, Tractor-Trailer	18 .99
99000 - Miscellaneous Occupations	
99030 - Cashier	9 .10
99050 - Desk Clerk	10 .65
99095 - Embalmer	21 .55
99251 - Laboratory Animal Caretaker I	9 .49
99252 - Laboratory Animal Caretaker II	10 .62

99310 - Mortician	24 .04
99410 - Pest Controller	14 .21
99510 - Photofinishing Worker	10 .43
99710 - Recycling Laborer	13 .60
99711 - Recycling Specialist	16 .58
99730 - Refuse Collector	12 .13
99810 - Sales Clerk	11 .41
99820 - School Crossing Guard	9 .05
99830 - Survey Party Chief	20 .96
99831 - Surveying Aide	14 .35
99832 - Surveying Technician	18 .13
99840 - Vending Machine Attendant	12 .00
99841 - Vending Machine Repairer	14 .41
99842 - Vending Machine Repairer Helper	12 .31

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of $3.24 per hour computed on the basis of all hours worked by service employees employed on the contract.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year, New Year's Day, Martin Luther King Jr's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than $27.63 (or on a salary or fee basis at a rate not less than $455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the

survey data indicates that the prevailing wage rate for the occupation equals or exceeds $27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate, then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:
(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;
(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;
(3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

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

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

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

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

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

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

Conformance Process:

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

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

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

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

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

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

6) The contractor informs the affected employees.

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

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

Attachment J-3

SAFETY

AND

HEALTH

PLAN

[TO BE PROPOSED BY OFFERORS]

Attachment J-4

IT

MANAGEMENT & SECURITY

PLANS

[TO BE PROPOSED BY OFFERORS]

ATTACHMENT J-5

SURVEILLANCE

PLAN

[TO BE INCLUDED AFTER CONTRACT AWARD]

ATTACHMENT J-6

ORGANIZATIONAL

CONFLICT OF INTEREST

AVOIDANCE PLAN

[TO BE PROPOSED BY OFFERORS]

ATTACHMENT J-7

ACRONYMS

LIST

Attachment J-7 – Acronym List

AC	Assembly Complete
ACES	Assessments, Cost Estimating and Schedules
ACO	Administrative Contracting Officer
ACP	Access Control Plan
ADP	Automatic Data Processing
AIS	Automated Information System
ANE	Advanced Notification of Export
ANSI	American National Standards Institute
AOE	Area of Emphasis
APM	Attached Pressurized Module
ASAP	Aerospace Safety Advisory Panel
ASDB	Application Service request Database
ASI	Agenzia Spaziale Italiana (Italian Space Agency)
ASR	Action Service Request (PI&C)
ATV	Automated Transfer Vehicle
BASEPLATE	Beta, Attitude, Significant Events, Planning Template
BDEALS	Bilateral Data Exchange Agreements, Lists and Schedules
BGA	Beta Gimble Assembly
BHSEALS	Bilateral Hardware and Software Exchange Agreements, Lists and Schedules
BIS	Bureau of Industry and Security
BIVP	Bilateral Integration and Verification Plan
BOE	Basis of Estimate
C&A	Certification and Accreditation
CAD	Computer Aided Design
CAM	Centrifuge Accommodation Module
CAM	Cost Accounting Manager
CAOT	Cognizant Audit Office Template
CAPPS	Checkout,, Assembly and Payload Processing Services
CBA	Collective Bargaining Agreement
CBO	Central Budget Office
CCS	Center Chief of Security
CDR	Configuration Discrepancy Report
CDT	Central Daylight Time
CST	Central Standard Time
CEA	Center Export Administrator

CEBT	Channelized Energy Balance Tool
CEI	Configuration End Item
CEV	Crew Exploration Vehicle
CEVIS	Cycle Ergometer with Vibration Isolation and Stabilization
CFR	Code of Federal Regulations
CI	Configuration Item
CIL	Critical Item List
CIO	Center/Chief Information Officer
CIP	Capital Investment Plan
CIR	Cargo Integration Review
CM	Configuration Management
CMRD	Configuration Management Receipt Desk
CMRS	Crew Medical Restraint System
CO	Contracting Officer
COB	Close of Business
CoFR	Certification of Flight Readiness
COSMOS	Configuration Status Management Operations System
COTR	Contracting Officer's Technical Representative
COTS	Commercial Off-the-Shelf
COTS	Commercial Orbital Transportation System
CPU	Computer Processing Unit
CR	Change Request
CSA	Canadian Space Agency
CSB	Change Screening Board
CSCI	Computer Software Configuration Item
CSD	Common Schedules Database
CUCU	COTS UHF Communications Unit
DACR	Days Away Case Rate
DART	Days Away plus Restricted Duty plus Job Transfer
DBMS	Database Management System
DC	Docking Compartment
DCM	Docking Compartment Module
DCN	Document Change Notices
DDCU	Direct Current to Direct Current Converter Unit
DID	Data Item Deliverable
DM	Data Management
DMI	Data Management and Integration
DoD	Department of Defense
DOT	Department of Transportation
DQA	Document Quality Assurance
DR	Data Requirement

DRD	Data Requirement Description
DRL	Data Requirements List
EAR	Export Administration Regulation
ECCN	Export Classification Control Number
ECLSS	Environmental Control and Life Support System
EDMS	Electronic Document Management System
EIM	Element Integration Manager
EP	Equivalent Personnel
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPM	Excel Pricing Model
ERA	European Robotic Arm
ERU	Engineering Release Unit
ESA	European Space Agency
EST	Export Services Team
EVA	Extra Vehicular Activity
ExCATT	External Configuration Analysis and Tracking Tool
FAR	Federal Acquisition Regulation
FBR	Fully Burdened Rates Development Template
FC	Fingerprint Card
FCA	Functional Configuration Audit
FGB	Functional Cargo Block
FIPS PUB	Federal Information Processing Standards Publication
FMD	Financial Management Division
FMEA	Failure Mode and Effects Analysis
F.O.B.	Freight On Board
FOR	Flight Operations Review
FP	Flight Program
FSE	Flight Support Equipment
FTE	Full Time Equivalent
FY	Fiscal Year
G&A	General and Administrative
GAO	Government Accountability Office
GAT	G&A Template
GBL	Government Bill of Lading
GFD	Government Furnished Data
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GN&C	Guidance, Navigation, and Control

GOV	Government
GGR&C	Generic Ground Rules and Constraints
GSA	General Services Administration
HATS	Hazard Abatement Tracking System
HHRS	Hardware History Retrieval System
HITS	Hardware Interfaces Tracking System
HSI	Hardware and Software Integration
HSPD	Homeland Security Presidential Directive
HTV	H-II Transfer Vehicle
ICD	Interface Control Document
ICMT	International Configuration Management Telecon
ICWG	Interface Control Working Group
ID	Identification
IDIQ	Indefinite Delivery Indefinite Quantity
IDMS	ISS Data Management System
IDRD	Increment Definition and Requirements Document
IEBT	Integrated Energy Balance Tool
IEMP	Integrated Enterprise Management Program
IFM	Integrated Financial Management
IFM	Interface Memorandums
IG	Inspector General
IGES	Initial Graphic Exchange Specification
IIR	Independent Implementation Review
IMC	Increment Management Center
IMCE	ISS Management and Cost Evaluation
IMCOH	ISS Management Center Operations Handbook
IMOC	Integrated Mission Operations Contract
IMRP	Integrated Management Review Products
IOMS	Integrated Office Management System
IP	International Partner
IPO	Industrial Property Officer
IPOD	ISS Program Operations Description
IP/P	International Partner/Participant
IPS	Integrated Program Schedule
IPSP	Integrated Program Schedule Panel
IRC	Internal Revenue Code
IRIS	Incident Reporting Information System
IRMA	Integrated Risk Management Application
IRD	Interface Requirements Documents
IRD	Information Resources Directorate

IRED	Interim Resistive Exercise Device
IRLS	Integrated Resource Loaded Schedule
IRS	Internal Revenue Service
ISPR	International Standard Payload rack
ISS	International Space Station
IST	Integrated Systems Test
IT	Information Technology
ITA	Interdivisional Technical Agreement
ITAR	International Traffic in Arms Regulation
ITS	Integrated Truss Segment
IVA	Intra-Vehicular Activity
IVC	Internal Volume Configuration
IVCWG	Internal Volume Configuration Working Group
JARSWG	Joint American/Russian Safety Working Group
JAXA	Japan Aerospace Exploration Agency
JEM	Japanese Experiment Module
JPD	Joint Program Directive
JPD	JSC Procedural Directive (Document number prefix)
JSC	Johnson Space Center
JTWG	Joint Technical Working Group
KPPI	Key Program Performance Indicator
KSC	Kennedy Space Center
LCC	Life Cycle Cost
LLDB	Lessons Learned Database
LLI	Limited Life Item
LLIS	Lessons Learned Information System
LOE	Level of Effort
LPA	Launch Package Assessment
LPM	Launch Package Manager
MA&RM	Mission Assurance and Risk Management
MD	Management Directive
MEIT	Multiple Element Integration Test
MEL	Mandatory Evaluators List
MER	Mission Evaluation Room
MFR	Mission Focus Review
MIM	Multi-Increment Manifest
MIP	Mission Integration Plan
MIS	Management Information System

MLM	Multipurpose Logistics Module
MOD	Mission Operations Directorate
MODGEN	Model Generator
MOU	Memorandum of Understanding
MPLM	Mini Pressurized Logistics Module
MRM	Mini Research Module
MSDS	Material Safety Data Sheet
MSFC	Marshall Space Flight Center
MSS	Mobile Servicing System
N3	Node 3
NAC	NASA Advisory Council
NAICS	North America Industry Classification System
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NASDA	National Space Development Agency of Japan
NDC	Notice of Document Change
NEMS	NASA Equipment Management System
NESS	NF1018 Electronic Submission System
NEQA	NASA Engineering Quality Audit
NF	NASA Form
NFNMS	NASA Foreign National Management System
NFS	NASA FAR Supplement
NLT	No Later Than
NPR	NASA Procedural Requirements
NSSC	NASA Shared Services Center
NSTS	National Space Transportation System
NTE	Not To Exceed
OBSS	Orbiter Boom Sensor System
OCI	Organizational Conflict of Interest
OCIO	Organization Chief Information Officer
OCS	Orbital Control System
OCWG	On-Orbit Configuration Working Group
ODC	Other Direct Costs
OFCCP	Office of Federal Contract Compliance Programs
OHT	Overhead Template
OMB	Office of Management and Budget
OMRSD	Operations and Maintenance Requirements Specification Document
OPMT	Open Paper Management Tool
OPR	Office of Primary Responsibility
ORCA	Online Representations and Certification Application

ORU	Orbital Replacement Unit
ORUDD	Orbital Replacement Unit Data Dictionary
OS	Operating System
OSCO	Organization Computer Security Officer
OSD	Operations Summary Document
OSE	Orbital Support Equipment
OSHA	Occupational Safety and Health Administration
PCA	Physical Configuration Audit
PDGF	Power and Data Grapple Fixture
PDIT	Program Data Integration Team
PDRS	Payload Deployment Retrieval System
PDS	PRACA Data System
PEP	Performance Evaluation Profile
PI&C	Program Integration and Control
PIDS	Prime Item Development Specification
PIER	Post-Increment Evaluation Report
PIRN	Preliminary Interface Revision Notices
PIT	Phase In Template
PKI	Public Key Infrastructure
PMA	Pressurized Mating Adapter
PMB	Performance Measurement Baseline
PMI&VP	Program Master Integration and Verification Plan
PMR	Performance Management Reviews
POA&M	Plan of Actions and Milestones
POC	Points of Contact
PP&C	Program Planning and Control
PPBE	Program Planning Budgeting and Execution
PPD	Partner Program Directive
PPE	Personal Protective Equipment
PQR	Post Qualification Review
PRA	Probabilistic Risk Assessment
PRACA	Problem Reporting and Corrective Action
PRMS	Program Risk Management System
QD	Quick Disconnect
QMS	Quality Management System
R&D	Research and Development
R&M	Reliability and Maintainability
RCRA	Resource Conservation and Recovery Act
RDD	Requirements Definition Document

RID	Review Items Discrepancies
RLLS	Russian Language and Logistic Services
Roscosmos	Federal Space Agency (Russia)
RS	Russian Segment
RSA	Russian Space Agency
RSC-E	Rocket Space Corporation-Energia
RTM	Requirements Traceability Management
RWS	Robotic Work Station
S&H	Safety and Health
S&MA	Safety and Mission Assurance
SAPHIRE	Systems Analysis Programs for Hands-on Integrated Reliability Evaluations
SARJ	Solar Array Rotary Joint
SBA	Small Business Administration
SCCR	Station Cargo Certification Reviews
SCEPTER	Station Channelized Electrical Power Transfer and Energy Resources
SCROALE	Schedule of Crew Rotation, On-orbit Assembly, Logistics, and EVA
SCT	Summary Cost Template
SCTF	Sonny Carter Training Facility
SE	Sub element Number
SE&I	System Engineering and Integration
SEMO	Supply and Equipment Management Officer
SF	Standard Form
SFAC	Space Flight Advisory Committee
SFP	Strategic Flight Plan
SIBC	Strategic Investment Business Case
SIR	Stage Integration Review
SIT	SIR Issue Tracking
SM	Service Module
SMD	Security Management Directive
SODB	Shuttle/Station Operations Data Book
SOP	Standard Operating Procedure
SORR	Stage Operations Readiness Review
SOW	Statement of Work
SPDM	Special Purpose Dexterous Manipulator
SPEARMAN	Strategic Planning Evaluation And Resource Model ANalysis
SPICE	Space Program Integrated Contract Environment
SPIP	Station Program Implementation Plan
SPOC	Space Program Operations Contract
SPRT	System Problem Resolution Team
SR	Service Request (ODIN)
SRP	Safety Review Panel

SR&QA	Safety, Reliability and Quality Assurance
SSACS	Space Station Analysis Coordinate System
SSODB	Space Station Operations Data Book
SSUAS	Space Station Utilization Advisory Subcommittee
SSAV	Space Station Accounting and Verification
SSCN	Space Station Change Notice
SSMB	Space Station Manned Base
SSRMS	Space Station Remote Manipulator System
SSP	System Security Plan
SSP	Space Shuttle Program
SSPF	Space Station Processing Facility
STRAP	Station Reboost Analysis Program
STTCP	Security/Technology Control Plan
SWG	Systems Working Group
T&V	Test and Verification
TBD	To Be Determined
TC (a)	Compensation Template (a) Salaries & Wages – Non-Exempt
TC (b)	Compensation Template (b) Salaries & Wages – Exempt
TC (c)	Compensation Template (c) Fringe Benefits Analysis Package
TC (d)	Compensation Template (d) Personnel and Fringe Benefits Policies
TC (e)	Compensation Template (e) Incumbency Assumptions
TCM	Technical Coordination Meeting
TIM	Technical Interchange Meeting
TMP	Temporary Exports
TMR	Technical Monitor Representative
TPS	Total Propellant Summary
TRAM	Traffic Resource Analysis Model
TRIR	Total Recordable Injury Rate
TRRJ	Thermal Radiator Rotary Joint
TSP	Thermal System Performance
UDM	Unpressurized Docking Module
UHF	Ultra High Frequency
U.S.	United States
USC	United States Code
USL	United States Laboratory
USOS	United States On-Orbit Segment
USPPI	U.S. Principal party in Interest
VCB	Vehicle Control Board
VCN	Verification Closure Notice

VDI	Vehicle Data Integration
VID	VIPER Interface Document
VIPER	Vehicle Integrated Performance and Resources
VMDB	Vehicle Master Data Base
VPP	Voluntary Protection Program
WBS	Work Breakdown Structure
WD	Wage Determination
WDOL	Wage Determinations On-Line
WSTF	White Sands Testing Facility
WYE	Work Year Equivalent
XPOP	X-Axis Perpendicular to the Orbit Plane

ATTACHMENT J-8

APPLICABLE

AND

REFERENCE

DOCUMENTS

LISTING

Attachment J-8 - 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 J8-1: Applicable Documents List

Table J8-2: Reference Documents List

The documents identified within Table J8-1 are cited within the body of this contract or within a document that is cited in this contact (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 Program Integration and Control'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 solid 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 Program Integration and Control 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 Program Integration and Control 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

Table J8-1: Applicable Documents List

Document Number	Title	Book Coordination Required
D684-10097-01	Guidelines and Procedures for the conduct of Functional Configuration Audit (FCA)/ Physical Configuration Audit (PCA)	
FED-STD-313	Federal Standard 313	
FIPS PUB 199	Standards for Security Categorization of Federal Information and Information Systems	
FIPS PUB 201	Personal Identity Verification (PIV) of Federal Employees and Contractors	
HSPD 12	Homeland Security Presidential Directive - Policy for a Common Identification Standard for Federal Employees and Contractors	
ISSP-MD-114	Guidelines for Travel to Russia and from Russia to Support Meetings	X
ITS-SOP-0005	Procedure for Completing a NASA Information Technology Security Program or System Assessment	
ITS-SOP-0009	Procedures for Updating and Managing NASA's Plan of Actions and Milestones	
ITS-SOP-0019	Procedure for FIPS 199 Categorization of Information Systems	
ITS-SOP-0030	IT System Certification and Accreditation Process for FIPS 199 Moderate and High Systems	
ITS-SOP-0032	Master Information Technology Security Plan Template, Requirements, Guidance and Examples	
ITS-SOP-0033	External System Identification and IT Security Requirements	
ITS-SOP-0040	Contingency Planning Guidance	
ITS-SOP-0043	Procedures for Selecting and Tailoring NIST 800-53 Common Security Controls	
J69W-01	Real Property Management	
J69W-02	Facility Space Allocation and Utilization	
JPD 306	Establishment of the Program Risk Management Plan (PRMS)	X
JPD 328	ISS Corrective Action Plan/Preventative Action Process	X
JPD 4310.1	National Historic Landmark Preservation	

Document Number	Title	Book Coordination Required
JPG 5151	Support Contractors Handbook	
JPG 5151.2	Johnson Space Center Support Contractor Procedures and Guidelines	
JPR 1700.1	JSC Safety and Health Handbook	
JPR 2310.1	JSC Organizational Learning Program	
JSC 17773	Preparing of Hazard Analyses for JSC Ground Operations	
MFR 137	JSC Mission Focus Review (MFR) 137 Policy Document	
MGT-OH-018	On-Orbit CDR Resolution Process	X
NIST 800-18	Guide for Developing Plans for Federal Information Systems	
NIST 800-30	Risk Management Guide for International Technology Systems	
NIST 800-34	Contingency Planning Guide for Information Technology Systems	
NIST 800-37	Guide for the Security Certification and Accreditation of Federal Information Systems	
NIST 800-53	Guide for Assessing the Security Controls in Federal Information Systems	
NIST 800-60 Volume 1	Guide for Mapping Types of Information and Information Systems to System Categories	
NIST 800-60 Volume 2	Appendixes to Guide for Mapping Types of Information and Information Systems to System Categories	
NITR 2810-12	NASA Information Technology Requirements: Continuous Monitoring	
NITR 2810-15	NASA Information Technology Requirements: Continuous Planning	
No Number	Government Information Security Reform Act of 2000	
No Number	Section 508, Rehabilitation Act of 1974	
No Number	Service Contract Act of 1965	
No Number	ISS Management Center Operations Handbook (IMCOH)	
NPD 1440.6	NASA Records Management	
NPD 2810.1	NASA Information Security Policy	
NPD 8800.14	Policy for Real Property Management	
NPR 1441.1	NASA Records Retention Schedule	
NPR 1600.1	NASA Security Program Procedural Requirements	

PROGRAM INTEGRATION AND CONTROL

Document Number	Title	Book Coordination Required
NPR 1600.2	NASA Security Policy	
NPR 1620.1	NASA Security Procedures and Guidelines	
NPR 1620.2	Physical Security Vulnerability Risk Assessments	
NPR 1620.3	Physical Security Requirements for NASA Facilities and Property	
NPR 2810.1A	Security of Information Technology	
NPR 4100.1	NASA Materials Inventory Management Manual	
NPR 4200.1	NASA Equipment Management Manual	
NPR 4300.1	NASA Personal Property Disposal Procedures and Guidelines	
NPR 6000.1G	Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components	
NPR 7120.5	NASA Program and Project Management Processes and Requirements	
NPR 7120.7	NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements	
NPR 8000.4	Risk Management Procedures and Guidelines	
NPR 8621.1	Procedural Requirements for Mishap Reporting, Investigating, and Record keeping	
NPR 8705.4	Risk Classification for NASA Payloads	
NPR 8705.5	PRA Guidelines for NASA Programs and Projects	
NPR 8715.3	NASA Safety Manual	
NPR 8831.2	Facility Maintenance Management	
NSTS-21000-IDD-ISS	Shuttle Orbiter/International Space Station Interface Definition Document	
OB-MER-006	ISS Mission Evaluation Room (MER) Handbook	
OH-WI-017	International Space Station Configuration Management (CM) Directive Work Instruction	X
OMB Circular A-130	Management of Federal Information Resources, Appendix III, Security of Federal Automated Information Resources	
OMB Circular A130 Appendix III	Management of Federal Information Resources, Appendix III provides guidance on "Security of Federal Automated Information Systems"	
OMB M-05-24	Implementation of HSPD-12: Policy for a Common Identification Standard for Federal Employees and Contractors	

PROGRAM INTEGRATION AND CONTROL

Document Number	Title	Book Coordination Required
OSHA CSP03-01-003	VPP Policies and Procedures Manual	
P-IM-114	Project Planning Process	
PPD 522	Space Station Control Board/Panel Operations Policy	X
Public Law 100-235	Computer Security Act of 1987	
SAE AS9100	Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation, and Servicing	
SMD 500-15	Security Termination Procedures	
SSP 30219	ISS Reference Coordinate Systems Document	X
SSP 30223	Problem Reporting and Corrective Action (PRACA) for Space Station Program	X
SSP 30309	Safety and Risk Assessment and Requirements Document	X
SSP 30459	ISS Interface Control Plan	X
SSP 30524	Problem Reporting and Corrective Action (PRACA) Data System (PDS) Requirements Definition Document (RDD) for ISS Program	X
SSP 30599	Safety Review Process	X
SSP 30695	Acceptance Data Package Requirements Specification	X
SSP 41170	Configuration Management Requirements	X
SSP 41173	Space Station Quality Assurance Requirements	X
SSP 41174	ISS Interface Control Working Group (ICWG) Operating Procedures	X
SSP 50005	ISS Flight Crew Integration Standards	
SSP 50010	Standards for ISS Program Documentation	X
SSP 50013	ISS Information Systems Plan	X
SSP 50021	Safety Requirements Document	X
SSP 50108	Certification of Flight Readiness for ISS	
SSP 50110	Multi-Increment Manifest	X
SSP 50112	Operations Summary Document	X
SSP 50123	Configuration Management Handbook	X
SSP 50124	NASA/CSA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)	X
SSP 50126	NASA/NASDA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)	X
SSP 50127	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS)	X
SSP 50135	ISS Interface Control Plan – NASA/RSA	X

PROGRAM INTEGRATION AND CONTROL

Document Number	Title	Book Coordination Required
SSP 50136	NASA/RSA Bilateral Hardware and Software Agreements, Lists and Schedules (BHSEALS)	
SSP 50137	NASA/RSA Bilateral Data Exchange Agreements, Lists and Schedules (BDEALS)	X
SSP 50172	Data Management Handbook	X
SSP 50175	ISS Risk Management Plan	X
SSP 50177	Government Furnished Data (GFD) Description Document	X
SSP 50200-01	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan	
SSP 50200-02	Station Program Implementation Plan (SPIP) Volume 2, Program Planning and Manifesting	
SSP 50220	NASA/CSA Bilateral Hardware and Software Exchange Agreements, Lists and Schedules (BHSEALS)	
SSP 50222	ISS Program Capital Investment Process (CIP)	X
SSP 50261-01	Generic Ground rules, Requirements, and Constraints Part 1: Strategic and Tactical Planning (GGR&C Part 1)	
SSP 50287	Hardware/Software Acceptance Process	X
SSP 50352	NASA/AEB Bilateral Data Exchange Agreements, list and Schedules (BDEALS)	X
SSP 50407	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for Cupola 1	X
SSP 50421	Program Planning and Control Certification of Flight Readiness Implementation Plan	X
SSP 50489	ISS Mission Integration Template	
SSP 50504	ISS Configuration Document	X
SSP 50564	ISS Interior Volume Configuration Document	X
SSP 50611	NASA/ESA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for ATV	X
SSP 50614	NASA/JAXA Bilateral Data Exchange Agreements, Lists, and Schedules (BDEALS) for HTV	X
SSP 50615	NASA/NASDA BHSEALS for the H II Transfer Vehicle (HTV)	
SSP 50622-02	Mission Integration Data Sets Blank Book (MIDSBB)	X
SSP 50659	ISS Program Work Breakdown Structure (WBS)	X
SSP 540XX	Increment Definition and Requirements Document for Increment XX	
SSP 54100	IDRD Flight Program	

Document Number	Title	Book Coordination Required
SSP 543XX	Post Increment Evaluation Report for Increment XX	
TDH Chapters 505, 506, 507	Texas Department of Health, Health and Safety Code	

Table J8-2: Reference Documents List

Document Number	Title	Book Coordination Required
JPD 315	Limited Life Item (LLI) Tracking and Control	X
JSC 26557	On-Orbit Assembly Modeling and Mass Properties Data Book (Blue Book) Volumes 1 and 2	X
No Number	NASA Reimbursable Space Act Agreement	
No Number	BASEPLATE	X
No Number	VIPER Interface Document (VID) Main Volume	X
No Number	VIPER Interface Document Volume 1 – Altitude and Propellant	X
No Number	VIPER Interface Document Volume 2 – Consumables	X
No Number	VIPER Interface Document Volume 3 – Energy Balance	X
NPR 2810.1	Security of Information Technology	
NPR 9501.2	NASA Contractor Financial Management Reporting	
NSTS 08171 File 10	Operational Maintenance Requirements and Specification (OMRS) File 10	X
NSTS 08171 File 2 Volume 2	Operational Maintenance Requirements and Specification (OMRS) File 2 Volume 2	
SO-999-M-JSC-0086	IT Security Plan (SPOA0010)	X
SSP 30234	Failure Modes and Effects Analysis and Critical Items List (FMEA/CIL) Requirements for Space Station	X
SSP 30256:001	EVA Standard ICD	
SSP 41000	System Specification For The International Space Station	X
SSP 41002	ISPR to NASA/ESA/JSAXA Modules ICD	X
SSP 41004 Part 1	CBM to Pressurized Elements ICD, Part 1	
SSP 41004 Part 2	CBM to Pressurized Elements ICD, Part 2	
SSP 41015 Part 1	Common hatch and Mechanisms to Pressurized Elements ICD, Part 1	
SSP 41015 Part 2	Common hatch and Mechanisms to Pressurized Elements ICD, Part 2	
SSP 41017 Part 1	Rack to Mini Pressurized Logistics Module ICD, Part 1	
SSP 41017 Part 2	Rack to Mini Pressurized Logistics Module ICD, Part 2	
SSP 41140 Part 1	Node 1 to Node 3 ICD, Part 1	X
SSP 41140 Part 2	Node 1 to Node 3 ICD, Part 2	X
SSP 41142 Part 1	Node Elements to Cupola Element ICD, Part 1	X
SSP 41142 Part 2	Node Elements to Cupola Element ICD, Part 2	X
SSP 41143 Part 1	Node Element 2 to U.S. Laboratory Element ICD Part 1	

Document Number	Title	Book Coordination Required
SSP 41143 Part 1 Appendix D	Node Element 2 to U.S. Laboratory Element ICD Part 1, Appendix D	
SSP 41143 Part 2	Node Element 2 to U.S. Laboratory Element ICD Part 2	
SSP 41143 Part 2 Appendix C	Node Element 2 to U.S. Laboratory Element ICD Part 2, Appendix C	
SSP 41147 Part 1	Node 2 to CAM ICD, Part 1	X
SSP 41147 Part 2	Node 2 to CAM ICD, Part 2	X
SSP 41148 Part 1	Active CBM to Passive CBM ICD, Part 1	
SSP 41148 Part 2	Active CBM to Passive CBM ICD, Part 2	
SSP 41150	IRD SSMB to Columbus APM	X
SSP 41151	IRD SSMB to JEM	X
SSP 41151 Appendix D	IRD SSMB to JEM Appendix D	X
SSP 41152	IRD ISPR ICD	X
SSP 41155 Part 1	Refrigerator/Freezer Rack to Mini Pressurized Logistics Module ICD, Part 1	
SSP 41155 Part 2	Refrigerator/Freezer Rack to Mini Pressurized Logistics Module ICD, Part 2	
SSP 41160	ESA Segment Specification For Columbus	X
SSP 41162	Segment Specification For The United States On-Orbit Segment	
SSP 41163	Russian Segment Specification	X
SSP 41165	Segment Specification For The Japanese Experiment Module	X
SSP 41167	Mobile Servicing System Segment Specification	X
SSP 41168:2:2	ISS System Specification Traceability Report	X
SSP 41168:3:1	Columbus Segment Spec Traceability Report	X
SSP 41168:3:10	CAM Segment Spec Traceability Report	X
SSP 41168:3:11	ATV Segment Spec Traceability Report	X
SSP 41168:3:12	Node 3 Segment Spec Traceability Report	X
SSP 41168:3:13	Cupola Segment Spec Traceability Report	X
SSP 41168:3:4	Russian Segment Spec Traceability Report	X
SSP 41168:3:6	JEM Segment Spec Traceability Report	X
SSP 41168:3:7	MSS Segment Spec Traceability Report	X
SSP 41168:3:9	HTV Segment Spec Traceability Report	X
SSP 41171	Preparation Of Program-Unique Specification	
SSP 42000	SSMB to JEM ICD	X

Document Number	Title	Book Coordination Required
SSP 42001	SSMB to Columbus APM ICD	X
SSP 42003 Part 1	SSMB to MSS ICD, Part 1	
SSP 42003 Part 2	SSMB to MSS ICD, Part 2	
SSP 42004 Part 1	Mobile Servicing System (MSS) To User (Generic) Interface Control Document Part 1	
SSP 42004 Part 2	Mobile Servicing System (MSS) To User (Generic) Interface Control Document Part 2	
SSP 42007 Part 1	USOS Segment to Italian MPLM ICD, Part 1	X
SSP 42007 Part 2	USOS Segment to Italian MPLM ICD, Part 2	X
SSP 42097 Part 1 Appendix E	PMA to Node 3 ICD, Part 1, Appendix E	X
SSP 42097 Part 1	PMA 2 and 3 to U.S. Pressurized Elements (Node 2 to PMA 2) ICD, Part 1	
SSP 42097 Part 2, Appendix E	PMA to Node 3 ICD, Part 2, Appendix E	X
SSP 42097 Part 2	PMA 2 and 3 to U.S. Pressurized Elements (Node 2 to PMA 2) ICD, Part 1	
SSP 42121 Part 1	USOS PMA-1 to FGB Part 1	X
SSP 42121 Part 2	USOS PMA-1 to FGB Part 2	X
SSP 42124 Part 1	ITS S0 to Node 2 ICD Part 1	
SSP 42124 Part 2	ITS S0 to Node 2 ICD Part 2	
SSP 42137 Part 1	ITS S0 to Node 3 ICD Part 1	X
SSP 42137 Part 2	ITS S0 to Node 3 ICD Part 2	X
SSP 50033	NASA/CSA Bilateral Integration and Verification Plan (BIVP)	X
SSP 50034	NASA/ESA Bilateral Integration and Verification Plan (BIVP)	X
SSP 50035	NASA/NASDA Bilateral Integration and Verification Plan (BIVP)	X
SSP 50038	Computer-Based Control System Safety Requirements	X
SSP 50062	NASA/CSA Bilateral S&MA Requirements	X
SSP 50094	NASA/RSA Joint Specs/Standards for the Russian Segment	X
SSP 50101	NASA/RSA Bilateral Integration and Verification Plan (BIVP)	X
SSP 50102	NASA-ASI Bilateral Integration and Verification Plan (BIVP)	X
SSP 50104	Portable Breathing Apparatus Standard ICD	
SSP 50123-ASI	Configuration Management Handbook, ASI Annex	X

Document Number	Title	Book Coordination Required
SSP 50123-CSA	Configuration Management Handbook, CSA Annex	X
SSP 50123-ESA	Configuration Management Handbook, ESA Annex	X
SSP 50123-INPE	Configuration Management Handbook, Brazilian Space Agency Handbook	X
SSP 50123-JAXA	Configuration Management Handbook, JAXA Annex	X
SSP 50123-Roscosmos	Configuration Management Handbook, Federal Space Agency Annex	X
SSP 50129	IRD ISS to ATV	X
SSP 50145	NASA/NASDA Bilateral S&MA Requirements	X
SSP 50146	NASA/RSA Bilateral S&MA Process Requirements for ISS	X
SSP 50182	NASA/ASI Bilateral Safety and Product Assurance Requirements	X
SSP 50190	ISS Program Contingency Action Plan	X
SSP 50191	NASA/ESA Bilateral S&PA Requirements	X
SSP 50200-01-ANX E	Station Program Implementation Plan (SPIP), Volume 1, Station Program Management Plan; Annexes E:	X
SSP 50200-01-ANX M	Station Program Implementation Plan (SPIP), Volume 1, Station Program Management Plan; Annex M	X
SSP 50200-03	Station Program Implementation Plan (SPIP) Volume 3, Cargo Analytical Integration	
SSP 50200-04	Station Program Implementation Plan (SPIP) Volume 4, Payload Engineering Integration	
SSP 50200-05	SPIP Volume 5, Logistics and Maintenance, Part 1: Maintenance	
SSP 50200-06	Station Program Implementation Plan (SPIP) Volume 6, Cargo Physical Processing	
SSP 50200-07	Station Program Implementation Plan (SPIP) Volume 7, Training	
SSP 50200-08	Station Program Implementation Plan (SPIP) Volume 8, Increment Execution Preparation	
SSP 50200-09	Station Program Implementation Plan (SPIP) Volume 9, Real Time Operations	
SSP 50200-10	Station Program Implementation Plan (SPIP) Volume 10, Sustaining Engineering	
SSP 50223	International Space Station Export Control Program	X
SSP 50227 Part 1	Russian Segment (SSP, SM and FGB) to PDGF/SSRMS ICD, Part 1	X

Document Number	Title	Book Coordination Required
SSP 50227 Part 2	Russian Segment (SSP, SM and FGB) to PDGF/SSRMS ICD, Part 2	X
SSP 50231	Safety and Mission Assurance Certificate Of Flight Readiness Implementation Plan	X
SSP 50235	Interface Definition Document (IDD) For ISS Visiting Vehicles	
SSP 50251 Part 1	ARIS to Pressurized Element ICD, Part 1	
SSP 50251 Part 2	ARIS to Pressurized Element ICD, Part 2	
SSP 50261-02	Generic Ground rules, Requirements, and Constraints Part 2: Execution Planning (GGR&C Part 2)	
SSP 50272	Interface Requirements Document International Space Station To H-II Transfer Vehicle	
SSP 50273	HTV Segment Specification	X
SSP 50281	Node 2 NASA/ASI Bilateral Integration and Verification Plan (BIVP)	X
SSP 50309 Part 1	Node 3 to Hab ICD, Part 1	X
SSP 50309 Part 2	Node 3 to Hab ICD, Part 2	X
SSP 50310	Atmosphere Revitalization Subsystem (ARS) Rack to Node 3 ICD	X
SSP 50312	CAM Segment Specification	X
SSP 50318	Prime Item Development Specification for Node 3	X
SSP 50333	Cupola Segment Specification	X
SSP 50334	ESA/RSA Bilateral Integration and Verification Plan (BIVP) For ATV	X
SSP 50346	NASA/ASI Nodes Bilateral S&PA Requirements	X
SSP 50349	NASA/AEB Bilateral Integration and Verification Plan	X
SSP 50357	Node 2 to Crew Quarters ICD	X
SSP 50406	NASA/ESA Bilateral Integration & Verification Plan (BIVP) For Cupola	X
SSP 50420	NASA/NASDA Bilateral Integration & Verification Plan (BIVP) For HTV	X
SSP 50428	NASA/AEB Bilateral Safety and Mission Assurance Requirements	X
SSP 50437	Safety and Mission Assurance/Program Risk Mission Evaluation Room Console Operations Handbook for ISS Program	X
SSP 50438 Part 1	ISS to HTV ICD, Part 1	X

Document Number	Title	Book Coordination Required
SSP 50438 Part 2	ISS to HTV ICD, Part 2	X
SSP 50439	ESA Segment Specification For The Automated Transfer Vehicle (ATV)	X
SSP 50448	Station Development Test Objectives (SDTO)	
SSP 50469	OCS to RWS ICD	X
SSP 50470	Crew Health Care System (CHeCS) Specification	X
SSP 50562	ISS Program Off-Nominal Situation Plan (IPOP)	X
SSP 50622-03	Operation Data Set Blank Book (ODSBB)	X
SSP 50699-03	USOS Certification Baseline, Volume 3: Flight Attitudes	X
SSP 50670	ARED to ISS Interface Control Document	X
SSP 50706	Change Engineer Handbook	X
SSP 50718	NASA/JAXA Centrifuge Element Bilateral Safety and Product Assurance Requirements	X
SSP 50722	Battery ORU to HTV-Exposed Pallet ICD	X
SSP 50724	NASA/ESA Node 3 Bilateral Safety and Product Assurance Requirements	X
SSP 50744	Data Impoundment Processing Procedures	X
SSP 50764	Modification Kit Process	X
SSP 50781	Project Technical Requirements Specification for the ISS Crew Quarters	X
SSP 50786 Part 1	USOS to MLM ICD, Part 1	X
SSP 50786 Part 2	USOS to MLM ICD, Part 2	X
SSP 50794	Express Logistics Carrier (ELC) Project Implementation Plan	X
SSP 50808	ISS to COTS IRD	X
SSP 50809	ISS to COTS ICD for Space X	X
SSP 50821	Requirements Specification for the ISS Second Treadmill	X
SSP 50826	ISS Six Crew Strategic Planning Document	X
SSP 50831	CUCU IRD	X
SSP 50832	COTS Cargo IRD	X
SSP 50834	ISS Vehicle Office Management and Hardware Development Plan	X
SSP 50839	ISS Program Operations Description	X
SSP 52055	Express Logistics Carrier Development Specification	X
SSP TBD	ISS to OBSS ICD	X
SSP TBD	ISS to External Carrier (TBD) ICD	X
SSP XXXXX	New Partner ICDs (Orbital)	X
SSP XXXXX	New Partner ICDs	X

Document Number	Title	Book Coordination Required
SSP XXXXX	CEV ICD	X

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

K.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
52.203-11	SEPT 2007	CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

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

CLAUSE NUMBER	DATE	TITLE
None included by reference		

K.2 FAR 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 541712 – Research and Development in the Physical, Engineering, and Life Sciences.

(2) The small business size standard is 1,000 employees.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (c) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

[ ] (i) Paragraph (c) applies.

[ ] (ii) Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at http://orca.bpn.gov. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [*offeror to insert changes, identifying change by clause number, title, date*]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR CLAUSE #	TITLE	DATE	CHANGE
_____	_____	_____	_____

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of provision)

[END OF SECTION]

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

PART I: PROVISIONS

L.1 LISTING OF PROVISIONS 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
52.204-6	APR 2008	DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER
52.214-34	APR 1991	SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE
52.214-35	APR 1991	SUBMISSION OF OFFERS IN U.S. CURRENCY
52.215-20	OCT 1997	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA AND ALTERNATE IV
52.219-24	OCT 2000	SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM-TARGETS
52.222-24	FEB 1999	PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE EVALUATION
52.222-46	FEB 1993	EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES
52.232-38	MAY 1999	SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER
52.237-1	APR 1984	SITE VISIT
52.237-10	OCT 1997	IDENTIFICATION OF UNCOMPENSATED OVERTIME
52.252-5	APR 1984	AUTHORIZED DEVIAITONS IN PROVISIONS

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

CLAUSE NUMBER	DATE	TITLE
1852.219-77	MAY 1999	NASA MENTOR-PROTÉGÉ PROGRAM
1852.225-70	FEB 2000	EXPORT LICENSES AND ALTERNATE I (FEB 2000)
1852.233-70	OCT 2002	PROTESTS TO NASA

L.2 FAR 52.215-1 INSTRUCTIONS TO OFFERORS – COMPETITIVE ACQUISITIONS (JAN 2004)

(a) *Definitions.* As used in this provision—

"Discussions" are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the Offeror being allowed to revise its proposal.

"In writing," "writing," or "written" means any worded or numbered expression that can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

"Proposal modification" is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

"Proposal revision" is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

"Time," if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) *Amendments to solicitations.* If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals.

(1) Unless other methods (*e.g.*, electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the Offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show—

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the Offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the Offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, revision, and withdrawal of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii) (A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is

received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and—

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

(i) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(ii) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(iii) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at FAR 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an Offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the Offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) *Offer expiration date.* Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the Offeror).

(e) *Restriction on disclosure and use of data.* Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall—

(1) Mark the title page with the following legend:

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this Offeror as a result of—or in connection with—the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [***insert numbers or other identification of sheets***]; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award.

(1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible Offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with Offerors [except clarifications as described in FAR 15.306(a)]. Therefore, the Offeror's initial proposal should contain the Offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the Offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with Offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer

determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful Offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting Offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed Offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed Offeror and past performance information on the debriefed Offeror.

(iii) The overall ranking of all Offerors, when any ranking was developed by the agency during source selection.

(iv) A summary of the rationale for award.

(v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful Offeror.

(vi) Reasonable responses to relevant questions posed by the debriefed Offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of provision)

L.3 FAR 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions 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. The Offeror is cautioned that the listed provisions may include blocks that must be completed by the Offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the Offeror may identify the provision by paragraph identifier and provide

the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at these addresses:

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

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

(End of provision)

L.4 FAR 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a:

Indefinite Delivery/Indefinite Quantity (IDIQ) Fixed Rate contract.

(End of provision)

L.5 FAR 52.233-2 SERVICE OF PROTEST (SEPT 2006)

(a) Protests, as defined in section 31.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Hand Carried:
Andrea R. Falls (call before arrival, 281-483-1862)

Mailing Address:
NASA Johnson Space Center
PI&C Solicitation NNJ09ZBG001R
BG/ISS Procurement Office
Attn: Andrea R. Falls
2101 NASA Parkway
Houston, Texas 77058-3696

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

L.6 NFS 1852.215-77 PREPROPOSAL/PRE-BID CONFERENCE (DEC 1988)

(a) A preproposal conference was held as indicated below:

Date: October 30, 2008

Time: Registration 1:30 to 2:00 p.m. CDT
Conference 2:00 to 5:00 p.m. CDT

Location: JSC Gilruth Center
2101 NASA Parkway
Houston, Texas 77058-3696

(b) Attendance at the preproposal/pre-bid conference is recommended; however, attendance is neither required nor a prerequisite for proposal/bid submission and will not be considered in the evaluation. Submit names of attendees to Andrea R. Falls, e-mail address: jsc-prog-int-and-contract-seb@mail.nasa.gov, by COB, CDT, October 27, 2008. Companies are not required to limit the number of attendees to the afternoon briefing on October 30, 2008. However, each Offeror will be limited to 5 attendees for the One-on-One Communication sessions on October 31, 2008.

(End of provision)

L.7 NFS 1852.215-81 PROPOSAL PAGE LIMITATIONS (FEB 1998)

(a) The page limitations for each of the sections of the proposal submitted in response to this solicitation are defined in Section L, Part II, 1.0 Introduction.

(b) A page is defined as one side of a sheet, 8 1/2" x 11", with at least one inch margins on all sides, using not smaller than 12 point type, with the exception of tables and figures, which may use 10 point type. Foldouts count as an equivalent number of 8 1/2" x 11" pages. The metric standard format most closely approximating the described standard 8 1/2" x 11" size may also be used.

(c) Title pages, tables of contents, and acronym listings are excluded from the page counts specified in paragraph (a) of this provision. In addition, the Cost section of your proposal is not page limited. However, this section is to be strictly limited to cost and price information. Information that can be construed as belonging in one of the other sections of the proposal will be so construed and counted against that section's page limitation.

(d) If final revisions are requested, separate page limitations will be specified in the Government's request for that submission.

(e) Pages submitted in excess of the limitations specified in this provision will not be evaluated by the Government and will be returned to the Offeror.

(End of provision)

L.8 NFS 1852.223-73 SAFETY AND HEALTH PLAN (NOV 2004)

(a) The Offeror shall submit a detailed safety and occupational health plan as part of its proposal (see NPR 8715.3, NASA General Safety Program Requirements, Appendices). The plan shall include a detailed discussion of the policies, procedures, and techniques that will be used to ensure the safety and occupational health of Contractor employees and to ensure the safety of all working conditions throughout the performance of the contract.

(b) When applicable, the plan shall address the policies, procedures, and techniques that will be used to ensure the safety and occupational health of the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), and high-value equipment and property.

(c) The plan shall similarly address subcontractor employee safety and occupational health for those proposed subcontracts that contain one or more of the following conditions:

(1) The work will be conducted completely or partly on premises owned or controlled by the Government.

(2) The work includes construction, alteration, or repair of facilities in excess of the simplified acquisition threshold.

(3) The work, regardless of place of performance, involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value equipment or property, and the hazards are not adequately addressed by Occupational Safety and Health Administration (OSHA) or Department of Transportation (DOT) regulations (if applicable).

(4) When the assessed risk and consequences of a failure to properly manage and control the hazards warrants use of the clause.

(d) This plan, as approved by the Contracting Officer, will be included in any resulting contract.

(End of provision)

L.9 NFS 1852.245-80 GOVERNMENT PROPERTY MANAGEMENT INFORMATION (DEVIATION) (SEP 2007)

(a) The Offeror shall identify the industry leading or voluntary consensus standards, and/or the industry leading practices, that it intends to employ for the management of Government property under any contract awarded from this solicitation.

(b) The Offeror shall provide the date of its last Government property control system analysis along with its overall status, a summary of findings and recommendations, the status of any recommended corrective actions, the name of the Government activity that performed the analysis, and the latest available contact information for that activity.

(c) The Offeror shall identify any property it intends to use in performance of this contract from the list of available Government property in the provision at NFS 1852.245-81, List of Available Government Property.

(d) The Offeror shall identify all Government property in its possession, provided under other Government contracts that it intends to use in the performance of this contract. The Offeror shall also identify: the contract that provided the property, the responsible Contracting Officer, the dates during which the property will be available for use (including the first, last, and all intervening months), and, for any property that will be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent, the amount of rent that would otherwise be charged in accordance with FAR 52.245-9, Use and Charges and the contact information for the responsible Government Contracting Officer. The Offeror shall provide proof that such use was authorized by the responsible Contracting Officer.

(e) The Offeror shall disclose cost accounting practices that allow for direct charging of commercially available equipment, when commercially available equipment is to be used in performance of the contract and the equipment is not a deliverable.

(f) The Offeror shall identify, in list form, any equipment that it intends to acquire and directly charge to the Government under this contract. The list shall include a description, manufacturer, model number (when available), quantity required, and estimated unit cost.

(g) The Offeror shall disclose its intention to acquire any parts, supplies, materials or equipment, to fabricate an item of equipment for use under any contract resulting from this solicitation when that item of equipment: will be titled to the Government under the provisions of the contract; is not included as a contract deliverable; and the Contractor intends to charge the costs of materials directly to the contract. The disclosure shall be in list form, parts shall be grouped by and identify the end item

or system and shall include all descriptive information, manufacturer, model, part, catalog or other identification numbers (when available), quantities required, and estimated unit costs.

(h) Existing available Government property listed in the provision at NFS 1852.245-81 is provided "as is". NASA makes no warranty regarding its performance or condition. The Offeror uses this property at its own risk and should make its own assessment of the property's suitability for use. The equitable adjustment provisions of the clause at FAR 52.245-1, Government Property, are not applicable to this property. The Offeror must obtain the Contracting Officer's written approval before acquiring replacement property when it intends to charge the cost directly to the contract.

(i) Existing Government property may be reviewed at the following locations, dates, and times:

Upon Request

(End of provision)

L.10 NFS 1852.245-81 LIST OF AVAILABLE GOVERNMENT PROPERTY (DEVIATION) (SEPT 2007)

(a) The Government will make the following Government property available for use in performance of the contract resulting from this solicitation, on a no-charge-for-use basis in accordance with FAR 52.245-1, Government Property. The Offeror shall notify the Government, as part of its proposal, of its intention to use or not use the property.

Item Description	Acquisition Date	Acquisition Cost	Quantity	If equipment		
See Section C, Add 4 – List of Installation Accountable Property and Services, Table(s) 8				Manufacturer	Model	Serial Number

(b) The Government will make the following Government property available for use in performance of the contract resulting from this solicitation, on a no-charge-for-use basis in accordance with FAR 52.245-2, Government Property Installation Operation Services. The Offeror shall notify the Government of its intention to use or not use the property.

Item Description	Acquisition Date	Acquisition Cost	Quantity	If equipment		
N/A				Manufacturer	Model	Serial Number

(c) The selected Contractor will be responsible for costs associated with transportation, and installation of the property listed in this provision.

(End of provision)

L.11 JSC 52.215-109 PROPOSAL MARKING AND DELIVERY (JUN 2007)

(a) Methods of Proposal Delivery

Proposals shall be delivered to the designated proposal receiving office by one of the following methods:

U.S. Postal Service
Commercial Delivery Service
Delivery by company employee or other individual agent

Regardless of the method of delivery chosen, the Offeror is responsible for delivery of the proposal to the designated receiving office no later than the date and time stated on the Standard Form 33 of the solicitation.

(b) External Marking of Proposal Package(s)

All proposal packages must be closed, sealed, and marked in large letters **"PROPOSAL – DELIVER UNOPENED"**. Proposals packages must include the solicitation number, the Contracting Officer's name, mail code/stop, and the Offeror's name and address clearly marked on the outside of the package.

The Offeror shall include a notice on the cover of the proposal package as follows:
"NOTICE: THIS PROPOSAL MUST BE DELIVERED TO THE SPECIFIED ADDRESS NO LATER THAN **(OFFEROR—ENTER DATE AND TIME)**."

(c) Delivery Address

Proposals must be delivered to the address/location specified on the Standard Form 33 of the solicitation.

Proposals submitted by commercial delivery service or hand carried packages must be delivered to:

NASA Johnson Space Center
2101 NASA Parkway
Houston, TX 77058-3696
Central Receiving, Bldg 421

JSC Central Receiving can only be accessed through JSC Gate 4, which is located off Space Center Boulevard. Offerors are cautioned that the delivery process may require an hour or more for packages to be screened through security and subsequently transported and delivered by the Offeror at the designated building while being accompanied by an employee of the U.S. Government. After 1:30 p.m., local time, incoming packages cannot be screened until the following business day. Any attempt by an Offeror to deliver a proposal on a weekend or a Federal holiday shall be coordinated through the Contracting Officer at least 48 hours prior to the planned delivery date. The Offeror is encouraged to notify the Contracting Officer one day in advance of the proposal submission.

(End of provision)

L.12 PROPOSAL SUBMISSION INSTRUCTIONS

(a) Due to heightened security measures in force at JSC, and to ensure timely proposal submission, the following procedures shall be followed.

(b) Offerors shall deliver proposals to Central Receiving - Building 421 at the Johnson Space Center (JSC) 2101 NASA Parkway, Houston, TX 77058-3696 no later than **1:30 p.m. CST on February 9, 2009** except for Section K, Representations, Certifications and Other Statements of Offerors, Volume III Past Performance Proposal, Past Performance Questionnaires, and the Cognizant Audit Office Template (CAOT) template which are due no later than **1:30 p.m. CST on January 22, 2009.** Each Offeror shall notify the Contracting Officer one day in advance of the proposal submission.

Call or e-mail Andrea R. Falls before arrival to ensure a Source Evaluation Board (SEB) member will be available to escort your proposal:

Telephone: (281) 483-1862
E-mail: jsc-prog-int-and-contract-seb@mail.nasa.gov

(c) The following instructions for submission of proposals are designed to ensure proposal data is adequately protected against potential improper disclosure while

concurrently ensuring the physical security of JSC. While the Offeror may use a commercial provider for delivery services, the Offeror shall ensure that its proposal is delivered in a manner that fully complies with the requirements of this solicitation provision and any other proposal delivery instructions in this RFP. Failure to comply could delay the proposal delivery or allow it to be handled by unauthorized or non-Government personnel. Offerors are advised that proposals sent by commercial carrier or through the U.S. Postal Service are subject to being opened and inspected by other than Government personnel. As used herein, the term "non-Government personnel" refers to all personnel not employed directly by the U.S. Government, and includes employees of Government Contractors.

(d) To deliver a proposal to JSC, Offerors shall do so by first entering JSC at Gate 4. Offerors are advised that entry through any other gate could result in excessive delays or searches of vehicle contents by non-Government personnel. Anyone delivering a proposal, including persons having authorized access to JSC, may be subjected to searches or delays when attempting to enter through a gate other than Gate 4. Gate 4 can be reached by traveling east on Bay Area Boulevard from Interstate Highway I-45. Turn right off of Bay Area Boulevard at Space Center Boulevard and enter JSC at the first entrance on the right. Gate 4 is opened at 6:00 a.m. local time. Upon entering the site, Offerors will encounter a security guard posted at Gate 4. Offerors shall advise the guard posted at Gate 4 that they are delivering a proposal and should receive instructions to proceed to a security checkpoint (Post 12). Since all incoming delivery vehicles are inspected, to avoid delays, Offerors are encouraged to limit vehicle contents to the proposal being delivered. The Offeror will be cleared to proceed to Central Receiving – Building 421.

Each Offeror shall verify with the Contracting Officer that an authorized civil service point of contact has been requested to accompany the Offeror for the remainder of the delivery process. The time when Central Receiving accepts the proposal package from the Offeror will determine the official proposal submission time.

(End of provision)

L.13 AVAILABILITY OF SPECIFICATIONS

(a) All technical documentation incorporated directly by reference in this solicitation may be obtained from the Program Integration and Control Technical Library which is available online at: http://procurement.jsc.nasa.gov/isspic/default.asp

(b) All Federal, Military, NASA, other Government Standards and Specifications, and technical documentation incorporated non-directly referenced in this solicitation may be obtained by submittal of a request to the Contracting Officer identified in L.6.

The request should identify the solicitation number and the specification requested by date, title, and number, as cited in the solicitation.

(c) Voluntary standards, such as industrial, manufacturing, independent laboratory, society, and institutional associations (non-Government organizations) codes, standards, specifications, and technical documents incorporated by reference in this solicitation must be obtained, at the bidder's expense, from the organization that develops, establishes and/or publishes those documents.

(d) The Contracting Officer will furnish, upon request, copies of NASA quality documents referenced in the solicitation and not otherwise available to the Offeror for the preparation of its offer.

(End of provision)

L.14 SBA OSTENSIBLE SUBCONTRACTOR RULE INFORMATION

(a) If a subcontracting arrangement is proposed, Offerors shall include specific detail in the following areas so that the Government can determine that the prime Contractor making the offer will be performing the primary and vital requirements for the contract.

(1) Who will manage the contract.

(2) Which party possesses background and expertise necessary for contract performance.

(3) Which party pursued the contract.

(4) The degree of collaboration in preparation and submission of competitive proposal.

(5) Whether there are discreet tasks to be performed by each of the teaming partners, or whether there is instead commingling of personnel and resources.

(6) The relative amount of work to be performed by each teaming partner.

(7) Which party will perform the more complex and costly contract functions.

(8) The business size of the other parties.

(9) Which of the parties possess the qualifications relevant to the contract requirements.

(10) Describe how the Offeror will ensure compliance with FAR 52.219-14, Limitations on Subcontracting. For the purposes of this RFP, JSC defines "costs of contract performance incurred for personnel" to mean direct labor,

labor overhead (including payroll taxes and benefits), and G&A. "Employees on the concern" means actual direct employees identified on the Offeror's payroll records for which social security taxes are matched. JSC considers "cost of contract performance" to include all costs throughout contract completion (the full contract period of performance).

Note: Major subcontractor is defined by this solicitation as a company that the Offeror anticipates providing at least $1,000,000 of contract value in support of the Statement of Work effort.

(b) If an 8(a) joint venture is proposed, Offeror shall submit a SMALL BUSINESS ADMINISTRATION signed and approved joint venture agreement with submission of the proposal.

(End of provision)
[END OF SECTION]

SECTION L - PART II INSTRUCTIONS FOR PROPOSAL PREPARATION

NOTE TO OFFERORS: For a better and more complete understanding of this part of Section L, you should also refer to Section M. The instructions in this part of Section L are directly related to the evaluation factors set forth in Section M.

1.0 INTRODUCTION

Proposals shall be submitted in the following five volumes within the established page limitations.

Volume No.	Title	Page Limit
Volume I	**Technical and Management Approach**	
	TA. Technical Approach	**120**
	TA1. Overall Technical Approach	*15
	TA2. Specific Technical Understanding and Associated Resources	*100
	TA3. Operational Scenario	*5
	MA. Management Approach	**40**
	MA1. Overall Management Approach	*30
	MA2. Key Personnel (Att. L-1 resumes not included in page limit)	*10
	SA. Safety and Health Approach	
	SA1. Overall Safety Approach	No Limit
Volume II	**Plans**	**56 + No Limits**
	A. Annual Performance Feedback Plan	10
	B. Phase-in/Transition Plan	25
	C. Total Compensation Plan	15
	D. Associate Contracting Agreements	3
	E. IT Management and Security Plans	No Limit
	F. Organizational Conflict of Interest Avoidance Plan	3
Volume III	**Past Performance**	No Limit
Volume IV	**Price Proposal**	No Limit

Volume No.	Title	Page Limit
Volume III	**Past Performance**	No Limit
Volume IV	**Price Proposal**	No Limit
Volume V	**Other Required Data**	
	A. Ostensible Subcontractor Approach	No Limit
	B. Model Contract Offerors shall also submit three (3) original executed model contracts, Sections A-J, with all fill-ins completed (those fill-ins required to be completed by the Offeror) and a completed Section K Representations and Certifications.	No Limit

*Subsection page limits are guidelines only.

The five volumes identified above shall be separately bound in appropriately sized 3-ring binders that permit the volume to lie flat when open. Staples shall not be used. A cover sheet should be included on each binder, clearly marked with date of offer, volume number, title, copy number, RFP identification and the Offeror's name. The same identifying data should be placed on the spine of each binder. Information should not be incorporated by reference. A suitable table of contents shall be provided with each volume for ready reference to sections, tables, and figures. All pages in each volume shall be numbered sequentially with Arabic numerals for contents subject to page limitations or with no page limitations and lower case Roman numerals for title pages, tables of contents, and acronym lists. The Government will allow for 10-point type for graphics and tables. Offerors shall tab each subsection within each volume for ease of reference. Tabs and dividers are not included in the page count limitations.

In providing these instructions, the Government's intention is to solicit information that will permit a competitive evaluation of the Offeror's proposal. The information solicited will demonstrate your competence and capability to successfully complete the requirements specified in the Program Integration and Control Contract Statement of Work (SOW). Generally, the proposal shall:

(a) Demonstrate understanding of the overall and specific requirements of the proposed contract,

(b) Convey the company's capabilities for transforming understanding into accomplishment,

(c) Present in detail, the plans and methods for so doing, and

(d) Present, as requested below, the costs associated with so doing.

Your proposal shall be specific, detailed, and comprehensive enough to clearly and fully demonstrate an understanding of the requirements and the inherent risks associated with the objectives of this procurement. It is inadequate to simply state that you understand and will comply with the specifications, or to paraphrase the specifications such as: "standard procedures will be employed to..." or "well-known techniques will be used for...". The proposal shall explain comprehensively how you propose to comply with the contract (SOW and Terms and Conditions,) as well as, the techniques and procedures you propose to implement.

In the event that you propose to involve other organizations in conducting this work, their relationships shall be explained, and their proposed contributions to the work shall be identified and integrated into each part of the proposal, as appropriate.

Applicable and reference technical documents as well as sample products shall be accessed through the electronic technical library available for this procurement at the following address:

http://procurenent.jsc.nasa.gov/isspic/default.asp

For the purpose of this RFP, the technical library contains the official versions of applicable and reference documentation. No other version of the documentation should be used.

You will need to contact the Contracting Officer identified in L.6 to obtain a user name and password for the ability to access the electronic technical library.

2.0 GENERAL

A. COPIES OF PROPOSALS

Offerors shall provide twenty (20) copies of Volume I, ten (10) copies of Volume II and Other Required Data, ten (10) copies of Volume III, and ten (10) copies of Volume IV. In addition, Offerors shall provide two (2) copies of their entire proposal (Volumes I through IV) electronically on separate CD ROMs. Two CD ROM copies of Volume III shall also be provided with the early delivery of Volume III.

Each CD ROM provided is to have an external label affixed indicating:

(1) The name of the Offeror,

(2) The RFP number,

(3) Copy number, and

(4) An identification of the files or range of files contained on the CD ROM.

The required number of copies of each volume shall be uniquely marked for documentation control on the cover as *Copy ___ of ___*. For example, the first copy of Volume I shall be marked as *Copy 1 of 20*, the second copy as *Copy 2 of 20*, etc.

B. GOVERNMENT-PROVIDED PROPERTY AND SERVICES

Services and property to be furnished by the Government for use on the proposed contract are as set forth in Section G.5, NFS Clause 1852.245-71, Installation-Accountable Government Property, and Section G.8, NFS Clause 1852.245-76, List Of Government Property Furnished Pursuant to FAR 52.245-1.

C. FACILITIES

The Program Integration and Control Contract is to use a combination of existing facilities onsite at JSC and offsite, both Government-furnished and Contractor furnished, to accomplish the work in Section C, Statement of Work. NASA's current estimate of office space available (including computer workstations and other services listed in G.5) for on-site personnel is listed in Section C, Addendum 4.

3.0 PERIOD COVERED BY PROCUREMENT

This solicitation covers a basic 3 year period with two 1-year options for a total potential period of performance of 5 years.

Detailed information on preparation of the Volume IV cost proposal is contained in Part II, Paragraph VI of Section L.

4.0. VOLUME I – TECHNICAL AND MANAGEMENT APPROACH

Offerors are requested to provide information responsive to the items set forth below. This information is considered essential for the Government to conduct a fair and uniform evaluation of proposals in accordance with the evaluation factors and subfactors provided in Section M. The items listed are not; however, all-inclusive, and Offerors should therefore include in their proposals any further discussion that they believe to be necessary or useful in demonstrating their ability to understand and perform the work under the contract.

TA. TECHNICAL APPROACH

This section of the proposal should use the Standard Labor Categories and guidelines as defined in Appendix 5, Sample Guidelines, Standard Labor Categories and Table L-1.

The Offerors shall use Appendix 6, Technical Understanding - Formats and Examples, as a guideline for discussing your technical approach.

The rollup table (Appendix 5, Table L-2: PI&C SOW Proposal Level of Detail and WYEs) shall be the sum of all subordinate SOW areas and is intended to evaluate the Offeror's proposed technical approach and required resources.

TA1. Overall Technical Approach

In this section discuss your overall technical approach to the Statement of Work requirements for technical activities that apply contract-wide including the identification of innovative methods you would employ with associated rationale.

Identify key technical SOW functional areas and discuss your approach for ensuring technical integration among these key areas both within the Program Integration and Control follow-on contract and with other ISS Program Contractors and International Partners.

A narrative and table of resources (see Appendix 6, Technical Understanding - Formats and Examples) are required for each of the rollup (R) SOW items listed in Section L, Appendix 5, Table L-2, PI&C SOW Proposal Level of Detail and WYEs.

The Offerors shall provide the WYE levels, in Appendix 5, Table L-2, Column 4, PI&C SOW Proposal Level of Detail and WYEs, for the corresponding work breakdown structure. The Offerors shall address not only the specific labor resources but also your supporting rationale, BOE, and assumptions for estimating the amount and skill mix of those resources as well as the technical approach for accomplishing the SOW areas as referenced by "R". In order to eliminate redundant detailed narratives, the Offeror may address efficiencies or risk mitigations at the rollup (R) level for explanations that span multiple detailed SOW items.

TA2. Specific Technical Understanding and Associated Resources

The Specific Technical Understanding and Associated Resources section shall address specific technical requirements and labor resources for each SOW area as referenced by "D" in Section L, Appendix 5, Table L-2, Column 4. In addition, the discussion addressing specific technical understanding and resources should be consistent with the proposed overall technical and management approach. Inconsistency between these two areas may result in negative mission suitability

findings. Included in Section L, Appendix 5, Table L-1 is a list of Standard Labor Categories to use for proposal purposes. Section L, Appendix 5, Table L-2 delineates the SOW level for which detailed data is required as referenced by "D". The format and specific instructions, including an example of what is to be included for each specified SOW level is addressed in Section L, Appendix 6.

Additionally, a table of resources (see Appendix 6, Technical Understanding - Formats and Examples) is required for each of the detail (D) SOW items listed in Section L, Appendix 5, Table L-2, PI&C SOW Proposal Level of Detail and WYEs.

The Offerors shall provide the WYE levels, in Appendix 5, Table L-2, Column 4: PI&C SOW Proposal Level of Detail and WYEs for the corresponding work breakdown structure for accomplishing the SOW areas as referenced by "D". The Offerors shall address not only the specific labor resources but also your supporting rationale, BOE, and assumptions for estimating the amount of those resources as well as the specific technical approach for accomplishing the SOW areas as referenced by "D".

TA3. <u>Operational Scenario</u>

The Offeror shall provide a detailed response of the technical approach to the scenario provided below. Identify and discuss impacts to SOW functions, impacted teams and areas that will need to be assessed and modified, and recommended courses of action. Identify any cost, schedule, risk, and contractual impacts to on-going operations and provide all assumptions and rationale. Use the reference assembly sequence in Section L, Appendix 1, Programmatic Groundrules and Assumptions.

Support ISS Capability upon Shuttle Retirement

The Space Shuttle will retire and no longer support the ISS near the end of 2010. The ISS Program will continue to operate in the as built "Assembly Complete" configuration. Without the Space Shuttle, the capability to transport crew and cargo to the ISS can be significantly reduced. Shuttle-unique functionality will no longer be available and alternatives must be developed.

<u>Assumptions</u>

- Shuttle retires in 2010
- All major elements of the ISS have been delivered (i.e. ISS "Assembly Complete").
- Reference latest assembly sequence attached Section L, Appendix 1

- ISS operational requirements met with required redundancy needed for crew and vehicle safety through December 31, 2015.

- Nominal ISS research will be conducted through December 31, 2015.

- 6-person Crew (3 USOS, 3 RS) will be present and continue throughout the life of the ISS Program.

Identify technical USOS impacts due to Shuttle retirement. Include a preliminary assessment of ISS impacts to accommodate any transportation gap, re-supply demands, transition from a Shuttle-based cargo delivery vehicle, and integration to new commercial-based vehicles. Also provide an assessment of ISS impacts for adapting to arrival of these different visiting vehicles.

4.0 VOLUME I – TECHNICAL AND MANAGEMENT APPROACH (Continued)

MA. MANAGEMENT APPROACH

MA1. Overall Management Approach

Describe your overall management approach to fulfilling all contract requirements. Describe proposed management approach, program and project management functions, strategies, policies and procedures to provide flexible and efficient implementation of customer requirements. Describe any innovations and efficiencies you plan to implement and gain through your management approach and provide adequate rationale for proposed innovations.

When discussing your overall management approach, be sure to address the following areas:

A. Organizational Structure

Describe your overall proposed organizational structure, including a chart depicting the proposed organization, and provide the rationale for its application to the contract requirements. Describe the organizational elements within the overall organization considered most critical to satisfactory accomplishment of all performance requirements and provide rationale as to why these are judged most critical within the framework of the overall organization. Provide supporting rationale that demonstrates the proposed organizational approach will ensure success in each of the critical areas identified.

B. Teaming Arrangements

Discuss the details of formal teaming arrangements with any proposed subcontractors, team members, or joint venture partners. Describe the division of tasks and responsibilities relative to the contract SOW and proposed WBS. Describe the communication channels, lines of authority (including the line of succession if Program Manager is unavailable), reporting relationships, and responsibilities of all organizational elements. Include in this discussion any proposed subcontractors, team members, or joint venture partners proposed to illustrate their relationships within the proposed structure or between the organizational elements and any other proposed subcontractors, team members, or joint venture partners.

Describe the reporting responsibilities of the Program Manager to corporate management and the relationship between the Program Manager and the prime Contractor's corporate management as well as the management of any proposed subcontractors, team members, or joint venture partners.

Note: The Offerors shall comply with Provision L.14, SBA Ostensible Subcontractor Rule Information, and Section L, Part II, 7.0 Ostensible Subcontractor Approach.

C. Work Breakdown Structure (WBS)

Provide a WBS down to at least the third level to map to the contract SOW and explain the rationale for the WBS.

D. Attracting and Retaining Personnel

Discuss your overall management approach to attracting and retaining high caliber personnel capable of meeting SOW requirements at a high level of excellence. Describe how you will maintain an environment in which highly skilled and talented people will make long-term commitments to achieving the ISS Program and Program Integration and Control mission. Describe how you will maintain a skill set and staff to support emerging programs such as Constellation, and other potentially new programs/projects. Describe incentives that you will use to motivate and reward performance and encourage the retention of personnel. Describe the policies, procedures, and experience related to these incentives. Specific information relating to the wages, salaries, and fringe benefits of employees specifically instructed in Section L, 4.0, Volume II - Plans, Part E, entitled "Total Compensation Plan" shall be included within the Total Compensation Plan.

E. Government Interface and Communication

Describe your overall approach to create an efficient and effective interface to the Government in the management and communication of Statement of Work tasks and priorities. Considering the dynamic nature of ISS Program operations, include a description of how you plan to provide a balanced, coordinated, and proactive approach to management of the SOW requirements, contract schedules and deliverables. Describe how you will communicate and obtain Government concurrence to support changing priorities and workforce adjustments.

F. Customer Satisfaction

Identify the stakeholders and describe how you will measure and report overall customer satisfaction for key SOW functional areas. Describe how you plan to develop and maintain customer relationships. Describe the steps that you will take to ensure that customer interactions are positive (e.g., meeting contract requirements in a friendly, professional manner). Describe the steps that you will take, if any, to continuously improve overall customer satisfaction.

G. Export Control

Describe how you plan to comply with the export control regulations referenced in Section H, Clause H.10, Additional Export Control Requirements. Include in the discussion planned courses of action for obtaining necessary approvals for any foreign subcontractor or team member, copies of any Technical Assistance Agreements (an export license from the State Department), and an explanation that the submitted or approved Technical Assistance Agreements will, in fact, allow the foreign team member to contribute as promised.

MA2. Key Personnel

Complete an Attachment L-1 resume for each person proposed to perform the functions of Program Management and other personnel considered key to your organization in accomplishing tasks under the contract. Explain why each person proposed is considered key personnel for this contract.

Describe the minimum qualification standards (training, certifications, type and length of experience, etc.) you will use to replace key personnel, if required, during the term of the contract. Provide this information for each key position. Describe how you will ensure key personnel will maintain the minimum qualification standards.

If key personnel are currently being proposed for other contracts, or for other reasons are not planned to be 100% dedicated to this contract, describe the level of commitment proposed. Please discuss your rationale for how the work can be effectively performed with a key person or persons who are not fully committed to this contract. Include in the discussion scenarios that may lead to less than their full commitment to this contract and any alternatives you propose. If the commitment of key personnel is contingent upon the outcome of another competition, alternate key personnel should be proposed, along with an Attachment L-1 resume and a description of their level of commitment.

SA. SAFETY AND HEALTH APPROACH

SA1. Safety and Health Plan

Provide a Safety and Health Plan as described in DRD PIC-SA-02, Safety and Health Plan. The plan shall include a detailed discussion of the policies, procedures, and techniques that will be used to ensure the safety and health of your employees (and subcontractor employees, if a subcontracting arrangement is proposed) throughout the performance of the contract.

5.0 VOLUME II - PLANS

A. ANNUAL PERFORMANCE FEEDBACK PLAN

The Offeror shall provide a set of objective performance measures (metrics) that describes the performance effectiveness of each of the key requirements in the contract SOW corresponding to the performance areas described in Section H, Clause H.7, Annual Performance Feedback. Each metric shall also indicate the minimum acceptable standard of excellence. These metrics will become part of the basis of the Annual Performance Feedback.

B PHASE-IN AND TRANSITION PLAN

A phase-in period is anticipated during which staffing buildup and training will occur during approximately 60 days prior to the effective date of the contract, which is anticipated to be August 3, 2009. Each Offeror shall provide the information requested in the following paragraphs relative to the proposed phase-in and transition plan.

1. Describe in detail the plan for accomplishing a smooth phase-in and transition without compromising effective and efficient operation of the current contract. Provide the management milestones, and all associated schedules that you

believe are required from start of phase-in to the full assumption of contract responsibilities.

2. Discuss in detail your specific plans for successfully completing each phase-in performance milestone described below. For each milestone, Offerors are requested to: (a) provide a detailed plan inclusive of responsible personnel, (b) provide all relevant interim and final schedule dates to be met, and (c) propose objective criteria that can be used to determine if the milestone has been achieved.

Milestone 1: Staffing
The successful Offeror has hired all personnel proposed as *key* personnel and all of these personnel are performing phase-in work at the level proposed; and at least 90% of all personnel proposed to perform all contract requirements have provided written acceptance of firm job offers.

Milestone 2: ISS Applications Competency
The successful Offeror has operational competency with the following ISS applications. (Ref. Section C, Addendum 2, Table 1 and Addendum 4, Table 2)

Reference Section C, App. 4, Table 2

1. SAPHIRE
2. CSD
3. EDMS
4. COSMOS
5. PRACA
6. IRMA
7. ORUDD
8. SANMIS

Reference Section C, App. 2, Table 1

9. ExCATT (or equivalent)
10. BASEPLATE (or equivalent)
11. TRAM (or equivalent)
12. STRAP (or equivalent)
13. TPS (or equivalent)
14. IEBT (or equivalent)
15. CEBT (or equivalent)
16. HITS (or equivalent)
17. MODGEN (or equivalent)

Milestone 3: Major Subcontracts
The successful Offeror has major definitized subcontracts and ready to perform contract requirements.

Milestone 4: Plans and Other Data Deliverables
The successful Offeror has completed and submitted the following plans and other Data Deliverables for NASA review and/or approval (per DRD):

1. PIC-CM-01, Configuration Management Plan
2. PIC-IT-01, Information Technology (IT) Management Plan
3. PIC-PM-01, PI&C Management Plan
4. PIC-PM-03, Certification of Flight Readiness (CoFR) Plan
5. PIC-PR-03, Wage/Salary and Fringe Benefit
6. PIC-SA-01, Mission Assurance and Risk Management Plan

Milestone 5: Financial Report

$TBD

The successful Offeror has implemented financial reporting system fully capable of accurately reporting in accordance with DRD PIC-PC-01 and submitting proper invoices for payment of completed work.

Milestone 6: Definitization of Contract Year 1 (FY 2010) Task Orders
$TBD

The successful Offeror has provided task order plans in accordance with DRD PIC-PR-05 and complied with clause NFS 1852.216-80, Task Order Procedures, for all task orders (Section L, Appendix 3 – Task Orders) for FY 2010.

C. TOTAL COMPENSATION PLAN (TCP)

Total compensation plans are required in accordance with FAR 52.222-46, EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES. Total compensation plans should identify and discuss salaries, wages and fringe benefits for professional employees and non-exempt service employees for both the prime and all major subcontractors. Any differences in fringe benefit coverage between working groups of employees should be reflected.

a. Discuss how salaries, wages and fringe benefits were established for professional employees and non-exempt service employees. Describe your

company's commitment for compliance with the Service Contract Act and all wage determinations.

b. Provide a discussion of your plans for recruiting, hiring and retaining qualified personnel; including any special provisions that your company has regarding the hiring of incumbent employees.

c. Provide salary/wage information for each labor classification proposed. Describe planned escalations for exempt and non-exempt employees.

d. Discuss your company's fringe benefit policies and practices regarding health insurance coverage, the types of health insurance benefits offered, the company share of premium costs, what deductibles and co-pays are required, the effective date of coverage, and anticipated escalation of insurance costs. Describe your policy on assuming health insurance coverage for incumbent employees.

e. Discuss your proposed retirement/savings plans, including what types of plans are offered, how much the company provides toward the plan and information on vesting of company contributions.

f. Describe your paid time off policies including vacation, sick leave, and holidays. Describe your company payment policies regarding severance pay, overtime pay, holiday pay and any other premium pay anticipated.

g. Describe your company policy regarding the recognition of seniority and protection of current salaries/wages and fringe benefit coverage for incumbent employees.

h. If uncompensated overtime is proposed for exempt employees, discuss the effects of uncompensated overtime on the total compensation plan. Provide a discussion as to whether the uncompensated overtime is voluntary or involuntary. Describe the possible effects that uncompensated overtime will have on employee morale and retention.

i. Describe incentives to motivate and reward performance and to encourage the retention of personnel. Describe your overall management approach to attracting and retaining high caliber personnel capable of meeting statement of work requirements at a high level of excellence.

j. Provide a discussion of prior experience with this proposed total compensation plan, including such information as the length of time you (or other elements of the company) have used the plan and the turnover experienced with this compensation plan compared to the National Average.

Your total compensation plan must correspond with the data provided on Total Compensation Templates (a), (b), (c), (d), and (e).

D. ASSOCIATE CONTRACTOR AGREEMENTS

The Offeror shall discuss its approach for establishing and maintaining Associate Contractor Agreements with ISS Contractors, reference Section H, Clause H.9, Associate Contractor Agreement for ISS. The approach should discuss the scope of the agreements, interfaces and expected benefits of these cooperative efforts.

E. IT MANAGEMENT AND SECURITY PLANS

1. The Offeror shall discuss its approach for coordinating and executing all technical and administrative tasks for all activities required to manage ISS Program IT resources and interfaces with other ISS Program and institutional IT providers, reference DRD PIC-IT-01.

2. The Offeror shall discuss its approach for establishing and maintaining IT security requirements, reference DRD PIC-IT-03. The Offeror shall demonstrate its understanding of IT security requirements, and the application of those IT Security requirements in the ISS Program IT operational environment. The Offeror shall demonstrate their familiarity with the Certification and Accreditation (C&A) process for IT systems. The Offeror shall provide an IT System Security Plan for any Offeror-managed off-site facilities that contain NASA data and are managed as a part of the proposed contract.

3. The Offeror shall discuss its proposed life cycle methodology that encompasses all life cycle phases for IT systems and applications. The proposed methodology shall enable the provisioning of IT systems with the best performance and quality in a cost effective manner.

F. ORGANIZATIONAL CONFLICT OF INTEREST AVOIDANCE PLAN

The Offeror shall provide its Organizational Conflict of Interest Avoidance Plan. At a minimum, the plans shall address Clauses H.2, Limitations of Future Contracting, and H.8, ISS Contract Strategy Conflict of Interest Agreement, as they apply to the specific requirements of this contract.

6.0 VOLUME III – PAST PERFORMANCE

A. The Offeror shall provide a narrative summary of all past experience, in the field(s) of technical endeavors that relate to this acquisition and/or qualify your

company or major subcontractors (over $1M value per year) to perform this work. Only current past performance will be evaluated. Current or currency is defined as performance that has occurred within the past three (3) years of proposal release date. Consider both the nature and magnitude of the effort(s) as they relate specifically to this requirement. The Offeror shall specifically provide a discussion of the relevant contract technical requirements, mission integration successes, any unique schedules requirements, cost performance, problems encountered and initiative in problem resolution, obtaining and maintaining export control licenses and overall performance.

B. The information requested below and in paragraphs C and D is required of the Offeror and major subcontractors and/or team members for the past performance evaluation, however, Offerors may submit additional information at their discretion if they consider such information necessary to establish a record of relevant performance. Refer to FAR 15.305 (a)(2)(iii).

- A list of all relevant active or ended contracts, in the last three years, by name, contract number, type, total original, and present or final contract value.
- Customer's name, address and telephone number of both the lead contractual and technical personnel. (Please verify that the telephone numbers provided are current and correct.)
- Date of contract, place(s) of performance and delivery dates or periods of performance.
- Relationship of this work to the work that will be performed under this contract; i.e., how is it specifically comparable. There should be discernable links between this discussion and the Statement of Work to be performed.
- Magnitude of work directly accomplished by the company on the relevant contract in relation to the total effort.
- Method of acquisition: competitive or noncompetitive.
- Nature of award: initial or follow-on. If initial, indicate whether award was preceded by a Government, customer, or Offeror financed study.
- Any major technical problems and how they were overcome. List any major deviations or waivers to technical requirements that were granted by the customer.

- Whether delivery was on time and, if not, why; adherence to Program schedules; incentive performance (e.g. schedule and technical) history, if applicable.

- Average number of personnel on the contract per year and percent turnover of personnel per year.

- Details of any incidents, mishaps, accidents or industrial illnesses.

- Details on the scope of Export Control Licenses and issues involved with obtaining and maintaining required licenses, if applicable.

C. List any Government contracts terminated (partial or complete) within the past three years and basis for termination (convenience or default). Include the contract number, name, address, and telephone number of the terminating officer. Include contracts that were "de-scoped" by the customer because of performance or cost problems.

D. The Offeror shall provide the Past Performance Questionnaire, Attachment L-2 to no more than four (4) of the references identified above for its own company and each of the major subcontractors and/or team members. For example, we will evaluate no more than 12 questionnaires requested from a prime Offeror teamed with two major subcontractors. The Offeror shall instruct each of its references to return the questionnaire directly to the Contracting Officer in a sealed envelope, by fax, or e-mail as identified in L.5, Service of Protest (FAR 52.233-2)(SEPT 2006). The Offeror shall include in its written proposal, a list of those to whom the questionnaire was sent including name of individual; current and verified phone number; organization; and contract number. The questionnaire shall be returned to the Contracting Officer no later than the time and date indicated in Section L.12, Proposal Submission Instructions, for submission of the Past Performance proposal. Past Performance proposals are subject to the late proposal rule. Past Performance proposal received after January 22, 2009, will be considered late. It is the Offeror's responsibility to ensure that its references delivery of the questionnaires to NASA by the required time and date.

E. Safety Past Performance Language Template:

(1) Safety and Environmental Performance – Offerors shall provide a statement of their past safety performance on contracts identified above for the prime and all subcontractors. A statement shall be made regarding any OSHA citations of the company's operations during the past three years. For those contracts cited above, records of the company's OSHA recordable injuries and illnesses shall be included. The records typically include, for each worksite, as a minimum, one copy of each year's OSHA logs for these past three years as

required by 29 CFR 1904.5(d) including the number of employees at the worksite and the calculated OSHA recordable frequency rate and the North American Industrial Classification Code utilized. If a joint venture or prime-subcontractor relationship is proposed, the same information shall be provided for each company that may provide either $1,000,000 or more in contract value or ten or more full-time equivalent employees.

Offerors shall provide a statement of their past environmental performance. A statement shall be made regarding any environmental related citation of the company's operations in the past three years for the prime and all subcontractors. Citation sources include, but are not limited to, Federal, State, and local environmental agencies. If a joint venture or prime-subcontractor relationship is proposed, the same information shall be provided for each company that may provide either $1,000,000 or more in contract value or ten or more full-time equivalent employees.

In addition to the above, a list of all safety and health insurance carriers that have underwritten the Offeror's workers' compensation program or equivalent for the last three years for which complete data is available plus any available data for the most recent year shall be provided for the prime and all subcontractors. The list of insurance carriers shall include a point of contact and phone number to aid proposal evaluators in verifying the Offeror's statements of its past safety and health performance. The Offeror shall authorize the listed insurance carriers to respond to questions asked by the Government. In addition, the workers' compensation experience modifier, including the State formula utilized for the computation, will be included, along with the loss ratio for the past three years (where the loss ratio is defined as the ratio of losses to premium). All figures used for computation shall be shown. Information on the liability and lawsuit history related to safety and health performance shall also be provided. Data shall be provided in the form of a letter of certification from the insurance carrier. In the event the Offeror is self insured, the same information shall be provided and certified with the signature of a responsible company official. If a joint venture or prime-subcontractor relationship is proposed, the same information shall be included for each company that may provide either $1,000,000 or more in contract value or ten or more full-time equivalent employees.

F. Attachments

Attached are sample forms. Electronic copies of all forms to be completed are available on the Program Integration and Control website: http://procurement.jsc.nasa.gov/isspic/default.asp

7.0 VOLUME IV – PRICE PROPOSAL

A. INTRODUCTION

To ensure that the Government is able to perform a fair assessment of the proposed price, each Offeror is required to submit a price proposal that is suitable for evaluation; however, this cost and pricing data need not be certified. A price volume that is suitable for evaluation shall:

1. Account for all resources necessary to complete requirements of this RFP and include all necessary supporting rationale.

2. Explain in detail all pricing and estimating techniques.

3. Disclose the basis of all projections, rates, ratios, percentages, and factors in sufficient detail to facilitate the SEB's understanding and ability to mathematically verify these estimating tools.

4. Comply with applicable Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), and governing statutory requirements.

5. Include a narrative portion that explains all judgmental elements of cost projections and team profit sharing arrangements.

6. Include all templates required in this RFP.

The Offeror's price proposal shall be submitted in one volume labeled "Volume IV Price Proposal."

Requirement for Concurrent Price Proposal Delivery to DCAA

A copy of the prime and all major subcontractor's (estimated annual value exceeds $1 million) price proposals (both electronic and hardcopy) are to be delivered to each respective cognizant Defense Contract Audit Agency (DCAA) field audit office concurrent with delivery to JSC. If you do not know your cognizant DCAA field audit office, the information is readily available on the world-wide-web at www.dcaa.mil. Once the web site is accessed, click on the "Audit Office Locator" link. Enter your company's 5 digit Zip Code in the area provided and click on the adjacent "search" button. (It is important that you enter the 5 digit Zip Code for your company location where auditable books and records supporting amounts in your proposal physically reside.) Once the search is completed, the cognizant field audit office physical and e-mail addresses and voice and fax telephone numbers will be displayed.

EXCEL PRICING MODEL (EPM) FILE:

Format: In order to achieve standardization, the Excel Pricing Model includes one (1) workbook/file. The worksheets located within the workbook contain the following:

1. Fully Burdened Rates Year 1 – Year 5
2. Summary Price Template
3. Total Compensation Template (a)
4. Total Compensation Template (b)
5. Total Compensation Template (c)
6. Total Compensation Template (d)
7. Total Compensation Template (e)
8. Cognizant Audit Office Template
9. Phase in Template

The Fully Burdened Rates worksheets and the Summary Price Template must be automated. The other templates need not be automated.

Formulas: All formulas used in the workbooks must be clearly visible in the individual cells and verifiable. Whereas linking among the spreadsheets or workbooks may be necessary; the use of external links (source data not provided to NASA) of any kind is prohibited. The workbooks must contain no macros or hidden cells.

Locks: The EPM shall not be locked/protected or secured by passwords.

CD Price Proposal Organization

The Government intends to use a personal computer with Microsoft Excel to aid in the evaluation of the price proposal. In addition to the hardcopy requirements of the preceding section, each prime and major subcontractor is required to submit their EPM and any other electronic cost data, including formulas, on CD only.

Each CD provided is to have an external label indicating:

1. The name of the Offeror,

2. The RFP number, and

3. The files/workbooks or range of files/workbooks contained on the CD.

Labeling CD case only does not fulfill this requirement. The CD itself must be labeled. The use of a permanent marker to label the CDs by hand is acceptable.

Workbook Acronyms

All electronic file/workbook names included in your proposal shall begin with the appropriate workbook acronym, hyphen, followed by the first three letters of your company name. For example: Assume your company name is ABC Company and you have completed the Completion Form workbook; the file/workbook name would be Completion Form-ABC.xls. The Offeror shall use the Template acronyms below in naming individual worksheets/tabs within an Excel file/workbook:

Template Acronyms:

FBR – Fully Burdened Rates Development Template (Years 1-5)
SPT – Summary Price Template
TC(a) – Compensation Template (a) Salaries & Wages – Non-Exempt
TC(b) – Compensation Template (b) Salaries & Wages –Exempt
TC(c) – Compensation Template (c) Fringe Benefit Analysis Package
TC(d) – Compensation Template (d) Personnel and Fringe Benefits Policies
TC(e) – Compensation Template (e): Incumbency Assumptions
CAOT – Cognizant Audit Office Template
PIT – Phase in template

FIXED RATE IDIQ PRICE TEMPLATES INSTRUCTIONS

1. Fully Burdened Rates Development Template (FBR) (Template #1)

A separate FBR is required for each contract year of the effort from the prime and is required from each major subcontractor(s). Major subcontractors are defined as proposing $1M per year or more. This template is provided so that each Offeror may show how they arrived at their individually proposed fully burdened rates including profit.

The first two columns address the Offeror's direct labor categories and the NASA Standard Labor Categories.

The Incumbent Retention % Column allows the Offeror to propose the percentage retention of the existing workforce per NASA Standard Labor Category (SLC). The

Offeror may propose any percentage per labor category that is based upon the proposed management and technical approach required for the statement of work. In the example, 100% is placed against an IT Professional II for illustrative purposes.

The Percentage Usage Column is provided so that the Offeror may weigh the proposed direct labor per the Offeror's labor categories. The usage percentage must total to 100% for each SLC. In addition the Direct Labor Rate Column is provided so that the Offeror may provide the average direct labor rates for each SLCs while simultaneously mapping the Offeror's job categories into the SLC's. For example, assume that for the SLC "Warehouse Specialist I," you have two Contractor specific categories that map into this category. The two categories are "XYZ 1" at $28.75/hr and "XYZ 2" at $25.25/hr. The Offeror (prime or sub) also assumes that its specific labor category will be utilized 75% and 25%, respectively. Then the rates that should show up as the consolidated SLC rate for this specific category is derived as follows: ($28.75/hr * 75%) + ($25.25/hr * 25%) = $27.88. Note that this is simply an example and it may not capture all possibilities.

Note: Refer to FAR clause 52.222-43 with respect to escalation for non-exempt personnel.

Next, Overhead Rate Column addresses the overhead rate(s). The Overhead Cost Column is the overhead cost added to the direct labor cost to compute the fully burdened rate. This column includes some typical indirect cost categories that may be applicable to Department of Labor (DOL) Wage Determination (WD) [Health and Welfare per hour, Holiday per hour, Vacation per hour, and Other which would typically include payroll taxes and miscellaneous]; however, it may be modified to accommodate your accounting system. You may add rows or columns to facilitate this. However, do not remove any SLC's in your submitted templates.

The General and Administration (G&A) Rate Column addresses the G&A rate. The G&A Cost Column addresses those costs associated with home office expenses.

The Profit column is provided so the prime Contractor can indicate the proposed profit per hour based upon the Offeror's rationale.

The Prime FBR column basically combines the direct labor hourly rate and all the indirect costs along with the profit to arrive at the prime's fully burdened labor rate per SLC.

The Subcontractor Price Input Area addresses the subcontractor fully burdened rates. In the Composite Subcontractor FBR column, the subcontractor(s) is to provide the prime the fully burdened labor rate(s) and shall be one composite rate per SLC. The Composite Subcontractor FBR is determined by the major subcontractor by completing the FBR template and determining the FBR that shall be charged to the Prime Contractor. If more than one major subcontractor is being proposed, then the

prime Contractor is responsible for integrating all the major subcontractors FBR into a single consolidated FBR per SLC and shall be included in this column. The formulas in the Composite Subcontractor FBR column must include the weighing of each subcontractor(s) FBR to arrive at the final composite FBR when a composite FBR due to multiple subcontractors are being proposed per SLC.

Note that major subcontractor(s) must complete the information on this template except the subcontractor input area. The subcontract price input area is only applicable to the prime Contractor who must provide the integrated subcontractor FBR as part of the blended FBR of the prime and subcontractor.

The Prime Burdens Rate is what the Prime Contractor may apply as a burden to the major subcontractor Composite FBR, if applicable. The Prime Contractor then combines the Subcontractor FBR with the Prime Burdens Rate to arrive at a total rate that addresses the subcontractor.

The Percentage Usage Prime/Sub column addresses the weighting of the Prime FBR versus the Composite Subcontractor FBR. Based upon this weighting, the Composite Prime and Composite Sub FBR can be determined. For example, if the Percentage Usage Prime/Sub was 50/50, then 50% of the Prime's FBR and 50% of the Subcontractor's FBR can be used in determining the overall Composite Prime and Sub FBR.

The Composite Prime and Subcontractor FBR per Hour column address the final composite FBR that the prime calculated. This shall include the prime subcontractor and the composite major subcontractor(s) fully burdened labor rates by SLC that shall match the FBRs in Section B of the contract.

The last column to the right of this template addresses the Composite Overtime Prime and Subcontractor FBR per Hour. The Offeror must be clear on how the overtime FBR was calculated in their narrative with a discussion and also, as with the rest of the template, include the formula within the cell to demonstrate the calculation.

At the bottom of this template is an area where the Offeror may propose a Material Handling/Material Surcharge rate if applicable. This rate shall be applied to material costs that may be realized on this contract. This rate is separate from the FBR rates and shall be treated as such.

2. Summary Price Template (SPT) (Template #2)

This template is for pricing out the sample matrix hours that is provided in the hours' section of this template. The purpose of this template is to determine the effect of the proposed fixed rates for all years. This template is divided into 3 sections:

The first section addresses the sample productive hours. The Offeror must not change the hours provided by the Government. Please note that the sample productive hours must not be construed as hours to be exercised on the contract but to see the effect of the proposed rates against the sample matrix of hours.

The second section addresses the contract rates that were determined in the Fully Burdened Rates Development Template – (**FBR**). The Composite Prime and Subcontractor FBR should be inserted in this area.

The third section addresses the labor cost developed by multiplying the sample productive hours by the fully burdened contract rates. This will be the fully burdened labor cost per labor category.

TOTAL COMPENSATION TEMPLATES INSTRUCTIONS

The following compensation templates are required in order for the Government to perform an evaluation of your labor relations. These templates should reconcile with the cost templates described above, wherever applicable. The templates are located in Section L, Appendix 2.

3. Compensation Template (a): SALARIES AND WAGES NON-EXEMPT - CONTRACT YEAR 1: TC(a) (Template #3)

The Offeror shall submit a completed Compensation Template (a) for non-exempt personnel for contract year 1. This template is required of the Offeror proposed as prime and all proposed major subcontractors. In the "LABOR CATEGORY - Offeror's" column, list all proposed labor classifications (included in the price proposal), by titles from the Offeror's estimating system. Each of the Offeror's Labor Categories shall be mapped to the Government Standard Labor Category. The DOL Wage Determination (WD) category shall be mapped to the "LABOR CATEGORY – Offeror's." The "Incumbent Actual Labor Rate" column is only applicable to incumbent Contractors or subcontractors. Incumbent Contractors or subcontractors are to include the actual average current direct labor rate for each SLC. The "WYE" Column shall include all proposed WYE's per SLC. Depending on whether the category is DOL or Collective Bargaining Agreement (CBA) covered, include the wage rate in the appropriate column. The "Contract Year 1 Actual Proposed Labor Rate" is the Offeror's actual proposed composite labor rate starting in contract year 1. The "Escalation Rates for Year 2-6" column shall include your annual escalation percentage. A source column has been provided on the template for the Offeror to use to identify the supporting data for each labor category. An example is included on the template for illustration purposes only. Note: FAR clause 52.222-43 with respect to escalation for non-exempt personnel.

4. Compensation Template (b): SALARIES AND WAGES EXEMPT - CONTRACT YEAR 1: TC(b) (Template #4)

The Offeror shall submit a completed Compensation Template (b) for exempt personnel for contract year 1. This template is required of the Offeror proposed as prime and all proposed major subcontractors. In the "LABOR CATEGORY - Offeror's" column, list all labor classifications included in the proposal, by titles from the Offeror's estimating system. Each of the Offeror's Labor Categories shall be mapped to the Government Standard Labor Category. The "Incumbent Actual Labor Rate" column is only applicable to incumbent Contractors. Incumbent Contractors are to include the actual average current direct labor rate for each SLC. The "WYE" Column shall include all proposed WYE's per SLC. The "Contract Year 1 Actual Proposed Labor Rate" is the Offeror's actual proposed composite labor rate starting in contract year 1. The "Escalation Rates for Year 2-6" column shall include your annual escalation percentage. The "Actual Proposed Annual Salary" is the salary of the proposed labor category. A source column has been provided on the template for the Offeror to use to identify the supporting data for each labor category, which shall include the source data (Actual or Wage Survey) for exempt personnel. An example is included on the template for illustration purposes only.

5. Compensation Template (c): FRINGE BENEFITS ANALYSIS OF COMPENSATION PACKAGE - Contract Year 1: TC(c) (Template #5)

A separate Template (c) shall be completed for Exempt, Non-Exempt Nonunion, and Non-Exempt Union direct labor. This template is required of the Offeror proposed as prime and all proposed major subcontractors. It should be noted that the minimum hourly fringe benefits rate cannot be less than the DOL specified minimum rate listed in the RFP under Section J for non-exempt employees. The column entitled, "Cost of Fringe Benefit" shall include the cost, not rate, associated with the fringes specified (i.e. life insurance, disability insurance, etc.) that are proposed on this contract for each of the related personnel type (exempt, non-exempt union/non-union). The next column entitled "Percent of Direct Labor Cost" shall include the percentage of each of the related specified fringe costs as a percent of direct labor cost. The third column shall include hourly rates based on the average cost per labor hour proposed per specified fringe.

6. Compensation Template (d): PERSONNEL AND FRINGE BENEFITS POLICIES - Contract Year 1: TC(d) (Template #6)

This template is required of the Offeror proposed as prime and all proposed major subcontractors. This template provides visibility, by employee category, into personnel policies and fringe benefits, which shall be in effect at the time of contract award. Although only brief explanations are desired, sufficient information is

required to allow an evaluation and estimate of all potential costs, which will arise upon award of the contract. Comments are required pertaining to all items listed below under the proper column, whether or not the policy is written. The established practice of the Offeror and applicability to this proposal shall be provided. If any item below is not applicable, so state. Items pertinent to the Offeror, which are not identified must be included if cost recovery is anticipated.

7. Compensation Template TC(e): Incumbency Assumptions-Contract Year 1:TC (e) (Template #7)

This template is required of the Offeror proposed as prime and all proposed subcontractors (major and minor). This template provides visibility into any incumbency assumptions proposed by each Offeror pertaining to incumbency labor rates and incumbency seniority rights for fringe benefit purposes. The Offeror shall select only one option in each category.

In the area entitled "Labor Rates," the Offeror shall pick one of the three options: 1) Proposing to pay current incumbent labor rates, 2) Proposing to not pay current incumbent labor rates or, 3) Other. The Government understands that a non-incumbent Offeror may be only able to estimate what the current incumbents are making; however, it simply wants to understand your intentions regarding pay for these employees if retained. The Offeror will provide a narrative explanation supporting or explaining the reason for selecting any of the options, particularly if option, "Other" is selected. Explain how your proposed salary structure will allow you to capture the proposed percentage of the qualified incumbent workforce.

In the area entitled, "Seniority Rights," the Offeror shall pick one of the three options: 1) Proposing to maintain seniority rights for fringe purposes, 2) Proposing to not maintain seniority rights for fringe purposes or, 3) Other. The SEB understands that a non-incumbent Offeror may be only able to estimate the current incumbent's seniority levels; however, the SEB simply wants to understand your intentions regarding seniority for these employees if retained. The Offeror shall provide a narrative explanation supporting or explaining the reason for selecting any of the options, particularly if option, "Other" is selected. Explain how not maintaining seniority rights for fringe benefit purposes will allow you to capture and maintain the proposed percentage of the incumbent workforce.

Note: The compensation templates (a-e) are required in order for the Government to perform an evaluation of your labor relations. These templates shall reconcile with the cost templates described above, wherever applicable.

8. Cognizant Audit Office Template (CAOT) (Template #8)

This template is required for each prime Contractor, teaming partner, joint venture partner, and major subcontractor that meets the major subcontractor threshold ($10

Million per year). This template is to be delivered with the Past Performance Volume due **January 22, 2009,** and with the Price Proposal Volume which is due **February 9, 2009**. This template is designed to capture relevant information concerning (1) the specific location (address or addresses for prime and major subcontractors) where auditable cost information physically resides that supports amounts proposed; (2) the person or persons (name, address, phone number, e-mail address etc) who can be contacted by DCAA to provide cost information for the prime Contractor, (3) the person or persons (name, address, phone number, e-mail address etc) who can be contacted by DCAA to provide cost information for your company or partners (in a teaming, joint venture or partnership situation) and major subcontractor(s); and (4) the name and address of the cognizant DCAA field audit office to which electronic and hardcopy proposals were sent.

9. Phase-In Template (PIT) (Template #9)

The phase-in template is required of the prime only and is designed to show the total price (include all subcontractor phase-in price). This template must be supported by a narrative basis of estimate (BOE). Include all skills and hours on this template and add rows if needed to account for all labor required. Use the SLC's for skill mix if appropriate or include your labor mix on the template with a brief job description in the narrative. The BOE should include a discussion of labor skill mix and significant non-labor resources (materials/supplies, equipment, other, etc.) necessary for accomplishment of phase-in requirements. The phase-in template is to include ALL phase-in price necessary for full contract implementation.

8.0 VOLUME V OTHER REQUIRED DATA

A. Ostensible Subcontractor Approach

See Provision L.14, SBA Ostensible Subcontractor Rule Information.

9.0 RESERVED

ATTACHMENT L-1 KEY PERSONNEL RESUME

Complete one form for each proposed Key Person. The resume shall not exceed two pages.

1. Name

2. Education

   a. Degrees, dates, majors, schools
   b. Other education or training and dates
   c. Licenses, certifications, or professional designations (locations)

3. Proposed assignment: title and organizational element

4. Current position and beginning date

5. Current significant responsibilities or projects

6. Previous positions (last five years)

   a. Firm and period of employment
   b. Significant experience
   c. Specific projects
   d. Immediate supervisor's name, address, telephone number and employer. (Indicate if current supervisor may be contacted)

7. Professional activities and achievements

   a. Awards
   b. Significant publications
   c. Professional societies
   d. Significant achievements

8. Unique qualifications. Summarize any relevant unique experience, education, or personal characteristics that may not be evident from the above information.

9. Evidence of commitment to the Program.

ATTACHMENT L-2 PAST PERFORMANCE QUESTIONNAIRE

Complete one set of letters and forms for each Past Performance reference. Additional space or blank sheets may be added to answer any question

Transmittal Letter to Accompany Present/Past Performance Questionnaire

FROM:

SUBJECT: Present/Past Performance Questionnaire for Contract(s):

We are currently responding to NASA Johnson Space Center's (JSC's) Request For Proposal RFP NNJ09ZBG001R for the acquisition of Program Integration and Control services for the International Space Station Program. This RFP requires Offerors to identify customers and solicit their response regarding our performance.

We are providing present and past performance data to NASA/JSC relating to our performance on contract _____(contract name/number). The RFP instructs that we provide our customers with the attached questionnaire and requests that you provide requested data and submit it by January 22, 2009, directly to:

NASA Johnson Space Center
BG/ Andrea R. Falls
Houston, TX 77058
E-mail: jsc-prog-int-and-contract-seb@mail.nasa.gov

You are also encouraged to fax the hardcopy questionnaire(s). The JSC source selection facility fax number is 281-483-1862. We have identified ( ) of your organization as the point of contact based on their knowledge concerning our work.

The information contained in the completed Past Performance Questionnaire is considered sensitive and cannot be released to us, the Offeror. If you have any questions about the acquisition or the attached questionnaire, your questions must be directed back to the JSC point of contact identified above. Thank you for your timely assistance.

Sincerely,
(Company Official)

I. CONTRACT IDENTIFICATION

1. Contractor (Company/Division/Mailing Address):

   _____

2. Contract Number: _____

3. Contract Type: _____

4. Product/Service Description:

   _____
   _____
   _____

5. Period of Performance (basic and any options):

   _____

6. During this contract period of performance, this firm was the:

   ___Prime Contractor ___Significant Subcontractor ___Team Member
   ___Other (please describe) _____

7. Does a corporate or ownership relationship exist between the Contractor being evaluated and your organization? ___Yes ___No
   If yes, please describe the relationship:

   _____
   _____
   _____

8. Unusual contract features or conditions:

   _____
   _____
   _____

II. PAST PERFORMANCE EVALUATION

Based on your knowledge on the contract identified above, please provide your assessment of how well the Contractor performed on each of the following questions. It is very important to keep in mind that only performance in the ***past 3 years from the date of proposal release*** is relevant.

Please rate the Contractor as described below in the following technical, schedule and cost areas. Please give a short narrative as to why you chose the adjective you did, especially for those answers that are other than "satisfactory".

Exceptional (E) - Exceeds the established performance requirements to an exceptional degree. Performance is exemplary and accomplished in a timely, efficient, and economical manner. Very minor (if any) deficiencies have no adverse affect on overall performance. Examples include substantial cost underruns due to Contractor diligence and cost savings initiatives, technical end products that exceed original Government specifications in critical performance areas, deliverables usually ahead of contract schedules, etc.

Satisfactory (S) - Meets the established performance requirements. Performance is effective and most requirements are met in a timely, efficient, and economical manner. Reportable deficiencies have little identifiable effect on overall performance. Examples include no cost overruns caused by the Contractor technical end products that meet all Government specifications, deliverables delivered on time/schedule, etc.

Unsatisfactory (US) - Fails to meet the established performance requirements. Remedial action required in one or more area. Reportable deficiencies in one or more area adversely affect overall performance. Examples include substantial cost overruns caused by Contractor, technical end products fail to meet government specifications in critical areas, deliverables usually delivered behind contract schedules, etc.

A. TECHNICAL PERFORMANCE

1. Overall performance in planning and controlling the program.
   Rating ___
   Comments: _____
   _____
   _____

2. Quality of services and support provided.
   Rating ___
   Comments: _____
   _____
   _____

3. Compliance with technical requirements and performance standards
   Rating ___
   Comments: _____
   _____
   _____

4. Insight in understanding customer requirements and priorities
   Rating ___
   Comments: _____

5. Initiative in identifying and resolving unforeseen technical and schedule problems (causes, impacts, and resolutions).
   Rating ___
   Comments: _____
   _____

6. Identification, surveillance, and management of major/critical subcontractors.
   Rating ___
   Comments:

7. Contractor's ability to correct performance deficiencies.
   Rating ___
   Comments: _____

8. Ability to use metrics and other tools to accurately measure and track programs.
   Rating ___
   Comments: _____

9. Provide details of any accidents or industrial illnesses resulting in lost time?

   _____

10. Particular strong/weak points of Contractor's performance.

    _____

B. SCHEDULE PERFORMANCE

1. Ability to provide a qualified workforce to fulfill schedule requirements.
   Rating ___
   Comments: _____
   _____
   _____

2. Content, accuracy, and timeliness of technical reports.
   Rating ___
   Comments:

3. Adherence to technical schedules.
   Rating ___
   Comments:

4. Timeliness and accuracy of cost and business reports.
   Rating ___
   Comments:

C. CONTRACT MANAGEMENT AND COST PERFORMANCE

1. Contract Value:

	Initial Value	Current/Final Value
Estimated Cost	$_____	$_____
Fee/Profit	$_____	$_____
Total Value	$_____	$_____

Briefly describe any change(s) from original contract value:

_____

_____

2. Adherence to estimated costs and contract cost targets.
Rating ___
Comments: _____

_____

_____

3. Was there a cost overrun/underrun? ___Yes ___No
If yes, what was the magnitude? Please explain:

_____

_____

4. Does the Contract have ceiling rates? ___Yes ___No
If yes, what are the rates? ___

Has the Contractor exceeded the rates? ___Yes ___No
Please explain: _____

_____

_____

5. Ability to effectively plan efforts, provide realistic cost and schedule estimates, etc.
Rating ___
Comments: _____

_____

_____

6. Ability to anticipate, identify and control cost growth.
Rating ___
Comments: _____

_____

_____

7. Ability to submit accurate and timely financial reports and credible forecasts of future program.
Rating ___
Comments: _____

8. Business management performance (discuss degree of monitoring/guidance required in contract administration).
Rating ___
Comments: _____
_____
_____

9. Contract change order management (discuss Contractor commitment to negotiate and implement contract changes).
Rating ____
Comment: _____
_____

10. If any export control considerations are involved in this contract, describe any issues associated with this Contractor obtaining and maintaining required Export Control Licenses.
Rating ___
Comments: _____
_____
_____

11. If an award/incentive fee type contract, percent of available Award Fee earned ___%

12. Has this contract been partially or completely terminated for default or convenience? ___Yes ___No

If yes, please explain the reason for termination (i.e. inability to meet cost or delivery schedules, performance, etc.)
_____
_____

13. Would you select this Contractor again? ___Yes ___No

14. Additional Comments:
_____
_____
_____
_____

III. RESPONDENT INFORMATION

A. Name of Evaluator: _____

B. Position Title: _____

C. Agency/Company Name and Mailing Address:

_____

_____

_____

D. Telephone Number: _____

E. Facsimile Number: _____

F. E-Mail Address: _____

G. Your Role in the Program/Contract: _____

H. Length of involvement in this program/contract: _____

I. Date questionnaire completed: _____

SECTION L Appendix

TABLE OF CONTENTS

APPENDIX #	TITLE
APPENDIX-L-1	PROGRAMMATIC GROUND RULES AND ASSUMPTIONS (Provides supplemental information for proposal preparation)
APPENDIX-L-2	IDIQ WORKBOOK (Provides pricing templates)
APPENDIX-L-3	TASK ORDERS (Provides Draft Task Orders for Contract Year One)
APPENDIX-L-4	SAMPLE PRODUCTS (Provides sample deliverables under this contract)
APPENDIX-L-5	SAMPLE GUIDELINES (Defines Standard Labor Categories and provides additional detailed instructions to offerors)
APPENDIX-L-6	TECHNICAL UNDERSTANDING – FORMATS AND EXAMPLES (Provides additional detailed instructions to offerors)

APPENDIX 1
PROGRAMMATIC GROUNDRULES AND ASSUMPTIONS

Flight Rate and Crew Rotation Overview

- 6 person capability already established onboard ISS
- Maintain 4 Soyuz, 5 Progress, 1 ATV, and 1 HTV missions per year
- Post Shuttle retirement Crew and cargo transportation rate from 2-4 flights per year
- Flight Rate and Crew Rotation Reference Table

Launch Date	Flt	Delivered Elements
25-May-09	19S	Soyuz-TMA (a) (l)
		Establish Six Person Crew
24-Jun-09	34P	Progress
30-Jul-09	17A	MPLM-P, LMC, Sidewalls (c") (43)
15-Aug-09	5R	Mini-Research Module-2 (MRM2)
01-Sep-09	HTV1	HTV PLC, HTV EP (f)
01-Oct-09	20S	Soyuz-TMA (c) (46)
Oct-09	ULF3	ELC1 (CMG, NTA, Pump Module, ATA, LEE, PCU, BCDU); ELC2 (CMG, NTA, Pump Module, MT/TUS, HPGT, CTC, MISSE-7, FEBO); Sidewall-1 (SASA); Sidewalls-2,3 (MISSE-7A & 7B) -- Rtn: Sidewall-1 (SASA FSE); Sidewalls-2,3 (MISSE 7A & 7B FSE) (b)
Oct-09	35P	Progress
Nov-09	21S	Soyuz (c)
Dec-09	20A	Node 3 w/ Cupola (N3 Avionics Rack-1, N3 Avionics Rack-2)
Dec-09	36P	Progress
Feb-10	37P	Progress
Feb-10	19A	MPLM-P (4 ISPRs (MARES, WORF, MELFI-3, ER7), 2 ZSRs, CQ-4 RSR/RSPs); LMC (ATA); Sidewall-1 (Orion Rel. Nav. Sensors (ff)) -- Rtn: LMC (Empty ATA, SOLAR, RON ORU); Sidewall-1 (Orion Rel. Nav. Sensors (ff))
Mar-10	22S	Soyuz (c)
Apr-10	*ULF4	ICC-VLD (6 Batteries, EOTP, SGANT, SGANT Boom); Mini-Research Module-1 (MRM1) (MLM Radiator, MLM Airlock, PWP, ERA Elbow Spare); Sidewall-1 (PFRAM) -- Rtn: ICC-VLD (6 End-of-Life Batteries, RON ORU); Sidewall-1 (LWAPA)
Apr-10	38P	Progress
May-10	*ULF5	ELC3 (SASA, FHRC, ATA, Utilization (pp), SM MMOD Shields, MMOD Bases); ELC4 (SPDM Arm, 2 CTCs, SASA, SHOSS ED, HPGT); Sidewalls-1,2 (MISSE-7A & 7B FSE); -- Rtn: Sidewalls-1, 2 (MISSE-7A & 7B)
		ISS Assembly Complete

(a) Crew Augmentation Flight
(b) Crew Rotation Flight (Crew Return Only)
(c) Crew Rotation Flight
(c") Split Crew Rotation Flight (Flight Engineer rotation)
(f) HTV1 launch date will be no earlier than September 1, 2009. Dates are under review.
(l) Open work to conduct analysis to determine if 19S can occur during the 2J/A mission (simultaneous operations).
(*) Two Shuttle-equivalent flights for contingency
(ff) Manifest of Orion Relative Navigation Sensors Experiment (DTO 703) is under review.
(43) Expedition crew member returns on 19S in strategic timeframe and duration is (4).

ISS Assembly Complete Configuration Consists of:

- All trusses, solar arrays, and Node 3 with Cupola and a Permanent MPLM (MPLM-P)
- All JAXA, ESA modules and external elements
- Russian MRM-1 launched on Shuttle
- Russian Segment (Non Shuttle launch)
  - Multi-purpose Research Module (MRM-2)
  - Multi-purpose Logistics Module (MLM) with European Robotic Arm (ERA)

Section L
Appendix 2

IDIQ WORKBOOK

FULLY BURDENED RATES TEMPLATE (FBR) (Template #1)

Prime Contractor:
Major Subcontractor:

[ ] Contract Year 1
[ ] Contract Year 2
[ ] Contract Year 3
[ ] Contract Year 4
[ ] Contract Year 5

Offeror's Labor Category	NASA Standard Labor Category (SLC)	Incumbent Retention%	% usage	Direct Labor Rate	Overhead Rate	Overhead Cost	G&A Rate	G&A Cost	FCCOM	Profit per hr	Prime FBR per hr	Subcontract Price Input Area: Composite Subcontractor FBR /hr*	Prime Burdens Rate /hr**	Subcontractor & Prime Burdened Combined / hr	% Usage Prime/Sub(s)	Composite Prime & Sub FBR /hr***	Composite Overtime Prime & Sub FBR /hr	REF.
Example:																		
XYZ 1			75%	28.75		21.56	-	3.02	-									
XYZ 2			25%	25.25		18.94	-	2.65	-									
	Ex IT Professional II	100%		27.88		20.91	-	2.93	-		$1.71							
	Program Manager																	
	Program Manager (Off-Site)																	
	Supervisor																	
	Manager I																	
	Manager																	
	Technical Professional IV																	
	Technical Professional III																	
	Technical Professional II																	
	Technical Professional I																	
	IT Professional III																	
	IT Professional II																	
	IT Professional I																	
	Analyst III																	
	Analyst II																	
	Analyst I																	
	Secretary																	
	Clerk																	
	Business Specialist II																	
	Business Specialist I																	
	Business Specialist																	
	Data/Document Management Specialist																	
	Other: (identify)																	
	Material Handling/Material Surcharge Rate																	

*This shall include the major subcontractor(s) fully composite burdened labor rate per SLC. IMPORTANT: If multiple subcontractors are proposed, include the formula on how you arrived at the composite.
**The Prime contractor may apply a burden rate to the major subcontractor(s) FBR if applicable
***This shall include the prime subcontractor and major subcontractor(s) composite fully burdened labor rates by SLC that shall match the FBRs in Section B of the contract.

Appendix 3
Task Orders

Introduction

The following draft Task Orders consist of task-order-specific requirements and workload indicators contemplated for the first year of the contract. For the purposes of the RFP, in the event of a discrepancy between the Task Order and the SOW, the SOW shall take precedence. The task orders identified below are a draft and are intended to be issued as the actual initial task orders and may be updated throughout the procurement process. Task Order Plans in accordance with DRD PIC-PR-05 shall be required prior to execution of the task orders during the phase in period.

Task Order 1: Management Integration and Control – Business Management

Task Order 2: Management Integration and Control – Configuration Management (CM) and Data Management and Integration (DM&I)

Task Order 3: Management Integration and Control - ISS Program Information Technology (IT)

Task Order 4: ISS System Engineering, Analysis, and Integration – System Analysis and Integration

Task Order 5: Safety and Mission Assurance (S&MA)

Task Order 6: Management Integration and Control - ISS Program Budget Support and Assessments

Task Order 7: Mission Analysis and Integration – COTS Integration Office Support

Task Order 8: Vehicle Integration

Task Order 9: International Partner (IP) Elements Integration Management Support

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #1
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OH

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #1 – MANAGEMENT INTEGRATION AND CONTROL – Business Management					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

SEE BILLING INSTRUCTIONS ON REVERSE

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.
21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

17(h) TOT. (Cont. pages)

17(i) GRAND TOTAL: $XXXXXX.XX

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

I. **TITLE OF EFFORT:** Management Integration and Control Requirements – Business Management

II. **TASK DESCRIPTION:**

The Contractor shall provide Program management and administration, business management, and engineering to accomplish the objectives and outcomes described within this delivery order. The Contractor shall propose to the tasks as described in the PI&C Contract Section C, Statement of Work, for the SOW items listed below. Specific workload indicators, quantities, and schedules are provided to scope the magnitude of the required tasks.

III. **STATEMENT OF WORK REFERENCE:** 1.0 Management Integration and Control, 1.2 Business Management

IV. **REQUIREMENTS / DELIVERABLES / SCHEDULE:**

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
1.2.5	Program Scheduling				
1.2.5.1	Schedule Management				
1.2.5.1.a	Develop PI&C contract schedules and provide month-end schedule and analysis for inclusion into the Integrated Program Schedule	- Updates to Task Orders, contract modifications - Monthly reviews and Updates	1 1	Yearly Monthly	PIC-PC-06
1.2.5.1.b	Prepare and report ISS Program schedule metrics		1	Monthly	PIC-PC-06
1.2.5.1.c	Develop and provide Integrated ISS Program budget-loaded, summary and intermediate level detail schedules and logic links to lower level detail schedules.		As required	Monthly	N/A
1.2.5.1.1	Integrated Program Schedule Management				
1.2.5.1.1.a	Develop ISS Program schedules as required	ISS Program schedules and charts for the IPSP, IMPR, EWS, ISS Organizational projects (e.g. ELC/HAB HW), ISS CRs with development tasks.	As required	As required	PIC-PC-06
1.2.5.1.1.b	Maintain and update ISS critical HW/SW deliveries, activities & tasks integrated with ISS Program flight schedules.	Integrated, summary level and intermediate level detail schedules for program	One top level One intermediate level	Weekly	PIC-PC-06

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		management.			
1.2.5.1.1.c	Maintain and update the Integrated Program Schedule and the Key Program Performance Indicators (KPPIs) for the ISS Program Management Information System (MIS) and PP&C website.	Updates to Program Management Information on PP&C Web site and IPS Schedules to ISS Program MIS.	One set of updates	Monthly, weekly, bi-weekly (as agreed with program participants)	PIC-PC-06
1.2.5.1.2	Provide support to the Integrated Program Schedule Panel (IPSP).	Meeting planning, issue identification, schedule status analyses, special agenda topics	Once	Weekly	N/A
1.2.5.1.3	Program Level Schedule Data Management				
1.2.5.1.3	Provide ISS Program schedules updates and status reports after data acquisition from ISS Program Participants	IPSP reviews schedule updates and special topic charts including charts for IMPR/EWS emphasis. Projects, incl. ISS CRs are statused / reviewed in PP&C/ACES.	IPS schedule and charts developed for IMPR/EWS emphasis. Update/Status schedules	Every other week for IMPR and EWS. As required	PIC-PC-06
1.2.5.2	Scheduling System Support				
1.2.5.2.a	Operate a scheduling system identified in Section C, Addendum 4, Table 1 in support of the ISS Program	Operation and maintenance of the data in the scheduling system	As required	As required	N/A
1.2.5.2.b	Review other contractor schedules to ensure compliance with DRD PIC-PC-06. The contractor shall work through the Integrated Program Schedules Panel (IPSP) to identify and resolve schedule process and data issues	Review other contractor schedules by participating in audits of Program Participants schedules.	As required	Monthly	N/A
1.2.5.3	Team Schedule Support	Provide the ISS Program CAM's top level and/or lower level schedules with analyses (e.g. IP Elements, and ISS development projects).	As required	As required	PIC-PC-06

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
1.2.5.4	ISS Program Planning Calendar/Certification of Flight Readiness (CoFR) Review Meeting Matrix				
1.2.5.4.a	Maintain ISS Program Planning Calendar and post on ISS Website	Update and upload ISS Program Planning Calendar on ISS website and distribute hard copies	Twice	Weekly	PIC-PC-06
1.2.5.4.b	Provide maintenance of the CoFR Review Meeting Matrix	CoFR Review Meeting Matrix updates	Once	Weekly	PIC-PC-06
1.2.5.5 & 1.2.5.6	Schedule Risk Assessment & Special Schedule Trade Studies				
	Perform independent schedule assessments of HW and SW development, Integrated Assessments including schedule risk/cost analysis, critical path analyses and special studies.	Independent integrated schedule assessments and special studies	As identified	As required	N/A
1.2.5.7	Propose Alternate Report Formats				
1.2.5.7	Propose Alternate Report Formats	Develop and propose alternate report formats for NASA review and concurrence	As identified	As required	N/A

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #2
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY – Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OH

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL
[ ] b. OTHER THAN SMALL
[ ] c. DISADVANTAGED
[ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED
[ ] e. HUBZone
[ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #2 – MANAGEMENT INTEGRATION AND CONTROL – Configuration Management (CM) and Data Management & Integration (DMI)					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages)

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

SEE BILLING INSTRUCTIONS ON REVERSE

$XXXXXX.XX

17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. **TITLE OF EFFORT:** Management Integration and Control Requirements – Configuration Management (CM) and Data Management and Integration (DMI)

II. **TASK DESCRIPTION:**

The Contractor shall provide Program management and administration, business management, and engineering to accomplish the objectives and outcomes described within this delivery order. The Contractor shall propose to the tasks as described in the PI&C Contract Section C, Statement of Work, for the SOW items listed below. Specific workload indicators, quantities, and schedules are provided to scope the magnitude of the required tasks.

III. **STATEMENT OF WORK REFERENCE:** 1.0 Management Integration and Control, 1.3 Configuration Management (CM) / Data Integration (DM)

IV. **REQUIREMENTS / DELIVERABLES / SCHEDULE:**

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
1.3	CONFIGURATION MANAGEMENT (CM) / DATA INTEGRATION (DM)				
1.3.1	Configuration Management				
1.3.1.1	Establish and maintain ISS Program CM policies, procedures and requirements.	Establish and maintain ISS Program CM policies, procedures, and requirements.	Daily	Daily	N/A
1.3.1.1	Provide Book Coordination functions.	Update SSP 41170, SSP 50010, SSP 50123, and SSP 50172, SSP 50744, SSP 50421, SSP 50706	Update as required	Yearly	
1.3.1.1	Maintain an infrastructure for continued development and baselining hardware, software, and other products under ISS Program control.	Create additional CM processes	3 processes	Yearly	N/A
1.3.1.1.1	Develop and implement a CM Plan	Maintain and update a CM Plan	Update as required.	See DRD	PIC-CM-01
1.3.1.1.2	Support in Technical Interchange Meetings (TIMs) and ISS Program Milestone Reviews by providing inputs regarding CM	Participation in TIMs and ISS Program Milestone Reviews	5 to 10 meetings	Yearly	N/A
1.3.1.1.2.1	The contractor shall participate in the International Configuration Management Telecons (ICMTs)	Contractor shall provide the following: (a) Schedule conference rooms; (b) Notify attendees; (c) Request	Once	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		interpretation/translation services; (d) Schedule and set-up equipment; (e) Prepare agendas; (f) Prepare meeting material; (g) Prepare minutes; and (h) Track action items.			
1.3.1.1.2.2	The contractor shall participate in the annual ICMT Face-to-Face meetings with the IP/Ps.	Contractor shall provide the following: (a) Schedule conference rooms; (b) Notify attendees; (c) Request interpretation/translation services; (d) Schedule and set-up equipment; (e) Prepare agendas; (f) Prepare meeting material; (g) Prepare minutes; and (h) Track action items.	Once	Yearly	N/A
1.3.1.1.2.3	ISS Program Milestone Reviews	Contractor shall provide the following: (a) Schedule conference rooms; (b) Notify attendees; (c) Request interpretation/translation services; (d) Schedule and set-up equipment; (e) Prepare agendas; (f) Prepare meeting material; (g) Prepare minutes; and (h) Track action items.	6 Reviews	Yearly	N/A
1.3.1.1.3	Maintain existing desk instructions and deliver in accordance with SSP 50123 and SSP 50172 for CM/DM processes	Maintain and deliver desk instructions. 1. Change Processing 2. Configuration	12-15	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		Status Accounting 3. Audit and Verification 4. Engineering Release Unit 5. CM Receipt Desk 6. Meeting Support 7. Board Secretariats 8. Change Integrators 9. Document Quality Assurance 10. Directive Desk 11. Program Data Integration Team (PDIT) Help Desk 12. Other Programs' Change Request (CR) reviews.			
1.3.1.2	Configuration Status Accounting and Verification				
1.3.1.2.1	Participate in ISS Program hardware and software Functional Configuration Audits (FCA) and Physical Configuration Audits (PCA)	Participation in FCAs and PCAs for all 1st time build configuration items at approximately 90% complete. (a) Determine the acceptability of the panel review items; (b) Support the audit chairperson(s) in developing recommended solutions to actions/issues; (c) Prepare panel summary and minutes, and submit for inclusion in the audit minutes; (d) Review draft minutes of the audit and sign applicable certification sheets, as appropriate; (e) Ensure all necessary documentation is compiled and presented in an understandable manner to the customer;	6 audits	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		(f) Coordinate panel activities and review/document document progress daily; (g) Determine if the use of sub-panels is necessary due to size/complexity of the CEI/CI and/or CSCI; and (h) Ensure audit action item/issue forms are available for auditors to document issues identified during the audit.			
1.3.1.2.2	Participate in ISS Acceptance Reviews and Program Readiness Reviews	Participate in ISS Acceptance Reviews and Flight Readiness Reviews: (a) Identify all open work for the CI and/or CSCI has been closed; (b) Verify that no unapproved activity has occurred to change the configuration since the PCA was performed; (c) Provide all preplanned, assigned, unplanned or deferred work associated with the item subject to the acceptance review to be presented in summary at the review; and (d) Identify any issues or concerns derived from work transfer or deferral and presented to the ISS Program Manager.	2 Acceptance Reviews and 13 Readiness Reviews	Yearly	N/A
1.3.1.2.3	The contractor shall provide technical coordination to the OCWG	Contractor shall provide the following to the OCWG: (a) Attend OCWG as a member and	1 meeting	Weekly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		facilitate the OCWG as required; (1) Provide technical assessment of all new, closed and current Configuration Discrepancy Reports (CDRs) according to MGT-OH-018, On-Orbit CDR Resolution Process, (2) Facilitate the meeting if NASA Chair is not available. (b) Organize the OCWG Meeting; (1) Support NASA chair to schedule OCWG meetings, (2) Establish agendas and schedule meetings based on CDR activity, (i) Send meeting notice/secure meeting room/set-up conference call-in. (3) Document and track action items; (4) Write and publish minutes for the OCWG, (i) Summarize the essence of discussions surrounding decisions and actions. (c) Maintain and track all CDR activity in the OCWG Master CDR List; (d) Review Master CDR List weekly; (1) To identify stalled CDRs or possible issues, (2) To ensure that the CM contractor(s) are providing a current			

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		status of on-orbit configuration discrepancies. (e) Establish and facilitate bi-weekly (or as required) contractor pre-coordination reviews to evaluate CDR activity; (f) Coordinate OCWG support for CDRs with high risk or safety impact to the ISS Program by establishing a special topic OCWG or adding it to the agenda of the appropriate Program forum (i.e. SPRT, SWG, VCB, etc); (g) Establish and maintain OCWG website includes current information regarding on-orbit configuration discrepancies; (h) Maintain the OCWG charter and the OCWG Work Instruction (MGT-OH-018, On-Orbit Configuration Discrepancy Resolution Process).			
1.3.1.2.4	Audit and validate program status accounting systems data	Data audit and validation for COSMOS, EDMS, and SSAV.	1 update	Daily	N/A
1.3.1.2.5	Validate the ISS Program baseline including review and evaluation of changes to ensure proper baseline maintenance.	Verify product and product information is properly updated per Program approved changes.	50-70 Change Packages	Monthly	N/A
1.3.1.3	Configuration Control				
1.3.1.3.1	Ensure execution of the Change Process per SSP 41170, SSP 50123, and SSP 50706.	Ensure execution of the Change Process (a) Ensure changes are thoroughly coordinated prior to submittal; (b) Reviewed and evaluated; and (c) Implemented by	Daily	Daily	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		an approved ISS Program Change Directive.			
1.3.1.3.1 (d)	Provide single point focal ISS Program International Partner/Participant communication.	Assist in tracking, status, and closure of International Partner/Participant changes. Assist in managing IP actions, telecons, and IP CM TIMs	Daily	Daily	N/A
1.3.1.3.1 (e)	Provide a thorough review of all Directive Packages to ensure quality packages prior to submittal for NASA CM signature per SSP 50123 and OH-WI-017.	Provide metrics on PI&C and all contracts to document rework scoring.	50- 70 Change Directive Packages	Monthly	N/A
1.3.1.3.2	Maintain CM blank forms/templates	Maintain all CM blank forms/templates	30-50 blank forms, 10 updates	Yearly	N/A
1.3.1.3.3	Provide CM Secretariats for all ISS Control Boards and Panels	CM Secretariats shall provide: (a) Participate as a board/panel member; (b) Provide CM direction to the board chair; (c) Coordinate with the board chair and CM meeting support personnel on all SSCNs processed through the board; (d) Track and report on all open SSCNs under the board responsibility; (e) Ensure that complete directive packages are available at the board for concurrence/approval; (f) Provide technical review and concurrence of the board minutes; and (g) Notify the Change Integrator in writing of the directive approval status following the board meeting.	1. 8 board meetings 2. 6 Multilateral board meetings 3. 4 Program Manager Reviews 4. 4 SSCBs	1. Weekly 2. Monthly 3. Quarterly 4. Yearly, as required (currently supported by OX)	N/A
1.3.1.3.4	Provide meeting logistics, administration, agendas,	Contractor shall provide the	1. 23 meetings	1. Weekly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	action item management, minutes and archival for ISS Boards, Panels, and Program Reviews.	following: (a) Scheduling conference rooms; (b) Notifying attendees; (c) Requesting interpretation and translation services; (d) Requesting local transportation services for Foreign Nationals, when necessary; (e) Scheduling and set-up of equipment; and (f) Preparation of meeting materials. (g) Provide Quality Records Management for Flight Certifications per NPR 1441.1. (h) Provide Quality Records Management for ISS boards and panels. (i) Provide reports and metrics. (j) Provide administrative functions for decision documents.	2. 6 multilateral meetings 3. 2 bi/tri lateral Program meetings 4. 46 Decision Documents	2. Monthly 3. Quarterly 4. Yearly	
1.3.1.3.5	PP&C CoFR Panel Reviews and SORRs per SSP 50108 and SSP 50421.	For each flight, the contractor shall: (a) Provide charts identifying open work for each flight; (b) Provide status at lower boards/panels for each flight; (c) Capture and track CoFR actions and CoFR exceptions to closure for each flight; (d) Track open paper for each flight; and (e) Maintain the PP&C CoFR schedule.	15 flights	Yearly	N/A
1.3.1.3.6	Conduct a Change Screening Board (CSB) as described in	The contractor shall provide:	1 meeting	Weekly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	SSP 50123.	(a) Review all new/revised Change Requests submitted to the ISS Program System; (b) Confirm contractor unit responsible to lead processing of the change; (c) Verify that all CR information is complete; (d) Ensure that all affected NASA organizations and contractors are given opportunity to evaluate; (e) Verify evaluation schedules, assessing the urgency of the CR; and (f) Verify the appropriate board/panel and the board/panel dates.			
1.3.1.3.7	Configuration Control Activities				
1.3.1.3.7.1	Process changes specific to the PI&C contract in accordance with SSP 50123. Review and evaluate ISS Program changes originating from outside the PI&C contract to determine if those changes have potential impacts to the PI&C contract	1. Process PI&C changes 2. Evaluate ISS Program changes originating from outside the PI&C contract.	1. 15 change packages 2. 50-70 change packages	1. Monthly 2. Monthly	N/A
1.3.1.3.7.2	Maintain and process Program Directives (Management Directives, Joint Program Directives and Partner Program Directives) in accordance with SSP 50123.	(1) Prepare redlines to directive (2) Initiate CR and release for evaluation to the ISS Program (3) Incorporate comments (4) Prepare directive for ISS Program signature (5) Release directives in EDMS.	30 Directives	Yearly	N/A
1.3.1.3.7.3	ISS Program Review of Space Shuttle Program and Constellation Program Change requests	Coordinate and prepare a consolidated response to CRs	50	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		back to the Space Shuttle Program and Constellation Program.			
1.3.1.3.7.4	Special Projects	Participate in special projects requiring lifecycle CM knowledge. Activities will include project planning, documentation changes, expedited CM process development and facilitation of new ISS Program requirements development to support expedited processing and ensure traceability of data is available for certification of flight readiness.	Daily	Daily	N/A
1.3.1.3.8	Input, maintain, and validate the data in the Configuration Status Management Operations System (COSMOS) database daily and provide accurate information, reports, and monthly metrics.	1. COSMOS database update 2. Reports and metrics 3. Coordinate and control user functionality of COSMOS tool 4. Perform audit of COSMOS database for accurate information.	1. 50-70 changes 2. 20 metrics 3. Daily 4. Weekly	1. Monthly 2. Monthly 3. Daily 4. Weekly	N/A
1.3.1.3.8.1	Process all ISS change directive packages in addition to PI&C changes processed under 1.3.1.3.7.1.	(a) Obtain, track and status directive packages. (b) Obtain change signatures. (c) Distribute, track and status directive actions to closure. (d) Change Request/Directive data entry.	50-70 Change Directive Packages (Directive Desk)	Monthly	N/A
1.3.2	Program Data Management and Integration				
1.3.2.1	Maintain and implement an SAE AS9100 compliant data management system.	Assure requirements and processes are implemented across	Daily	Daily	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		ISS Program.			
1.3.2.1.1	Update and maintain the on-line Program Documentation Tree.	Maintain the working version of the on-line ISS Program Documentation Tree and provide to the ISS Program.	Daily	Daily	N/A
1.3.2.1.2	Update and maintain the ISS Program technical documentation baseline	1. Upload approved documentation to EDMS and capture documentation data in COSMOS 2. Provide reports and metrics	1. 5 documents 2. 5 metrics	1. Monthly 2. Monthly	N/A
1.3.2.1.3	Maintain Master List and upload Work Instructions	(a) Assign work instruction numbers; (b) Upload work instructions to the authorized Program repository; (c) Update the ISS Program Master List; and (d) Notify author and Quality Management (QX) of updates/releases.	5-7 Work Instructions	Monthly	N/A
1.3.2.1.4	Data Requirement (DR) receipt, tracking, monitoring, reporting, validation, evaluation, distribution, statusing, and storage for ISS Program contracts and the IP/P data deliverables incoming to the ISS Program	1. DR Receipt, tracking, monitoring, reporting, validation, evaluation, distribution, status, and storage of DRs identified in ISS Program contracts 2. Tracking of IP/P data deliverables identified in SSP 50124, SSP 50126, SSP 50127, SSP 50137, SSP 50407, SSP 50611, SSP 50614	1. 170 deliverables 2. 25 deliverables	1. Monthly 2. Monthly	N/A
1.3.2.1.5	Manage and operate the International Partner library	IP Library management and operation, including receipt, logging, and storage of IP data, such as but not limited to, protocols, faxes, BDEALS deliverables, safety	300 entries into EDMS/IOMS	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		data packages, hazard reports, drawings, NAS15-10110 (RSA contract) deliverables, etc.			
1.3.2.1.6	PI&C Provide an Engineering Release Unit (ERU) per SSP 50172.	PI&C ERU	5-8 documents/DCNs released	Monthly	N/A
1.3.2.1.7	Operate a Configuration PI&C Management Receipt Desk (CMRD) per SSP 50123 and SSP 50172.	PI&C CMRD	400-900 change paper items	Monthly	N/A
1.3.2.1.8	Provide Document Quality Assurance (DQA) in accordance with SSP 50010 and SSP 50172 for all ISS Program controlled documentation identified under this contract and NASA owned documents not specified under other existing ISS Program contracts and joint ISS/CxP documentation.	DQA reviews and updates	25 documents	Monthly	N/A
1.3.2.1.9	Maintain and Deliver SSP 50177	1. Maintain and deliver SSP 50177 2. The contractor shall notify other existing ISS Program contractors for delivery of United States and IP/P GFD as required by other contracts through their Data Management on behalf of NASA Data Management.	1. 1 update 2. Daily	1. Yearly 2. Daily	N/A
1.3.2.2	Program Technical Data Access				
1.3.2.2	Integrate and maintain the Orbital Replacement Unit (ORU) data and Flight Support Equipment (FSE) data in the Orbital Replacement Unit Data Directory (ORUDD)	Maintain ORUDD with ORU and FSE data updates	8	Twice per quarter	N/A
1.3.2.2.1	Centralized Program Data Requirements				
1.3.2.2.1	The contractor shall respond to requests for resolving data workflow process issues that cross ISS Program contractual interfaces and	(a) Identification and documentation of the issue or problem; (b) Investigation,	8	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	impacts to work performance. Responding to, and resolving requests for issues with data work flow processes	analysis and documentation of the data workflow processes involved and the associated interfaces; (c) Development of a resolution plan and schedule; (d) Facilitation of the implementation of the proposed resolution; (e) A three-month follow-up to verify resolution is working and provide rework as identified; and (f) Provision of closeout documentation addressing sub-paragraphs (a) thru (e).			
1.3.2.2.1.1	Certification of Flight Readiness Support	The Contractor shall participate in special projects requiring lifecycle Data Management (DM) knowledge. Activities will include project planning, documentation changes, expedited DM process development and facilitation of new ISS Program requirements development to support expedited processing and ensure traceability of data is available for certification of flight readiness.	Monthly	Monthly	N/A
1.3.2.2.2	Assess the state of technology and the Program's data requirements, processes and infrastructure, and propose new process improvement concepts for the Government's consideration.	These proposed concepts may be driven by one or more of the following reasons: (a) New customer requirements, (b) Improving performance,	Daily	Daily	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		efficiency or effectiveness of ISS Program's data requirements and/or processes, (c) New agency or center policies, (d) Conforming to current standards and formats, (e) Reducing operating costs.			
1.3.2.2.3	Provide book coordination functions to include preparation, distribution and processing Document Change Notices (DCNs), Notice of Document Changes (NDCs) and revisions in accordance with SSP 41170 and SSP 50010	(a) BDEALS/ BHSEALS: (1) SSP 50124 (2) SSP 50126 (3) SSP 50127 (4) SSP 50137 (5) SSP 50407 (6) SSP 50614 (7) SSP 50352 (b) SSP 50622-03, Operations Data Set Blank Book, and (c) SSP 50839, ISS Program Operations Description (IPOD).	1 update	Yearly	N/A
1.3.2.2.4	Support to ISS Program Data Users				
1.3.2.2.4	Respond to and resolve inquiries regarding ISS Program data	Inquiry response including special EDMS issues, Critical First Steps (CFS) and migration tasks	65	Monthly	N/A
1.3.2.2.4	Locate data, identify, and resolve data discrepancies and document data processes	Resolution of data discrepancies	16	Yearly	N/A
1.3.2.2.5	Assess and concur on ISS Program Change Requests	Review CRs for request for data to ensure no duplications and delivery of data is in Program authorized repository.	50-70	Monthly	N/A

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09 C
3. ORDER NO.: Task Order #3
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OH

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #3 – MANAGEMENT INTEGRATION AND CONTROL – ISS Program Information Technology					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages)

SEE BILLING INSTRUCTIONS ON REVERSE

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

$XXXXXX.XX — 17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. **TITLE OF EFFORT:** Management Integration and Control Requirements – ISS Program Information Technology (IT)

II. **TASK DESCRIPTION:**

The Contractor shall provide IT resources in accordance with SSP 50013, ISS Information Systems Plan to accomplish the objectives and outcomes described within this delivery order. The Contractor shall propose to the tasks as described in the PI&C Contract Section C, Statement of Work, for the SOW items listed below. Specific workload indicators, quantities, and schedules are provided to scope the magnitude of the required tasks.

III. **STATEMENT OF WORK REFERENCE:** 1.0 Management Integration and Control, 1.4 Program Information Technology

IV. **REQUIREMENTS / DELIVERABLES / SCHEDULE:**

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
1.4	Program Information Technology (IT)				
1.4.1	IT Management and Administration				
1.4.1.1	Report all IT delivered or direct charged to this contract in accordance with SSP 50222, ISS Program Capital Investment Process (CIP)	1. IT POP Planning products	1. Once	1. Per SSP 50222	N/A
1.4.1.1		2. Fiscal Year IT Plan products	2. Once	2. Annually with quarterly updates as required	N/A
1.4.1.2	Develop and implement an IT Management Plan	IT Management Plan	See DRD	See DRD	PIC-IT-01
1.4.1.2	Report IT performance metrics	1. IMPR	1. 12	1. Monthly on 1st working Monday of each month, except when 1st workday is a Monday, then 2nd workday of the month	N/A
1.4.1.2		2. PMR Level 1	2. 12	2. 3rd Thursday of each month	N/A
1.4.1.2		3. Level 2 and Level 3	3. 12	3. 2nd Friday after 1st Monday of each month	N/A
1.4.1.4 1.4.1.5	Develop, document and implement IT project plans	Develop, document and implement project plans to conduct an IT study, IT proposal,	As required	As requested	PIC-IT-02

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		or IT development project providing statement of the problem, operational concept, system level requirements, preliminary design, schedule, staffing plan, and cost estimate			
1.4.1.6	Maintain the IT Performance Management and Capacity Plan	IT Performance Management and Capacity Plan	Once	Updates as required	N/A
1.4.1.7	Develop and implement an IT Technology Infusion Plan	IT Technology Infusion Plan	Two	As requested	N/A
1.4.1.7.1	Conduct and report trade studies on IT technologies, tools, architectures, methods, processes, trends, and organizations	Report or white paper documenting problem, opportunity for the study; items / options studied or evaluated; evaluation method (including criteria or requirements, weighting, and scoring algorithms); detailed results (including individual scores and rational), conclusion and recommendation.	Three	As requested	N/A
1.4.1.7.2	Execute recommendations as defined in trade studies.	Perform critical first steps as documented in the DM/CM Trade Study Report.	Once	Per task plan	N/A
1.4.2	IT Systems Management and Operations				
1.4.2(a)(1)	Provide the ISSP customer community with full life cycle system support for ISSP IT systems, applications, web pages, platform systems, services, equipment, etc., as defined in Section C, Addendum 3 and Addendum 4, Table 1, Table 2, and Table 3. IT applications will be provided to the contractor in the sustaining phase of the Life Cycle.	1. Full life cycle system support for items defined in Section C, Addendum 3 and Addendum 4, Table 2.	1. See Section C, Addendum 3 and Addendum 4, Table 2. Provide an average of four 4-point releases per application.	1. Continuous	N/A
1.4.2(a)(2)		2. Limited life cycle system support for	2.Continuous	2. Continuous	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		unique ISS requirements for the EDMS identified in Section C, Addendum 3			
1.4.2(a)(3)		3. EDMS Sustaining.	3.	3.	
1.4.2(a)(4)		3.a. Perform business admin functions including access management.	3.a. Continuous	3.a. Continuous	N/A
1.4.2(a)(5)		3.b. Support the ISS community by providing EDMS training and anomaly resolution. Define requirements, workflows and document lifecycles, and reports for implementation by the JSC Information Resources Directorate. Define and conduct testing to ensure products meet ISS defined requirements.	3.b. Continuous	3.b. Continuous	N/A
1.4.2(a)(6)		3.c. Provide tier 2 user support function.	3.c. Continuous	3.c. Continuous	N/A
1.4.2(a)(7)		3.d. Provide user training on common and specific product features. Hold periodic user forums.	3.d. Once	3.d. As requested	N/A
1.4.2(a)(8)		4. EDMS Transition	4.	4.	
1.4.2(a)(9)		4.a. Support transition of EDMS from current provider to JSC IRD.	4.a. Continuous	4.a. As defined in Project Plan	N/A
1.4.2(a)(10)		6.c.ii. Support the distribution and administration of the Contribute software tool, as well as the training of Contribute users.	6.c.ii. Continuous	6.c.ii. As defined in Project Plan	N/A
1.4.2(a)(11)		6. Provide for the design and implementation phases of the following projects:	6.	6.	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
1.4.2(a)(12)		6.a Web Re-architecture	6.a. Continuous	6.a. As defined in Project Plan	N/A
1.4.2(a)(13)	Develop project plans to support IT security initiatives such as HSPD-12, FISMA, etc.	7. Perform IT security strategic planning.	7. Four	7. Per year	PIC-IT-02
1.4.2(b)	Provide streamlining of the life cycle methodology	Streamline life cycle methodology	Once	Per IT system or application	N/A
1.4.2(c)	Address IT security in each phase of the life cycle	Incorporate IT security in the life cycle methodology	Once	Per life cycle phase of each IT system or application	N/A
1.4.2(d)	Implement IT system performance standards	Implementation of IT system performance standards	See Section C, Addendum 3	Continuous	N/A
1.4.2(e)	Provide book coordination of SSP 50013 and SSP 50222	Updates to SSP 50013 (ISS IT Management Plan) and SSP 50222 (Capital Investment Plan)	One update per document	As requested	N/A
1.4.2(f)	Property Custodian	Property management of IT equipment	All government owned property in the NASA NEMS database identified by organization OH2B & OH2L	Continuous	N/A
1.4.2.1	IT Life Cycle Systems Engineering				
1.4.2.1.1	Review Government-provided policies, architectures, standards, and procedures	Recommended modifications and implementation strategies	Continuous	Continuous	N/A
1.4.2.1.2	Provide a representative to attend recurring Government-sponsored meetings	Representative at recurring meetings	1 representative at:		
1.4.2.1.2			A. ISS AIT	A. Bi-weekly	N/A
1.4.2.1.2			B. JSC IT Steering Council	B. Bi-weekly	N/A
1.4.2.1.2			C. Network Access Control Board	C. Weekly	N/A
1.4.2.1.2			D. OCSO Meeting	D. Monthly	N/A
1.4.2.1.2			E. Security Birds of a Feather	E. Monthly	N/A
1.4.2.1.2			F. EDMS Meetings	F. Three per week	N/A
1.4.2.1.2			G. IRD Customer	G. Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
			Forum		
1.4.2.1.2			H. JSC Workstation Group	H. Weekly	N/A
1.4.2.1.2			I. Active Directory Working Group	I. Weekly	N/A
1.4.2.1.2			J. JSC Web Committee	J. Monthly	N/A
1.4.2.1.3	Manage the acquisition of commercial off-the-shelf (COTS) software, hardware, and associated maintenance agreements as approved by the Government.	As requested	As requested	As requested	N/A
1.4.2.1.5	Develop, implement, and maintain IT Standard Operating Procedures (SOPs)	SOP	Once	Annually	N/A
1.4.2.1.6	Develop, implement, and maintain an IT Configuration Management Plan	IT CM Plan	Once	Annually	N/A
1.4.2.1.7	Develop IT configuration reports on all equipment and software maintained by and/or operated by the contractor	IT Configuration Reports	Once	Quarterly	N/A
1.4.2.1.8	IT Sustaining Engineering and Operation				
1.4.2.1.8.1	Provide sustaining engineering for multimedia, computer, and network systems.	Sustaining engineering	Section C, Addendum 3 and Addendum 4, Table 2	Continuous	N/A
1.4.2.1.8.2	Manage third party maintenance and license agreements.	Management of third party maintenance and license agreements, including a 5 year planning spreadsheet capturing all expected maintenance purchases.	Section C, Addendum 4, Table 1 and Table 3	Annually or per maintenance schedule	N/A
1.4.2.1.8.3	Minimize disruption to system availability during normal working hours	Schedule outages with the customer in advance of the outage	Per SOP ???	Continuous	N/A
1.4.2.1.8.4	Establish and conduct a preventive maintenance and operational readiness program	Preventive maintenance and operational readiness program	Continuous	Continuous	N/A
1.4.2.1.8.4.1	Remedial Maintenance	Repair or replacement of failed equipment	Section C, Apx 4, Table 1 Section C, Apx	Continuous	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		and restoration to operating condition	4, Table 3		
1.4.2.1.8.4.2	Maintenance Agreements and License Management	Plans and schedules for maintenance agreement and license management	Section C, Apx 4, Table 1 Section C, Apx 4, Table 3	Continuous	N/A
1.4.2.1.8.4.3	COTS Upgrades/Maintenance	Patches & version upgrades			
1.4.2.1.8.4.3		a. OS and System patches	a. As required	a. Continuous	N/A
1.4.2.1.8.4.3		b. Emergency patches	b. As required	b. Continuous	N/A
1.4.2.1.8.4.3		c. COTS patches	c. As required	c. Continuous	N/A
1.4.2.1.8.4.3		d. COTS upgrades	d. As required	d. Continuous	N/A
1.4.2.1.8.5	Operate and provide system administration for all systems Attachment J-1, Appendix E	Operation and system administration of IT systems as defined in the SOW	See Section C, Addendum 3	Continuous	N/A
1.4.2.1.8.5.1	Provide Return to Service for IT systems	Return to Service for IT systems	See Section C, Addendum 3	Continuous	N/A
1.4.2.1.8.5.2	System administration functions shall be performed to minimize disruption to system availability	Scheduling of system administration activities	Continuous	Continuous	N/A
1.4.2.1.8.5.3	Provide backup, restore, and archive functions for IT systems	Backup for IT systems	See Section C, Addendum 3	Continuous	N/A
1.4.2.2	IT Security Support				
1.4.2.2.1	Advise ISS Program customers and users on IT security policies and implement approved security and networking solutions	1. Advise ISSP customers and users on IT security policies	1. Continuous	1. Continuous	N/A
1.4.2.2.1		2. Implement approved networking solutions	2. Once per request (SR)	2. As required	N/A
1.4.2.2.2	Monitor production capabilities and respond to requests for IT security support by providing consultation and direct technical assistance to assist customers with the development of requirements for secure firewall and networking solutions	3. Monitor production capabilities	3. Continuous	3. Continuous	N/A
1.4.2.2.2		4. Respond to requests for IT security support	4. Once per request (SR)	4. As required	N/A
1.4.2.2.2		5. Provide review, testing and implementation of NASA configuration	5. Continuous	5. Continuous	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		requirements for IT systems.			
1.4.2.1.7.7		6. Manage user accounts for access to ISS applications including additions, modifications, expiration, and deletion as defined in SSP 50013.	6. Continuous	6. Continuous	N/A
1.4.2.2.3	Response to IT Security Issues and Incidents				
1.4.2.2.3(a)	Report all IT security issues, security incidents, problems and resolutions to the ISS Program Organization Computer Security Official (OCSO) and ISS Program IT Lead.	Report IT security issues	Per incident	As required per incident, estimate three to five incidents per month.	N/A
1.4.2.2.3(a)	Provide real-time incident status reports beginning within 24 hours after a security incident.	Real-time incident status reports	Per incident	As required per incident, estimate one to two incidents per month requiring real-time status reports.	N/A
1.4.2.2.3(b)	Process security-related incidents	1. Identification and analysis of security-related incidents	1. Per incident	1. As required per incident, estimate three to five incidents per month.	N/A
1.4.2.2.3(b)		2. Securing computing resources	2. Per incident	2. As required per incident, estimate two to four incidents per year that require securing of computing resources for analysis by JSC IT Security.	N/A
1.4.2.2.3(b)		3. Round the clock response to computer security incidents	3. 15% require after hours response capability	3. As notified by the ISS OSCO or JSC IT Security.	N/A
1.4.2.2.3(c)	Provide analysis of security incidents relating to incorrectly configured systems	Analysis of security incidents and coordination with system owners per	Once	Per incident, estimate two to three incidents per	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		vulnerability scans by JSC IT Security or per contract SOP.		month related to incorrectly configured systems.	
1.4.2.2.4	Certification and Accreditation Packages and Documentation	Major re-certification of ISS Production Facility occurs every three years; the next major re-certification is anticipated to occur in June 2010.	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)	Update and maintain existing C&A packages and related documentation for ISS Program IT systems as per NPR 2810.1A, ITS-SOP-0030C and NIST 800-37.		Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)(1)	Map types of ISS information and ISS Program IT systems to security categories as per NPR 2810.1A, ITS-SOP-0019B, FIPS-PUB-199 and NIST 800-60 (Volumes 1 and 2).	Mapping of information and system types	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)(2)	Update risk assessments for ISS Program IT systems as per NPR 2810.1A and NIST 800-30.	Risk Assessment	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)(3)	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, ITS-SOP-0032 and NIST 800-18 Rev 1, assessing security controls as per NIST 800-53A.	Security Plan, Plan of Actions and Milestones (POA&M)	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)(4)	Perform periodic technical assessment, security testing and continuous monitoring of ISS Program IT systems as per NPR 2810.1A and NITR 2810-12.	Periodic assessments, security testing and continuous monitoring	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(a)(5)	Perform disaster recovery, 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,	Disaster recover, contingency and continuity of operations	Per NPR 2810.1A	Per NPR 2810.1A	PIC-IT-03
1.4.2.2.4(b)	Follow the instructions in ITS-	External systems	Per ITS-SOP-	Per ITS-SOP-	PIC-IT-03

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	SOP-0033 for any external systems that are managed under this contract		0033	0033	
1.4.2.3	Work Authorization and User Support				N/A
1.4.2.3.1	Gather, organize, and disseminate IT information to the customer community.	1. Communication of IT information.	1. Approximately 5 messages or notices.	1. Monthly	N/A
1.4.2.3.1	Review and coordinate responses to e-mail traffic.	2. Reviewing and coordinating responses to e-mail traffic	2. Approximately 10,000 messages	2. Yearly	N/A
1.4.2.3.1	Manage user accounts for access to ISS applications including additions, modifications, expiration, and deletion as defined in SSP 50013.	3. Manage user accounts	3. Approximately 5,000 user accounts.	3. Continuous	N/A
1.4.2.3.2	User Requirements/Analysis				
1.4.2.3.2(a)	Perform data gathering, entry, and analysis of requests	1. Develop/update pro cesses and work instructions	Continuous	Continuous	N/A
1.4.2.3.2(a)		2. Coordinate the ISS Program SR process between the customer, OH2 Management, and Contractor	Approximately 300 – 500 Service Requests	Monthly	N/A
1.4.2.3.2(a)		3. Validate customer data prior to submitting for processing and implementation			N/A
1.4.2.3.2(a)		4. Monitor ISS Program SRs (and any related requests, such as institutional IRD SRs) to completion. Issues should be elevated to NASA OH2 management.			N/A
1.4.2.3.2(a)		5. Status of service requests	Once	Weekly	N/A
1.4.2.3.2(a)		6. Metrics provided on a monthly basis	Once	Monthly	N/A
1.4.2.3.2(b)	Document and coordinate implementation of IT requirements requested for implementation by institutional IT providers	Documentation and coordination of IT requirements	70% of requests require an IRD SR for JSC institutional services	Yearly	N/A
1.4.2.3.2(c)	Serve as the primary point of contact for IT services	Primary POC for non-institutional IT	Approximately 50 – 100	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	required to support end users	Services	Service Requests		
1.4.2.3.3	ISS Program Loan Pool				
1.4.2.3.3(a)	Serve as the primary point of contact for loan pool services	Primary POC for loan pool services	Approximately 90 Service Requests	Monthly	N/A
1.4.2.3.3(b)	Develop and maintain user guides/desktop instructions for services that require user self-installation	1. Maintain existing Guides and instructions	1. Once	1. Yearly	N/A
1.4.2.3.3(b)		2. Develop new guides and instructions	2. 1-2 guides	2. Yearly	N/A
1.4.2.3.3(c)	Develop and maintain procedures for appropriate property management of the ISS loan pool products, compliant with NASA Property Management procedures	Standard Operating Procedures (SOPs) for ISS Loan Pool operations	Once	Updates as required	N/A
1.4.2.3.3(d)	Report property losses	Provide reports of property losses	Once	Per incident	N/A
1.4.2.3.3(e)	Develop, implement, and maintain a standard load consistent with the approved JSC laptop load and any related policies and practices for the loan pool laptops	Standard load	Once	Per configuration	N/A
1.4.2.3.3(f)	Provide augment standard load configuration in order to support specific user requirements	Unique updates to standard load	20% of loan pool request	Monthly	N/A
1.4.2.3.4	Ensure that the contractors internal work management and tracking systems interface seamlessly with the Customer Service System	Closed loop accounting for work authorizations	Continuous	Continuous	N/A
1.4.2.3.5	Track, resolve, and report on problems associated with systems, products, and services	Problem Reports	Once	Yearly	N/A
1.4.2.3.6	Provide desktop support to ISSP IT not supported by other institutional providers. Desktop support are those services which support the users desktop environment; such as, but not limited to, loading/configuring local and network software, drivers, printers, peripherals, and data migration.	1. Desktop support	1. 200 – 300 Service Requests	1, Yearly	N/A
1.4.2.3.7	Conduct customer satisfaction surveys on all IT Operations SRs and ASRs servicing end users.	2. Customer Satisfaction Survey	2. Once	2. Monthly (reported as Level 2 metric)	N/A
1.4.2.3.8	The contractor shall provide	Physical space	Approximately	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	assistance in space utilization, coordination/facilitation, and planning for ISSP physical space requirements at JSC.	request assessments, coordination, recommendations, tracking, and reporting.	40 – 80 Service Requests		
1.4.2.3.9	Manage interconnection access between ISS IPs and ISS Program resources. Work with JSC sponsors to process requests from ISS IPs for access to ISS Program servers and applications. Coordinate processing of Access Control Plan (ACP) requests and IRD Service Requests (SRs) for JSC accounts for ISS IPs.	Interconnection requests from ISS IPs.	Approximately 2000 requests	Yearly	N/A
1.4.2.3.11	Facilitate and support meetings to resolve application and network connectivity issues between IPs and ISS Program systems.	Meetings to resolve application and network connectivity issues	As required	Continuous	N/A

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #4
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA:

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OH

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #4 – ISS System Engineering, Analysis, and Integration – System Analysis and Integration					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages)

SEE BILLING INSTRUCTIONS ON REVERSE

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

$XXXXXX.XX

17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. **TITLE OF EFFORT:** ISS System Engineering, Analysis, and Integration – System Analysis and Integration

II. **TASK DESCRIPTION:**

The Contractor shall provide the following ISS systems analysis and integration requirements. The Contractor shall coordinate ISS documents in accordance with SSP 30219, ISS Reference Coordinate Systems Document. The Contractor shall propose to the tasks as described in the PI&C Contract Section C, Statement of Work, for the SOW items listed below. Specific workload indicators, quantities, and schedules are provided to scope the magnitude of the required tasks.

III. **STATEMENT OF WORK REFERENCE:** 2.0 ISS Systems Engineering Analysis, and Integration, 2.2 System Analysis and Integration

IV. **REQUIREMENTS / DELIVERABLES / SCHEDULE:**

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.0	SYSTEM ENGINEERING, ANALYSIS, AND INTEGRATION				
2.1	RESERVED				
2.2	System Analysis and Integration				
2.2.1	Program Requirements and Interfaces				
2.2.1.1	ISS Specifications and ICDs Maintenance				
2.2.1.1.a	Provide book coordination functions for ISS Specifications, Interface Control Documents (ICDs), and Interface Requirements Documents (IRDs)	Updates to Specs, IRDs, ICDs	See Addendum 6	See DRD	PIC-SI-01
2.2.1.1.b	Maintain the contents of the Master File for all Specifications and ICDs/Interface Requirements Documents (IRDs)	Update Master File	1 update	Monthly	N/A
2.2.1.1.c	Maintain tracking logs of Specifications, CRs and ICD/IRD Revisions and History	Tracking Logs	1 update	Monthly	N/A
2.2.1.1.d	Maintain, update and produce Requirements Traceability and Management (RTM) Reports	RTM reports	See DRD	See DRD	PIC-SI-02

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.1.1.e	Identify and track non-incorporated CRs to all retired, or no longer actively maintained, ISS specifications and ICDs	Identification and tracking of non-incorporated CRs	8 CRs	Weekly	N/A
2.2.1.1.f	Review all program CRs to assess impacts to supported documents.	CR Evaluations	15 CRs	Weekly	N/A
2.2.1.2	Coordination and review of ISS Specifications and ICDs				
2.2.1.2.a	Provide technical review Specifications and ICDs during Milestone Reviews	Comments to Specifications and ICDs	3 reviews at 20 comments per review.	Yearly	N/A
2.2.1.2.b	Provide technical review and coordination of Preliminary Interface Notices (PIRNs) and Document Change Notices (DCNs)	Comments to PIRNs and DCNs	60	Monthly	N/A
2.2.1.3	ICWG				
2.2.1.3.1	Maintain and update Hardware Interfaces Tracking System (HITS) Microsoft Access database				
2.2.1.3.1.a	Track and provide ICD metrics reports	ICD Metrics reports	1	Monthly	N/A
2.2.1.3.1.b	Track and provide Element Manager Open PIRNs reports	Element Manager Open PIRNs reports	8	Weekly	N/A
2.2.1.3.1.c	Track and provide reports identifying TBDs	Reports identifying TBDs	1	Monthly	N/A
2.2.1.3.1.d	Track and provide Open Issues reports	Open Issues reports	1	Monthly	
2.2.1.3.2	Provide administrative support for Milestone Reviews	Administrative support for Milestone Reviews	3	Yearly	N/A
2.2.1.3.3	Prepare, distribute, maintain and track Interface Memorandums	Interface Memorandums	16	Monthly	N/A
2.2.1.3.4	PIRN and DCN Development and Maintenance				
2.2.1.3.4.a	Prepare, distribute, process, maintain, and track Preliminary Interface Revision Notices (PIRNs)	ICD PIRNs	5	Monthly	N/A
2.2.1.3.4.b	Prepare, distribute, process, maintain, and track Document Change Notices (DCNs)	IRD DCNs	3	Monthly	N/A
2.2.2	System Performance Analysis and Integration	Recommendations to ISSP management and assistance in development of strategic requirements	Twice	Monthly	PIC-SI-03

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.2.1	Mission Analysis and Integration				
2.2.2.1.1	Attitude Requirements				
2.2.2.1.1.a	Develop, coordinate and obtain ISSP approval of the flight attitude requirements for the ISS operations	Flight attitude requirements	Nine	Yearly	PIC-SI-03
2.2.2.1.1.b	Input and maintain approved attitude requirements in the Space Station Certification Baseline Document (SSP 50699-03)	Flight attitude requirements updates in Cert Baseline (SSP 50699-03)	Once	Yearly	PIC-SI-03
2.2.2.1.2	Develop and coordinate the ISS altitude strategy	1. Altitude strategy assessment 2. Update Altitude Strategy in CSD 3. Provide inputs to Mission Integration team 4. VAC Statement Preparation	1. Once 2. Once 3. 1 per Increment 4. 1 per Flight	1. Quarterly 2. Annually 3. Increment-18 months 4. L-2 months	PIC-SI-04
2.2.2.1.3	Integrate rendezvous, proximity, and other special operations requirements and constraints related to attitudes and system configurations for joint operations between the ISS and all ISS Visiting Vehicles	1. Requirements and constraints for joint operations between ISS and all ISS Visiting Vehicles 2. Development of the Space Shuttle/ISS Proximity Operations Timelines 3. Baseplate deliveries	1. 1-2 design reviews and 75 biweekly teleconferences 2. 1 per Flight 3. Once	1. Yearly 2. L-5 months 3. Monthly	PIC-SI-03
2.2.2.1.3.1	Integrate rendezvous, proximity, and other special operations requirements and constraints related to attitudes and system configurations for joint operations between the ISS and the Crew Exploration Vehicle (CEV)	Requirements and constraints development for joint operations between ISS and CEV	4 assessments/major reviews	Yearly	N/A
2.2.2.1.3.2	Integrate rendezvous, proximity, and other special operations requirements and constraints related to attitudes and system configurations for joint operations between the ISS and the Commercial Orbital Transfer Services (COTS) vehicles.	Requirements and constraints development for joint operations between ISS and COTS.	12 assessments/major reviews	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.2.1.3.3	Comply with US requirements for information security to assess analyses analysis and data incorporating the classified capabilities of the US national technical means, wherever necessary to complete the assigned special operations assessments.	Assessments/meeting support requiring such information security, which includes but are not limited to, planning, analysis, and scientific observation of the end-of-life de-orbit of the ISS.	Once	Monthly	N/A
2.2.2.1.4	Provide predictions for the ISS solar beta angle	Predictions for ISS solar beta angle	Once	Quarterly	PIC-SI-03
2.2.2.1.5	Develop, track, and maintain the strategic allocation of Vehicle technical resources	Strategic allocation of Vehicle technical resources	Once	Quarterly	PIC-SI-03
2.2.2.1.5.1	Coordinate projected water delivery and usage rates with ISS Program suppliers and users of water	Projections for water delivery and usage rates	Once per increment	Increment -18 months	PIC-SI-03
2.2.2.1.6	Applications and Data Systems	Updates to applications and data systems	1 update for each of 2 applications and data systems.	Yearly	N/A
2.2.2.2	Mission Requirements and Support				
2.2.2.2.1	Provide strategic mission requirements, concepts, constraints, and resource allocations to the ISS Mission Integration team and NASA Mission Operations Directorate (MOD) to support development of mission planning, flight rules, and training	Strategic mission requirements, concepts, constraints, and resource allocations to Mission Integration Team and MOD	One initial delivery per new Visiting Vehicle flight and one per Shuttle flight. One update per flight at Flight Operations Review	Launch - 18 months Launch - 6 months	N/A
2.2.2.2.2	Review of Operations Products				
2.2.2.2.2.a	Review the ISS operations plans and procedures to ensure that all ISS Program strategic technical constraints are satisfied	Comments to ISS operations plan and procedures	Once per Shuttle flight at FOR	Launch - 6 months	N/A
2.2.2.2.2.b	Review crew procedures that are related to systems activation or rechannelization, or to environment interactions to ensure that all strategic technical constraints are satisfied	Comments to crew procedures	Once per Shuttle flight at FOR	Launch - 6 months	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.2.2.2.c	Flight Rule Change Request (CR) coordination, technical reviews, and tracking for OM3	1. Review ISS Program Flight Rule CRs, assign and perform technical reviews. 2. Provide weekly CR tracking to VIPER Working Group	1. 100 Flight Rule CR reviews 2. Once	1. Monthly 2. Weekly	N/A
2.2.2.2.3	Report to ISS Program Management the closure of the ISS Stage Integration Reviews (SIRs) as defined in SSP 50200-1.	Close SIR issues as a result of formal review of assembly and operations plans for each flight and all pertinent ICDs. Provide weekly status reports to ISSP Management	Once	Weekly	N/A
2.2.2.2.4	Provide technical support as needed to Mission Operations Directorate and to the ISSP through assessment of strategic ISS impacts during resolution of significant in-flight anomalies	Assessments of strategic ISS impacts resulting from anomalies	7 anomalies	Yearly	PIC-SI-03
2.2.2.3	Provide overall system analysis and integration of the ISS and associated interfaces				
2.2.2.3.1	Integrate ISS operational procedures and hardware thermal performance data to ensure component survivability from launch to its activation on the ISS	LTA Analysis, which is a thermal assessment of assembly, deployment timeline and assumptions for external hardware in Shuttle cargo bay that is deployed on ISS (complexity and scope varies per flight)	One per Shuttle Flight	Launch - 6 months	N/A
2.2.2.3.2	Provide recommendations to ISS Program management in the development and prioritization of tasks performed by NASA institutional resources for the Shuttle/ISS Induced Loads and Plume Heating analyses	1. Recommendations regarding Visiting Vehicle/ISS Induced Loads 2. Recommendations regarding Plume Heating analyses	1. 1-2 recommendations 2. 1-2 recommendations	1. Yearly 2. Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.2.3.3	Develop and provide strategic assessments of ISS Thermal System Performance (TSP) throughout assembly phases and other significant ISS operations	Strategic assessments of ISS Thermal System Performance development.	Once per increment	Launch - 18 months	PIC-SI-03
2.2.2.3.4	Develop and provide heat load allocations to the ISS end-user community, based upon active heat rejection margin analysis	Heat load allocations development.	Once per increment	Launch - 18 months	PIC-SI-03
2.2.2.3.5	Develop and provide power allocations to the ISS end-user community, based upon Integrated Energy Balance margin analysis	Power allocations for IDRD development and SCEPTER Tool Maintenance.	Once per increment	Launch - 18 months	PIC-SI-03
2.2.2.3.6	Provide systems integration support for assembly, off-nominal situations, and strategic operations that involve the Electrical Power Subsystem.	Provide technical support for Plasma SPRT, Solar Array Constraints WG, Bilateral Electrical WE, and VAC analysis. Perform Electrical Power Subsystem special studies in support of nominal, off-nominal, and assembly situations	96 7 studies	Yearly Yearly	N/A
2.2.2.4	ISS Program Change Request coordination, technical reviews, and tracking for OM3.	1. Review ISS Program CRs, assign and perform technical reviews. 2. Provide weekly CR tracking to VIPER Working Group	1. 50 CR reviews 2. Once	1. Monthly 2. Weekly	N/A
2.2.3	Assembly and Configuration Definition/Analysis				
2.2.3.1	Assembly Sequence Analysis and Definition				
2.2.3.1.01	Develop and maintain the Integrated Flight Schedule (IFS) and Reference Assembly Sequence Overview	1. IFS 2. ASOV	1. Fourteen 2. Fourteen	1. Yearly 2. Yearly	1. N/A 2. N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.1.2	Perform ISS Program Crew Rotation Plan assessments	Crew Rotation Plan assessments 1. Major Study requiring more than 1 month to assess 2. Minor Study requiring less than 1 month to assess	1. Two 2. Two	1. Yearly 2. Yearly	1. N/A 2. N/A
2.2.3.1.3	Develop and maintain the BASEPLATE	BASEPLATE release	1. 48	1. Yearly	1. N/A
2.2.3.1.4	Develop and maintain Flight Program Figure	Flight Program Figure (FPF)	12	Yearly	N/A
2.2.3.1.5	Strategic Flight Plan Development	MIM (or equivalent) update	One	Yearly	N/A
2.2.3.1.6	Provide Mission Overviews for Program Mission Integration Office	Mission Overviews are developed to support flight transition from strategic to tactical timeframes	One	At L-18 months for each ISS shuttle flight mission	N/A
2.2.3.1.7	Assess proposed tactical and strategic mission updates and identify issues and/or impacts to the SFP	Strategic and tactical assessments	6	Yearly	N/A
2.2.3.1.8	Participate in the OM2 Working Group and provide the integration and coordination of strategic ISS/SSP flight inputs to the SSP and ISS Program Boards/Panels	Strategic ISS/SSP flight inputs to the Space Shuttle Program	4-5 meetings	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.1.9	Represent the Strategic Planning and Integration Team as a technical expert at boards and panels	Technical representative for Strategic Planning and Integration Team 1. RIP 2. FPWG 3. IMT 4. PICB 5. JOP 6. Videoconferences/Teleconns 7. SSCB 8. MIOCB 9. Logistics and Maintenance End-to-End 10. SWG 11. VCB 12. AWG 13. TIMs 14. FAWG 15. CTWG	1. 3-4 meetings 2. 1-4 meetings 3. 1 meeting 4. 2-4 meetings 5. 1-3 meetings 6. 8-12 meetings 7. 4 meetings 8. 1-2 meetings 9. 1 meeting 10. 1 meeting 11. 1 meeting 12. 4 meetings 13. 2-4 meetings 14. 1 meeting 15. 4 meetings	1. Monthly 2. Monthly 3. Monthly 4. Monthly 5. Quarterly 6. Monthly 7. Annually 8. Monthly 9. Monthly 10. Monthly 11. Monthly 12. Monthly 13. Annually 14. Monthly 15. Monthly	N/A
2.2.3.1.10	Provide technical inputs and review assessments for other ISS Program documents or reviews.	Technical inputs to ISS documents and reviews. Documents include: IDRDs, GGR&C, SPIP (Volume 2), and Flight Data File Review (FDR). Technical Coordination Meeting and Change Request Evaluations	30 inputs	Monthly	N/A
2.2.3.1.11	Develop and Provide strategic studies	Special Studies 1. Major Strategic Study requiring more that 2 months to asses. 2. Minor Strategic Study requiring less than 1 month and greater than 1 week to asses. 3. Quick Strategic Study requiring one week or less to assess.	1. Two 2. Twenty-five 3. Thirty-five	1. Yearly 2. Yearly 3. Yearly	
2.2.3.1.13	Perform the Annual Traffic Model Report	ISS strategic resupply / logistics (traffic model) analyses	Once	Yearly	PIC-SI-03
2.2.3.1.14	Develop the Semi-Annual Traffic Model Assumptions Document	ISS strategic resupply/logistics (traffic model) assumptions document	Two	Yearly	PIC-SI-03

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.1.15	Applications and Data Systems	Updates to applications and data systems 1. SPI action item tracking database 2. Traffic model spreadsheets 3. SPEARMAN 4. CR tracking database 5. BASEPLATE	Three	Yearly	N/A
2.2.3.1.16	Develop Groundrules and Constraints for the ATV, HTV, and 6 Crew Operations related to vehicle traffic, crew time, and crew rotation.	GGR&C updates 1. Visiting Vehicle traffic (ATV and HTV) 2. Crew time 3. Crew rotation 4. 6-Crew	1. Six 2. Two 3. Two 4. Three	Yearly Yearly Yearly Yearly	N/A
2.2.3.2	Configuration Analysis, Modeling and Mass Properties (CAMMP)				
2.2.3.2.1	Shall maintain a technical understanding of the on-orbit vehicle assembly flows and the associated on-orbit hardware configuration for flight, intermediate, and stage configurations. The contractor shall also maintain a technical understanding of the assembly and configuration constraints necessary to manage the strategic, tactical, and real-time external Vehicle configuration	Review of maturing configuration data to maintain technical understanding of on-orbit vehicle assembly flows, hardware configuration, and configuration constraints	33 times	Yearly	N/A
2.2.3.2.2	Assess, integrate, and coordinate requirements associated to the ISS external vehicles configuration, that impact the external configuration for flight, intermediate, and/or stage configurations	ISS external vehicle configuration requirements development 1. Review data for maturing hardware 2. Participate in design reviews	1. 18 times 2. 2 reviews	1. Yearly 2. Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.2.3	Maintain and update the SSP 50504, ISS Configuration Document and Assembly Matrix	1. SSP 50504 updates 2. Assembly Matrix update for SSP 50504 (to assembly complete) 3. Assembly Matrix update for Blue Book development (covers 18 month Blue Book timeframe)	1. One 2. One 3. One	1. Yearly 2. Yearly 3. Yearly	N/A
2.2.3.2.4	Maintain and coordinate the revision of SSP 30219, Space Station Reference Coordinate Systems, that documents the ISS reference coordinate systems for major elements and robotically handled items	SSP 30129 updates	One	Yearly	N/A
2.2.3.2.5	CAD Model Development Support				
2.2.3.2.5.a	Participate in CAD Model User Technical Interchange Meetings (TIMs) and Measurement Technical Interchange Meetings (TIMs). Provide inputs necessary to get the necessary validated and as-built CAD models	Participate in CAD Model TIMs and provide technical inputs per flight	Six TIMs	Yearly	N/A
2.2.3.2.5.b	Ensure that the external physical configuration data needed by the ISS/SSP users is provided	Physical configuration data from CAD models is available to ISS/SSP users	One	Monthly	N/A
2.2.3.2.6	Develop and gain concurrence of external configuration protocols with the International Partners and any other affected teams	IP External Configuration protocols	One	Yearly	N/A
2.2.3.2.7	Develop and review the mission-specific ISS/SSP On-Orbit Interface Control Document (ICD), Section 3, Physical Configuration for each Shuttle flight.	ISS/SSP On-orbit ICD, Section 3, and Physical Configuration	Initial: One per Shuttle flight Update: Average Four Shuttle flights	Initial: Baselined at Launch - 10 months	N/A
2.2.3.2.8	Develop and distribute Vehicle Configuration Joint Working Group (JTWG) mission-specific vehicle configuration data sources letters to the ISS/SSP community	JTWG mission specific configuration data sources letters	Initial: One per Shuttle flight Update: One per Shuttle flight	Initial: Launch - 9 months Update: Launch - 4 months	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.2.9	Maintain and utilize the External Configuration Analysis and Tracking Tool (ExCATT) and provide web-based reports accessible by the ISS Program	Current and planned external configuration items location tracking and reporting. ExCATT web-based reports 1. COFR report 2. Pre-flight plan 3. Post flight	1. One per ISS flight (Shuttle and visiting vehicles) 2. One update per Shuttle flight 3. One update for each Shuttle flights	1. L-1 month 2. L-1 week 3. Landing + 3 weeks	N/A
2.2.3.2.10	Develop revisions of the On-orbit Assembly Modeling and Mass Properties Data Book	Mass Properties Data Book includes the mass and aerodynamic properties for each ISS flight and corresponding intermediate stage configurations for and 18 month span of time.	See DRD	See DRD	PIC-SI-04
2.2.3.2.11	Review ISS Vehicle Sustaining Engineering team Launch - 30 days delivery of pre-flight on-orbit ISSP mass properties prior to every ISS flight docking, undocking and redocking. Coordinate and resolve issues due to mass properties differences between the Launch - 30 days data delivery and the Blue Book	Reconcile discrepancies as required between ISS vehicle Sustaining Engineering Launch - 30 days mass properties and Blue Book	For each flight as follows: 4 Soyuz, 4 Progress, 1 ATV or HTV 1 COTS and 5 Shuttle	Launch - 30 days	N/A
2.2.3.2.12	Perform ISS configuration, clearance external stowage and mass property analysis using approved 3D CAD models	ISS configuration, clearance external stowage, and mass property analysis to include visiting vehicle docking clearance.	Four	Monthly	N/A
2.2.3.2.13	Develop and deliver simplified 3D CAD models to the IP's in .igs and .step formats	Simplified 3D CAD models development and delivery to IP's for non-Russian Segment on-orbit configuration hardware	Four	Yearly	N/A
2.2.3.2.14	Provide electronic dimensioned and non-dimensioned hidden line or shaded drawings to support the development of ISS documentation	Dimensioned and non-dimensioned hidden line or shaded drawings	Four	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.2.15	Maintain the CAMMP team website to record and communicate CAMMP activities to the NASA community. Provide launch vehicle ascent and descent weight assessments to support manifest assessments in the strategic timeframe	Update CAMMP team website	8 times	Monthly	N/A
2.2.3.2.16	Participate in the OM2 Working Group	Document the CAMMP Program processes.	One	Weekly	N/A
2.2.3.2.17	Provide technical inputs and review for ISSP documents or reviews	Change Request (CR) review	Twenty	Monthly	N/A
2.2.3.2.18	Provide technical support as needed to Mission Operations Directorate and to the ISS Program through assessment of strategic ISSP (including IP/P) impacts during resolution of significant in-flight anomalies. Such support includes provision of technical assessments that individual specialists within the contractor's employ may be able to provide to the Mission Evaluation Room (MER), working with the Vehicle Sustaining Engineering team on a temporary basis to resolve mission or life-critical issues.	Anomaly Resolution Support to the MER	For each flight as follows: 4 Soyuz, 4 Progress, 1 ATV or HTV 1 COTS and 5 Shuttle	Yearly	
2.2.3.3	Internal Volume Configuration (IVC)				
2.2.3.3.1	Provide and maintain criteria for evaluating and prioritizing ISS internal volume demands in accordance with SSP 50261-01 (Generic Ground Rules and Constraints), Section 3.12, IVC Constraints & Ground Rules.	Input to SSP 50261-01 to include criteria for evaluation and prioritization of ISS internal volume demands	One	Yearly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.3.2	Document and maintain the planned ISS IVA topology in SSP 50564	Updated ISS Interior Volume Configuration topologies 1. Baseline updated in SSP 50564 associated with MIM updates or major interim assembly sequence releases 2. Updates to working version based on latest program planning data, approved CRs, and hardware changes to support trade studies, hardware development, and IVA systems integration	1. One 2. One	1. Yearly 2. Monthly	N/A
2.2.3.3.3	Develop and maintain a unified 3D CAD model of the Station's interior	ISS integrated interior 3D CAD model consisting of all modules, racks, and significant GFE for a particular ISS stage	Two per ISS flight as per DRD	See DRD	PIC-SI-05
2.2.3.3.4	Graphically analyze the acceptability of the ISS planned configurations based on the documented pass/fail criteria	Reports in a predefined format of the graphic analysis of the ISS planned configuration based on evaluation of the ISS interior 3D CAD models, including VAC statement preparation	Two per ISS flight	One at Launch - 9 months One at Launch - 3 months	PIC-SI-03
2.2.3.3.5	Develop major situation unique analyses, as required, to provide inputs to ISSP planning and issue resolution. This shall include developing updated IVA topologies, relevant 3D CAD models, reports on IVA issue resolution, significant integration analysis, major hardware design support, and presentation to ISS Boards and Review Panels.	Major and minor situation unique analyses	Four	Yearly	N/A
2.2.3.3.6	Maintain the IVCWG website to record and communicate IVC activities to the NASA community	Update IVCWG website	Two	Monthly	N/A

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
2.2.3.3.7	Participate in hardware design reviews to ensure identification and resolution of potential issues regarding design features that, if not resolved, would result in GGR&C IVC exceptions.	Identification of potential protrusions into ISS operational envelopes, that would require an exception to the GGR&Cs section 3.12, documented as RIDs in formal design reviews	Two hardware reviews	Yearly	N/A
2.2.3.3.8	Participate in the OM2 Working Group	Document the IVC Program processes.	One	Weekly	N/A
2.2.3.3.9	Provide technical inputs and review for Payload Protrusion PIRNS and other ISS Program documents or reviews.	Technical inputs to ISS documents and reviews. Documents include: IDRDs, Payload Protrusion PIRNs, and hardware ICDs 1. IDRD inputs: Table 4.3 Accommodations Tables and Appendix D Topologies 2. Payload Protrusion PIRN reviews 3. Hardware ICDs and Associated TCMs 4. Change Request (CR) review	1. Three 2. Six 3. Three 4. one	1. Yearly 2. Yearly 3. Yearly 4. Monthly	N/A

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. *(If any)*: NNJ09____C
3. ORDER NO.: Task Order #5
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE *(Address correspondence to)*: BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA:

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OE

11. BUSINESS CLASSIFICATION *(Check appropriate box(es))*
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE *(Date)*: TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE *(See reverse for Rejections)*

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #5 – ISS Safety and Mission Assurance					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. *(Cont. pages)*

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS *(or P.O. Box)*
c. CITY
d. STATE
e. ZIP CODE

SEE BILLING INSTRUCTIONS ON REVERSE

$XXXXXX.XX — 17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY *(Signature)*

23. NAME *(Typed)*
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. **TITLE OF EFFORT:** ISS Safety and Mission Assurance

II. **TASK DESCRIPTION:**

The Contractor shall provide safety and mission assurance management and administration including mission assurance and risk management, quality management audit and surveillance, safety and health, IP S&MA integration, Program risk assessment, safety, quality assurance and operations safety. The Contractor shall propose to the tasks as described in the PI&C Contract Section C, Statement of Work, for the SOW items listed below. Specific workload indicators, quantities, and schedules are provided to scope the magnitude of the required tasks.

III. **STATEMENT OF WORK REFERENCE:** 6.0 Safety and Mission Assurance

IV. **REQUIREMENTS / DELIVERABLES / SCHEDULE:**

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.0	SAFETY AND MISSION ASSURANCE (S&MA)				
6.1	S&MA Management And Administration				
6.1.1	Mission Assurance and Risk Management Plan	Update Mission Assurance and Risk Management (MA&RM) Plan	See DRD	Yearly	PIC-SA-01
6.1.2	Quality Management System	Develop and implement a QMS compliant with AS9100, including documentation control, corrective action system, development of PI&C Quality Management Plan, work instructions and process flows, quality record systems, etc.	See DRD	Ongoing	PIC-SA-01
6.1.3	Audit/Surveillance	Documentation of audit meetings lasting 8 hours, response to audit/surveillance findings and action tracking	1 audit	Yearly	
6.1.4	Safety and Health	1. Update Safety and Health Plan. "	One update	Yearly	PIC-SA-02
		2. Provide Monthly Safety and Health Metrics.	12 metrics packages	1 per month	PIC-SA-03
		3. Submit Annual Safety and Health Self Evaluation Report.	One update	Yearly	PIC-SA-04
		4. Participate in NASA close call and mishap reporting system.	as required	Ongoing	
		5. Perform Safety Walkthroughs.	12 walkthroughs	1 per month	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
		6. Provide Management of call tree and fire wardens.	Initial: once Updates: As changes occur in personnel	At contract start	
6.1.5	Lessons Learned	Initial Submission of Plan	1	90 days after contract start	PIC-SA-08
		Monthly Meeting(s) and Status Reports	12	Per year	
		Lessons Learned Plan Updates as needed	as required	Ongoing	
6.2	S&MA INTEGRATION				
6.2.1	Technical Integration	Provide S&MA support to the ISS IP/VV community.			
	Safety Reviews	1. Provide coordination and support of Safety Reviews, SRP, SRP splinter meetings, OSB reviews, resolution of SRP and WG issues and actions, evaluation of FMEA/CILs and R&M data, CoFR support to SMAP and SMARR.	30	per year	
	Technical Integration Meetings (TIMs), including chairmanship of selected teams	Participate in TIMs, including chairmanship of selected teams. Provide issue resolution and integration support.	4	per year	
	Milestone Reviews	Provide coordination and support of milestone reviews. Includes: PDR, CDR, QR, etc.; generation, tracking, and closure of RIDs. Facilitate S&MA reviews of IP subsystem and discipline data.	4	per year	
	ISSP Change Requests	Evaluate Technical Change Memorandums (TCMs), Change Requests (CRs), provide recommendations	12	per year	
	IP Requirements and Processes	Participate in the development of requirements and processes and negotiation with the IP/VV community. Participate in LPM, Tiger teams, joint telecons, videocons, etc. to develop requirements and processes. Review IP requirements verification data and determine compliance.	12	per year	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	ISS working groups	Represent S&MA in working groups to support the development of CE documents, and to ensure CE documents are compliant with S&MA requirements.	8	per year	
	Weekly Telecons	Participate in and support weekly US/IP/VV telecons.	40	per year	6.2.1.7
	CoFR support	Provide CoFR related support to the SMAP and SMARR. Including presentations.	15	per year	6.2.1.8
	Document Updates	SSP 50191, NASA/ESA Bilateral S&PA Requirements		1 every 2 years	
		JPD 315, Limited Life Item Tracking and Control		1 every 2 years	
6.2.2	IP/Visiting Vehicle Integration	Provide telecon and TIM support for JARSWG and other IP/VV working groups/meetings			
		1. Book coordination for SSP 50146		1 every 2 years	
		2. Prepare Agendas and minutes for JARSWG telecons.	40	per year	
		3. Prepare agenda and protocols for IP TIMs	2 IP TIMS (1 in Moscow and 1 in Houston)	2 per year	
		4. Provide administrative coordination for SRP, PSRP, and MS&MAP Meetings. Coordinate letter of invitation, logistics, and interpreters.	2 TIMs per year 2 SRPs per year	4 per year	
		5. Coordinate translation support from TTI for all Russian faxes.	200 Russian faxes	4 faxes per week	
		6. Maintain archive folders for all JARSWG/IP received and sent correspondence.	1000 translations	20 weekly	
		7. Unplanned Management Requests	~2 hours per week	~80 hours per year	
		8. Administrative Duties	Yearly training	1 per year	
6.2.3	Document Maintenance	SSP 50191, NASA/ESA Bilateral S&PA Requirements		1 every 2 years	
6.3	PROGRAM RISK MANAGEMENT				

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.3.1	Management of Risk Process	Provide specialized risk management process facilitation to the ISS Program community. Coordinate ISS risk in support of the PRAB and CoFR by reviewing team inputs, resolving discrepancies, and preparing metrics and charts for the PRAB and CoFR. Additional emphasis will be given to the Program S&MA internal risk process. Provide tailored training for improvement. Ensure that the risk management process is consistent with program risk management requirements.			
	Book Updates for JPD 306 and NPR 8000.4 Risk Management Procedures and Guidelines	Establishment of the Program Risk Management System (PRMS) and SSP 50175, ISS Risk Management Plan. Review and provide inputs to NPR 8000.4 Risk Management Procedures and Guidelines	1 Update	every 2 years	
	Provide risk management support across the program	Facilitate general risk management across the program; assist organizations with identification of risks, and completion of their risk assessment	3 hrs per week	per week	
	CoFR Document	Provide Inputs to the CoFR document in the Risk Management Section	1	every 2 years	
	Risk Management Training	Provide training for consistent implementation of risk management principle across the ISS community.	4 Classes; 40 one-on-one training sessions	per year	
	Risk Facilitation - PRAB	Coordinate ISS risks in support of the PRAB by reviewing team inputs, resolving discrepancies, and preparing metrics and charts for the PRAB.	6 PRABs	1 every 2 months	
	ISS Risk Management Working Group Meetings	Support and participate in ISS Risk Management Working Group Meetings.	12 meetings	1 per month	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	Integrated Risk Management Activities	Coordinate risk integration and transfer with and provide support to Integrated Risk Management activities.	6	per month	
	Integrated Risk Product Activities	Develop, coordinate and support integration of ISS qualitative and quantitative risk analysis within ISS Program Office.	6	per month	
	Manage IRMA enhancements and requirements	Identify, track and integrate IRMA enhancements/issues and requirements.	15	per month	
	Unplanned Management Activities	Support management requests that are not part of standard deliverables and processes.	12	per year	
	Risk Facilitation - CoFR/SORR	Coordinate ISS risks in support of CoFR/SORR by reviewing team inputs, resolving discrepancies, preparing risk data by flight, and ensuring complete risk acceptance rationale for CoFR/SORR.	15 Flights per year	1 per flight	
6.3.2	Probabilistic Risk Assessment (PRA)	Perform PRA risk trade studies for the ISSP community. Develop and optimize ISS PRA models. Perform Bayesian update of ISS Program MADS data for ISS PRA failure database. Provide tailored training for improvement. Supporting working groups and tiger teams. Ensure that the PRA process is consistent with program risk management requirements. Incorporate uncertainty evaluation techniques. Integrate with existing reliability (PRA) modeling.	1 model, 1 Bayesian update, 12 trade studies	per year	
	Risk Trade Studies	As risk-related issues are identified within the ISS Program, PRA risk trade studies will provide information to permit better-informed decisions to be made by ISS Program management concerning these issues.	12 risk trades studies	per year	PIC-SA-05

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	Develop PRA models	Update existing ISS stage PRA model; complete internal documentation of PRA model; perform Bayseian update of MADS data for ISS PRA failure database	1 model; 1 Bayseian update	per year	PIC-SA-05
	Prepare reports	Generate presentations on ISS PRA activities for dissemination of information outside of ISS S&MA; Complete subsystem notebooks documentation for 10A PRA model; Develop integration and results reports.	3 presentations; 1 set 15A notebooks; 2 PRA reports	per year	PIC-SA-05
	Working groups and Tiger Teams	1. Support ISS PRA working groups and tiger teams. Assist project planning, budgeting, and expenditure tracking; prepare weekly status reports; Conduct briefings to NASA customer, including monthly status; Support and participate in tiger team meetings for PRA of Bioastronautics Risk (BR).	48 tag-ups 4 project planning and budgeting exercises 4 briefings 12 (monthly) status briefings 40 meetings	per year	
	Develop PRA methodologies	Methodologies for modeling HRA (Human Reliability and Common Cause) will be incorporated into the PRA model.	1 methodology development	per year	
	PRA data development	Develop data consistent with MADS database	1 file	per year	PIC-SA-05
	Develop additional PRA system models	Develop PRA system models for the CEV, COTS	9 system PRA models	per year	PIC-SA-05
6.3.3	Document Maintenance	The Contractor shall provide book coordination functions for the following ISS Program S&MA documents: • JPD 306, Establishment of the Program Risk Management System (PRMS) • SSP 50175, ISS Risk Management Plan		1 every 2 years	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.4	ISS SAFETY PROGRAM	Perform hazard analyses and close VTLs for assembly complete hazard reports; Stowage Hazard Report ISS-STO-801, Internal Volume Hazard Report ISS-IVA-0202, Drag Through Hazard Report ISS-NTN-001	15 flights	3 HR VTLs/closures per flight	PIC-SA-07
	COFR	Provide support for CoFR; including presentation development, administrative support, and status integration. Document maintenance.	15 flights per year	1 per flight	
6.5	RESERVED				
6.6	QUALITY ASSURANCE				
6.6.1	Problem Reporting System Maintenance	Maintain the ISS PRACA Database System. Implement and maintain an improved PDS. Provide support to QA personnel and SPRTs during PR resolution/closure process			
	PR resolution/closure process	Provide support to QA personnel and SPRTs during PR resolution/closure process through daily PR review and updates. Participate in bi-weekly QA working group meetings and weekly SPRT meetings	70 meetings; daily review/update	per year	
	PDS System	PDS Upgrade: compile list of requested enhancements from users, prioritize with OE Quality Manager and coordinate implementation with ARES PI&C IT SW group. At a minimum, includes flexible signature functionality, new CoFR report, and additional metrics reports. May include proprietary data directory structure to accommodate IP processing of PRs..	4 releases	per year	
	Administrative support to the PDS system	Provide user support, training, custom queries/reports	8	per year	
	PRACA Metrics development	Develop meaningful metrics for CoFR and process management.	2	per year	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
	Evaluation/test of Cx PRACA prototype	Test administrative functions and search capabilities once ISS data is imported; Evaluate potential for use as a replacement for ISS PDS	4	per year	
6.6.3	Document Maintenance	The Contractor shall provide book coordination functions for the following ISS Program S&MA documents: • JPD 328, ISS Corrective Action Plan/Preventive Action Process • JPD 315, Limited Life Item (LLI) Tracking and Control • SSP 30223, Problem Reporting and Corrective Action (PRACA) for Space Station Program • SSP 30524, Problem Reporting and Corrective Action (PRACA) – Data System (PDS) Requirements Definition Document (RDD) for ISS Program • SSP 30695, Acceptance Data Package Requirements Specification • SSP 41173, Space Station Quality Assurance Requirements • SSP 50190, ISS Program Contingency Action Plan • SSP 50200-01-ANX E, Station Program Implementation Plan Volume 1, Station Program Management Plan, Annex E: S&MA/Program Risk Plan; ISS Risk Management Plan • SSP 50287, Hardware/Software Acceptance Process		1 every 2 years	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.7	OPERATIONS SAFETY	Represent S&MA at strategic and tactical planning meetings including launch package teams (LPT), stowage integration working group (SIWG), internal volume configuration working group (IVCWG), and the Assembly Working Group (AWG) meetings. Evaluate products for those teams and provide an S&MA status or S&MA position when required. Evaluate change requests relating to these areas and present recommendations to the S&MA change panel. Attend Daily Space Station Reviews (DSSR) and SSPCBs, as required to support management, LPTs, and to perform pre-flight tactical integration responsibilities. Participate and present at Mission Integration Office (MIO) and Safety and Mission Assurance (S&MA) milestone reviews or technical interchange meetings when required, including daily participation in the open paper tracking for each flight. Conduct issue resolution conferences and participate in special teams as necessary. Provide technical briefings or status to S&MA management upon request			
6.7.1	Documentation Verification	Evaluate, monitor, and respond to the S&MA Manifest Priorities List for each flight (PBMA); Assess all line items on the flight manifest to determine status of safety and reliability certification/readiness; track flight open paper	84 manifest drops	6 manifest drops per flight (14) and as required for unplanned on-orbit activities	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.7.2	Mission Integration and Operations Planning	Stowage Flight Readiness Activities - generate Stowage 1-pagers for every flight in support of SMSRs, while evaluating the stowage OC risk acceptance rationale and the OC stowage CoFR presentations.	5 per flight	per flight, 15 flights	
	DSSR Representation	Review agenda and prepare for topics; work actions and requests for information. Coordinate information with S&MA teams. Work special assignments as requested by OE customer.	30	per year	6.7.6
6.7.4	Launch Package Management Team	Provide LPM the S&MA related requirements. Attend LPM meetings, evaluate flight plans and objectives, and provide meeting notes to S&MA team members	40	Per year	
6.7.5	CR Evaluation	Coordinate and facilitate S&MA review of change requests:	30	per year	

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule	DRDs
6.7.6	Document Maintenance	The Contractor shall provide book coordination functions which include preparation, distribution, and processing for the following ISS Program S&MA documents: • SSP 30234, Failure Modes and Effects Analysis and Critical Items List (FMEA/CIL) Requirements for Space Station • SSP 30309, Safety Analysis and Risk Assessment Requirements Document • SSP 30599, Safety Review Process • SSP 50021, Safety Requirements Document • SSP 50038, Computer-Based Control System Safety Requirements • SSP 50145, NASA/NASDA Bilateral S&MA Requirements • SSP 50231, Safety and Mission Assurance Certification of Flight Readiness Implementation Plan		1 every 2 years	

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #6
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OM

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL
[ ] b. OTHER THAN SMALL
[ ] c. DISADVANTAGED
[ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED
[ ] e. HUBZone
[ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #6 – Management Integration and Control - ISS Program Budget Support and Assessments					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

SEE BILLING INSTRUCTIONS ON REVERSE

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

17(h) TOT. (Cont. pages)

17(i) GRAND TOTAL: $XXXXXX.XX

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

I. TITLE OF EFFORT: ISS Program Budget Support/ Assessments

II. TASK DESCRIPTION:

The Contractor shall provide budget and assessment support as described in the PI&C Contract Section C, Statement of Work, for the SOW tasks listed below.

III. STATEMENT OF WORK REFERENCE: 1.2.4 ISS Program Budget Support /Assessments

IV. REQUIREMENTS / DELIVERABLES / SCHEDULE:

1.2.4.1 ISS Program Budget Database Support

The Contractor shall utilize the Space Program Integrated Contract Environment (SPICE) and the Integrated Financial Management (IFM) databases to accomplish the following as primary functions:

(a) The Contractor shall maintain the ISS Program budget database to include tracking of all approved changes.

(b) The Contractor shall maintain tracking of all approved purchase requests for the ISS Program Office.

(c) The Contractor shall maintain tracking of funding requirements for the ISS Program Office.

(d) The Contractor shall support the Contract Resource Analyst and the Contracting Officer's Technical Representative (COTR) with data analysis and presentations, as required.

Integrated Financial Management (IFM) databases to accomplish the following as backup functions:

(a) The Contractor shall answer queries from Central Budget Office (CBO), CO, NASA Program Planning and Control (PP&C) managers and resource analysts and provide reports.

(b) The Contractor shall track monthly cost actuals in IFM database.

1.2.4.2 ISS Program Reserves/Changes Management Database Support

The Contractor shall use the SPICE and the Integrated Risk Management Application (IRMA) database to accomplish the following:

(a) The Contractor shall maintain the data in the ISS Program Reserves/Changes Management database to include tracking of all changes,

(b) The Contractor shall answer queries from NASA business managers and Resource analysts and provide reports.

(c) The Contractor shall provide ad-hoc product support to the Resources Management Office.

(d) The Contractor shall answer queries from NASA PP&C managers and Resource analysts and provide reports.

1.2.4.3 Assessments and Cost Estimating Support

The Contractor shall support the ISSP Assessments, Cost Estimating, and Schedules (ACES) Office in integrating content and formats of all assessments and analyses prior to delivery of all final ACES products.

(a) The Contractor shall support the ACES Office in integrating data from ISS contractor status, cost, and earned value reports to assess ISSP performance. These assessments will be used by the ACES Office for the development of overall ISSP analyses and status.

(b) The Contractor shall support the ACES Office in performing and integrating ad hoc parametric cost estimates, including but not limited to the preparation and documentation of individual cost estimates, the technical evaluation of Contractor proposals, and the integration of component estimates to produce consolidated estimates and associated reports.

(c) The Contractor shall support the ACES Office in the maintenance of analytic models associated with the development of parametric cost estimates and related assessments.

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09 C
3. ORDER NO.: Task Order #7
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY – Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, ON

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #7 – VISITING VEHICLE - COTS Integration Support					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages)

SEE BILLING INSTRUCTIONS ON REVERSE

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

$XXXXXX.XX

17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. TITLE OF EFFORT: Mission Analysis and Integration – COTS Integration Support

II. TASK DESCRIPTION:

The Contractor shall provide technical support as described in the PI&C Contract Section C, Statement of Work, for the SOW tasks listed below.

III. STATEMENT OF WORK REFERENCE: 3.2 Visiting Vehicle

IV. REQUIREMENTS / DELIVERABLES / SCHEDULE:

The Contractor shall confirm that the visiting vehicles meet ISS Program requirements. The Contractor shall provide technical coordination for the visiting vehicle data and hardware and software exchange documents.

The Contractor shall perform the tasks identified below:

1. Coordinate Data Item Descriptions (DIDs) between the COTS projects and ISS Program.

2. Distribute COTS vehicle technical, programmatic and operations data for review by ISS Program technical teams and collect assessments and comments to this data from the teams.

3. Facilitate ISS Program teams' communications with SpaceX and Orbital Sciences.

4. Provide responses to communications and data requests from COTS and ISS Program teams in accordance with teams' schedules.

5. Coordinate shipment of items to and from the COTS projects with the ISS Program shipping coordinator in the Mission Integration Team.

6. Facilitate and coordinate the resolution of issues associated with integrating the COTS vehicles, as necessary, and report status of issues regularly to the NASA Element Manager.

7. Facilitate and coordinate the closure of action items associated with integrating the COTS vehicles, as necessary, and track and report status of all action items regularly to the NASA Element Manager.

8. Initiate or coordinate CRs to maintain and update the ISS design and requirements baseline for COTS Elements.

9. Support development, coordination and maintenance of the ISS Transportation Integration Office CoFR implementation plans, and COTS Element Acceptance and Assessment Review Plans.

10. Plan and coordinate the ISS Program teams' participation in the COTS design, qualification, and certification reviews.

    i. Develop ISS Program Support Plans for Milestone Reviews.

ii. Review COTS Design, Qualification and Certification Review data packages for compliance with ISS Program requirements and policies.

iii. Track and facilitate closure of issues and action items.

11. Provide consolidated Element team inputs to mission requirements, increment definition requirements, and manifest requirements for COTS flights.

12. Coordinate the planning and implementation of COTS flight operations with ISS Program and COTS Operations teams, which includes review of the COTS operations documentation, such as operational timelines, procedures and flight rules

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #8
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OB

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL
[ ] b. OTHER THAN SMALL
[ ] c. DISADVANTAGED
[ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED
[ ] e. HUBZone
[ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #8 – Engineering and Technical Services - Vehicle Integration					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

SEE BILLING INSTRUCTIONS ON REVERSE

18. SHIPPING POINT:
19. GROSS SHIPPING WEIGHT:
20. INVOICE NO.:
21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box):
c. CITY:
d. STATE:
e. ZIP CODE:

17(h) TOT. (Cont pages):
17(i) GRAND TOTAL: $XXXXXX.XX

22. UNITED STATES OF AMERICA BY (Signature)
23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

I. TITLE OF EFFORT: Engineering and Technical Services

II. TASK DESCRIPTION:

The Contractor shall provide technical support as described in the PI&C Contract Section C, Statement of Work, for the SOW tasks listed below.

III. STATEMENT OF WORK REFERENCE: SOW 3.1.1.1 Engineering and Technical Services

IV. REQUIREMENTS / DELIVERABLES / SCHEDULE:

4.1 Office Web Support

The Contractor shall maintain the OB-owned web pages by soliciting and implementing revisions from content owners. The Contractor shall provide a point of contact for interfacing with the ISS web development team for updates to the design of OB-owned web pages.

4.2 On-Orbit Engineering Office Support

The Contractor shall support the teams and meetings of the ISS Mission Evaluation Room (MER). The primary task is to develop meeting minutes for the ISS MER anomaly resolution meetings. During Shuttle missions, this support could result in the need for round the clock staffing. Individual Shuttle mission support requirements will be coordinated in advance with the On-Orbit Engineering Office.

The Contractor shall perform the tasks identified below in support of the On-Orbit Engineering Office:

a. Develop and distribute minutes of the MER anomaly resolution meetings.

b. Develop and distribute MER Daily Notes.

c. Develop and distribute minutes from the daily tagup meetings with the subsystem teams.

d. Support planning meetings.

e. Assist with Work Instruction development and revisions.

f. Assist with engineering report development.

4.3 Vehicle Integration Office Support

The Contractor shall perform the tasks identified below in support of the Vehicle Integration Office.

4.3.1 Engineering Services

The Contractor shall support the Vehicle Office by coordinating or leading the resolution of Vehicle system and system integration issues. This task includes representing the Vehicle Office in ISS decision forums, and providing oversight of preparation of flight products. The Contractor shall perform the tasks identified below:

a. Coordinate or lead the resolution of Vehicle system integration issues through participation in issue resolution meetings or teleconferences, review or preparation of presentation material for ISS

Program management, and communication of status and recommendations from the issue resolution team to the Program.

b. Represent the Vehicle Office in ISS boards, panels, and working groups. Coordinate with appropriate technical teams and management the technical and resource position of the Vehicle Office as it relates to topics represented at these forums.

c. Support design and integration reviews or audits to identify issues with hardware under development as it relates to impacts to the Vehicle hardware. Coordinate or lead resolution of identified issues.

4.3.2 Project Management

The Contractor shall perform project management, project engineer, and integration tasks associated with ISS systems development and sustaining efforts. This task will include serving as the facilitator and focal point for issues and concerns relating to the assigned systems integration tasks. The Contractor shall support the tasks identified below:

a. Evaluate, negotiate, and document requirements between hardware provider and ISS requirement stakeholders.

b. Evaluate and track hardware development issues and schedules with the provider.

c. Evaluate development designs through the Systems Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), and System Acceptance Review (SAR) process.

d. Monitor, track and negotiate changes to system work plans, schedules and cost within delegated authority.

e. Identify and assess threats to key milestones completion and corresponding program impacts.

f. Represent the Vehicle Office for assigned development projects and systems integration tasks at ISS reviews and meetings and present results of impact assessments.

g. Prepare Interdivisional Technical Agreement (ITA) status report addressing technical, cost and schedule issues associated risks.

h. Negotiate and resolve issues for projects that cross multiple ISS systems.

4.3.3 Schedule Analysis

The Contractor shall assist with the coordination of schedules, metrics, and risks associated with vehicle systems. The tools used should be available to all team members. The Contractor will work one-on-one with system managers and their teams and should be able to identify where there are gaps in existing scheduling functions and develop tools to bridge those planning gaps. The Contractor shall:

a. Discern key project and sustaining task milestones from system manager planning and major meetings.

b. Develop and maintain system work flow plans and schedules.

c. Incorporate individual project schedules into an integrated system management schedule.

4.3.4 Element Integration Support

The Contractor shall provide element integration support for assigned ISS elements and visiting vehicles. The Contractor shall perform the tasks identified below:

a. Evaluate change requests for applicability and impact to the elements managed by the Element Integration Team. Perform impact assessments of the change requests against baselined requirements and identify potential impacts to affected subsystems.

b. Support the verification and NASA acceptance of assigned Elements and visiting vehicles.

c. Coordinate the OMRSD process for assigned Elements and end items.

d. Provide leadership for the closure of requirements for flight through the CoFR process, assessing the status for a given flight and coordinating with the responsible technical teams to ensure closure of all issues.

4.3.5 OMRSD

The Contractor shall coordinate the OMRSD process for assigned elements and input the OMRSs into the system. The Contractor shall provide support to the subsystems when entering requirements into the system. The Contractor shall identify all mandatory evaluators, schedule required meetings, track the evaluations and action items dispositions and consolidate the ISS inputs.

4.3.6 Integrated Test and Verification

The Contractor shall perform test and verification analysis by providing assessments and recommendations regarding environmental testing of hardware items and assemblies. The contractor shall review test reports and procedures, Space Station Operations Data Book (SSODB) short sheets, and hardware certification records to ensure the certification records are accurate and complete. The contractor shall represent the Vehicle Office in Program forums and lead resolution of certification and assigned test and verification issues. In addition, the contractor shall perform the tasks identified below:

a. Manage the development, coordination and approval of Bilateral Verification Plans between NASA and the International Partners.

b. Review and provide recommendations on the verification approaches and Verification Logic proposed by the hardware provider(s).

c. Assess and provide recommendations on proposed verification and risk mitigation tests performed at KSC.

d. Review test planning documents and provide recommendations on the criticality and classification of the proposed test objectives and requirements for risk mitigation tests.

e. Review and provide recommendation to hardware provider proposals for test requirements, test procedures, test readiness review, test discrepancies and final test reports.

f. Review and comment on ISS Program change request related to the test and verification area.

g. Represent the test and verification team during the Multi Element Integrated testing (MEIT), Integrated Systems Test (IST), and Hardware Software Integrated Test (HSI). The contractor shall

have the technical expertise required and be able to make on-the-spot decisions regarding test discrepancies and configuration variances.

h. Review test reports and procedures for vehicle hardware items and integrated tests to understand the demonstrated capability and limitations of the hardware.

i. Review ISS hardware certification records for accuracy and completeness as demonstrated by test, analysis, or exception/waiver.

j. Represent the Vehicle Office as Core team lead for SSODB short sheet review and approval.

k. Coordinate with multiple disciplines to understand certification issues and communicate them to Vehicle Office Management.

4.3.7 Technical Integration Support

The Contractor shall provide technical integration support including verification and the sell-off of the International Partner (IP/Participant) hardware via verification Closure Notices/Qualification Reviews or equivalents, acceptance reviews and CoFR. The Contractor shall perform the following tasks:

a. Conduct Functional Configuration Audit (FCA) or equivalent pre-audit checklist reviews at review minus (R-60) and review minus fourteen (R-14) day review readiness assessments and daily audit status reviews for the assigned USOS and IP/P elements. Checklists and reviews shall be conducted in accordance with the FCA process. Each element will have the FCA process tailored based on needs and agreements.
   i. Prepare audit readiness recommendations for the NASA element integration manager.
   ii. Gather materials required for review documentation in the form of notebooks that will aid each individual team to close out their verification activities.
   iii. Input and Maintain data in program-supported tracking database.
   iv. Participate in the preparation of in-briefs and out-briefs for program management.
   vi. Aid in the facilitation and implementation of review process.

b. Provide process definition and documentation for the conduct of Qualification (or equivalent) and Acceptance review meetings for assigned USOS, IP/P Elements. Tailor processes used for US ISS Pressurized and Unpressurized Element reviews to those to be used for IP/P elements. Customize process flows for each element based on lessons learned, complexity of element systems, needs and international agreements.

c. Investigate and report status of all open NASA action items and Verification Closure Notices (VCNs) via the Open Paper Management Tool (OPMT) for assigned USOS, IP, and IP/P Elements through the following review processes: Qualification Reviews or equivalents, pre-ARB, ARB and CoFR. Provide a summary report of open items for each scheduled review. Conduct daily status meetings during reviews to ensure consistent processes are being implemented. Document issues as action items into OPMT.

d. Coordinate the OMRSD process for assigned Elements and input the OMRSs into the system. Provide support to the subsystems when entering the requirements into the system. Identify all

mandatory evaluators, schedule required meetings, track the evaluations and action item dispositions, and consolidate the ISS inputs.

e. Support the Test and Verification (T&V) element manager in the coordinating the ISS subsystems review of changes and requirements related to the test and verification area. The contractor shall coordinate and schedule the meeting and teleconference required to support T&V issue resolution and requirements reviews.

f. Develop and maintain the distribution list for the specific element T&V team. The contractor shall generate, distribute, and maintain T&V meeting agendas and minutes.

g. Coordinate the OMRSD process and review for the T&V items. Identify all mandatory evaluators, schedule required meetings, track the evaluations and action items dispositions, and consolidate the ISS inputs.

h. Support the T&V element manager in the review and closure of the element specific VCNs.

i. Track Space Station Operations Data Book (SSODB) short sheet and hardware certification records.

4.3.8 Cable and Fluid Constraint Verification

The Contractor shall provide verification of ISS fluid line and electrical cable on-orbit constraints. The contractor shall perform the tasks identified below:

a. Define and implement on-orbit constraints testing necessary to complete ISS line/cable verifications for USOS and IP/P elements and participate in test planning and performance assessments.

b. Provide closure of requirements for flight through the COFR process.

c. Review VCNs for the ISS line/cable on-orbit constraints and provide recommendations to the Vehicle Office management and coordinate issues and open work with the responsible technical teams.

d. Coordinate the resolution of Vehicle line/cable on-orbit constraints issues through participation in issue resolution meetings or teleconferences, review or preparation of presentation material for ISS Program management, and communication of status and recommendations from the issue resolution team to the Program.

4.3.9 Resolution of Leak Test Issues

The Contractor shall coordinate the resolution of leak test issues. This task includes representing the Vehicle Office in ISS decision forums, and providing oversight of preparation of flight products. The Contractor shall perform the following tasks:

a. Support the Test and Verification Team in the definition of ISS unique leak test requirements for the parts (e.g. QD, seal), subcomponents (e.g. flex hoses, tanks, pumps), systems (e.g. thermal control systems, ECLSS), and Elements (e.g. Node 2, Node 3, CAM).

b. Define the acceptable test methods for leak testing, and review and concur with the test objectives and minimum configuration.

c. Represent the T&V team at QD SPRT meetings.

d. Manage the development, coordination and approval of Bilateral Verification Plans between NASA and the International Partners.

e. Provide assessments and recommendations regarding proposed Element leak tests performed at KSC.

f. Review test planning documents and provide recommendations on the criticality and classification of the proposed test objectives and requirements for risk mitigation tests.

g. Review and provide recommendation to hardware provider proposals for: test requirements, test procedures, test readiness review, test discrepancies and final test reports.

4.4 Hardware Projects Office Support

The Contractor shall integrate assigned hardware projects. The contractor shall coordinate the resolution of integration issues. This task includes representing the Vehicle Office in ISS decision forums, and providing oversight of the preparation of flight products. The Contractor shall perform the following tasks:

a. Coordinate or lead the resolution of integration issues with stakeholders through participation in meetings, teleconferences, reviews, and other communications.

b. Communicate status and recommendation to the Vehicle Office and to ISS Management.

c. Participate in overall ISS Hardware Projects Office policy, schedule, and budget development.

d. Represent the Hardware projects Office in ISS boards, panels, and working groups at JSC, other NASA Centers, and to International Partner forums. Coordinate the technical and resource position of the Vehicle Office with appropriate technical teams and management.

e. Support design, development, and integration reviews to identify issues with hardware under development as it relates to impacts to Vehicle hardware and goals. Coordinate resolution of identified issues.

4.5 Logistics and Maintenance Office

4.5.1 The Contractor shall support the teams and meetings of the Logistics and Maintenance Office of the Vehicle Office. Tasks shall include support to the Logistics and Maintenance Control Panel, the Maintenance and Resupply Team, and the Logistics Engineering Operations Working Group. The Contractor shall perform the tasks identified below:

a. Schedule meetings and telecoms for US and IP/P Logistics and Maintenance conferences. Conferences include weekly meetings on Logistics and Maintenance Integration, Logistics Engineering and On-Orbit Maintenance Operations.

b. As needed, coordinate conference rooms, telecon numbers, distribution of presentation materials, and reproduction.

c. Distribute agendas and other Logistics and Maintenance information and post information on web sites as needed.

d. Track action items, develop minutes and protocols.

4.6 Management Integration Office Support

The Contractor shall serve as the Vehicle Office Point of Contact (POC) for CR evaluations, TCM notices and Directive closures. The Contractor shall perform the following tasks:

a. Represent the Vehicle Office to the Configuration Management coordination reviews.

b. Maintain a CR Mandatory Evaluation tracking system; maintain files on-line of all activity regarding CRs comments, EA evaluations and completions of CRs by the OB office. Maintain records and databases of CRs and other documentation for the Vehicle Office.

c. Identify appropriate Vehicle evaluators, distribute evaluation packages for internal review, and monitor evaluation due dates.

d. Consolidate all completed evaluations, comments and issues, submit them to Vehicle Management for approval and submit them to NASA and Boeing Change Management Receipt Desks.

e. Provide regular status to the Vehicle Office Management regarding CR processing metrics.

4.6.1 CoFR Process Support

The Contractor shall coordinate the development and update of the Vehicle Offices' CoFR plans and processes. Specific tasks shall include the following:

a. Assisting in the definition of and documentation of the Vehicle Office CoFR Implementation Plan.

b. Coordinating and supporting the SORR development and presentation for the IP flights and USOS flights as necessary.

4.7 Book Coordination Support

The Contractor shall provide book coordination support to the Vehicle Office for the following documents:

Document Number	Document Title
SSP 50470	Crew Health Care System (CHeCS) Specification
SSP 50821	Requirements Specification for the International Space Station (ISS) Second Treadmill (T2)
SSP 50834	ISS Vehicle Office Management and Hardware Development Plan

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. (If any): NNJ09____C
3. ORDER NO.: Task Order #9
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE (Address correspondence to): BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
[ ] a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, ON

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL
[ ] b. OTHER THAN SMALL
[ ] c. DISADVANTAGED
[ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED
[ ] e. HUBZone
[ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #9 – INTERNATIONAL PARTNER (IP) ELEMENTS INTEGRATION MANAGEMENT SUPPORT					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages)

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS (or P.O. Box)
c. CITY
d. STATE
e. ZIP CODE

SEE BILLING INSTRUCTIONS ON REVERSE

$XXXXXX.XX

17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 4/2006)
Prescribed by GSA/FAR 48 CFR 53.213(f)

I. TITLE OF EFFORT: International Partner (IP) Elements Integration Management Support

II. TASK DESCRIPTION:

The Contractor shall provide technical support as described in the PI&C Contract Section C, Statement of Work, for the SOW tasks listed below.

III. STATEMENT OF WORK REFERENCE: 1.5 International Integration

IV. REQUIREMENTS / DELIVERABLES / SCHEDULE:

1.0 IP Elements Integration Management

Under contract SOW 1.5.3 IP Elements Integration Management, the Contractor shall perform the following tasks:

The Contractor shall provide technical support to the NASA IP Element Integration Manager (EIM) in managing and overseeing the tasks necessary to integrate the IP Elements into the ISS. 'IP Elements' are defined as: JEM, HTV, ATV, MSS, SPDM, MLM (including ERA), MRM1, MRM2, SM, DC1, Soyuz, and Progress. The scope of this support includes, but is not limited to:

(a) Confirming the IP Elements meet their ISSP requirements

(b) Confirming the IP Elements are ready for flight

(c) Ensuring that NASA meets applicable ISS requirements associated with integrating the IP Elements

(d) Ensuring that NASA and its contractors comply with relevant bilateral agreements.

The Contractor shall perform the tasks identified below in support of IP Element Integration Management. Additional tasks (not listed) may be required within the scope defined above.

1. Work with the Program Data Integration team, which provides the book coordination function, to facilitate the technical development, coordination with IPs, management approval, and implementation of the IP BDEALS documents.

2. Work with the Mission Integration team, which provides the book coordination function, to facilitate the technical development, coordination with IPs, management approval, and implementation of the IP BHSEALS documents.

3. Distribute Element technical, programmatic and operations data for review by ISS Program technical teams and collect assessments and comments to this data from the teams.

4. Facilitate ISS Program teams' communications with IPs and IP Contractors.

5. Provide responses to communications and data requests from IP and ISS Program teams in accordance with teams' schedules.

6. Coordinate shipment of items to and from the IPs with the ISS Program shipping coordinator in the Mission Integration team.

7. Facilitate and coordinate the resolution of issues associated with integrating the IP Elements, as necessary, and report status of issues regularly to the NASA EIM.

8. Facilitate and coordinate the closure of action items associated with integrating the IP Elements, as necessary, and track and report status of all action items regularly to the NASA EIM.

9. Initiate or coordinate CRs to maintain and update the ISS design and requirements baseline for IP Elements.

10. Support development, coordination and maintenance of the Program Integration office IP CoFR implementation plans, and IP Element Acceptance/Assessment Review Plans.

11. Plan and coordinate the ISS Program teams' participation in the IP design, qualification, certification, and pre-shipment reviews.

    (i) Develop ISS Program Support Plans for IP Milestone Reviews.

    (ii) Review IP Design, Qualification and Certification Review data packages for compliance with ISS Program requirements and policies.

    (iii) Track and facilitate closure of issues and action items.

12. Coordinate IP EIM team support to ISS Program Milestone and Launch Package reviews in the ISS Mission Integration Template

13. Provide consolidated Element team inputs to mission requirements, increment definition requirements, and manifest requirements for IP Element flights.

14. Coordinate with KSC and IP regarding IP Element hardware processing in the SSPF, to provide programmatic coordination including review of integrated IP Element schedules, status of hardware processing, status of action items, and development and coordination of meeting agendas. After handover of the IP Element hardware to Shuttle Integration, support the Launch Package Management teams to coordinate element related processing issues.

15. Coordinate with ISS Program and IP Operations teams the planning and implementation of IP Elements flight operations, which includes participation in ISS Program SIRs and review of the IP Element operations documentation, such as operational timelines, procedures and flight rules.

16. Staff the ISS Increment Management Center and MER consoles during IP Elements' assembly flights, flights involving CSA robotics missions, and first-time IP visiting vehicle flights (e.g., HTV and ATV). Staff an ISS MER console on an as-needed basis after the initial IP assembly flights and first-time IP visiting vehicle flights.

2.0 Meeting and Documentation Support

Under contract SOW 3.1.1.1 Engineering and Technical Services and Program WBS 1.5.3 IP Elements Integration Management, the Contractor shall perform the following activities to provide the Element Integration Management Teams with meeting and documentation support.

1. Meeting Support is provided for:

   (a) Technical Interchange Meetings

   (b) Milestone Reviews,

      (i) Preliminary Design Reviews

      (ii) Critical Design Reviews

      (iii) Qualification Reviews

      (iv) Acceptance Reviews

   (c) Element Integration Meetings

   (d) Other meetings as necessary

2. Meeting support tasks include:

   (a) Scheduling conference calls

   (b) Producing design review plans

   (c) Developing and maintaining agendas and calendar of events

   (d) Preparing meeting minutes

   (e) Compiling presentations and electronically distributing items to the appropriate team

   (f) Tracking actions, issues, and Review Item Discrepancies (RIDs)

   (g) Generating and maintaining travel lists

   (h) Data entry and database management of RIDs for milestone reviews.

3. Documentation support tasks include:

   (a) Documentation management

   (b) Filing and archiving project-related documentation

   (c) Photocopying meeting presentations and other documentation as necessary

   (d) Formatting documentation

(e) Converting documents from various formats to PDF files

(f) Scanning hard copies into electronic format for posting on the internet

(g) Distributing documentation to team members

(h) Maintaining intranet sites and managing content

(i) Posting project related documentation to the appropriate internet site

(j) Serve as Curator of the Program Integration Office homepage

(k) Coordinate all Program Integration Office web site curators

(l) Develop and maintain the OM 1,2,3,4, & 7 web sites

(m)Ensure all applicable OM web pages are registered and compliant with NASA standards

V. PERIOD OF PERFORMANCE: October 1, 2009- September 30, 2010

VI. TRAVEL REQUIREMENTS:

VII. ESTIMATED PRICE BREAKOUT:

APPENDIX 4
Sample Products

The following table provides examples of products for the Program Integration and Control Contract. These sample products are viewable in the technical library.

SOW Para #	Product Name
1.2.5.1	Contract activity/milestone chart
1.2.5.1.1	Integrated Program Summary Schedule
1.2.5.1.2	Integrated Program Summary Schedule (baseline vs performance, trend charts)
1.2.5.3	ISS Control Account Manager Project Schedule (Hardware/Subsystem design and development)
1.2.5.4	ISS Program Planning Calendar (Sr. Management Meetings/Activity)
1.2.5.4	Certification of Flight Readiness (CoFR) Review Matrix
1.2.5.5	Schedule Risk Assessment
1.3.1.3.4	Sample Control Board Minutes
1.3.1.3.7	Sample Change Paper – CR
1.3.1.3.7	Sample Change Paper – MEL
1.3.1.3.7	Sample Change Paper – CR Eval Form
1.3.1.3.7	Sample Change Paper – TCM Minutes
1.3.1.3.7	Sample Change Paper – Executive Summary
1.3.1.3.7	Sample Change Paper – Directive Concurrence Sheet
1.3.1.3.7	Sample Change Paper – Directive
1.3.1.3.7	MD, JPD and PPD (see Tier 1 documents)
1.3.2.1.4	BDEALS (see Tier 1 documents)
1.5.3	Draft Acceptance checklist
1.5.3	Draft Acceptance Plan
1.5.3	SSCN 2632
1.5.3	Terms of Agreement for Exchange of CAM DDCU
1.5.3	Support Plan Addendum for the NASDA JEM Second Post Qualification Review (PQR2) Revision Draft
1.5.3	HTV Status 2/26/03
2.2.1.1	ISS System Spec (see Tier 2 documents)
2.2.1.1	ISPR ICD (see Tier 2 documents)
2.2.1.3.1 (a)	ICD Metric
2.2.1.3.1 (b)	NASDA JEM Element Manager Report
2.2.1.3.3	Interface Memorandum
2.2.1.3.4	PIRN
2.2.1.4	Solar Flux
2.2.2.1.1	12A Mated Attitude Issues
2.2.2.1.2	ISS Altitude Strategy Status
2.2.2.1.3	Russian Vehicle Docking Capability Improvement Options
2.2.2.1.4.2	VIPeR ISS Solar Beta Angle Projection

PROGRAM INTEGRATION AND CONTROL

SOW Para #	Product Name
2.2.2.1.4.4	VIPeR Task Description Sheet
2.2.2.1.4.4	IVC Analysis Abstract
2.2.2.1.4.4	IVC Analysis Graphics
2.2.2.1.4.4	IVC Working Group Charter
2.2.2.1.4.7	VIPeR Traffic Model Analysis Final Results
2.2.2.1.4.7	VIPER MIS/IMPR Inputs
2.2.2.1.5	STRAP 6.2 Validation
2.2.2.2.1	Closure of SIR8-0023 TRRJ
2.2.2.2.2	P4 Solar Array Deployment Attitude, SARJ, AND BGA Configuration
2.2.2.2.2	Primary Power Channel Activation Flow Chart
2.2.2.2.3	SIR 10 Instructions for Technical Teams and Launch Package Teams
2.2.2.2.3	Stage Integration Review 9 (SIR 9) 10A, ULF2 Pre-Board Sept. 5, 2002
2.2.2.2.3	AOE/Risk/SIR/SAR Issues by Flight First Affected Flight - 8A
2.2.2.3.1	ISS Flight UF-2 Launch-to-Activation Analysis
2.2.2.3.2	Flight 12A Assessment of Loads Due to an Orbiter Final Separation Burn with ISS in XPOP Attitude
2.2.2.3.3-4	EETCS Heat Rejection Capability
2.2.2.3.5	PP2 and PP3 Energy Allocations
2.2.3.1.1	Integrated Flight Schedule
2.2.3.1.2	Crew Rotation Assessment
2.2.3.1.3	BASEPLATE
2.2.3.1.4	Reference Assembly Sequence
2.2.3.1.5	Assembly Sequence Overview
2.2.3.1.8	Flight Overview Guidelines
2.2.3.1.10	Operations Summary Document (see Tier 1 documents)
2.2.3.2.3	Assembly Matrix
2.2.3.2.6	External Configuration Protocol Presentation
2.2.3.2.6	External Configuration Protocol Doc.
2.2.3.2.7	ISS/SSP On-Orbit ICD
2.2.3.2.8	STS-115/12A On-Orbit Vehicle Configuration Data Sources, enclosure
2.2.3.2.8	STS-115/12A On-Orbit Vehicle Configuration Data Sources, memorandum
2.2.3.2.10	Docking Port Status 9Prog-M1 Undock - 13A.1 Dock
2.2.3.2.11	Graphics 1
2.2.3.2.11	Graphics 2
2.2.3.2.11	Graphics 3
2.2.3.2.11	Electronic Mass Property File
2.2.3.2.11	Summary of System Components and mass properties
2.2.3.2.11	Blue Book Vol. I (JSC 26557) (see Tier 1 documents)
2.2.3.2.11	Blue Book Vol. II (JSC 26557) (see Tier 1 documents)
3.1.1.1	Detailed Verification Objective
3.1.1.1	Verification Closure Notice
3.1.1.1.2.3	ISS Test and Verification Control Panel PMI&VP Implementation Instruction PII-001-RIA, 01/31/02 Requirement Interpretation Agreement

SOW Para #	Product Name
3.1.1.1.2.3	NASA Approval of Reverification Assessments
3.1.1.1.2.3	NASA Concurrence of Test Objectives Agreements
3.1.1.1.2.3	NASA Approval of Test Article Configuration Variances
3.1.1.1.2.4	9A CA/FA Audit – Status As Of 6/10/02
3.1.1.1.2.4	CA/FA Flight Specific Summary Forward Work – Status 1/24/03
3.1.1.1.2.5	Example Project Status
6.2.1	Minutes and Protocol from IF Milestone Review/Technical; OE-SP-001 Interchange Meeting
6.2.2	S&MA Change Review Package; OE-SP-002
6.3.1	IRMA Status Report for Program Risk Assessment Board (PRAB); OE-SP-003
6.3.1	ISS Top Program Risks; OE-SP-004
6.3.5	ISS PRA Trade Study for Uncrewed Station; OE-SP-005
6.6.2	Acceptance Review Audit Report; OE-SP-006

APPENDIX 5
SAMPLE GUIDELINES

Standard Labor Categories (SLC)

Standard Labor Categories (SLC) applicable to this contract are provided to facilitate a consistent evaluation among Offerors. Table L-1 addresses the recommended qualifications and experience levels of SLC that are to be used for proposal purposes. When describing the proposed labor necessary to accomplish the SOW, the SLCs provided in Table L-1 shall be used in the basis of estimates and Table of Resources (Table L-3) described in the following paragraphs. Offerors are not excluded from including other additional labor categories that cannot be easily or logically mapped to those provided in Table L-1. Job descriptions similar to the ones listed in Table L-1 shall be provided for the additional other categories.

Examples of Skills Mapping

The skills below are provided only as examples of how certain labor categories proposed by the offeror may fit into the SLCs identified by Government.

Analyst
CDM Specialist
CM Administrator
Junior Configuration Management Analyst
Senior Configuration Management Analyst

Technical Professional
Aerospace Engineer
Electrical Engineer
Mathematician
Project Engineer
Safety/Quality/Reliability Engineer
Thermal Engineer

Technician
Computer Technician
Data Warehouse Specialist
Info Systems Specialist

Business Specialist
Senior Staff Assistant
Staff Professional Specialist
Professional Specialist

Table L-1 Standard Labor Categories

SLC:	Job Description Guidelines
Program Manager (On-Site/Off-Site)	Serves as the Contractor's primary contract manager, and shall be the Contractor's authorized interface with the Government Contracting Officer (CO), the contract level Contracting Officer's Technical Representative (COTR), Government management personnel and customer agency representatives. Responsible for formulating and enforcing work standards, assigning Contractor schedules, reviewing work discrepancies, and supervising Contractor personnel and communicating policies, purposes, and goals of the organization to subordinates. Shall be responsible for the overall contract performance. Typically requires a bachelor's degree or 10 years of equivalent experience.
Manager I	Manager without degree, with experience in progressively challenging technical and management positions, including successfully managing people.
Manager	A BS/BA degree or higher with experience in progressively challenging technical and management positions, including successfully managing people.
Supervisor	3 or more years experience in technical positions with experience in supervising or directing other technical personnel.
Technical Professional IV	A BS degree in engineering, math or science with a minimum of 15 years of professional experience, performing professional work in design, development, test, etc. Recognized expert in their field of specialization.
Technical Professional III	A BS degree in engineering, math or science with a minimum of 10 years of professional experience, performing professional work in design, development, test, etc.
Technical Professional II	A BS degree in engineering, math or science with a minimum of 5 years of professional experience, performing professional work in design, development, test, etc.
Technical Professional I	A BS degree in engineering, math or science performing professional work in design, development, test, etc.
IT Professional III	A BA/BS degree in computer science or related field and minimum of 10 years of professional equivalent experience.
IT Professional II	A BA/BS degree in computer science or related field and minimum 5 years of professional equivalent experience.
IT Professional I	A BA/BS degree in computer science or related field or equivalent experience in related field.
Analyst III	A BA/BS degree in the field of specialization and at least 3 years specialized experience.
Analyst II	A BA/BS degree in the field of specialization and at least 1

SLC:	Job Description Guidelines
	year specialized experience, ability to serve as lead.
Analyst I	No degree with at least 2 years specialized experience or an Associated degree in the field of specialization.
Secretary	Secretarial training and demonstrated secretarial skills.
Clerk	Entry-level clerical position
Business Specialist II	A BS or BA degree with a minimum of 10 years of professional experience with a specialty in a business management field, project scheduling and project controls functions, supervision and administration or other field with equivalent qualifying experience.
Business Specialist I	A BS or BA degree with a minimum of 5 years of professional experience with a specialty in a business management field, project scheduling and project controls functions and administration or other field with equivalent qualifying experience.
Business Specialist	A BS or BA degree with a specialty in a business management field or other field with qualifying experience.
Data/Documentation Management Specialist	Experience with software tools such as MS Powerpoint, Excel, Word and other common office applications.
Other	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/or experience for all additional labor categories.)

Table L-2: PI&C SOW Proposal Level of Detail and WYEs

Column 4 of the table below, shall be the sum of all subordinate SOW areas.

Column 1	Column 2	Column 3	Column 4
Detail (D) Rollup (R)	SOW	Title	*FY 2010 **WYEs (12 mo.)
			IDIQ
R	0.0	Total PI&C Contract	
D	1.1	Program Management	
R	1.2	Business Management	
D	1.2.3	Resources Management	
D	1.2.4	ISS Budget Support/Assessments	
D	1.2.5	Program Scheduling	
R	1.3.1	Configuration Management	
D	1.3.1.1	Management and Administration	
D	1.3.1.2	Configuration Status Accounting and Verification	
D	1.3.1.3	Configuration Control	
D	1.3.2	Program Data Management and Integration	
R	1.4	Program Information Technology (IT)	
D	1.4.1	IT Management	
D	1.4.2	IT Systems Management and Operations	
D	1.5.3	IP Elements Integration Management	
R	2.2	Systems Analysis and Integration	
D	2.2.1	Program Requirements and Interfaces	
D	2.2.2	System Performance Analysis and Integration	
D	2.2.3	Strategic Planning, Assembly and Configuration Engineering	
D	3.1.1	Vehicle Technical Integration	
R	3.2	Visiting Vehicles	
R	6.0	Safety and Mission Assurance (S&MA)	
R	6.1	S&MA Management and Administration	
R	6.2	S&MA Integration	
D	6.3	Program Risk Management	
R	6.6	Quality Assurance	
R	6.7	Operations Safety	

NOTE: This table is not a full representation of the SOW in its entirety.
* Excludes indirect/overhead WYEs.
**Work Year Equivalent (WYE) is a full time equivalent defined as the proposed productive hours needed to comprise one average full time employee. This may be

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: TBD
2. CONTRACT NO. *(If any)*: NNJ09____C
3. ORDER NO.: Task Order #1
4. REQUISITION/REFERENCE NO.: N/A
5. ISSUING OFFICE *(Address correspondence to)*: BG/Andrea R. Falls, Contracting Officer

6. SHIP TO:
a. NAME OF CONSIGNEE: Transportation Officer, Building 421, NASA-JSC
b. STREET ADDRESS: 2101 NASA Parkway
c. CITY: Houston
d. STATE: TX
e. ZIP CODE: 77054
f. SHIP VIA:

7. TO: TBD
a. NAME OF CONTRACTOR: TBD
b. COMPANY NAME: TBD
c. STREET ADDRESS: TBD
d. CITY: TBD
e. STATE: TBD
f. ZIP CODE: TBD

8. TYPE OF ORDER
☐ a. PURCHASE
REFERENCE YOUR: _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

☒ b. DELIVERY -- Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: N/A
10. REQUISITIONING OFFICE: ISS Program Office, OH

11. BUSINESS CLASSIFICATION *(Check appropriate box(es))*
☐ a. SMALL ☐ b. OTHER THAN SMALL ☐ c. DISADVANTAGED ☐ g. SERVICE-DISABLED VETERAN-OWNED
☐ d. WOMEN-OWNED ☐ e. HUBZone ☐ f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: DESTINATION

13. PLACE OF
a. INSPECTION: DESTINATION
b. ACCEPTANCE: DESTINATION

14. GOVERNMENT B/L NO.:
15. DELIVER TO F.O.B. POINT ON OR BEFORE *(Date)*: TBD
16. DISCOUNT TERMS: TBD

17. SCHEDULE *(See reverse for Rejections)*

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Task Order #1 – MANAGEMENT INTEGRATION AND CONTROL – Business Management					
	Estimated Labor	XXX hrs.			$XXXXX.XX	
	Travel				$XXX.XX	
	Materials				$XXXX.XX	

SEE BILLING INSTRUCTIONS ON REVERSE

18. SHIPPING POINT:
19. GROSS SHIPPING WEIGHT:
20. INVOICE NO.:

21. MAIL INVOICE TO:
a. NAME: Same as Block 5
b. STREET ADDRESS *(or P.O. Box)*:
c. CITY:
d. STATE:
e. ZIP CODE:

17(h) TOT. *(Cont. pages)*:
17(i) GRAND TOTAL: $XXXXXX.XX

22. UNITED STATES OF AMERICA BY *(Signature)*:

23. NAME *(Typed)*:
TITLE: CONTRACTING/ORDERING OFFICER

one employee or several part time employees. Productive hours are defined as the total available hours for productive work in a year, excluding overtime, less paid time off.

APPENDIX 6
TECHNICAL UNDERSTANDING - FORMATS AND EXAMPLES

The following is the format(s) and example(s) for the Volume I - Technical Approach sections:

A. TECHNICAL UNDERSTANDING/APPROACH

1. Format

The offeror shall address the following:

Technical Understanding of Requirements: Describe your approach for performing the tasks required by the Statement of Work for the detailed and subordinate requirements. Provide sufficient discussion to fully demonstrate your understanding of the technical requirements in this area including the processes and plans for coordinating and interfacing with other ISS Program Contractors and International Partners. It is inadequate to simply state that the Offeror understands and will comply with the requirements, or to paraphrase the requirements such as: "standard procedures will be employed to..." and "well-known techniques will be used for...". Comprehensively explain how you propose to comply with the applicable requirements, as well as the techniques and procedures you propose to implement.

IT Tools: Describe the IT tools (software applications, databases, analytical tools, etc.) proposed to effectively and efficiently perform contract requirements. For any proposed IT tool you shall, (1) fully describe the tool, (2) identify if it is a commercial-off-the-shelf (COTS) product or custom developed, (3) identify any proprietary restrictions, (4) identify if it is an available GFD tool currently in use by the ISS Program, (5) identify any existing tools it is intended to replace, (6) describe how any existing tools would be transitioned to the new tool, (7) identify the contract requirements that will benefit from using the new tool, and (8) describe how the tool can improve performance. The Offeror shall be prepared to provide a demonstration of any new tool not currently in use by the ISS Program proposed to perform contract requirements if requested by the Government.

Risks: Describe the processes you will use to accurately identify, monitor, and control cost, schedule, and technical risks. Identify any specific risks relative to performance of work under the SOW and any plans to mitigate those risks.

2. Example

SOW 1.1.1.1: Planning and Reviews

Technical Understanding of Requirements: We plan to develop, maintain and implement a management plan in the following manner... Integrated financial review products will be provided in the following manner...

IT Tools: We have identified the following tools...These tools are currently operating on the following contracts...

Risk: The following risks have been identified for this area...We plan to monitor the risk by performing...The risk will be controlled by performing the following:...The proposed mitigation procedures are...

B. BASIS OF ESTIMATE (BOE) AND ASSUMPTIONS

1. Format

Explain the BOE for the WYEs by providing supporting rationale for all resources proposed. Labor resources are to be proposed for full 12-month period of performance. For example, if a person is only needed full time for 6 months to do a task over a 12-month period, then this would be proposed at 0.5 WYE. If a person is required full time, for 12 months, to do a task over a 12-month period, then this would be proposed at 1 WYE. Repeating for clarity, a WYE is a full time equivalent defined as the proposed productive hours needed to comprise one average full time employee. This may be one employee or several part time employees. Productive hours are defined as the total available hours for productive work in a year, excluding overtime, less paid time off.

Include a discussion regarding how the proposed resources were estimated. Also, include a discussion associated with any assumptions made regarding the scope of work that led to the proposed resources such as: "we assume that a verification plan for the XYZ deliverables already exist and all we are responsible for is the maintenance of the plan." Include sufficient narrative discussion to demonstrate to the Government the proposed resources are realistic based on your technical and management approach.

2. Example

The approach is based upon a grass roots estimate of the required effort for planning, coordinating, reviewing, maintaining and implementing planning methodology. The amount of resources proposed in the table above was developed based on a review of the DRD requirements of this area and...The proposed skills were based on...The skill XYZ was added because it could not be

easily mapped and will be performing the following function...(Include job description).

C. EFFICIENCIES OR COST SAVINGS

1. Format:

Explain any efficiencies or cost savings, including improvement curves, in sufficient detail to allow for a comprehensive analysis, if applicable. Efficiencies or cost savings that span the entire SOW should be addressed in Section A.1 (overall technical approach) of the Technical Approach area of Volume I. Efficiencies or cost savings specifically associated with lower level SOW areas should be addressed in Section A.2 (Technical Understanding/ Resources) of the Technical Approach area of Volume I.

If efficiencies, cost savings, or improvement curves are being proposed, ensure you provide sufficient supporting information to perform a review. Make sure historical references to other contracts are relevant in size and complexity. Explain in detail how you can actually achieve whatever percentage savings you are proposing. Also describe efficiencies or cost savings measures for the post FY 2010 contract years, if proposed. Provide established and proven methodologies, processes and techniques that demonstrate to the Government that you can perform the SOW with the proposed resources.

2. Example:

We proposed a reduction of X% for labor resources based on...(Be very specific with historical experience to support this reduction.) Efficiencies will be derived through a reduction of personnel made possible by the...

D. TABLE OF RESOURCES

1. Format

Table L-3 shall be in an embedded format supported by Microsoft Excel and must follow the narrative discussion of items A B, and C above. The tables must reconcile to the Summary Price Template (SPT) required in the price proposal (Volume IV). The rollup summary tables must reconcile with the details and must reconcile with price proposal as indicated in the price proposal instructions for the IDIQ Workbook, reference Section L, Appendix 2.

Offerors shall use the Standard Labor Categories as previously discussed and defined in Table L-2. Include **all** direct labor resources necessary (prime and subcontractors combined) to accomplish the requirements.

Table L-3 Table of Resources

NASA PI&C RFP Standard Labor Category	WYEs	SOW X.X.X
Labor Categories:		
Program Manager		
Manager I		
Manager		
Supervisor		
Technical Professional IV		
Technical Professional III		
Technical Professional II		
Technical Professional I		
IT Professional III		
IT Professional II		
IT Professional I		
Analyst III		
Analyst II		
Analyst I		
Secretary		
Clerk		
Business Specialist II		
Business Specialist I		
Business Specialist		
Data/Documentation Mgmt. Specialist		
Other – OFF Site		
Program Manager		
Technical Professional IV		

Technical Professional
Business Specialist II
Business Specialist

2. Example

NASA PI&C *RFP Standard Labor Category*	SOW 1.1.1.1	WYEs
Labor Categories:		
Supervisor		2
IT Professional I		6
Analyst III		2
Analyst I		2
Secretary		1
Clerk		2
Business Specialist		1
Data/Doc Mgmt Specialist		1
Other		
XYZ		1
TOTAL WYE PRIME AND ALL SUBS		18

SECTION M - EVALUATION FACTORS FOR AWARD TO OFFERORS

M.1 LISTING OF PROVISIONS 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		

(End of provision)

1.0 GENERAL

The Offeror's proposal will be evaluated by a Source Evaluation Board (SEB) in accordance with applicable regulations which include the FAR and the NASA FAR Supplement. The SEB will carry out the evaluation activities and report its findings to the Source Selection Authority (SSA), who is responsible for making the source selection decision.

2.0 FAR 52-217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined by FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(End of provision)

3.0 SOURCE EVALUATION FACTORS

Proposals will be evaluated in accordance with the following factors: Mission Suitability, Past Performance, and Price. A brief description of each of these factors is set forth below. Only the Mission Suitability factor will be weighed and scored. The Government's intent regarding discussions with Offerors in the competitive range is set forth in provision 52.215-1, Instructions To Offerors – Competitive Acquisitions (JAN 2004) (Alternate I) (OCT 1997) in Section L.

Volume No.	Title	Evaluation Factor	Evaluation Subfactor
Volume I	**Technical and Management Approach**		
	TA. Technical Approach		
	TA1. Overall Technical Approach	M.4.0.1 Mission Suitability	TA: Technical Approach
	TA2. Specific Technical Understanding and Associated Resources	M.4.0.1 Mission Suitability	TA: Technical Approach
	TA3. Operational Scenario	M.4.0.1 Mission Suitability	TA: Technical Approach
	MA. Management Approach		
	MA1. Overall Management Approach	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
	MA2. Key Personnel (Att. L-1 resumes not included in page limit)	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
	SA. Safety and Health Approach		
	SA1. Overall Management Approach		
Volume II	**Plans**		
	A. Annual Performance Feedback Plan	M.4.0.1 Mission Suitability	TA: Tech and MA: Mgmt. Approach
	B. Phase-in/Transition Plan	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
	C. Total Compensation Plan	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
	D. Associate Contracting Agreements	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
	E. IT Management and Security Plans	M.4.0.1 Mission Suitability	TA: Tech and MA: Mgmt. Approach

Volume No.	Title	Evaluation Factor	Evaluation Subfactor
Volume II	**Plans (Continued)**		
	F. Organizational Conflict of Interest Avoidance Plan	M.4.0.1 Mission Suitability	MA: Mgmt. Approach
Volume III	**Past Performance**	M.6 Past Performance	----------
Volume IV	**Price Proposal**	M.7 Price Proposal Evaluation	----------
Volume V	**Other Required Data**		
	A. Ostensible Subcontractor Approach	M.8 Ostensible Subcontractor Approach	----------
	B. Model Contract Offerors shall also submit three (3) original executed model contracts, Sections A-J, with all fill-ins completed (those fill-ins required to be completed by the Offeror) and a completed Section K Representations and Certifications`	----------	----------

4.0 VOLUME 1 – TECHNICAL AND MANAGEMENT APPROACH

4.0.1 MISSION SUITABILITY FACTOR

The Mission Suitability factor and associated subfactors are used to assess the merit of the work or product proposed and the ability of the Offeror to actually provide what is offered. Proposals will be evaluated and scored numerically based on the subfactors set forth below.

4.0.2 RELATIVE IMPORTANCE OF SUBFACTORS

The Mission Suitability subfactors and their corresponding weights reflecting relative importance are listed below. These weights will be used as a guideline in the source selection decision-making process.

Subfactor	Points
A: Technical Approach (TA)	500
B: Management Approach (MA)	400
C: Safety and Health Approach (SA)	100
TOTAL	1000

4.1 MISSION SUITABILITY SUBFACTORS

TA Subfactor A: Technical Approach

TA1. Overall Technical Approach

The Government will evaluate the effectiveness, soundness, efficiency, and innovative approaches of the Offeror's overall technical rationale and approach to accomplishing Statement of Work requirements. For technical activities that apply contract wide, the Government will evaluate the effectiveness of ensuring the technical integration of the key SOW functional areas and the contractor's approach for ensuring technical integration among key areas both within the Program Integration and Control (PI&C) follow-on contract and with other ISS Program Contractors and International Partners.

TA2. Specific Technical Understanding and Associated Resources

a. The Government will evaluate the Offeror's technical understanding of Statement of Work Requirements for PI&C including the processes and plans for interfacing with other ISS Program Contractors. The Government will evaluate the effectiveness and efficiency of the offeror's proposed IT tools for accomplishing PI&C requirements, including any required demonstrations. The Government will evaluate the effectiveness, soundness, efficiency, and innovative methods of the Offeror's approach to identifying, monitoring, and controlling price, schedule, and technical risks for PI&C requirements.

b. The Government will evaluate the effectiveness, soundness, efficiency, and innovative approaches of the Offeror's proposed labor resources (skill mix and staffing levels identified in the Tables of Resources) for accomplishing PI&C requirements including the qualifications and experience levels of personnel. The Government will evaluate the

basis of estimate and supporting rationale for the proposed labor resources.

c. The Government will evaluate proposed efficiencies and cost savings.

TA3. Operational Scenario

The Government will evaluate the response to the Operational Scenario for demonstration of the offeror's understanding of the SOW requirements, process flexibility, and necessary technical capabilities. The Government will evaluate associated impacts to SOW functions, recommended courses of action, contractual implications if any, and approach to identifying price, schedule, and risk impacts to on-going operations.

MA Subfactor B: Management Approach

MA1. OVERALL MANAGEMENT APPROACH:

The Government will evaluate the effectiveness, soundness, efficiency, and innovative method of the Offeror's overall management approach to PI&C contract requirements for the following areas:

a. ORGANIZATIONAL STRUCTURE: The Government will evaluate the Offeror's ability to demonstrate and ensure success in executing the PI&C SOW requirements (reference Section L, 4.0, MA1.A).

b. TEAMING ARRANGEMENTS: The Government will evaluate the teaming arrangements, communication channels, lines of authority, reporting relationships, and responsibilities of any proposed subcontractors, team members, or joint venture partners (reference Section L, 4.0, MA1.B).

c. WORK BREAKDOWN STRUCTURE (WBS): The Government will evaluate the proposed work breakdown structure (reference Section L, 4.0, MA1.C).

d. ATTRACTING AND RETAINING PERSONNEL: The Government will evaluate the Offeror's proposal to assess their approach to attract and retain qualified personnel (reference Section L, 4.0, MA1.D).

e. GOVERNMENT INTERFACE AND COMMUNICATION: The Government will evaluate the offeror's interface with the Government in the management and communication of SOW tasks and priorities. The Government will evaluate the approach to management of the SOW requirements and contract schedules and deliverables; as well as the

approach for communicating and obtaining customer concurrence with changing priorities and workforce adjustments (reference Section L, 4.0, MA1.E).

f. CUSTOMER SATISFACTION: The Government will evaluate the Offeror's proposed approach for ensuring customer satisfaction (reference Section L, 4.0, MA1.F).

g. EXPORT CONTROL: The Government will evaluate the Offeror's understanding of compliance with export control regulations (reference Section L, 4.0, MA1.G).

MA2. KEY PERSONNEL:

The Government will evaluate the experience, past performance, education, overall capability and commitment of key personnel. The Government will evaluate the minimum qualifications standards proposed to be used to replace key personnel and how the offeror will ensure key personnel will maintain the minimum qualification standards.

SA Subfactor C: Safety and Health Approach

SA1. SAFETY AND HEALTH PLAN:

The Government will evaluate the effectiveness and compliance of the Offeror's proposed Safety and Health Plan with the requirements contained in DRD PIC-SA-02.

5.0 VOLUME II – PLANS - The Government will evaluate the effectiveness, soundness, efficiency, and innovative method of the Offeror's overall management approach to PI&C contract requirements.

The following plan will be evaluated under the Technical Approach and Management Approach subfactor:

A. ANNUAL PERFORMANCE FEEDBACK PLAN - The Government will evaluate the effectiveness of the proposed Annual Performance Feedback Plan to adequately define the objective measures and standards of excellence in performing the SOW requirement.

The following plans will be evaluated under the Management Approach subfactor:

B. PHASE-IN and TRANSITION PLAN - The Government will evaluate the effectiveness of the Phase-in and Transition Plan for accomplishing a smooth phase-in without compromising effective and efficient operations of the work performed under the current contracts.

C. TOTAL COMPENSATION PLAN (TCP) - The Government will evaluate the appropriateness and effectiveness of the Offeror's proposed Total Compensation Plan.

D. ASSOCIATE CONTRACTOR AGREEMENTS (ACAs) - The Government will evaluate the overall completeness, soundness, and effectiveness of the proposed approach to establishing and implementing ACAs.

The following plan will be evaluated under the Technical Approach and Management Approach subfactor:

E. IT MANAGEMENT AND SECURITY PLANS

1. The Government will evaluate the Offeror's approach for coordinating and executing all technical and administrative tasks for all activities required to manage ISS Program IT resources and interfaces with other ISS Program and institutional IT providers.

2. The Government will evaluate the offeror's approach for establishing and maintaining IT Security requirements. The Government will evaluate the offeror's understanding of IT Security requirements, and the application of those requirements in the ISS Program IT operational environment, as well as the Offeror's familiarity with the Certification and Accreditation (C&A) process for ISS Program IT systems. The Government will evaluate the IT Security Plan for any proposed offsite Offeror-managed facility.

3. The government will evaluate the proposed life cycle methodology that encompasses all life cycle phases for IT systems and applications. The proposed methodology shall enable the provisioning of IT systems with the best performance and quality in a cost effective manner.

The following plan will Management Approach subfactor:

F. ORGANIZATIONAL CONFLICT OF INTEREST AVOIDANCE PLAN - The Government will evaluate the Offeror's Organizational Conflict of Interest Avoidance Plan.

6.0 VOLUME III PAST PERFORMANCE

Past performance indicates how well an Offeror performed on earlier work and can be an indicator of how well it can be expected to perform future work.

The Offeror's past performance, including relevant experience, will be evaluated separately by the SEB in accordance with FAR 15.305 and NFS 1815.305(a), but will not be numerically weighed or scored. The evaluation will be based on information provided by Offerors in their proposals, as well as any other information obtained independently by the SEB. In accordance with FAR 15.305(a)(2)(iv), an Offeror without a record of relevant past performance, or for whom information on past performance is not available, may not be evaluated favorably or unfavorably on past performance. The results of the Board's evaluation will be presented to the SSA for his/her consideration.

7.0 VOLUME IV PRICE PROPOSAL EVALUATION

The Government will perform price analysis and may also perform cost analysis where appropriate in accordance with FAR 15.305, FAR 15.404, and NASA FAR Supplement (NFS) 1815.305.

The Government will analyze proposed fully burdened IDIQ rates. In addition, the proposed rates will then be multiplied against the Government provided sample hours matrix in Section L, Template # 2 of the RFP to develop a total price for IDIQ work. The proposed rates as well as the total price for IDIQ work calculated using the Government provided sample hours matrix in Section L, Template # 2 of the RFP will be considered for selection purposes. If fixed price rates proposed in Section B of the model contract differ from the fixed price rates proposed in the Price Proposal, the rates in Section B will be presented to the Source Selection Authority.

In accordance with FAR 52.215-1 (f)(8), the proposed fully burdened rates in Section B will also be treated as line item prices and be analyzed in the price proposal to ensure proposed line item prices are balanced. The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

Phase-In - The price of the Phase-In will be evaluated and presented to the source selection authority but will not be included in the total price calculated by the Government by multiplying proposed fully burdened rates by the Government provided sample hours matrix in Section L, Template # 2 of the RFP. The government analysis of the proposed Phase-In price may result in Mission Suitability

weaknesses if the proposed resources are not consistent with the proposed Phase-in Plan.

8.0 VOLUME V OTHER REQUIRED DATA

A. Ostensible Subcontractor Approach

The SEB will perform an analysis to ensure no ostensible subcontract relationship has been proposed. The SBA Ostensible Subcontracting Rule Information will be evaluated to verify the offeror is eligible for award as a small business. If it appears an ostensible subcontract may have been proposed, the proposal evaluation may proceed until a final determination is made. The Government may request additional information to analyze. Offerors are advised that evidence of non compliance with Provision L.14, SBA Ostensible Subcontractor Rule Information, or FAR 52.219-14, Limitations on Subcontracting, may result in elimination of the Offeror from further consideration for award at any time during the procurement process.

9.0 RELATIVE IMPORTANCE OF EVALUATION FACTORS

Mission Suitability is more important than Past Performance. Mission Suitability and Past Performance, when combined, are significantly more important than Price.