

SECTION H – SPECIAL CONTRACT REQUIREMENTS

H.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
52.223-5	AUG 2003	POLLUTION PREVENTION AND RIGHT- TO-KNOW INFORMATION

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

CLAUSE NUMBER	DATE	TITLE
1852.204-74	MAY 2002	CENTRAL CONTRACTOR REGISTRATION
1852.208-81	OCT 2001	RESTRICTIONS ON PRINTING AND DUPLICATING
1852.223-70	APR 2002	SAFETY AND HEALTH
1852.223-75	FEB 2002	MAJOR BREACH OF SAFETY OR SECURITY
1852.225-70	FEB 2000	EXPORT LICENSES (ALTERNATE I) (FEB 2000)
1852.228-72	SEP 1993	CROSS-WAIVER OF LIABILITY FOR SPACE SHUTTLE SERVICES
1852.228-76	DEC 1994	CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES
1852.242-72	AUG 1992	OBSERVANCE OF LEGAL HOLIDAYS
1852.242-78	APR 2001	EMERGENCY MEDICAL SERVICES AND EVACUATION
1852.244-70	APR 1985	GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM
1852.246-70	MAR 1997	MISSION CRITICAL SPACE SYSTEM PERSONNEL RELIABILITY PROGRAM

(End Of Clause)

H.2 SPECIAL PROVISIONS REGARDING LOCKHEED SUBCONTRACT ASSIGNED TO BOEING

1. Notwithstanding any other provision of this contract, the parties agree that the Contractor is not required to update or modify any of the FAR or NASA FAR Supplement clauses in NAS 9-17830 upon or after the assignment of this contract from the Government to the Contractor.

2. RESPONSIBILITIES OF THE PARTIES:

- (a) NASA and Lockheed shall look only to each other in resolving any claims or disputes which may arise during the performance of the NASA-Lockheed prime contract NAS9-17830.
- (b) Lockheed and Boeing shall look only to each other in resolving any claims or disputes which are based on the performance of the Boeing-Lockheed subcontract.

- (c) NASA and Boeing shall look only to each other in resolving any claims or disputes which are based on the performance of this Boeing prime contract.

(End of clause)

H.3 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS (JSC 52.209-90) (SEP 1988)

This contract incorporates Section K, Representations, Certifications, and Other Statements of Offerors, as set forth in the Contractor's proposal 2-1150-94-0300, dated October 10, 1994, by reference, with the same force and effect as if it were given in full text.

(End of clause)

H.4 TECHNICAL INFORMATION RELEASES AND PUBLICATIONS

As authorized by paragraph (d)(1) of the Rights in Data - General Clause 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 Space Station Program (SSPO) to have the benefit of advance information concerning accomplishments of interest, and will provide the SSPO 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)

H.5 MANNED SPACE FLIGHT MOTIVATION AWARENESS PROGRAM

The Contractor shall maintain a product oriented motivation (awareness) program in accordance with Safety NHB 1700.1(VI-B). The program objective shall be the prevention of human error by instilling in individuals performing on the contract and on critical subcontracts, an awareness of individual responsibility for the International Space Station Alpha (ISSA) mission success, flight crew safety, and motivating the exemplary performance necessary to achieve success. The program shall include as a minimum¹.

1. Participation in the NASA-Industry Manned Flight Awareness Program (MFA).
2. Goal setting and measurement to provide documented practical goals and performance standards for the reduction and elimination of human errors at organizational and individual employee levels.
3. Error Cause Identification and Removal System for detecting human errors, relating them to an identifiable cause, and action to remove the cause⁴.
4. Methods to obtain and distribute ISSA motivational information and materials to concerned Contractor personnel, subcontractors, and vendors supplying critical flight and ground support hardware and software.

5. Motivational (awareness) indoctrination for Contractor ISSA supervisory personnel and indoctrination of the work force in workmanship needs.
6. Recognition of personnel who demonstrate their awareness through exceptional craftsmanship, error free workmanship and attention to careful performance in their job responsibility. The Contractor shall flow down the provisions of this clause to the critical subcontractors identified in H.18 entitled "Key Product Groups."

(End of clause)

H.6 PRICING OF COMMON ITEMS TO INTERNATIONAL PARTNER

1. The Government has entered into agreements with International Partners (IP) which contemplates that certain space station "common items," previously intended to be procured by NASA, will now be acquired directly by the contractors of these organizations from the United States development contractor. These agreements provide, among other things, that NASA will take the necessary contractual steps to enable that common items can be procured by International Partner contractors for Space Station use, and to ensure that the recurring cost to such contractors consistent with the cost basis paid by NASA. The common items subject to this clause are found in Appendix J-11.

2. In order to carry out the intent of the above, the contractor (Boeing) agrees as follows:

- (a) If a Product Group is requested by an IP contractor to submit a proposal for any of the common items identifies, the Product Group agrees to estimate such items to such contractor consistent with the recurring costs estimated for such items in the NASA Space Station contract (NAS15-10000); provided, however, that if there are differences in the circumstances under which the items are being priced to the contractor (e.g., greater or lesser quantities, configuration changes, alternative business relationships, variances in schedule requirements, break in production, actual price experience, etc.), the Product Group's estimate of the items may vary to the extent of such different circumstances. For the purposes of establishing a pricing baseline, Boeing, the Product Groups, and the Government anticipate reaching an agreement on cost estimates for the common items listed in Attachment J-11 no later than 90 days after definitization of the prime contract. Appendix J-11 shall be modified to include the agreed-upon cost estimates.

Each proposal provided to an International Partner contractor for common items shall include a reference to the base target cost identified in Appendix J-11 as well as an explanation of any differences from the base target cost.

- (b) Boeing and the Product Groups agree to negotiate in good faith with any International Partner contractors desiring to buy common items as identified in Attachment J-11, and to do so in a manner consistent with the terms of this clause.
- (c) Boeing agrees to insert the substance of this clause in all subcontracts negotiated between Boeing and a Product Group which is furnishing to Boeing one or more of the common items identified in Attachment J-11. The Product Groups will flow this clause to lower tier subcontracts to the extent practical and possible. This clause has no application to contracts between Product Groups and IP contractors entered into prior to the effective date of this contract.

(End of clause)

H.7 GOVERNMENT APPROVALS/CONCURRENCE

1. In the performance of this function, exercise by the NASA of any rights provided for in this contract shall not relieve the contractor of his responsibility for performance of hardware provided under this contract or for any other contract obligations. Such rights include, by way of example, but not by limitation, the Government's right to:

- (a) approve or disapprove certain contractor documentation;
 - (b) issue technical direction in accordance with the article of this contract entitled "Technical Direction and Surveillance";
 - (c) approve of design approaches, design solutions, and specifications and
 - (d) concur in "Make or buy" decisions or source selections
2. Nothing in this clause shall be construed to be in derogation of the rights of the Contractor provided for elsewhere in this contract.

(End of clause)

H.8 INDEMNIFICATION

The Government is not aware at this time that any unusually hazardous risks exist in carrying out the Space Station Program. Should the Contractor request indemnification under PL 85-804 in the future, and the facts and circumstances warrant the inclusion of an indemnification clause at that time, the Government will pursue in good faith the indemnification of the contractor and subcontractors for liabilities in excess of their respective insurance coverages in effect at the time of space product liability exposure, without additional consideration flowing to the Government.

(End of clause)

H.9 SPECIAL TERMINATION COST

1. Definition.

"Special termination costs," as used in this clause, means those allowable costs as defined in Part 31 of the Federal Acquisition Regulation (FA-- including but not limited to

- (a) Severance pay, as provided in FAR 31.205-6(g);
 - (b) Reasonable cost continuing after termination, as provided in FAR 31.250-42(b)
 - (c) Settlement of expenses as provided in FAR 31.205-42(g);
 - (d) Costs of return of field service personnel from sites, as provided in FAR 31.205-35 and FAR 31.205-46(c); and
 - (e) Subcontractor termination settlements including, but not limited to, the costs in subparagraph 1 (a)(b), (c), and (d) of this clause.
2. Notwithstanding the Limitation of Funds clause of this contract, the Contractor shall not include in its estimate of costs incurred or to be incurred, any amount for special termination costs to which the Contractor may be entitled in the event this contract is terminated for the convenience of the Government
3. In the event of a termination for convenience, and subject to negotiation of a termination settlement, the Government agrees to pay the Contractor for special termination costs from amounts reserved within NASA's Human Space Flight appropriation or from such other funds appropriated or to be appropriated by Congress for this purpose. In the event any additional funding is required to reimburse the Contractor for its full termination liability, NASA will seek such funds and provide them to the Contractor when available.
4. In the event of termination for the convenience of the Government, this clause shall not be construed as affecting the allowability of special termination costs in any manner other than limiting the source of funds from which the Government would pay allowable costs.

5. This clause shall remain in full force and effect until this contract is fully funded or other mutually agreeable provisions are established to cover such termination costs. Nothing in this clause shall be deemed to commit or bind Congress to take any future appropriation action.

(End of clause)

H.10 PROPERTY/DATA TO BE FURNISHED BY INTERNATIONAL PARTNER.

1. Property identified in Attachment J-12, will be made available to the Contractor on or before the dates indicated for the Contractor's use in performing this contract, together with such related data and information as the Contractor may request and as may be reasonably required for the intended use of the property. The identified property in Attachment J-12 with a disposition of "Requires NASA Protocol," have been agreed to be provided by NASA, although the International Partners have not agreed via protocol. The J-12 lists categories of data to be furnished by the International Partners and their respective contractors for which NASA has obtained authority over the course of the ISS to share as required in order to fulfill its obligations under the various Agreements cited in the applicable sections of the J-12. The contractor shall honor restrictive markings and protect such data from further disclosure pursuant to the Data Rights and Data Protection requirements contained elsewhere in this contract.
2. In the event any of the property/data identified above is not furnished on or before the established need date, or is not in a condition suitable for use when furnished, and either or both of these conditions increase the cost of performance of this contract, such increased cost shall be excluded from costs evaluated under the Award Fee Plan. In the event either or both conditions otherwise affect the Contractor's ability to perform this contract in accordance with its terms, an equitable adjustment shall be made in other appropriate terms and conditions hereof in accordance with the procedures of the "CHANGES" clause .
3. If the Contractor proposes an equitable adjustment, or the exclusion of certain costs from award Fee evaluations, based on this clause, the Contractor shall submit to the Contracting Officer such supporting data as the Contracting Officer may reasonably request for purposes of evaluation and reaching a conclusion on the Contractor's position.

(End of clause)

H.11 IDENTIFICATION AND APPROVAL FOR USE OF RESTRICTED COMPUTER SOFTWARE AND/OR COMMERCIAL COMPUTER SOFTWARE

- A. The Contractor shall identify, in writing, within 30 days of definitization, all restricted computer software and/or commercial computer software, as defined in the "Rights in Data-General" and the "Commercial Computer Software Licensing" clauses of this contract, that will be delivered in performance of this contract. The Government shall approve or disapprove, in writing, delivery of the identified restricted computer software and/or commercial computer software within 60 days from receipt of request.
- B. The Contractor shall be responsible for notifying the Government on a continuous basis of additional restricted computer software and/or commercial computer software to be delivered.
- C. If the Government disapproves the use of restricted computer software and/or commercial computer software, when such software is identified, the Contractor may submit a proposal for equitable adjustment to the Contracting Officer. Such proposals shall be handled according to the provisions of the "Changes" clause of this contract.

(End of clause)

H.12 KEY PRODUCT GROUPS

For the purpose of the provisions of this contract wherein appears the term “Product Group” (“PG”), the term is defined as a subcontractor/Boeing Division which is considered essential to the performance of the work under this contract by reason of possessing an exclusive or a predominant capability to provide the required supplies, services, and/or processes at the time(s) and in the manner specified.

The following firms are designated Product Groups:

- PG-1 McDonnell Douglas, A wholly owned subsidiary of The Boeing Company
Huntington Beach, California
- PG-2 The Boeing Company
Space and Communications Group
Rocketdyne Propulsion & Power
Canoga Park, California
- PG-3 The Boeing Company
Space and Communications Group
International Space Station
Huntsville, Alabama

(End of clause)

H.13 ORDER OF PRECEDENCE

Any inconsistency in this contract shall be resolved by giving precedence in the following order:

1.	The Schedule (including the SOW)
2.	Representations and other instructions
3.	Contract clauses
4.	Other Contract Section “J” documents, exhibits, and attachments not listed below, excluding documents listed in Attachment J-6
5.	ISSA System specification
6.	U.S. On-Orbit Segment specification
7.	Inter-segment Interface Control Documents
8.	SSP 50257 sections 2.1 and 2.2, and other applicable documents as listed in Attachment J-6, Applicable Documents List

(End of clause)

H.14 SPECIAL PROVISION FOR CONTRACT CHANGES

1. The parties agree that notwithstanding the provisions of Clause I.8 “Chan-s--Cost-Reimbursement (Deviation),” no change made pursuant to Clause I.8 shall give rise to an equitable adjustment in the estimated cost and applicable fees when such change causes, (i) contract cost increase(s) totaling less than \$700,000, or (ii) contract cost decrease(s) totaling less than \$700,000, or (iii) a combination of contract cost increases and decreases which in the aggregate total (i.e., the absolute value of which is) less than \$700,000. Each such change shall be controlling in making this determination, and such change shall not, for purposes of determining the applicability of the clause, be added to any other change(s) nor shall any change be split into sub-elements. The parties recognize that several changes may be grouped together in bilateral contract modification for administrative purposes
2. The clause applies to all contract changes issued and authorized pursuant to Clause I.8, and shall continue to apply to all such changes issued and authorized from October 1, 2013 to September 30, 2014 under this contract. Change request issued dates under this clause

shall be based on the date authorized by Contract Change Order (CCO), Supplemental Agreement (SA), or Contracting Officer's Letter (COL). The contractor shall submit a proposal in July of each year which includes identifying all changes that were authorized by this clause during the period from July 1st through June 30th of the previous year.

3. "This clause shall not apply to waivers or deviations approved pursuant to clause G.10, "Request for Waivers or Deviation."

(End of Clause)

H.15 SPACE STATION FREEDOM HARDWARE AND SOFTWARE USAGE

Hardware and software developed under the Space Station Freedom (SSF) program may be used for the ISSA program applications. Hardware and software for which the design had been completed and manufacturing had been initiated at contract definitization shall be considered for exclusion from the requirement to meet ISSA applicable documents design requirements. The SSF items identified for transition to the ISSA program shall meet applicable ISSA performance, interface, survivability, and crew safety requirements. The Contractor shall submit design assessments, analyses, rationale, or records to support transition of the SSF items. This data shall be sufficient to substantiate that the items satisfy applicable performance, survivability, and safety requirements. Initial rationale shall be provided no later than 90 days after contract definitization and final rationale (which will include applicable detailed data, assessments, and analysis) shall be provided at the appropriate corresponding first-use-on element critical design review.

For hardware and software developed under the Space Station Freedom (SSF) program, the Contractor is not required to flow ISSA applicable documents to lower tier subcontractors provided that the subcontractor performs a "meets-or-exceeds" exercise to confirm the verification of items designed and built to SSF requirements meet the ISSA requirements and includes this analysis in the compliance documentation.

In the event the SSF hardware and software identified for use in the ISSA program contained in the SSF Equipment List as described in Attachment J-14, are not excluded from the requirement to meet ISSA applicable documents design requirements, the Contractor shall be entitled to an equitable adjustment pursuant to the Changes Clause. Attachment J-14 is subject to a one-time modification to add the PG-3 items to the list in accordance with clause H.31.

(End of clause)

H.16 SPECIAL PROVISION FOR GOVERNMENT FURNISHED DATA

- (a) Government Furnished Data made available under this clause shall in every respect be subject to FAR 52.245-5 Government property clause of this contract. Such data requested by the Contractor shall from time to time be added by mutual agreement of the parties to Attachment J-2, Section III, together with the date such data shall be provided.
- (b) GFD identified in Attachment J2 is not required to be returned to the Government unless specifically requested by the Government at the time the data is provided to the Contractor.
- (c) The contractor is not responsible for retaining an archival copy of the data provided.
- (d) All other data shall be considered abandoned in place in accordance with FAR 52.245-5 (j) (2) at Contractor facility and shall be destroyed by the Contractor regardless of the format in which it was delivered.

(End of clause)

H.17 UNPRESSURIZED LOGISTICS CARRIER/DRY CARGO CARRIER (ULC/DCC) DELETION

The capabilities to support prelaunch and post landing operations and resupply and return requirements for the transportation of external cargo as defined in SSP 41000 System Specification Revision E paragraphs 3.2.1.3.1.1, and 3.2.1.3.2.1 and SSP 41162 United States On-orbit Segment Specification Revision E paragraphs 3.2.1.3.1.1, 3.2.1.3.2.2 will be met by GFE hardware provided by the Government to the Contractor. The Government will ensure that the functional performance of the GFE hardware provides full compliance with the functional requirements for the transportation of external cargo specified in SSP 41000 System Specification Revision E paragraphs 3.2.1.3.1.1, 3.2.1.3.2.1, 3.7.1.3.28.1, and 3.7.1.3.29.1, and SSP 41162 United States On-orbit Segment Specification Revision E paragraphs 3.2.1.3.1.1, and 3.2.1.3.2.2. The Government will also ensure that the GFE hardware provides full compliance with ISS program requirements defined in SSP 41000 System Specification Revision E and SSP 41162 United States On-orbit Segment Specification Revision E paragraphs 3.2.2 through 3.6.2 inclusive.

(End of clause)

H.18 SPECIFICATION EVALUATION PROVISION

The ISS shall be considered compliant with the quantitative reliability requirement as defined in the system specification when one of the following occurs: a) compliance is demonstrated per the system specification; or b) compliance is demonstrated through analysis of assembly complete on-orbit performance data prior to completion of the contract. Since this requirement is allocated to the approved assembly complete configuration, any award fee evaluation of this requirement shall be based on the approved assembly complete configuration and not on any interim configurations. The timing of the award fee evaluation of this requirement shall be based on the contractor's chosen method for demonstrating compliance as specified in either a) or b) above. Nothing in this clause shall preclude the evaluation of this requirement in the final award fee milestone.

(End of clause)

H.19 RESERVED

H.20 ADDITIONAL EXCUSABLE DELAYS

In the event subcontract performance is excused pursuant to the provision titled "Force Majeure" of subcontract HX3295 between the contractor and KhSC (shown for reference below in full text), this will represent an addition to the excusable delays listed in clause 52.249-14, to the extent that the contractor's performance is thereby affected. The contractor shall immediately provide to the Government any notice of force majeure that the subcontractor may identify and include the extent to which contract performance may be affected. Requests for revised delivery schedule under this clause will be processed in accordance with clause 52.249-14 of this contract.

"20 FORCE MAJEUR

- A. Where a Party is unable, wholly or in part, by reason of force majeure, to carry out any obligation under this Subcontract that Party:
 - 1. Gives the other Party prompt notice of that force majeure with reasonably full particulars thereof and, insofar as known, the probable extent to which it will be unable to perform or be delayed in performing that obligation; and
 - 2. Uses all possible diligence to mitigate the effects of the force majeure as quickly as possible; that obligation is suspended as far as it is affected by force majeure during the continuance thereof
- B. If after a period of one month the force majeure has not ceased, the Parties shall meet in good faith to discuss the situation and endeavor to achieve a mutually satisfactory resolution to the problem.

- C. The requirement that the effect of any force majeure shall be mitigated with all possible diligence shall not require the settlement of any strike, lockouts or other labor disputes, or claims or settlement of demands, by any Government on terms contrary to the wishes of the Party affected.
- D. In the event of an excusable delay, resulting from events of force majeure under this Subcontract, the performance schedule of this Subcontract shall be extended equitably. Subcontractor shall provide Boeing with evidence supporting Subcontractor's claim of excusable delay and shall exert its best efforts to mitigate such schedule impact to the extent reasonable, including providing a work around schedule.
- E. In this Subcontract, "force majeure" means an act of God, strike, lockout or other interference with work, war declared or undeclared, blockage, disturbance, lightning, fire, earthquake, storm, flood, explosion, government or quasi-government restraint, expropriation, prohibition, intervention, direction, or embargo, unavailability or delay in availability of equipment or transport, inability or delay in obtaining governmental or quasi-governmental approvals, consents, permits, licenses, authorities or allocations. and any other cause whether of the kind specifically enumerated above or otherwise which is not reasonably within the control of the Party affected,"

(End of clause)

H.21 SPECIAL PROVISION REGARDING ALLOWABILITY OF FGB COSTS

All applicable taxes (sales, use, service occupation, retailer's occupation, personal property, excise, tariffs, duties, license fees, royalty fees, custom fees, and similar liabilities whatsoever imposed by the Russian Federation or any subdivision thereof ("taxes")) with the FGB manufacture, test, or delivery requirements are not allowable costs under this contract.

(End of clause)

H.22 RELIEF FROM CENTRIFUGE ACCOMMODATIONS MODULE (CAM) AND RS-FGB VOLUME ALLOCATION REQUIREMENTS

The CAM internal user payload volume requirement of 264.5 cubic feet as included in SSP 41000, paragraph 3.2.2.2 and the CAM stowage volume requirement of 324 cubic feet as included in SSP 41000, paragraph 3.2.2.8 and Table XI-A, and SSP 41162, Table XVIII-B are out of the scope of this contract.

The RS-FGB internal user payload volume requirement of 212 cubic feet as included SSP 41000, paragraph 3.2.2.8 and Table XI-A is out of the scope of this contract.

(End of clause)

H.23 CERTIFICATES OF FLIGHT READINESS (CoFRs)

The parties shall execute Certificates of Flight Readiness (CoFRs), in accordance with SSP 50108. The intent of the Boeing signature is to reflect satisfactory completion of particular contract efforts. The parties agree that the signing of Certificates of Flight Readiness (CoFRs) by Contractor and subcontractor personnel participating in the International Space Station (ISS) Program shall not give rise to any obligations or liabilities under this contract which are in addition to those which Boeing has assumed under other terms and conditions hereof. In particular, Contractor and its subcontractors do not assume (1) any liability or responsibility for express, or implied warranties of any type not otherwise provided in the contract, or (2) any additional responsibilities under statute, law or regulation, which they would not have if no certification was requested or provided.

(End of Clause)

H.24 ACCOUNTING FOR ENVIRONMENTAL TAXES

A reduction of \$2,322,200 to the billable/reimbursable contract costs will be made at a below the line calculation, thus not impacting the contract targets, award fee or obligated funds. This reduction is the result of a settlement reached on a CAS 405 issue between the DCMC CACO and The Boeing Company on environmental taxes. The CAS 405 settlement used this contract as means of receiving payment from The Boeing Company for unallowable costs previously billed to and paid by the Government.

(End of Clause)

H.25 GRCI Commercialization

The Contracting Officer has granted permission to establish claim to copyright, publish and release to others, the computer programs developed under Contract NASW-615 and NAS9-19610 as "Paths Data System (PDS)" and subsequently enhanced by GRC and renamed "MultiLinx," and the computer program developments and enhancements to MultiLinx Version 1.2, which are first produced in performance of Boeing subcontract number HS1354 and Boeing contract number NAS15-10000 and subject to the following conditions:

- (1) GRCI agrees to use its best efforts to commercially market and distribute the computer software including supporting and updating services;
- (2) GRCI shall affix the copyright notice of 17 U.S.C. 401 to the computer software when it is delivered to the Government and released or furnished to third parties;
- (3) NASA reserved a paid-up nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, perform publicly and display publicly by or on behalf of the U. S. Government all such copyrighted computer software;
- (4) In the event GRCI has not, or is not, making the efforts or achieved the objectives set forth in paragraph (1) above, NASA reserves the right to obtain assignment of the copyright(s) in order to foster the desired commercialization efforts;
- (5) GRCI agrees to deliver without charge copies of any updated or enhanced versions of the software covered by the permission herein granted which are generated by GRCI internally within a period of 3 years after completion of the Boeing subcontract. If GRCI desires such updated or enhanced versions may be delivered with restrictions on use by NASA and its contractor(s) for NASA internal purposes only; and
- (6) The foregoing permission does not affect in any way the applicability of the U.S. export control laws and regulations on any use and release of such software which GRCI may contemplate under this permission.

(End of Clause)

H.26 NODE 1 STRUT STRAIN GAUGE OUTFITTING

There are eight titanium struts in the ISS Node 1. Each of these struts has a strain gauge circuit that was installed to measure loads in the struts during installation of the struts into the Node 1. These strain gauges were planned to be removed before launch. SSCN 987 directs the contractor to prepare the eight strain gauges for launch and on-orbit use. These strain gauges were for temporary use only, and were not intended to meet the requirements of flight rated equipment on the Space Shuttle or ISS. Therefore the parties agree the contractor will not be held responsible for ability of the strain gauges to meet the launch and on-orbit requirements and that the contractor will not be held responsible for the strain gauge performance.

(End of Clause)

H.27 PERMISSION TO COPYRIGHT SOFTWARE

On behalf of its subcontractor, Honeywell, Inc., the Contractor has requested permission to use MDM Application Test Environment ("MATE") software ("the MATE Software"), which was first produced under the ISS contract, in a commercial software product line for "Mini-MATE" hardware developed by Honeywell. The Mini-MATE software shall consist of the MATE Software, plus additional software developed by Honeywell using its own funds. This additional software qualifies as Restricted Computer Software under FAR 52.227-14.

The Contracting Officer hereby grants such request, subject to the following conditions.

- a. Honeywell agrees to use its best efforts to commercially market and distribute the Mini-MATE software including supporting and updating services;
- b. If Honeywell determines to assert copyright protection for the MATE software, Honeywell shall affix the copyright notice of 17 U.S.C. 401 to the MATE Software when it is delivered to the Government and released or furnished to third parties;
- c. If Honeywell establishes claim to copyright to the MATE Software, NASA shall have a paid-up, nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, and perform publicly and display publicly on behalf of the Government the MATE Software;
- d. Honeywell agrees to deliver promptly without charge a copy of the Mini-MATE Software, and of any updated or enhanced versions of the Mini-MATE Software covered by the permission granted herein which are generated within a period of three (3) years after the execution of this modification incorporating this clause into the contract. If Honeywell desires, such updated or enhanced versions (including Mini-MATE) may be delivered with restricted rights as set forth in subparagraph (g) (3) of the "Rights in Data General of FAR 52.227-14; as modified to implement this agreement; and
- e. The foregoing permission does not affect in any way the applicability of the U.S. export control laws and regulations on any use and release of the MATE Software which Honeywell may contemplate under the permission.

(End of Clause)

H.28 EEATCS TEST FACILITY

There is an agreement between the parties relative to implementation of the change that can be identified by reference to SSCN 311 (Modify Early External Active Thermal Control System), that (a) the Government will provide contractor access and Government furnished equipment and services required for the Kennedy Space Center Processing Facility (SSPF) and (b) the immediately preceding agreement constitutes a "mutually agreeable plan."

(End of Clause)

H.29 ISIL CAPITAL EQUIPMENT MAINTENANCE AND OPERATION AGREEMENT

The Contractor agrees to invest up to \$31.4 million to purchase, upgrade, and integrate equipment for the purpose of developing the International Space Station (ISS) System Integration Laboratory (ISIL). The parties further recognize and agree that any such contractor expenditures will be capitalized and depreciated in accordance with the contractor's established cost accounting practices and procedures. Any property incorporated into the ISIL or transferred to the contractor for incorporation into the ISIL is subject to the provisions of this clause.

The intent of the parties is to develop a laboratory where high fidelity subsystem integration, hardware/software interface troubleshooting, and anomaly investigations can be performed in support of the ISS Program, as well as other NASA and Boeing programs on a non-interference basis.

The Contractor will maintain records of capital expenditures and items where title has been transferred to the contractor. All capital items will be tagged and recorded for tracking purposes only.

NASA agrees to provide all required facilities and utilities for the installation and operation of the ISIL Laboratory. This includes its physical location in the Sonny Carter Training Facility (SCTF) in Houston, Texas. Provision of the facilities, and any facility modifications required, as well as on-going support, such as utilities required for operations during, and for the duration of this contract, is the sole responsibility of the Government (NASA).

NASA will transfer to Boeing title to excess ISS Program property which is determined to be appropriate for incorporation into the ISIL. The parties recognize that much, if not all, of the transferred property will require modification and/or repair. Transfer to Boeing shall constitute NASA's approval for modification and installation of property into the ISIL. As equipment is identified for use in the ISIL, up to an original acquisition value of \$6 million, it will be screened to re-issue by the Johnson Space Center's Property and Equipment Branch to determine if it can otherwise re-issued or used within the agency. If no requests are made for identified assets during screening, the transfer will be accomplished using an approved DD 1149. Following the transfer, the equipment will become Boeing company owned property. If the total original acquisition value of excess property requested for transfer exceeds \$6 million, transfers will be reviewed on a case by case basis and will require the written approval of the Contracting Officer. Except for depreciation of Boeing capital costs expended to modify, install, or otherwise improve transferred equipment, the value of any equipment transferred by the Government to Boeing shall not be recognized as an allowable cost.

Boeing agrees that during the life of the ISS contract or any extension or follow-on thereto, it shall not transfer, sell or otherwise dispose of ISIL property to a third party without the written consent of the NASA Contracting Officer.

Boeing will be responsible for funding the maintenance of all Boeing owned property, for the period of time said property is required for operating the ISIL. NASA will be responsible for funding the maintenance of all NASA owned property, for the period of time said property is required for operating the ISIL.

(End of Clause)

H.30 OPTION TO PURCHASE THE ISIL LABORATORY

The parties agree that if the Government does not extend the ISS contract beyond on-Orbit Performance, September 30, 2006, and does not there after contract with the contractor for the performance of the same, or substantially the same services contemplated by this contract, the contractor will, upon request by the Contracting officer, transfer title of its capital assets identified and listed as components of the ISIL Laboratory by the contracting officer from the records referenced in Clause H.29 ISIL Capital Equipment Maintenance and Operation Agreement of this contract, to either (a) the Government, or (b) a successor contractor. It is also agreed by the parties that the Government may exercise this option to acquire the contractor's capital assets in the ISIL Laboratory at any time during the contract period of performance.

If a request for transfer of title to the Government is made, the Government agrees to recognize as allowable cost under the contract an equitable adjustment to the contract value equal to the remaining un-depreciated balance of Boeing capitalized expenditures allocated to ISIL assets plus profit equal to 10% of that amount attributed to the period beyond September 30, 2008.

If a request for transfer of title to a successor contractor is made, the Contractor agrees to transfer title of its ISIL capital assets to the successor contractor for the un-depreciated balance of Boeing capitalized expenditures allocated to ISIL assets plus profit equal to 10% of that amount attributed to the period beyond September 30, 2008, subject to reasonable terms and conditions regarding payment and other matters to be agreed upon by the parties.

For purposes of determining the value of any equitable adjustment required to exercise this option, the value of any equipment transferred by the Government to the contractor shall be limited to the un-depreciated amount of Boeing capitalized expenditures used to improve such equipment.

(End of Clause)

H.31 DELIVERY OF GOVERNMENT FURNISHED EQUIPMENT AND GOVERNMENT FURNISHED DATA

The items listed in Section J-2 Government Furnished Equipment and Government Furnished Data, and J-12 International Partner Government Furnished Equipment and Government Furnished Data, are to be provided to the contractor for use in accomplishing the work specified under this contract. The Government acknowledges that the contractor's performance is predicated on such items being provided in a timely manner (i.e., in time to avoid an impact to the contractor's performance) and in a condition suitable for its intended use.

Tracking of need dates, timeliness of delivery, and early identification of potential impacts shall be accomplished through the GFE/GFD integration panel. Through this panel the Contractor shall assess impacts associated with untimely deliveries.

Nothing construed herein shall prohibit the Contractor from asserting rights and remedies pursuant to FAR 52.245-5 as incorporated under Section I.

(End of Clause)

H.32 IPS and NSTS-21000

The parties recognize that requirements of NSTS 21000-IDD-ISS Revision A, including the constraints for the Shuttle Cargo Bay and Middeck, and Shuttle Remote Manipulator System (SRMS), were not allocated from SSP 41000 (ISS System) to the SSP 41160 (APM), SSP 41164 (MPLM), and SSP 41165 (JEM) Segment Specifications. The parties agree the contractor is not responsible for negative system performance that is attributable to the misalignment of NSTS 21000-IDD-ISS Revision A and the APM, MPLM and JEM Segment Specifications.

(End of Clause)

H.33 CREW CAPABILITY TO TERMINATE PROGRESS REBOOST AT FGB NADIR WITHOUT SM PRESENT

The parties recognize that during a translational/reboost maneuver using the Progress at FGB Nadir and SM not present, the FGB does not have the capability to allow crew termination of this maneuver. The Contractor shall not be responsible for providing this capability during this configuration. If it is determined that this capability is needed, then a follow-on change will be processed and this provision will be deleted from the contract, via separate administrative contract action, upon NASA, RSA, and KhSC signatures on the updated SSP 50128 containing the requirements necessary to support crew capability to terminate a maneuver.

(End of Clause)

H.34 ESA EEE PARTS

The parties recognize that the parts control requirements of Node 2 PIDS Revision A allow application of European Space Agency inventory which are qualified and certified to different EEE requirements than are required by U.S. Segment Specification paragraph 3.3.1.4. The parties agree that the contractor is not responsible for negative performance at the element, segment, or system level that is attributable to application of ESA EEE parts.

(End of Clause)

H.35 AWARD FEE LOOK BACK

1. This clause supersedes the previous Clause H.66 of this contract, "EARLY LOOK-BACK INCENTIVES," in its entirety.
2. The Contractor will submit provisional fee vouchers for payment in the amount of \$7,000,000 each in the months of July 2002, August 2002, and September 2002. Provisional payments will be made to the Contractor on a monthly basis after receipt of the Contractor's voucher. After the final on-ground evaluation provided for in Table V.B.1 in Attachment J-1 is complete, the final "look-back" incentive On-Ground Award Fee determination amount will be reconciled with the cumulative provisional fee payments made hereunder in accordance with the methodology set forth in paragraph III.D, Provisional Payments, of Attachment J-1 Award Fee Plan for Exhibit A.

(End of Clause)

H.36 SPECIAL PROVISION REGARDING INTERNATIONAL PARTNERS/PARTICIPANTS' SPECIFICATIONS

The parties recognize that due to agreements between the International Partner/Participants (IPs) and NASA, some discrepancies between the ISSA System Specification and the IP Segment Specifications may arise. The parties agree that any ISSA System Specification compliance deficiency created as a result of these discrepancies shall be considered property/data not suitable for its intended purpose as described in the Special Contract Requirement H.10 PROPERTY/DATA TO BE FURNISHED BY INTERNATIONAL PARTNERS. It is agreed that Boeing shall identify to NASA any specific discrepancies, as they arise, in sufficient detail for NASA to take action to resolve specification issues, which arise from these discrepancies.

The parties agree that the resolution of discrepancies, to the extent possible, shall be processed through the proper board structure. In no case shall the Contractor's Award Fee evaluation be negatively impacted by an IP deficiency resulting from a discrepancy, caused by the agreements referenced above, that has been identified to NASA for resolution in a timely fashion.

(End of clause)

H.37 MANAGEMENT OF I&O TASKS

Tasks identified as Integration and Operations (I&O) in Section C, USOS Acceptance & Vehicle Sustaining Engineering Contract Statement of Work are subject to the procedures set forth herein:

To provide for efficient and effective administration, the parties have structured an Integration and Operations Work Plan (Data Requirement No. PC-22). The work plan, consisting of multiple work packages, will be used to manage the total resources and requirements necessary to implement the I&O SOW within the authorized budget. This plan provides specific tasks, schedules, and associated resource estimates. Procedures for updating task content within the Integration and Operations Work Plan are described below:

1. Initial Integration and Operations (I&O) Baseline: The contractor shall provide a baseline, which documents the negotiated contract value of all I&O tasks throughout the entire period of performance including operations.

2. Yearly Integration and Operations (I&O) Baseline: Each fiscal year, the content and estimated resources/cost for I&O work will be jointly developed by the Government and the Contractor and approved by the Government. The yearly I&O baseline shall contain the currently defined Integration and Operations tasks in Section C, Statement of Work. The yearly I&O baseline plan will be adjusted as tasks are reprioritized, work is deleted, or new work is authorized. (see paragraph 3 below)
3. Added/Modified Tasks: When a task that is within the general scope of work, but not currently within the statement of work is approved, the Contracting Officer will issue written direction in the form of a Contract Change Order (CCO) before the task can be added to the I&O Work Package. When a task that is within the statement of work is modified, the Contracting Officer or the Contracting Officer's Technical Representative (COTR) will issue direction pursuant to Article G.4, Technical Direction via the Work Package Revision Request (WPRR) form. The process to add, delete, reprioritize, reschedule or otherwise modify tasks within approved Work Package is defined in the Joint Program Directive ISSP-JPD-341 (current version). Work package adjustments shall be reviewed monthly to assess the effect of new tasks, modified tasks, or reprioritizations and to update the baseline.
4. The I&O Work packages may not reflect accomplishment of the SOW tasks and should not be construed as proof of completion. Upon contract completion, each I&O SOW task will require proof of closure in accordance with DRD F-PM-09.

(End of clause)

H-38 ASSOCIATE CONTRACTOR AGREEMENT FOR ISS OPERATIONS AND UTILIZATION ACTIVITIES

- (a) The success of the International Space Station (ISS) Program is dependent on the efforts of multiple contractors. The NAS 15-10000 contractor is a key participant. The other contracts of the key participating contractors are:

NNJ09HA15C	Integrated Mission Operations Contract (IMOC)
NNJ10GA35C	Cargo Mission Contract (CMC)
NNJ10TB01C	Extravehicular Activity Space Operations Contract (ESOC)
NNJ12GA46C	Mission and Program Integration (MAPI) Contract
NNJ12GA47C	Russian Language and Logistics Services (RLLS) Contract
NNJ12GA69C	Common Communications for Visiting Vehicles (C2V2) Contract
NNK13MA14C	Test and Operations Support Contract (TOSC)

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 International Space Station.

- (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 in developing, operating, maintaining and utilizing the ISS, the contractor will engage in cooperative relationships that facilitate effective management of the overall ISS effort. This joint cooperation will be evaluated as part of the

contract award fee process, as defined in the Award Fee Plan for the contract. Successful performance will be determined by the Government's assessment of the overall and combined performance of the operation and utilization requirements in the contracts, as modified. This clause will be effective during the award fee period starting November 01, 2003.

- (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.39 JSC HAZARDOUS MATERIALS USE (JSC 52.223-92) (DEC 1999)

- (a) This clause is JSC-unique, and the requirements are in addition to any U.S. Environmental Protection Agency, U.S. Occupational Safety and Health Administration, or other state or Federal regulation or statute. Therefore, the following requirements do NOT supercede any statutory or regulatory requirements for any entity subject to this clause.
- (b) "Hazardous materials," for the purposes of this clause, consist of the following:
- 1) Those materials defined "s "highly hazardous chemicals" in Occupational Safety and Health Administration Process Safety Management Regulation, 29 Code of Federal Regulation 1010.119, without regard for quantity.
 - 2) Those "extremely hazardous substances" subject to the emergency planning requirements in the Environmental Protection Agency Emergency Planning and Community Right-to-Know Regulation, 40 Code of Federal Regulation 355, Part 355, without regard for quantity.
 - 3) Those "hazardous substances" subject to the release notification requirements under Environmental Protection Agency's Emergency Planning and Community Right-to-Know Regulation, 40 Code of Federal Regulation 302.4, without regard for quantity.
 - 4) Any radioisotope material or device that produces ionizing radiation.
 - 5) Any Class II, III, or IV laser as defined by the American National Standards Institute No. Z136.1 (1986)
 - 6) Any explosive or any pyrotechnics.
 - 7) Any pesticide.
- (c) The contractor shall develop and maintain an inventory listing the identity and quantity of hazardous materials stored or used onsite at JSC for the performance of the contract.
- (d) The contractor shall ensure that the proper training of its employees in the use and inherent hazards of these materials is accomplished prior to use.
- (e) The contractor shall notify the JSC Occupational Health and Test Support Office (SD13) prior to any initial use or different application of these materials.
- (f) The contractor shall use all hazardous materials properly and take all necessary precautions to ensure no harm is done to humans or the environment.

(g) The contractor shall insert the substance of this clause, including this Paragraph F with appropriate changes of designations of the parties, in subcontracts under which hazardous materials will be utilized, or may reasonably be expected to be utilized, onsite at JSC.

(h) In the event the contractor fails or refuses to comply with any aspect of this clause, such failure or refusal may be considered a material breach of this contract.

(End of clause)

H.40 Post-Production Support (PPS) Orbital Replacement Unit (ORU) Repair/Scheduled Maintenance, Replenishment Parts, and Transition Subcontracts Costs

The values provided for the materials pool and the associated usage are depicted in the table below:

Time Period	Estimated Cost	Usage
FY02	(b) (4)	ORU repair, replenishment parts, transition
10/1/2002-12/31/2003	(b) (4)	ORU repair, replenishment parts, transition
10/1/2003-12/31/2003	(b) (4)	Replenishment of the pool
01/01/2004-09/30/2004	(b) (4)	ORU repair, replenishment parts, transition
FY05	(b) (4)	ORU repair, replenishment parts, transition
FY06	(b) (4)	ORU repair, replenishment parts, transition
FY07	(b) (4)	ORU repair, replenishment parts, transition
FY08	(b) (4)	ORU repair, replenishment parts, transition
FY09	(b) (4)	ORU repair, replenishment parts, transition
FY10	(b) (4)	ORU repair, replenishment parts, Commercial Bills of Lading, residual asset management process (RAMP) & transition, which represents critical repairs and parts for items to be manifested through 3/2011
FY11	(b) (4)	ORU repair, replenishment parts, Commercial Bills of Lading, residual asset management process (RAMP) & transition.
FY12	(b) (4)	Commercial Bill of Lading (estimated cost of (b) (4)), replenishment parts (estimated cost of (b) (4)), Residuals (estimated cost of (b) (4)) and 188 repairs at an average cost of (b) (4) (estimated cost of (b) (4))
FY13	(b) (4)	Commercial Bill of Lading (estimated cost of (b) (4)), replenishment parts (estimated cost of (b) (4)), residual assets (estimated cost of (b) (4)) and 179 repairs at an average cost of (b) (4) (estimated cost of (b) (4))

FY14	(b) (4)	Commercial Bill of Lading (estimated cost of (b) (4) replenishment parts (estimated cost of (b) (4) residual assets (estimated cost of (b) (4) transitions (Moog to UTC Windsor; estimated cost of (b) (4) and repairs as follows (estimated cost of (b) (4)): 85 simple repairs, 14 medium repairs, and 8 complex repairs (see definitions below).
TOTAL	(b) (4)	

Simple repairs are defined as repairs that cost less than \$50,000 and typically consist of scratches, dings, dents, and parts replacements (back to print). TT&E is not required and a simple or no post repair acceptance testing is required. This type of repair includes preventative maintenance and minor repairs.

Medium repairs are defined as repairs that cost between \$50,000 and \$250,000 and require TT&E to determine the parts replacement and test requirements.

Complex repairs are defined as repairs that cost between \$250,000 and \$1,500,000 and require an extensive TT&E, requiring multiple go backs to determine failure, and potential MRB disposition.

The estimated cost of this pool will be increased on an as-needed basis. The contractor shall track and report all cost status information in accordance with PC27, entitled "Contractor Financial Management Report (533M)". The contractor shall submit a price proposal to replenish this pool for follow-on fiscal years in July of each year.

In the event the contractor forecasting shows that the costs incurred under this pool will exceed the negotiated amount prior to the end of the year, the contractor shall submit a proposal no later than 30 days prior to the date costs are expected to exceed the negotiated amount.

The work covered under H.40 is located in the Section C, Statement of Work, paragraph 3.3.8.

H.41 System Administrator Security Certification Program

In addition to any other requirements of this contract, all individuals, contractors or subcontractors who perform tasks as a system administrator or have authority to perform tasks normally performed by system administrator shall be required to demonstrate knowledge appropriate to those tasks. This demonstration, referred to as the NASA System Administrator Security Certification, is a NASA funded two-tier assessment to verify that system administrators are able to –

1. Demonstrate knowledge in system administration for the operating systems for which they have responsibility.
2. Demonstrate knowledge in the understanding and application of Network and Internet Security.

Certification is granted upon achieving a score above the certification level on both an Operating System test and the Network and Internet Security Test. The Certification earned under this process will be valid for three years. The criteria for this skills assessment has been established by the NASA Chief Information Officer. The objectives and procedures for this certification can be obtained by contacting the IT Security Awareness and Training Center at (216) 433-2063.

A system administrator is one who provides IT services, network services, files storage, web services, etc. to someone else other than themselves and takes or assumes the responsibility for the security and administrative controls of that service or machine. A lead system administrator

has responsibility for information technology security (ITS) for multiple computers or network devices represented within a system; ensuring all devices assigned to them are kept in a secure configuration (patched/mitigated); and ensuring that all other system administrators under their lead understand and perform ITS duties. An individual that has full access or arbitrate rights on a system or machine that is only servicing themselves does not constitute "a system administrator" or "since they are only providing or accepting responsibility for their system. An individual that is only servicing themselves is not required to obtain a System Administrator Certification.

(End of clause)

H.42 RESERVED

H.43 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 by Boeing or its subcontractors. The term includes technical data; computer software; and information incidental to contract performance. Types of data contained in the definition also include the results of contractor internal audits of any discipline, procedures, system, or task which directly or indirectly supports the performance of this contract as well as data from any audit of subcontractor(s) performing under this contract. The term is limited to data that is archived as a normal part of contractor performance.
- (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 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 the most current data produced or used in the performance of this contract for examination
- (d) 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 D-a--General clause.
- (e) The Contractor shall flow this clause to all cost-type subcontracts valued at \$1,000,000 or more.

(End of clause)

H.44 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 Shuttle launch and landing operations, 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 cost-reimbursement subcontractors (with values exceeding \$1 million) to determine compliance with the requirements of 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.45 ISS CONTRACT STRATEGY CONFLICT OF INTEREST AGREEMENT

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 six 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 ISS Mission Integration contract. The other four contracts to be awarded will be responsible for the overall implementation of these Program requirements. These four contracts are: Cargo Mission, ISS Payload Integration/Payload Mission, ISS Vehicle Segment Sustaining, and the Flight Equipment Sustaining and Operations contract. 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 five contracts responsible for “ISS Program Implementation”. Therefore, the contractor, by signing this contractual document, fully understands, agrees and will comply with the following conditions:

- 1) The contractor will not perform work as a prime and will not submit any proposal(s) for the Program Integration and Control and the Mission Integration procurements.
- 2) The contractor will perform no more than 49% (total contract costs) of the work as a subcontractor under any of the contracts mentioned above in number 1.
- 3) The contractor shall not and will not make the day-to-day management decisions under any of the contracts set forth in number 1.

If by the performance of this contract, or by any other means, the contractor believes he may violate any of these conditions above, the contractor shall notify the Contracting Officer in writing immediately.

(End of Clause)

H.46 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:

1. Russian Translations
2. Russian Interpretations
3. Russian Language training
4. 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 at the Renaissance Hot-I - Olympic Penta in Russia; 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.47 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:

1. 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:
 - a. 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 International Space Station Program.
 - b. 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 International Space Station Program.
 - c. 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 International Space Station Program.
2. 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.

- a. 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.
- b. 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
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
H)) Intermediate and Ultimate Consignees, End User (full name and address), and Destination of export (Country, city and company).	X		
6) Point of contact with current phone number and e-mail address (for technical questions – must be a representative of the contractor originating the export).	X	X	X
7) Contractor Point of contact, current e-mail address and phone number for CEA's use to send response	X	X	X

8) Export Classification Control Number (ECCN) under the Export Administration Regulations or category under the United States Munitions List regulations	X		X
9) The technical rationale used to support the classification	X		X
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.) **
 - c. 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.
3. 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)).
 4. ** For temporary exports (TMP), the contractor or its subcontractors shipping on behalf of NASA shall submit written notice to the CEA and CO within five (5) business days of the date that the item was actually returned, along with the incoming documentation.

5. 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 representative
6. 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”.
7. 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.)
8. 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.
9. 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.
10. 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.48 SUBCONTRACTING WITH RUSSIAN ENTITIES FOR GOODS OR SERVICES)

(a) Definitions: In this provision:

(1) The term “Russian entities” means:

(A) Russian persons, or

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

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

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

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

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

- (b) This clause implements the reporting requirement in section 6(i) of the Iran, North Korea, and Syria Nonproliferation Act. The provisions of this clause are without prejudice to the question of whether the Contractor or its subcontractor(s) are making extraordinary payments under section 6(a) or fall within the exceptions in section 7(1)(B) of the Act. NASA has applied the restrictions in the Act to include funding of Russian entities via U.S. Contractors.
- (c) (1) The Contractor shall not subcontract with Russian entities without first receiving written approval from the Contracting Officer. In order to obtain this written approval 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 paragraph (a):
- (A) A detailed description of the subcontracting entity, including its name, address, and a point of contact, as well as a detailed description of the proposed subcontract including the specific purpose of payments that will be made under the subcontract.
 - (B) The Contractor shall provide certification that the subcontracting entity is not, at the date of the subcontract approval request, on any of the lists of proscribed denied parties, specially designated nationals and entities of concern found at:
 - 'IS's Listing of Entities of Concern (see <http://www.access.gpo.gov/bis/ear/pdf/744spir.pdf>)
 - 'IS's List of Denied Parties (see <http://www.bis.doc.gov/dpl/Default.shtm>)
 - O'AC's List of Specially Designated Nationals (Adobe® PDF format) (see <http://www.treas.gov/offices/enforcement/ofac/sdn/t11sdn.pdf>)
 - List of Unverified Persons in Foreign Countries (see http://www.bis.doc.gov/Enforcement/UnverifiedList/unverified_parties.html)
 - State Department's List of Parties Statutorily Debarred for Arms Export Control Act Convictions (see <http://www.pmddtc.state.gov/debar059.htm>)
 - State Department's Lists of Proliferating Entities (see <http://www.state.gov/t/isn/c15231.htm>)
- (2) Unless relief is granted by the Contracting Officer, the information necessary to obtain approval to subcontract shall be provided to the Contracting Officer 30 business days prior to executing any planned subcontract with entities defined in paragraph (a).
- (d) After receiving approval to subcontract, the Contractor shall provide the Contracting Officer with a report every six months that documents the individual payments made to an entity in paragraph (a). The reports are due on July 15th and January 15th. The July 15th report shall document all of the individual payments made from the previous January through June. The January 15th report shall document all of the individual payments made from the previous July through December. The content of the report shall provide the following information for each time a payment is made to an entity in paragraph (a):
- (1) The name of the entity
 - (2) The subcontract number
 - (3) The amount of the payment
 - (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 paragraph (a), subject to an equitable adjustment.
- (f) Notwithstanding FAR 52.216-7, "Allowable Cost and Payments," on or after June 30, 2016 the Contractor shall be responsible to make payments to entities defined in paragraph (a) of this provision. Any subcontract with entities defined in paragraph (a), therefore, shall be completed in sufficient time to permit the U.S. Government to make extraordinary payments on subcontracts with Russian entities on or before June 30, 2016.
- (g) The Contractor shall include the substance of this clause in all its subcontracts, and shall require such inclusion in all other subcontracts of any tier. The Contractor shall be responsible to obtain written approval from the Contracting Officer to enter into any tier subcontract that involves entities defined in paragraph (a).

(End of Clause)

H.49 ADVANCED AGREEMENT FOR PENSION COSTS

The parties understand that this contract is priced consistent with the terms of the Advanced Agreement effective September 29, 2003 entered into between the Boeing Company and the U.S. Government. Upon final determination by the DACO of the noncompliance issue, the parties will negotiate appropriate adjustments to contract prices in accordance with the terms of the advance agreement. It is understood that any pension costs will be billed and paid in accordance with the contractors current disclosure practices until the non-compliance issue is resolved.

(End of clause)

H.50 HARDWARE TRANSITION ACTIVITIES

The parties recognize that the Contractor may not complete the transition of hardware by 31 December 2003 pursuant to SSCN 7939, and that the Government remains accountable for hardware identified in SSCN 7939 until such time that the hardware is accountable to the Contractor under Contract NAS15-10000. It is understood that the contractor shall complete the transition of hardware pursuant to SSCN 7939 and be accountable for all of the hardware identified in Appendix A of the statement of work on or before March 31, 2004.

(End of clause)

H.51 EVIDENCE OF COMPLETION MATRIX

The Contractor shall submit a SOW Evidence of Completion Matrix in accordance with DRD F-PM-09. The SOW Evidence of Completion Matrix shall define completion criteria for each numbered paragraph of the statement of work. Upon contract completion, each SOW task will require proof of closure in accordance with the Evidence of Completion Matrix pursuant to DRD F-PM-09.

(End of clause)

H.52 QUARTERLY NF 1018 AND ISS MAJOR ELEMENT VALUES REPORTING

In addition to the property reporting requirements established by clause G.5 of this contract, the Contractor shall submit annual and quarterly NF 1018 and ISS Major Element Values reporting in accordance with DRD F-PM-08, Quarterly Capital Property Reporting with Element Pricing Methodology.

(End of clause)

H.54 Advance Settlement Of Contract Changes

NASA and Boeing recognize that the NAS15-10000 Period of Performance may be extended past its current end-date of September 30, 2006 by exercising the Options listed in Article B.5 Options to Extend Completion Date. To prepare for such extension, the parties have reached negotiated settlements on the following list of Space Station Change Notices (SSCNs).

Options 1 and 2 were exercised under contract modification 1308. The Cost and Award Fee values below for SSCN 7818, ISS MDM Upgrade Development, and SSCN 8644, Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC were added to clause B.1, "Estimated Cost and Fee" in contract modification 1310.

Options 3 and 4 are exercised under contract modification 1365. The Cost and Award Fee values below for SSCN 8644, Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC; SSCN 8529, Node 3 Analytical Integration; MOD 1333, ISS Payload Integration Contract (IPIC) transition into NAS15-10000, and MOD 1335, Return to Flight are added to clause B.1, "Estimated Cost and Fee" in contract modification 1367.

Option 1		CONTRACT VALUE	
SSCN #	TITLE	COST	AWARD FEE
		7818	ISS MDM Upgrade Development
8644	Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC	(b) (4)	

Option 2		CONTRACT VALUE	
SSCN #	TITLE	COST	AWARD FEE
		7818	ISS MDM Upgrade Development
8644	Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC	(b) (4)	

Option 3		CONTRACT VALUE	
SSCN #	TITLE	COST	AWARD FEE
		8644	Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC
8809	Centrifuge Accommodation Module (CAM) Software Sustaining	(b) (4)	
8529	Node 3 Analytical Integration	(b) (4)	

MOD 1333	ISS Payload Integration Contract (IPIC) transition into NAS15-10000	(b) (4)	(b) (4)
MOD 1335	Return to Flight	(b) (4)	(b) (4)

Option 4			
SSCN #	TITLE	CONTRACT VALUE	
		COST	AWARD FEE
8644	Node 3 Hardware Support, ACBM and Port Hardware Installations and Tests, and Node 2/3 Stovepipe Installation at KSC	(b) (4)	(b) (4)
8809	Centrifuge Accommodation Module (CAM) Software Sustaining	(b) (4)	(b) (4)
8529	Node 3 Analytical Integration	(b) (4)	(b) (4)
MOD 1333	ISS Payload Integration Contract (IPIC) transition into NAS15-10000	(b) (4)	(b) (4)
MOD 1335	Return to Flight	(b) (4)	(b) (4)

(End of Clause)

H.55 RESERVED

H.56 IPIC HARDWARE AND SOFTWARE ACCEPTANCE DATA PACKAGES

The parties hereby understand and agree that hardware and software transitioned from the ISS Payload Integration Contract (IPIC) program contract (NAS9-02099) to the ISS Vehicle Sustaining contract (NAS15-10000EXT) have Acceptance Data Packages (ADP) that were assembled and maintained under the then IPIC ADP Data Requirements Description (DRD), CM11, which are not necessarily compliant to the requirements in ISS ADP DRD, PC08. Further more, these ADPs are herewith agreed to as being acceptable in the existing delivered “as-is” configuration, for all history prior to transition to the ISS Vehicle Sustaining contract (NAS15-10000EXT). Specifically, for IPIC:

1. Software, designated in the Deliverable Items List (DIL) as either (1) Formal Release Software (FRL); (2) Ground Support Software (GSS); or End Item S/W (EIM), the delivered ADP did not have to comply with SSP 30695 Table 4.0-2, but rather the following table.

Data Items	Data Elements
Version Description Document. Establishes the as-built configuration items released and provides installation and adaptation information. Establishes the exact description of the actual configuration of the items as depicted by specifications, incorporated approved changes, approved exceptions, etc.	Identified by software identifier and version (May point to the software VDD data requirement, if applicable.)
Certifications. Documented evidence that delivered software meets specified requirements. Certificates will be presented in a form of Sample 1 or Sample 2 attached.	Deliverable software identifier and version. Identifier of certifying official. The requirements being satisfied. The source of the requirement.

2. Hardware designated in the DIL as (1) Test Support Equipment (TSE); (2) Ground Support Equipment (GSE); (3) Simulator (SIM); (4) Trainer (TRN); and Prototype H/W (PRO) the delivered ADP was required to only consist of Sections I through V, and XVI only, as defined in Section 5.1 (structure) of SSP 30695.

In the event that any IPIC hardware or software item is modified, altered, or maintained, subsequent to transition to the NAS15-10000EXT contract, in such a manner so as to require a change in the ADP, per SSP 30695, the “current version” of the ADP will be required to be updated as required to be fully compliant with the requirements in PC08 and SSP 30695; although the historical version will continue to be acceptable “as is”.

(End of clause)

H. 57 DELIVERABLES AFTER CONTRACT PERIOD OF PERFORMANCE

- A. The parties agree that certain effort specified in paragraphs C and D below involve long lead items which must be initiated during the current contract for delivery sometime after September 30, 2015.
- B. It is NASA's intention to extend the current contract through September 30, 2020. Upon the negotiation of the contract extension with The Boeing Company, the effort specified in paragraph C will be transferred to the contract extension, and cost and fee for program support and infrastructure will be negotiated as part of the contract extension.
- C. The following items will require delivery beyond the current completion date of the contract:

Mod No.	PIO or SSCN	DIL ID No.	Description	Qty	Destination		Completion Date
					DD250	Final	
1792	SSCN 12202	51513	Lithium-Ion Battery ORU	1	HSR	KSC	10/15/2015
1792	SSCN 12202	51514	Lithium-Ion Battery ORU	1	HSR	KSC	12/15/2015
1792	SSCN 12202	51515	Lithium-Ion Battery ORU	1	HSR	KSC	2/15/2016
1792	SSCN 12202	51516	Lithium-Ion Battery ORU	1	HSR	KSC	4/15/2016
1792	SSCN 12202	51517	Lithium-Ion Battery ORU	1	HSR	KSC	6/15/2016
1792	SSCN 12202	51518	Lithium-Ion Battery ORU	1	HSR	KSC	8/15/2016
1792	SSCN 12202	51519	Lithium-Ion Battery ORU	1	HSR	KSC	10/14/2016
1792	SSCN 12202	51520	Lithium-Ion Battery ORU	1	HSR	KSC	12/15/2016
1792	SSCN 12202	51521	Lithium-Ion Battery ORU	1	HSR	KSC	2/15/2017
1792	SSCN 12202	51522	Lithium-Ion Battery ORU	1	HSR	KSC	4/14/2017
1792	SSCN 12202	51523	Lithium-Ion Battery ORU	1	HSR	KSC	6/15/2017
1792	SSCN 12202	51524	Lithium-Ion Battery ORU	1	HSR	KSC	8/15/2017
1792	SSCN 12202	51525	Lithium-Ion Battery ORU	1	HSR	KSC	10/16/2017
1792	SSCN 12202	51526	Lithium-Ion Battery ORU	1	HSR	KSC	12/15/2017
1792	SSCN 12202	51527	Lithium-Ion Battery ORU	1	HSR	KSC	2/15/2018
1792	SSCN 12202	51528	Lithium-Ion Battery ORU	1	HSR	KSC	4/16/2018
1792	SSCN 12202	51529	Lithium-Ion Battery ORU	1	HSR	KSC	6/15/2018
1792	SSCN 12202	51531	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	10/15/2015
1792	SSCN 12202	51532	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	12/15/2015
1792	SSCN 12202	51533	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	2/15/2016
1792	SSCN 12202	51534	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	4/15/2016
1792	SSCN 12202	51535	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	6/15/2016
1792	SSCN 12202	51536	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	8/15/2016
1792	SSCN 12202	51537	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	10/14/2016
1792	SSCN 12202	51538	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	12/15/2016
1792	SSCN 12202	51539	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	2/15/2017
1792	SSCN 12202	51540	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	4/14/2017
1792	SSCN 12202	51541	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	6/15/2017
1792	SSCN 12202	51542	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	8/15/2017
1792	SSCN 12202	51543	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	10/16/2017
1792	SSCN 12202	51544	Adaptor Plate, Lithium-Ion Battery	1	BHOU	KSC	12/15/2017

Mod No.	PIO or SSCN	DIL ID No.	Description	Qty	Destination		Completion Date
					DD250	Final	
1792	SSCN 12202	51545	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	2/15/2018
1792	SSCN 12202	51546	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	4/16/2018
1792	SSCN 12202	51547	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	6/15/2018
1792	SSCN 12202	51549	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	11/15/2015
1792	SSCN 12202	51550	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	1/15/2016
1792	SSCN 12202	51551	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	3/15/2016
1792	SSCN 12202	51552	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	5/15/2016
1792	SSCN 12202	51553	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	7/15/2016
1792	SSCN 12202	51554	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	9/15/2016
1792	SSCN 12202	51555	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	11/14/2016
1792	SSCN 12202	51556	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	1/15/2017
1792	SSCN 12202	51557	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	3/15/2017
1792	SSCN 12202	51558	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	5/14/2017
1792	SSCN 12202	51559	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	7/15/2017
1792	SSCN 12202	51560	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	9/15/2017
1792	SSCN 12202	51561	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	11/16/2017
1792	SSCN 12202	51562	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	1/15/2018
1792	SSCN 12202	51563	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	3/15/2018
1792	SSCN 12202	51564	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	5/16/2018
1792	SSCN 12202	51565	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	7/15/2018
1792	SSCN 12202	51566	Assembly, Pressure Pad, Left	18	BHO	KSC	7/15/2016
1792	SSCN 12202	51567	Assembly, Pressure Pad, Right	18	BHO	KSC	7/15/2016
1792	SSCN 12202	51568	Assembly, Connector Bracket	18	BHO	KSC	7/15/2016
1792	SSCN 12202	51569	Assembly, Tie-down, Front	18	BHO	KSC	7/15/2016
1792	SSCN 12202	51570	Assembly, Tie-down, Rear	18	BHO	KSC	7/15/2016
1792	SSCN 12202	51571	Rail, Guide, Battery ORU	72	BHO	KSC	7/15/2016
1792	SSCN 12202	51574	Status/Charging Unit, Lithium-Ion Battery (STE)	3	Vendor	KSC	7/15/2016
1792	SSCN 12202	51637	Lithium-Ion Battery ORU	1	HSR	KSC	8/15/2018
1792	SSCN 12202	51638	Lithium-Ion Battery ORU	1	HSR	KSC	10/15/2018
1792	SSCN 12202	51639	Lithium-Ion Battery ORU	1	HSR	KSC	12/15/2018
1792	SSCN 12202	51640	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	8/15/2018
1792	SSCN 12202	51641	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	10/15/2018
1792	SSCN 12202	51642	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	12/15/2018
1792	SSCN 12202	51643	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	9/15/2018
1792	SSCN 12202	51644	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	11/15/2018
1792	SSCN 12202	51645	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	1/15/2019
1792	SSCN 12202	51646	Assembly, Pressure Pad, Left	3	BHO	KSC	8/15/2018
1792	SSCN 12202	51647	Assembly, Pressure Pad, Right	3	BHO	KSC	8/15/2018
1792	SSCN 12202	51648	Assembly, Connector Bracket	3	BHO	KSC	8/15/2018
1792	SSCN 12202	51649	Assembly, Tie-down, Front	3	BHO	KSC	8/15/2018
1792	SSCN 12202	51650	Assembly, Tie-down, Rear	3	BHO	KSC	8/15/2018
1792	SSCN 12202	51651	Rail, Guide, Battery ORU	12	BHO	KSC	8/15/2018
1792	SSCN 12202	51652	Lithium-Ion Battery ORU	1	HSR	KSC	2/15/2019
1792	SSCN 12202	51653	Lithium-Ion Battery ORU	1	HSR	KSC	4/15/2019
1792	SSCN 12202	51654	Lithium-Ion Battery ORU	1	HSR	KSC	6/15/2019
1792	SSCN 12202	51655	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	2/15/2019
1792	SSCN 12202	51656	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	4/15/2019
1792	SSCN 12202	51657	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	6/15/2019
1792	SSCN 12202	51658	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	3/15/2019
1792	SSCN 12202	51659	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	5/15/2019
1792	SSCN 12202	51660	Mod Kit, On-Orbit, Lithium-Ion Battery	1	BHO	BHO	7/15/2019
1792	SSCN 12202	51661	Assembly, Pressure Pad, Left	3	BHO	KSC	2/15/2019
1792	SSCN 12202	51662	Assembly, Pressure Pad, Right	3	BHO	KSC	2/15/2019
1792	SSCN 12202	51663	Assembly, Connector Bracket	3	BHO	KSC	2/15/2019
1792	SSCN 12202	51664	Assembly, Tie-down, Front	3	BHO	KSC	2/15/2019
1792	SSCN 12202	51665	Assembly, Tie-down, Rear	3	BHO	KSC	2/15/2019
1792	SSCN 12202	51666	Rail, Guide, Battery ORU	12	BHO	KSC	2/15/2019
1792	SSCN 12202	51667	Lithium-Ion Battery ORU	1	HSR	KSC	8/15/2019
1792	SSCN 12202	51668	Lithium-Ion Battery ORU	1	HSR	KSC	10/15/2019
1792	SSCN 12202	51669	Lithium-Ion Battery ORU	1	HSR	KSC	12/15/2019
1792	SSCN 12202	51670	Adaptor Plate, Lithium-Ion Battery	1	BHO	KSC	8/15/2019
1792	SSCN 12202	51671	Assembly, Pressure Pad, Left	3	BHO	KSC	8/15/2019
1792	SSCN 12202	51672	Assembly, Pressure Pad, Right	3	BHO	KSC	8/15/2019
1792	SSCN 12202	51673	Assembly, Connector Bracket	3	BHO	KSC	8/15/2019
1792	SSCN 12202	51674	Assembly, Tie-down, Front	3	BHO	KSC	8/15/2019
1792	SSCN 12202	51675	Assembly, Tie-down, Rear	3	BHO	KSC	8/15/2019
1792	SSCN 12202	51676	Rail, Guide, Battery ORU	12	BHO	KSC	8/15/2019

Mod No.	PIO or SSCN	DIL ID No.	Description	Qty	Destination		Completion Date
					DD250	Final	
1936	SSCN 13144	20349	O-Ring	2	Parker Hanifan	KSC	10/16/2015
1936	SSCN 13144	20353	Distillate to QD-33M Hose	1	B-MSFC	KSC	10/19/2015
1936	SSCN 13144	20354	Gas Separator Purge Hose	1	B-MSFC	KSC	10/19/2015
1936	SSCN 13144	20355	Recycle Tank Feed Hose	2	B-MSFC	KSC	10/19/2015
1952	SSCN 13244	20235	Ammonia Tank Assembly (ATA) - ORU	1	BHOU	KSC	7/28/2016
1952	SSCN 13244	20236	Ammonia Tank Assembly (ATA) - ORU	1	BHOU	KSC	10/11/2016
1952	SSCN 13244	20239	Isolation Valve	7	Marotta	KSC	9/22/2016
1952	SSCN 13244	20240	Ammonia Tank	4	Honeywell	KSC	8/29/2016
1952	SSCN 13244	20250	Electronic Control Unit (ECU)	6	Marotta	KSC	10/26/2015
1961	PIO 105 SSCN 13191	20290	SPCU Heat Exchanger	1	Vender	KSC	4/25/2016
1978	SSCN 13287	20361	Nitrogen Interface Assembly ORU	1	B-MSFC	B-MSFC	5/17/2016
1978	SSCN 13287	20362	Relief Valve – Nitrogen Interface Assembly	2	B-MSFC	B-MSFC	5/17/2016
1978	SSCN 13287	20363	Pressure Regulator – Nitrogen Interface Assembly	1	B-MSFC	B-MSFC	5/17/2016
1995	SSCN 13763	51358	Solid State Light Assembly (SSLA)	20	Vendor	KSC	2/4/2016
1995	SSCN 13763	51359	Solid State Light Assembly (SSLA)	20	Vendor	KSC	6/13/2016
1995	SSCN 13763	51360	Solid State Light Assembly (SSLA)	20	Vendor	KSC	6/13/2016
1995	SSCN 13763	51361	Solid State Light Assembly (SSLA)	20	Vendor	KSC	8/22/2016
1995	SSCN 13763	51362	Solid State Light Assembly (SSLA)	20	Vendor	KSC	8/22/2016
2026	SSCN 13258	20297	Audio/Video Interface Card (AVIC) Assy	1	Vendor	KSC	2/1/2016
2026	SSCN 13258	20298	Audio/Video Interface Card (AVIC) Assy	1	Vendor	KSC	4/26/2016
2026	SSCN 13258	20408	Audio/Video Interface Card (AVIC) Assy	1	Vendor	KSC	5/5/2016
2026	SSCN 13258	20409	Audio/Video Interface Card (AVIC) Assy	1	Vendor	KSC	5/20/2016
2059	13283	20513	Fiber Optic Hybrid Transmitter Microcircuit	80	KSC	KSC	1/29/16
2059	13283	20514	Fiber Optic Hybrid Receiver Microcircuit	88	KSC	KSC	1/29/16
2060	SSCN 13079	51750	Digital User I/O Adapter (23A287M) (Program Logic Control Device (УПЛУ))	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51751	Relay User Signal I/O Adapter (23A288) (УПЛУ)	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51752	Custom Logic Processor (23A291) (УПЛУ)	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51753	23A281-4 Standard Switching Device	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51754	23A281-5 Standard Power Switching Device	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51755	11M157M Circuit Breaker Unit	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51790	Status Monitoring Device (ПКС) УПЛУ (41A-01)	1	Moscow	Moscow	3/15/18
2060	SSCN 13079	51767	ПТАБ-2 Storage Battery Current Converter	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51768	БУПТ-2 Current Converter Control Unit	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51769	PT-50-2 Current Controller	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51770	CHT-120/28 V Voltage and Current Stabilizer	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51775	Matching Unit [УС-31]	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51776	Converter (ПС) 28.5/120-90	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51777	Terminal Switch Unit [КСР]	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51778	Local Analog Switch TA249M	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51779	Local Digital Switch TA250	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51780	Local Temperature Switch TA251	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51781	Local Analog Switch TA252	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51782	Local Digital Switch TA253	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51783	Local Group Secondary Power Source TA818M	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51784	Programmable Memory Device TA765Б	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51785	Switch TA056	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51786	Command Generator (БФК)	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51787	Nitrogen Pumping System Avionics Unit (БАСПА)	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51788	Compressor Power Unit (БПК)	1	Moscow	Moscow	2/15/17
2060	SSCN 13079	51789	Filter Unit (БФ)	1	Moscow	Moscow	2/15/17
2062	13642	32430	Docking Adapter End Item Kit – NASA Docking System (NDS) Block 1	1	B-MSFC	B-MSFC	12/22/15
2062	13642	32431	Docking Adapter End Item Kit – NASA Docking System (NDS) Block 1	1	B-MSFC	B-MSFC	5/16/16
2062	13642	32432	Docking Adapter End Item Kit – NASA Docking System (NDS) Block 1	1	B-MSFC	B-MSFC	6/8/16
2062	13642	32433	Docking Adapter End Item Kit – NASA Docking System (NDS) Block 1	1	B-MSFC	B-MSFC	8/11/16

D. The table below documents the estimated cost and fee negotiated for the identified SSCN/PIO beyond October 1, 2015. Modification 1961 (S/A) incorporated all cost and fee dollars for Value thru September 30, 2010.

Mod #	SSCN/ PIO	TITLE		VALUE THRU 9/30/10	VALUE PAST 10/01/15	TOTAL
1662				(b) (4)		
1792	12202	Mod Kit, Design, Development, and Delivery of Lithium-Ion Battery ORUs for Use as Superseding Configuration for Existing IEA Nickel Hydrogen Batteries	Cost			
			Fee			
1795	12198	Develop, Manufacture, and Deliver 100 Solid State Lighting Assembly (SSLA) Units	Cost			
			Fee			
1816	SSCN 13162/PIO101	Control Moment Gyroscope (CMG)	Cost			
			Fee			
1952	SSCN 13244/PIO 103	Ammonia Tank Assembly (ATA) Orbital Replaceable Unit (ORU)	Cost			
			Fee			
1961	SSCN 13191/PIO 105	Service Performance Checkout Unit (SPCU) Heat Exchanger	Cost			
			Fee			
1973		Incentive Fee, H. 69	Fee			
1978	SSCN13287/PIO113	Provisioning Item Order (PIO) 113 Brine Filter Assemblies, Nitrogen Interface Assembly and Crew Quarter Spares	Cost			
			Fee			
2026	SSCN 13258/PIO107	Network Circuit Card Assemblies (CCA) and Audio/Video Interface Cards (AVIC) to Support the Integrated Communications Unit (ICU)	Cost			
			Fee			
2060	SSCN 13079	Request for Service Life Extension of Functional Cargo Block (FCB): Phase IV FCB module maintenance and Orbital Replacement Units (ORU) replacement for the delta service life	Cost			
			Fee			
2062	SSCN 13642	Design, Development, Qualify and Delivery of NASA Docking System (NDS) Block 1 Flight Units	Cost			
			Fee			
2066	SSCN 13565	Permanenet Multipurpose Module (PMM) Relocation and Second Docking Port at Node 2 Zenith	Cost			
			Fee			
		Total for Paragraph D				

(End of Clause)

H.58 RESERVED

(End of Clause)

H.59 CENTRIFUGE ACCOMMODATION MODULE (CAM), CAM ROTOR (CR) AND LIFE SCIENCE GLOVEBOX (LSG) HARDWARE ACCEPTANCE DATA PACKAGES (ADPs) (S/A 1475)

The parties hereby understand and agree that hardware and software transitioned from the CAM, CR and LSG residual assets to the ISS Vehicle Sustaining contract (NAS15-10000 EXT) have ADPs that were assembled and maintained which are not necessarily compliant to the requirements in ISS ADP Data Requirement Document (DRD), PC-08. Further more, these ADPs are herewith agreed to as being acceptable in the existing delivered "as-is" configuration, for all history prior to transition to the ISS Vehicle Sustaining contract (NAS15-10000 EXT).

In the event that any CAM, CR and LSG hardware item is modified, altered, or maintained, subsequent to transition to the NAS15-10000 EXT contract, in such a manner so as to require a change in the ADP, per SSP 30695, the "current version" of the ADP will be required to be updated for the work performed as required to be fully compliant with the requirements in PC-08 and SSP 30695; although the historical version will continue to be acceptable "as is."

Commercially procured hardware has been accepted by NASA with acknowledgement that the United States Government inspections and acceptances were not required during International Partner (IP) acquisitions. In process inspection and verification activities during production and initial delivery to the IP entities are hereby waived and accepted into inventory.

Manufacturing and test documents associated with the IP procurement may not be contractually available for Boeing use during sustaining and utilization effort. Boeing will not be held responsible when there is an impact, NASA will assist upon request.

H.60 DISPOSITION OF FLOOD LOSSES UNDER AMPHENOL SUBCONTRACT

1. BACKGROUND:

- a. During record high rainfall in late June 2006, the Amphenol facility in Sidney, NY was flooded due to extreme rainfall and overflow from the Susquehanna River.
 - b. Approximately \$890,815 in NASA-owned EEE connector parts were damaged as a result of a combination of river water, oils, hydrochloric acid, and bleach which leached into the water.
 - c. Connector piece-parts were stored at Amphenol under a fixed-price subcontract to the Boeing ISS Prime Contract in order to facilitate expedited build-up of ISS connectors. (Designed to reduce lead time to >30 days as opposed to 52 weeks in some cases.)
 - d. Amphenol did not have insurance on GFP and did not request and obtain limited risk of loss from the NASA PCO, so Amphenol now bears full liability.
 - e. A significant portion (approximately \$600,000) of the loss was classified as excess to minimum needs based on an updated Logistics stock level analysis.
2. To provide a remedy for the Government for the electronic connector component parts lost or damaged in the June 2006 flood which occurred at the Amphenol Corporation Facility, Sidney, New York, the parties have agreed that the contractor shall replace the Amphenol Gold inventory to pre-flood levels using the following guidelines. More specific details can be found in the agreement between Boeing and Amphenol, a copy of which is contained in Attachment J-31 of this contract.

- a. Replace the Physical Inventory to a limited pool level that would allow building of connectors quickly, then replace them as they are consumed to this inventory level
 - b. Create a virtual inventory in Gold that reflects pre-flood level quantities less the replaced physical inventory
 - c. As components are consumed in the Physical Inventory at Amphenol, contractual direction shall be provided to Amphenol to produce replacement components in the physical inventory.
 - d. Lead time for hardware delivery should remain stable once the inventories are backfilled (Typically 2 to 4 weeks ARO).
 - e. At end of Program, virtual hardware will be dispositioned as residual hardware in the same manner as tangible inventory.
3. Boeing shall oversee replacement of Government Furnished Property (GFP) identified in Attachment J-31 through final disposition of all items identified therein through the termination or expiration of the NAS15-10000 Prime Contract. It is understood by the parties that the Government has the unilateral right to transfer this clause and Attachment J-31 to any follow-on contract for sustaining engineering of the ISS.
 4. Boeing shall maintain an ongoing electronic inventory of the GFP as described in Attachment J-31, and shall provide quarterly status reports of property balances to the JSC ISS Logistics office.
 5. Except as described herein, this clause does not alter NASA's or Boeing's rights, liabilities or obligations pursuant to FAR 52.245-5, Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (JAN 1986).

(End of Clause)

H.61 ADMINISTRATIVE LEAVE (JSC 52.242-94) (SEP 2008)

- (a) When the NASA installation grants administrative leave to its Government employees (e.g., as a result of inclement weather, potentially hazardous conditions, or other special circumstances), the following personnel should also be dismissed upon notification of a center closure provided by the Contracting Officer:
 1. Contractor personnel and its subcontractor personnel working on-site; and
 2. Contractor personnel and its subcontractor personnel dedicated to the Contract effort who are
 - A. working off-site within 10 miles of JSC; and
 - B. unable to perform their 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, contractor personnel and its subcontractors shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by Buyer 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 in accordance with the FAR clause 52.232-22 "Limitation of Funds Clause". The cost of salaries and wages to the contractor and its subcontractors for the period of any such excused absence shall be a reimbursable item of cost under this Contract for effected employees in accordance with 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 contractor's established accounting policy.
2. For fixed price Contracts based on other than labor hours for deliverables, the Contracting Officer and the 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 prepared in accordance with the contractor's established accounting procedures. This clause is not applicable to the contractor or their lower tier subcontractors who have adequate casualty damage insurance and or adequate suspended operations labor insurance as determined for each instance of a declared administrative leave. However, should the insurance as payer of first resort fail to cover costs of such leave, the coverage contained within this provision will then be applicable to the contractor and such subcontractors.

All invoices requesting payment under a labor hour or fixed price Contract shall be marked as "Administrative Leave in accordance with 52.242-94, Administrative Leave." All such invoices paid will be subject to review, audit, and revision when routine operations re-commence.

- (c) The contractor shall include this clause in all services subcontracts that include personnel in the categories described in (a) above.

(End of Clause)

H. 62 PERFORMANCE FEE MILESTONES ASSOCIATED WITH THE ISS COMMON DOCKING ADAPTER PHASE II (SSCN 11885)

- (a) The Government shall pay the Contractor the performance fees listed below upon the completion of the identified milestones per the baselined evidence of completion.

Milestone #	Milestone Description	Performance Fee Available	Anticipated Completion Date
1	Baseline the CDA System Requirement document and develop a draft of first tier subsystem specifications	(b) (4)	January 2010
2	Conduct a System Requirement Review (SRR)	(b) (4)	May 2010
3	Conduct an Interim Design Review (IDR) of the Experimental Engineering Mockup Subassemblies (EEMS)	(b) (4)	July 2010
4	Transfer the EMS via DD Form 1149	(b) (4)	September 2010
5	Conduct CDA Project Interim review; perform subtasks pursuant to Modification 1602, Revision 1	(b) (4)	September 2010
6	Conduct studies and analyses to support avionics upgrade docking system avionics	(b) (4)	September 2010
7	Delivery of functional Experimental Engineering Mockup [See paragra(c) of this clause]	(b) (4)	September 2010

- (b) The contractor is authorized to submit a voucher for payment of a milestone once the COTR has signed the evidence of completion statement referenced in clause

H.51 Evidence of Completion Matrix and DRD F-PM-09, SOW Evidence of Completion Matrix. Payment vouchers shall be prepared in accordance with Clause G.2 Submission of Vouchers for Payment. These vouchers will be paid within 30 days in accordance with the prompt payment clause of this contract. (FAR 52.232-25 MAR 1994)

- (c) The accomplishment of incentive milestone 7 is highly desirable to the Government. Performance above the target level is of significant value to the Government and the value of the higher level of performance is worth the additional fee to the Government. The attainment of the higher level of performance is clearly within the control of the contractor. In order to qualify for the (b) (4) fee payment, the following conditions must be met:
1. The hardware must be delivered on or before September 30, 2010 without any ship short items.
 2. The COTR has signed the evidence of completion statement referenced in clause H.51 Evidence of Completion Matrix and DRD F-PM-09, SOW Evidence of Completion Matrix.
 3. The contractor has not exceeded the estimated cost for this project which is called out in line item 26 of clause B.1 Estimated Cost and Fee. If for any reason, the estimated cost in line item 26 is exceeded after payment of milestone 7 is made by the Government; the contractor agrees that they will return the milestone 7 fee payment to the Government. If the payment of milestone 7 is returned because the contractor has exceeded the estimated cost in line item 26, any costs above the estimated cost in line item 26 will be paid in accordance with FAR 52.216-7 (Allowable Cost and Payment Dec 2002).
- (d) The Government will not make partial fee payments for partial completion of a milestone.

(End of Clause)

H.63 OVERLIMIT PROPOSAL PREPARATION/INFRASTRUCTURE COSTS

Any change made pursuant to Clause I.8 Changes – Cost Reimbursement will include proposal preparation costs. The contractor shall utilize the change directive process and defer firm proposal preparation until the government has authorized via change direction. Any costs incurred prior to the directive signature shall be charged to technical definition.

In response to a request for firm proposal the contractor shall capture proposal preparation costs from all impacted teams, with the exception of contracts management and pricing teams, and include as part of the firm proposal submittal. The contractor shall have a goal to spend less than 1% of the estimated cost of the proposal being submitted on proposal preparation costs. It is understood by the parties that proposal preparation costs over the established goal of 1% are non-fee bearing. The contractor shall account for, track, and provide actual proposal preparation costs for proposals with an estimated cost of \$30M or greater.

After September 30, 2010, changed with an estimated cost exceeding \$3M shall additionally include business, administration, and management infrastructure tasks, with the exception of pricing and estimating, necessary to perform the change identified in the change directive.

(End of Clause)

H.64 IT SECURITY REQUIREMENTS

The contractor shall implement FAR 52.204-9, *Personal Identity Verification of Contractor Personnel* (SEPT 2007) and NASA 1852.204-76 (PIC 09-14) *Security Requirements for Unclassified Information Technology Resources* (OCT 2009) as tailored by the Boeing Houston

Site IT security plan dated July 31, 2008. The controlling authority for all IT security requirements shall be NASA Procedural Requirement 2810.1A.

(End of Clause)

H.65 TRANSITIONED ITEMS GRANDFATHER CLAUSE

The following items are transferred to Boeing to assume Sustaining Engineering (SE) and cognizant design center Commercial and Government Entity (CAGE) code responsibilities, but are “grandfathered” by NASA to Boeing “as-is” with existing documentation per the GFD list. Boeing shall not validate, recreate, or update existing documentation at the time of sustaining transition; however these activities will be performed when required to implement a sustaining task, spares producibility change, or design modification. If a design modification or spares build is implemented via a Change Directive (CD), all effort associated with the updates to the documentation will be included in the CD proposal.

- Transition of Crew Quarters Sustaining to Boeing and Crew Quarters Spares Procurement (SSCN 12860)
- Early Transfer of Sustaining Engineering for USA Maintained and NASA Sustained ISS Flight Crew Equipment (FCE) Government Furnished Equipment (GFE) Hardware to Boeing (SSCN 12870)
- Transition Sustaining Responsibility of the Oxygen Generation Assembly Power Supply Module (OGA PSM) from the Marshall Space Flight Center (MSFC) to the Boeing NAS15-10000 Contract (SSCN 13097)
- Cargo Mission Contract (CMC) Flight Support Equipment (FSE), Resupply Stowage Rack (RSRs), Resupply Stowage Platform (RSPs) (Extension contract)
- Goddard Space Flight Center (GSFC) Express Logistics Carrier (ELC) hardware, software, and simulators
- GSFC External Stowage Platform 3 Passive Common Attachment System (ESP3 PCAS) (SSCN 11967)
- Regenerative ECLSS Hardware from Marshall Space Flight Center (MSFC) (SSCN 12204): OGA Rack and support equipment, WRS Rack 1 and Rack 2 and support equipment, and Contingency hardware
- SSCN 013267 Rev 2, Transition of Sustaining Engineering for Selected Johnson Space Center (JSC) Government Furnished Equipment (GFE) Boeing.

The procurement of spare parts for the items listed above shall be performed as “build to print” per the NASA provided transitioned product baseline unless directed otherwise in the Change Directive authorizing the spares build. For “build to print” hardware the following shall guidelines shall be used:

- The NASA provided flight-certified design drawings including the list of certified hardware components shall be used by Boeing.
- Boeing shall build the assembly per the NASA provided design documentation.
- Boeing shall not be responsible for the design documentation; however shall be responsible to identify issues and concerns with the design documentation as discovered during the hardware builds.
- Boeing shall provide an Acceptance Data Package (ADP) with the Certification of Conformances (C of C) of the material ordered, records of workmanship, and acceptance testing results.
- Boeing shall deliver the assembly and associated documentation to NASA as “in conformance with NASA-provided design documentation”. If any hardware modifications have been made; Boeing shall verify the modification as required by the contract.
- NASA will declare the hardware as Flight Certified after delivery and update the ADP with the certification. Boeing shall declare any hardware modifications as Flight Certified and update the ADP.

Required configuration and design changes on subsequent-build hardware shall be identified, processed and authorized in accordance with SSP 41170.

(End of Clause)

H. 66 ANOMALY RESOLUTION/FAILURE INVESTIGATION POOL

A cost of \$10,000,000 is provided for anomaly resolution/failure investigation for the period of performance of FY11 – FY15.

This pool shall be used to perform special studies, tests, and/or evaluations required for anomaly resolution/failure investigation and shall meet at least one of the following criteria:

- Requires a subcontractor not under contract for sustaining engineering. The subcontractors negotiated in the 2011 – 2015 contract extension are listed in attachment J-32 of this contract.
- Requires the purchase of equipment to conduct the effort.
- Requires the refurbishment and/or assembly of special test equipment or support equipment to conduct the effort.
- The effort is manpower extensive and requires additional sustaining resources for other baseline sustaining work to remain on schedule (cannot be WPRR'd).

The contractor is not authorized to spend anomaly resolution/failure investigation pool funding until authorization has been provided by the Contracting Officer or the Contracting Officer's Technical Representative (COTR) for this contract. For all work to be performed using this pool, the contractor shall provide the Government with an authorization request which shall include at a minimum the purpose of the study, test, analysis, or evaluation, start and completion events and dates, and a ROM value for the activity, and the criterion/criteria noted above under which the request is being made. For ROMs over \$700K, details driving the costs shall be provided. Costs exceeding the ROM value shall be considered as an overrun and not count against the value of the pool. Contractor technical teams are responsible to advise their NASA counterparts of anticipated efforts.

Budget for this pool shall be held at the program level. A summary briefing of expenditures and status of ongoing efforts shall be briefed by the Contractor at the quarterly CSTR.

The contractor shall track and report all cost status information in accordance with PC27, entitled "Contractor Financial Management Report (533M)." Once the pool is depleted; NASA may choose to replenish the pool by requesting a proposal or may require change requests to be used to fund these studies, tests/analyses, and evaluations.

The work covered under this clause is located in the Section C, Statement of Work, paragraphs 3.2.1.3.

Anomaly Number	Title	Total Approved
01	ECLSS	(b) (4)
02	ECLSS	
03	ECLSS	
04	ATCS	
05	ATCS	
06	EPS	
07	ECLSS	
08	C&T	

A detailed list of anomalies including the tasks, task descriptions/objectives, and completion criteria may be found at Attachment J-32 – Sustaining Engineering Subcontractors and Anomaly Pool/Failure investigation Tracking

(End of Clause)

H. 67 STELLA NANORACKS INTEGRATION (SSCN 13175 – S/A 1848)

The contractor shall provide the Software Toolkit for Ethernet Lab-Like Architecture (STELLA) software in accordance with SOW 8.7.6, and marked with a RESTRICTED RIGHTS NOTICE, in accordance with FAR 52.227-14 RIGHTS IN DATA – GENERAL (JUNE 1987) as modified by NASA FAR Supplement 1852.227-14 (OCT 1995), Alternate III. Item (b)(5) of this notice shall be modified to read as follows:

- Disclosed to and reproduced for use by U.S. and International Partner Payload Developers, in accordance with subparagraphs (b)(1) through (4) of this clause, provided the Government makes such disclosure or reproduction subject to these restricted rights.

NASA and support contractors may have access to STELLA software and information as required to perform standard ISS integration tasks.

The Government is paying the contractor to sustain the software. The parties recognize that once over 50% of the STELLA Software Version 2.0 source code software has been modified under this contract, the RESTRICTED RIGHTS NOTICE shall be removed and the Government shall have UNLIMITED RIGHTS in the use of the STELLA software.

(End of Clause)

H.68 BOEING PROVIDED TRANSPORTATION IN RUSSIA

In furtherance of ISS contractual objectives, Boeing may provide transportation to NASA employees in Russia at no additional cost to the Government. This clause and the associated transportation applies only to work associated with the NASA Docking System (NDS) changes.

(End of clause)

H.69 INCENTIVE FEE ASSOCIATED WITH LITHIUM-ION (LI-ION) BATTERIES (SSCN 12202)

The Government reserves an amount of (b) (4) for payment of incentive fee for the acceleration of deliveries of Li-Ion batteries and associated parts, as detailed below.

- Meeting 100% of the Milestone due dates (hardware delivered with no open paper) stated in this clause earns (b) (4) in incentive fee per Milestone. The Government will not make partial fee payments for partial completion of a milestone. Any project cost overrun not caused by The Government shall be deducted, dollar for dollar, from the earned incentive fee.
- The contractor is authorized to submit a voucher for 50% payment of each milestone after meeting the delivery requirements for that milestone. Payment vouchers shall be prepared in accordance with Clause G.2 Submission of Vouchers for Payment. These vouchers will be paid within 30 days in accordance with the prompt payment clause of this contract. (FAR 52.232-25 MAR 1994).
- Upon project completion, the Government will pay the remaining fee, excluding any project cost overruns not caused by the Government. If these overruns are greater than the amount of the incentive fee earned by, but not yet paid to, The Boeing Company, The Boeing Company will credit back to the Government the project cost overruns in excess of the remaining amount owed to the Boeing Company on a dollar for dollar basis up to the maximum of the incentive fee previously paid to The Boeing Company. Project cost evaluation value for overrun determination is defined as the cost identified in Contract Modification 1792 for SSCN12202 (b) (4), plus any future SSCNs which impact the Lithium Ion project costs in addition to any Government driven cost impacts including, but not limited to, rate changes from partial or total program terminations or cancellations and changes in accounting standards and laws which affect The Boeing Company or any of Boeing's suppliers.

The basis for evaluation of cost will be documented in PM-02. Project completion is evidenced as follows:

- The COTR has signed the evidence of completion statement referenced in clause H.51 Evidence of Completion Matrix and DRD F-PM-09, SOW Evidence of Completion Matrix.
- All DIL items have been delivered via DD250 and any ship shorts have been closed.
- All residual assets have been dispositioned.

MILESTONE 1

Due Date	ID	Nomenclature	Qty	DD250 Date	P/N
NLT 11/15/15	51566	Pressure Pad, Left	18	07/15/16	684-017031-0001
	51567	Pressure Pad, Right	18	07/15/16	684-017031-0002
	51568	Kit, Connector Bracket	18	07/15/16	684-017033-0001
	51569	Tie-down, Front	18	07/15/16	684-017034-0001
	51570	Kit, Tie-down, Rear	18	07/15/16	684-017037-0001
	51571	Rail, Guide, Battery ORU	72	07/15/16	684-017056-0001
	51574	Status/Charging Unit, Lithium-Ion Battery (STE)	3	07/15/16	684-017045-0001
NLT 04/15/16	51517	Lithium-Ion Battery ORU	1	06/15/16	684-017000-0001
	51535	Adapter Plate, Lithium-Ion Battery	1	06/15/16	684-017050-0001
	51552	Mod Kit, On-Orbit, Lithium-Ion Battery	1	05/15/16	684-017105-0001
	51553	Mod Kit, On-Orbit, Lithium-Ion Battery	1	07/15/16	684-017106-0001
NLT DD250 Date	51512	Lithium-Ion Battery ORU	1	08/14/15	684-017000-0001
	51513	Lithium-Ion Battery ORU	1	10/15/15	684-017000-0001
	51514	Lithium-Ion Battery ORU	1	12/15/15	684-017000-0001
	51515	Lithium-Ion Battery ORU	1	02/15/16	684-017000-0001
	51516	Lithium-Ion Battery ORU	1	04/15/16	684-017000-0001
	51530	Adapter Plate, Lithium-Ion Battery	1	08/14/15	684-017050-0001
	51531	Adapter Plate, Lithium-Ion Battery	1	10/15/15	684-017050-0001
	51532	Adapter Plate, Lithium-Ion Battery	1	12/15/15	684-017050-0001
	51533	Adapter Plate, Lithium-Ion Battery	1	02/15/16	684-017050-0001
	51534	Adapter Plate, Lithium-Ion Battery	1	04/15/16	684-017050-0001
	51548	Mod Kit, On-Orbit, Lithium-Ion Battery	1	09/14/15	684-017101-0001
	51549	Mod Kit, On-Orbit, Lithium-Ion Battery	1	11/15/15	684-017102-0001
	51550	Mod Kit, On-Orbit, Lithium-Ion Battery	1	01/15/16	684-017103-0001
	51551	Mod Kit, On-Orbit, Lithium-Ion Battery	1	03/15/16	684-017104-0001

MILESTONE 2

Due Date	ID	Nomenclature	Qty	DD250 Date	P/N
NLT 02/15/17	51522	Lithium-Ion Battery ORU	1	04/14/17	684-017000-0001
	51523	Lithium-Ion Battery ORU	1	06/15/17	684-017000-0001
	51540	Adapter Plate, Lithium-Ion Battery	1	04/14/17	684-017050-0001

	51541	Adapter Plate, Lithium-Ion Battery	1	06/15/17	684-017050-0001
	51557	Mod Kit, On-Orbit, Lithium-Ion Battery	1	03/15/17	684-017110-0001
	51558	Mod Kit, On-Orbit, Lithium-Ion Battery	1	05/14/17	684-017111-0001
	51559	Mod Kit, On-Orbit, Lithium-Ion Battery	1	07/15/17	684-017112-0001
NLT DD250 Date	51518	Lithium-Ion Battery ORU	1	08/15/16	684-017000-0001
	51519	Lithium-Ion Battery ORU	1	10/14/16	684-017000-0001
	51520	Lithium-Ion Battery ORU	1	12/15/16	684-017000-0001
	51521	Lithium-Ion Battery ORU	1	02/15/17	684-017000-0001
	51536	Adapter Plate, Lithium-Ion Battery	1	08/15/16	684-017050-0001
	51537	Adapter Plate, Lithium-Ion Battery	1	10/14/16	684-017050-0001
	51538	Adapter Plate, Lithium-Ion Battery	1	12/15/16	684-017050-0001
	51539	Adapter Plate, Lithium-Ion Battery	1	02/15/17	684-017050-0001
	51554	Mod Kit, On-Orbit, Lithium-Ion Battery	1	09/15/16	684-017107-0001
	51555	Mod Kit, On-Orbit, Lithium-Ion Battery	1	11/14/16	684-017108-0001
	51556	Mod Kit, On-Orbit, Lithium-Ion Battery	1	01/15/17	684-017109-0001

MILESTONE 3

Due Date	ID	Nomenclature	Qty	DD250 Date	P/N
NLT 12/15/17	51527	Lithium-Ion Battery ORU	1	02/15/18	684-017000-0001
	51528	Lithium-Ion Battery ORU	1	04/16/18	684-017000-0001
	51529	Lithium-Ion Battery ORU	1	06/15/18	684-017000-0001
	51545	Adapter Plate, Lithium-Ion Battery	1	02/15/18	684-017050-0001
	51546	Adapter Plate, Lithium-Ion Battery	1	04/16/18	684-017050-0001
	51547	Adapter Plate, Lithium-Ion Battery	1	06/15/18	684-017050-0001
	51562	Mod Kit, On-Orbit, Lithium-Ion Battery	1	01/15/18	684-017115-0001
	51563	Mod Kit, On-Orbit, Lithium-Ion Battery	1	03/15/18	684-017116-0001
	51564	Mod Kit, On-Orbit, Lithium-Ion Battery	1	05/16/18	684-017117-0001
	51565	Mod Kit, On-Orbit, Lithium-Ion Battery	1	07/15/18	684-017118-0001
NLT DD250 Date	51524	Lithium-Ion Battery ORU	1	08/15/17	684-017000-0001
	51525	Lithium-Ion Battery ORU	1	10/16/17	684-017000-0001
	51526	Lithium-Ion Battery ORU	1	12/15/17	684-017000-0001
	51542	Adapter Plate, Lithium-Ion Battery	1	08/15/17	684-017050-0001
	51543	Adapter Plate, Lithium-Ion Battery	1	10/16/17	684-017050-0001
	51544	Adapter Plate, Lithium-Ion Battery	1	12/15/17	684-017050-0001
	51560	Mod Kit, On-Orbit, Lithium-Ion Battery	1	09/15/17	684-017113-0001
	51561	Mod Kit, On-Orbit, Lithium-Ion Battery	1	11/16/17	684-017114-0001
		51646	Pressure Pad, Left	3	08/15/18
	51647	Pressure Pad, Right	3	08/15/18	684-017031-0002

	51648	Kit, Connector Bracket	3	08/15/18	684-017033-0001
	51649	Tie-down, Front	3	08/15/18	684-017034-0001
	51650	Kit, Tie-down, Rear	3	08/15/18	684-017037-0001
	51651	Rail, Guide, Battery ORU	12	08/15/18	684-017056-0001

MILESTONE 4

Due Date	ID	Nomenclature	Qty	DD250 Date	P/N
NLT 10/12/18	51638	Lithium-Ion Battery ORU	1	10/15/18	684-017000-0001
	51639	Lithium-Ion Battery ORU	1	12/15/18	684-017000-0001
	51652	Lithium-Ion Battery ORU	1	02/15/19	684-017000-0001
	51653	Lithium-Ion Battery ORU	1	04/15/19	684-017000-0001
	51654	Lithium-Ion Battery ORU	1	06/15/19	684-017000-0001
	51641	Adapter Plate, Lithium-Ion Battery	1	10/15/18	684-017050-0001
	51642	Adapter Plate, Lithium-Ion Battery	1	12/15/18	684-017050-0001
	51655	Adapter Plate, Lithium-Ion Battery	1	02/15/19	684-017050-0001
	51656	Adapter Plate, Lithium-Ion Battery	1	04/15/19	684-017050-0001
	51657	Adapter Plate, Lithium-Ion Battery	1	06/15/19	684-017050-0001
	51644	Mod Kit, On-Orbit, Lithium-Ion Battery	1	11/15/18	684-017120-0001
	51645	Mod Kit, On-Orbit, Lithium-Ion Battery	1	01/15/19	684-017121-0001
	51658	Mod Kit, On-Orbit, Lithium-Ion Battery	1	03/15/19	684-017122-0001
	51659	Mod Kit, On-Orbit, Lithium-Ion Battery	1	05/15/19	684-017123-0001
	51660	Mod Kit, On-Orbit, Lithium-Ion Battery	1	07/15/19	684-017124-0001
	51661	Pressure Pad, Left	3	02/15/19	684-017031-0001
	51662	Pressure Pad, Right	3	02/15/19	684-017031-0002
	51663	Kit, Connector Bracket	3	02/15/19	684-017033-0001
	51664	Tie-down, Front	3	02/15/19	684-017034-0001
51665	Kit, Tie-down, Rear	3	02/15/19	684-017037-0001	
51666	Rail, Guide, Battery ORU	12	02/15/19	684-017056-0001	
NLT DD250 Date	51637	Lithium-Ion Battery ORU	1	08/15/18	684-017000-0001
	51640	Adapter Plate, Lithium-Ion Battery	1	08/15/18	684-017050-0001
	51643	Mod Kit, On-Orbit, Lithium-Ion Battery	1	09/15/18	684-017119-0001

SPARES

Due Date	ID	Nomenclature	Qty	DD250 Date	P/N
NLT DD250 Date	51667	Lithium-Ion Battery ORU	1	08/15/19	684-017000-0001
	51668	Lithium-Ion Battery ORU	1	10/15/19	684-017000-0001
	51669	Lithium-Ion Battery ORU	1	12/15/19	684-017000-0001
	51670	Adapter Plate, Lithium-Ion Battery	1	08/15/19	684-017050-0001
	51671	Pressure Pad, Left	3	08/15/19	684-017031-0001
	51672	Pressure Pad, Right	3	08/15/19	684-017031-0002
	51673	Kit, Connector Bracket	3	08/15/19	684-017033-0001
	51674	Tie-down, Front	3	08/15/19	684-017034-0001
	51675	Kit, Tie-down, Rear	3	08/15/19	684-017037-0001

	51676	Rail, Guide, Battery ORU	12	08/15/19	684-017056-0001
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(End of Clause)

H.70 Non-Government Property

All hardware delivered under the Change Directives listed below is being developed under a fixed price subcontract. Only the hardware on the Deliverable Items List will become Government Property. NASA is not responsible for the development, sustaining, maintenance or repair of any of the tooling, ground support equipment and test equipment required to deliver this hardware.

- SSCN 12283 “Request for Service Life Extension of Functional Cargo Block (FGB): Phase IIIA FGB Non-Replaceable Hardware through 2028”
- SSCN 13079 “Request for Service Life Extension of Functional Cargo Block (FGB): Phase IV FGB module maintenance and Orbital Replacement Units (ORU) replacement for the delta service life”

(End of Clause)