

**SOLICITATION, OFFER AND AWARD**

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 7900)

RATING

PAGE 1 OF 93 PAGES

2. CONTRACT NUMBER: **NNG13CR48C**

3. SOLICITATION NUMBER: **NNG11375927R**

4. TYPE OF SOLICITATION:  SEALED BID (IFB)  NEGOTIATED (RFP)

5. DATE ISSUED

6. REQUISITION/PURCHASE NUMBER

7. ISSUED BY: **GSFC**

8. ADDRESS OFFER TO (If other than item 7):  
 NASA/GSFC, Procurement Operations Division  
 8800 Greenbelt Road, Code 210.3, Greenbelt, MD 20771

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

**SOLICITATION**

9. Sealed offers in original and See RFP L.14 copies for furnishings the supplies or services in the Schedule will be received at the place specified in item 8, or if hand carried, in the depository located in See RFP Section L.19 until 1 PM local time 2/26/2013

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

10. FOR INFORMATION CALL:

A. NAME: **Michelle D. McIntyre**

B. TELEPHONE (NO COLLECT CALLS):  
 AREA CODE: **301** NUMBER: **286** EXT.: **7985**

C. E-MAIL ADDRESS: **Michelle.D.McIntyre@nasa.gov**

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**OFFER (Must be fully completed by offeror)**

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

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

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)

10 CALENDAR DAYS (%)    20 CALENDAR DAYS (%)    30 CALENDAR DAYS (%)    CALENDAR DAYS(%)

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):

AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
000001/000002	01/13/2012	000005	02/19/2013
000003/000004	9/19/9/26/12	000006	02/25/2013

15A. NAME AND ADDRESS OF OFFEROR: **ASRC FEDERAL SPACE AND DEFENSE (AS&D) 6303 IVY LANE, STE. 130 GREENBELT, MD 20770**

CODE: **3B3H1** FACILITY:

16. NAME AND THE TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print): **CATHERINE URBAN VP FINANCE & BUSINESS MANAGER**

15B. TELEPHONE NUMBER: AREA CODE: **301** NUMBER: **837** EXT.: **3159**

15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.

17. SIGNATURE: *Catherine Urban*

18. OFFER DATE: **02/26/2013**

**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS

20. AMOUNT

21. ACCOUNTING AND APPROPRIATION

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

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

24. ADMINISTERED BY (If other than Item 7)

25. PAYMENT WILL BE MADE BY CODE

26. NAME OF CONTRACTING OFFICER (Type or print): **Michelle D. McIntyre**

27. UNITED STATES OF AMERICA: *Michelle D. McIntyre* (Signature of Contracting Officer)

28. AWARD DATE: **7/3/13**

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

AUTHORIZED FOR LOCAL REPRODUCTION  
 Previous edition is unusable

**SECTION B - SUPPLIES OR SERVICES AND COSTS**

**B.1 SUPPLIES AND/OR SERVICES TO BE PROVIDED**

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to deliver and/or perform the items below in accordance with the Clause J.1, Attachment A “Statement of Work”, and Task Orders issued.

<i>Item</i>	<i>Description</i>	<i>Reference</i>	<i>Schedule</i>	<i>Delivery Method/Addressee(s)</i>
1	SOW Requirements	Clause C.1, Attachment A, and as defined in individual task orders	As defined in individual task orders.	<i>See Task Order(s)</i>
2	Foreign Travel Requests and Foreign Travel Reports	Clause G.1	Requests – 30 days in advance of travel; Reports – Upon conclusion of travel	<i>As specified in Contracting Officer’s (CO) travel approval</i>
3	NASA Financial Management Reports	Clause G.2 and Clause G.5	Monthly and Quarterly in accordance with Attachment C	<i>Electronic Format/ CO; Contracting Officer’s Representative (COR); Task Monitor (TM); Resource Analyst (RA) (Code 501.0)</i>
4	Safety & Health Reporting	Clause H.7 and Clause H.8	Monthly and Quarterly Reports	<i>Electronic Format/Code 350; &amp; CO</i>
5	Requests for Government Property	Clause G.10	30 days prior to approval need date	<i>Hard Copy/CO</i>
6	Financial Report of NASA Property in the Custody of Contractors (NF 1018)	Clause G.12	Annual report due by October 15 <sup>th</sup> and Final Report as specified	<i>NF 1018 Electronic Submission System (NESS)</i>
7	New Technology/Patent Reportable Items	Clause G.9, Clause I.59, and Clause I.60	As required and Final Report	<i>Electronic or Hard Copy Format/New Technology/Patent Representatives</i>
8	Personal Identity Verification (PIV) Documentation and Reporting	Clause H.4 and Clause H.5	10th calendar day of each month	<i>Electronic Format/COR; &amp; Code 240</i>
9	Equal Opportunity	Clause I.38	As required by	<i>Electronic Format/ CO; &amp;</i>

**NNG13CR48C**

<i>Item</i>	<i>Description</i>	<i>Reference</i>	<i>Schedule</i>	<i>Delivery Method/Addressee(s)</i>
	Reports		Contracting Officer	<i>Code 120</i>
10	Insurance Notification	Clause I.62 and Clause I.106	As required by Contracting Officer	<i>Electronic Format/CO</i>
11	Subcontract Notification	Clause I.101	30 days prior to subcontract award date	<i>Hard Copy/CO</i>
12	IT Security Management Plan	Clause I.112	30 days after contract award, & annual updates as required	<i>Electronic Format/CO</i>
13	Task Plans	Clause B.7 and H.12	As Required by Contracting Officer	<i>NASA Task Order Management System (TOMS)</i>
14	Final Task Order Report	Clause C.2	Within 30 days of task order completion	<i>Electronic Format/COR; Task Monitor (TM); CO (letter transmittal only); &amp; Hard Copy/CASI</i>
15	Monthly Progress Reports	Clause C.2	Monthly: 15 <sup>th</sup> calendar day of each month Final: within 30 days of completion of task	<i>Electronic Format/COR;TM; &amp; CO (letter transmittal only)</i>
16	Contract Historical Data	Clause G.6 and Attachment I	Within 30 days of a written request	<i>Electronic Format/CO</i>
17	Organizational Conflicts of Interest (OCI) Avoidance Plan	Clause H.15 and Clause I.120	30 days after contract award	<i>Hard Copy/CO</i>

(End of clause)

**B.2 1852.216-85 ESTIMATED COST AND AWARD FEE (SEPT 1993)**

The estimated cost of this contract is \$(to be negotiated by task order). The maximum available award fee, excluding base fee, if any, is \$(to be negotiated by task order). The base fee is \$0. Total estimated cost, base fee, and maximum award fee are \$(to be negotiated by task order).

(End of clause)

**B.3 1852.232-81 CONTRACT FUNDING (JUN 1990)**

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$1,456,311. This allotment is for task orders issued under this contract and covers the following estimated period of performance : September 9, 2013.

(b) An additional amount of \$43,689 is obligated under this contract for payment of fee.

(End of clause)

**B. 4 ORDERING (52.216-18) (OCT 1995)**

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from the effective date of this contract through a five (5) year period afterwards (effective ordering period).

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered issued when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

(End of clause)

**B.5 ORDER LIMITATIONS (52.216-19) (OCT 1995)**

(a) *Minimum order.* When the Government requires supplies or services covered by this contract in an amount of less than \$1,000 the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order.* The Contractor is not obligated to honor -

(1) Any order for a single item in excess of \$15M;

(2) Any order for a combination of items in excess of \$15M; or

(3) A series of orders from the same ordering office within fifteen (15) calendar days that together call for quantities exceeding the limitation in subparagraph (b) (1) or (2) of this section.

(c) If this is a requirements contract (*i.e.*, includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required

to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.

(d) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within three (3) calendar days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

**B.6 MINIMUM/MAXIMUM AMOUNT OF SUPPLIES OR SERVICES (COST REIMBURSEMENT) (GSFC 52.216-90) (APR 2008)**

(a) The minimum amount of supplies or services that shall be ordered during the effective period of this contract is \$1,500,000.00. The maximum amount of supplies or services that may be ordered during the effective period of this contract is \$475,000,000.00. All orders placed under this contract will be applied to the minimum and maximum specified in this paragraph.

(b) The minimum amount is reached when the sum of the dollar amounts of all ordered supplies or services, except for any adjustments made pursuant to the Limitation of Cost or Limitation of Funds clause, equals or exceeds the minimum amount stated in paragraph (a).

(c) The maximum amount is reached when the sum of the dollar amounts of all ordered supplies or services, except for any adjustments made pursuant to the Limitation of Cost or Limitation of Funds clause, equals the maximum amount stated in paragraph (a).

(d) The maximum amount, if reached, precludes the issuance of further orders for supplies or services under this contract. However, reaching the maximum amount does not preclude adjustments to the dollar amounts of existing placed orders, for actions that are within the scope of the placed orders, and which are made pursuant to existing contract authority, such as the Changes clause.

(e) The maximum amount may be adjusted unilaterally by the Government on an as needed basis. Historic, current, and/or projected workload requirements will be used to determine the amount of upward adjustment. In no event will the adjusted maximum amount exceed 130% of the original maximum amount.

(End of clause)

**B.7 SUPPLEMENTAL TASK ORDERING PROCEDURES (COST REIMBURSEMENT) (GSFC 52.216-91) (APR 2010)**

(a) When the Government issues a request for a “task plan” to the Contractor in accordance with the Clause entitled “Task Ordering Procedure” of this contract, the Contractor shall prepare its estimate of the labor hours, labor categories, indirect costs, and other direct costs required to perform the task order requirements. The Contractor shall use only those appropriate labor and indirect cost rates, which may be less than but shall not exceed the rates found in Attachment B, to calculate the proposed estimated costs for all task orders issued in accordance with the “Task Ordering Procedure” clause of this contract.

(b) The Contractor’s proposed approach/pricing of the representative tasks set forth in its proposal for award of this contract shall be used as reference by the Contracting Officer in negotiating tasks with the Contractor which are issued under this contract, but only to the extent portions of a representative task are relevant to portions of a task actually issued.

(c) The Government and Contractor agree that the maximum award fee percentage specified in Attachment B shall be used to calculate the maximum available award fee dollars on all task orders issued in accordance with the “Task Ordering Procedure” clause of this contract. The Government shall solely determine the earned award fee under the contract.

(End of clause)

**B.8 ESTIMATED COST INCREASES (GSFC 52.232-94) (DEC 2005)**

(a) The Contractor shall notify the Contracting Officer in writing when the Contractor has reason to believe that the total cost for performance of this contract, or any individual task order, exclusive of any fee, will be either greater or substantially less than the total estimated cost stated in this contract or in the task order. Notification shall not be delayed pending preparation of a proposal.

(b) A proposal is required to support a request for an increase in the estimated cost of the contract or the task order. The proposal should be submitted as soon as possible after the above notification but no later than 115 days before the incurred costs are expected to exceed the estimated cost. This will allow adequate time for the Government to evaluate the proposal and to mutually establish any increase in estimated cost with the Contractor.

(c)(1) The proposal shall be submitted in the following format unless some other format is directed or approved by the Contracting Officer:

Incurred costs to date  
Projected cost to completion  
Total cost at completion

Current negotiated estimated cost  
Requested increase in estimated cost

(2) The “projected cost to completion” shall consist of the following “other than cost or pricing data” unless the Contracting Officer requests or approves the submittal of a greater or lesser amount of information:

- (i) Elements of cost with supporting detail for estimated direct labor hours, direct and indirect rates, materials and subcontracts, and other elements.
- (ii) Supporting explanation for the increases and projections, sufficient for the Government to understand the reasons for the increased estimated cost.

(End of clause)

**B.9 52.216-22 INDEFINITE QUANTITY (OCT 1995)**

- (a) This is an indefinite-quantity contract for the supplies or services specified and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.
- (b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."
- (c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.
- (d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; *provided*, that the Contractor shall not be required to make any deliveries under this contract after **(1) the end of the effective ordering period, or (2) no more than one (1) year from the end of the contract’s effective ordering period for those orders placed within the ordering period where performance extends beyond the end of the effective ordering period.**

(End of clause)

**B.10 RESERVED**

**B.11 52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)**

(a) The use of overtime is authorized under this contract if the overtime premium does not exceed \$0 or the overtime premium is paid for work -

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall -

(1) Identify the work unit; *e.g.*, department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multi-shift operations or by employing additional personnel.

(End of clause)

**[END OF SECTION B]**



**SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

**C.1 SCOPE OF WORK**

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to perform the work and to furnish the items specified in Section B, in accordance with the requirements set forth in the Statement of Work for Electrical Systems Engineering Services II (ESES II) for the Applied Engineering and Technology Directorate (AETD) incorporated in Section J as Attachment A, and task orders issued hereunder.

(End of Text)

**C.2 REPORTS OF WORK**

(a) Monthly progress reports. The Contractor shall submit monthly progress reports of all work accomplished covering all task orders active during each month of contract performance. Reports shall be in narrative form and brief and informal in content. They shall include a quantitative description of overall progress, an indication of any current problems which may impede performance and proposed corrective action, and a discussion of the work to be performed during the next monthly reporting period.

(b) Final Task Order Report. The Contractor shall submit a final task order report for each completed task order that summarizes the results of the entire task order, including recommendations and conclusions based on the experience and results obtained. The final task order report should include, as appropriate, tables, graphs, diagrams, curves, sketches, photographs, and drawings in sufficient detail to comprehensively explain the results achieved under the task order. The final report shall also include the final incurred cost for the task order.

(c) Report Documentation Page. The copies provided to the Center for Aerospace Information shall have a completed Standard Form 298, Report Documentation Page, as the last page. Refer to NASA FAR Supplement clause 1852.235-73, "FINAL SCIENTIFIC AND TECHNICAL REPORTS" of this contract.

(d) Submission. The Contractor shall submit the report required by this clause as follows:

[M=Monthly, F=Final]

Copies	Report Type	Addressee	Mail Code
1	M,F	Contracting Officer	210.3
1	M,F	Contracting Officer's Representative (COR)	560
1	M,F	Task Monitor	See Task Order

1	F	Center for Aerospace Information (CASI) Attn: Acquisitions Collections Development Specialist 7115 Standard Drive, Hanover, Maryland 21076-1320	
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(e) Submission dates. Monthly reports shall be submitted by the 15th day of the month following the month being reported. If the task order is awarded beyond the middle of a month, the first monthly report shall cover the period from award until the end of the following month. The final report for each task order shall be submitted within 30 days after completion of the task order.

(End of Text)

**C.3 LIMITED RIGHTS DATA OR RESTRICTED COMPUTER SOFTWARE  
(GSFC 52.227-90) (MAR 2008)**

In accordance with the delivery requirements of this contract, all software data rights shall be delivered in accordance with the Rights in Data – General clause, specified elsewhere in this contract, except for the following: **NONE**

(End of clause)

**[END OF SECTION C]**

**SECTION D - PACKAGING AND MARKING**

**D.1 1852.211-70 PACKAGING, HANDLING, AND TRANSPORTATION (SEP 2005)**

(a) The Contractor shall comply with NASA Procedural Requirements (NPR) 6000.1, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components", as may be supplemented by the statement of work or specifications of this contract, for all items designated as Class I, II, or III.

(b) The Contractor's packaging, handling, and transportation procedures may be used, in whole or in part, subject to the written approval of the Contracting Officer, provided (1) the Contractor's procedures are not in conflict with any requirements of this contract, and (2) the requirements of this contract shall take precedence in the event of any conflict with the Contractor's procedures.

(c) The Contractor must place the requirements of this clause in all subcontracts for items that will become components of deliverable Class I, II, or III items.

(End of clause)

**NOTE: Class I, II, and III designations for Task Order deliverables will be specified in each individual task order at the time of task order issuance. All reports/documentation deliverables specified under Clause B.1, unless specified (electronic format, etc.), are considered Class IV and shall be shipped via the most advantageous commercial transportation means considered to be in the best interest of the Government.**

**[END OF SECTION D]**

**SECTION E - INSPECTION AND ACCEPTANCE**

**E.1 ACCEPTANCE—LOCATION(S) (GSFC 52.246-93) (APR 2008)**

The Contracting Officer or authorized representative will accomplish acceptance at NASA/Goddard Space Flight Center or other locations as specified in individual work assignments. The Contracting Officer reserves the right to designate other Government agents as authorized representatives. The Contractor will be notified by a written notice or by a copy of the delegation letter if other agents are authorized.

(End of clause)

**E.2 INSPECTION SYSTEM RECORDS (GSFC 52.246-102) (APR 2013)**

The Contractor shall maintain records evidencing inspections in accordance with the Inspection clause of this contract for six (6) years after delivery of all items and/or completion of all services called for by the contract.

(End of clause)

**E.3 52.246-5 INSPECTION OF SERVICES – COST-REIMBURSEMENT  
(APR 1984)**

**NOTE: Clause E.3 applies only to Task Orders issued for Services**

**E.4 52.246-8 INSPECTION OF RESEARCH AND DEVELOPMENT – COST-  
REIMBURSEMENT (MAY 2001)**

**NOTE: Clause E.4 applies only to Task Orders issued for End-Items.**

**E.5 52.246-11 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT  
(FEB 1999)**

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

(a) ANSI/ISO/ASQ Q9001-2000 Quality Management System (QMS) requirements as documented on-line in the GSFC QMS system (<http://gsfcmanagementsystem.gsfc.nasa.gov/fundamentals.cfm>).

**-or**

(b) The Aerospace Standard (AS) 9100. Additional quality requirements may also be specified in individual task orders.

“Compliant” means that the contractor has defined, documented, and will continually implement during the term of the contract management-approved methods of operation that conform to the requirements given in the above-cited International Standard.

**-and**

(c) Attachment F – Quality Assurance Plan (QAP)

(End of clause)

**E.6 MATERIAL INSPECTION AND RECEIVING REPORT (1852.246-72)  
(AUG 2003)**

(a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in an original copy and sufficient other copies to accomplish the following distribution:

(1) Via mail and marked "Advance Copy", one copy each to the Contracting Officer, the Contracting Officer's Technical Representative (if designated in the contract), and to the cognizant Administrative Contracting Officer, if any.

(2) Via mail, the original and 1 copy (unfolded) to the shipment address (delivery point) specified in Section F of this contract. Mark the exterior of the envelope "CONTAINS DD FORM 250". This must arrive prior to the shipment.

(3) With shipment in waterproof envelope (one copy) for the consignee.

(4) If the shipment address is not directly to the Goddard Space Flight Center (Greenbelt) or Goddard Space Flight Center (Wallops) central receiving areas, then one copy of the DD Form 250 must be provided (via mail) to one on the following addresses depending upon whether this contract is with GSFC Greenbelt or GSFC Wallops:

Receiving and Inspection (Code 279), Goddard Space Flight Center, Greenbelt, MD  
20771

Receiving and Inspection (Bldg. F16), Wallops Flight Facility, Wallops Island VA 23337

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

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

(End of clause)

**E.7 MATERIAL INSPECTION AND RECEIVING REPORT NOT REQUIRED  
(GSFC 52.246-94) (APR 1989)**

NASA FAR Supplement clause 18-52.246-72 of this contract requires the furnishing of a Material Inspection and Receiving Report (MIRR) (DD Form 250 series) at the time of each delivery under this contract. However, a MIRR is not required for the following deliverable items:

Description

Services rendered  
Reports/documentation

(End of clause)

**E.8 CLAUSES INCORPORATED BY REFERENCE -- SECTION E**

Clause E.3 and E.4 at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

**[END OF SECTION E]**

**SECTION F - DELIVERIES AND PERFORMANCE**

**F.1 EFFECTIVE ORDERING PERIOD - TASK ORDERS**

The Government may issue task orders for a period of five (5) years after the effective date of the contract, **August 1, 2013**. New Task Orders shall not be issued after the expiration of the effective ordering period.

(End of text)

**F.2 52.242-15 STOP-WORK ORDER (AUG 1989) - ALTERNATE I (APR 1984)**

**F.3 52.247-34 F.O.B. DESTINATION (NOV 1991)**

**F.4 PLACE OF PERFORMANCE - SERVICES**

The services to be performed under this contact shall be performed at the following location(s): NASA Goddard Space Flight Center, the Contractor's off-site facilities, and other NASA facilities.

(End of text)

**F.5 SHIPPING INSTRUCTIONS -- CENTRAL RECEIVING (GSFC 52.247-94)  
(JUN 2006)**

Shipments of the items required under this contract shall be to:

Receiving Officer  
Building 35  
Code 279  
Goddard Space Flight Center  
Greenbelt, Maryland 20771

Marked for:

Technical Officer (Name): \_\_\_\_\_ Code: \_\_\_\_\_  
Building: \_\_\_\_\_ Room: \_\_\_\_\_  
Contract No.: \_\_\_\_\_  
Item(s) No. \_\_\_\_\_

Compliance with this clause is necessary to assure verification of delivery and acceptance and prompt payment.

(End of clause)

**F.6 CLAUSES INCORPORATED BY REFERENCE -- SECTION F**

Clause(s) F.2 and F.3 at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

**[END OF SECTION F]**



**SECTION G - CONTRACT ADMINISTRATION DATA**

**G.1 1852.242-71 TRAVEL OUTSIDE OF THE UNITED STATES (DEC 1988)**

**G.2 1852.242-73 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (NOV 2004)**

**G.3 1852.216-76 AWARD FEE FOR SERVICE CONTRACTS (APR 2012)**

**NOTE: Clause G.3 applies only to Task Orders issued for Services.**

(a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause [1852.216-85](#), "Estimated Cost and Award Fee" in this contract.

(b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the Contractor's performance every 6 months to determine the amount of award fee earned by the contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with the Performance Evaluation Plan. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.

(c) The Government will advise the Contractor in writing of the evaluation results. The NASA/Shared Services Center Financial Management Division (FMD) Accounts Payable will make payment based on issuance of a unilateral modification by the Contracting Officer.

(d) The Contracting Officer may direct the withholding of earned award fee payments until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest relative to an orderly and timely closeout of the contract. This reserve shall not exceed 15 percent of the contract's total potential award fee or \$100,000, whichever is less.

(e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth in the approved Performance Evaluation Plan. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

(f) (1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the Contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80% or the prior period's evaluation score.

(2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the Contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.

(3) If the Contracting Officer determines that the Contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the Contractor in writing if it is determined that such discontinuance or reduction is appropriate.

(4) Provisional award fee payments may be made prior to the first award fee determination by the Government.

(g) Award fee determinations are unilateral decisions made solely at the discretion of the Government.

(End of clause)

**G.4 1852.216-77 AWARD FEE FOR END ITEMS CONTRACTS (APR 2012)**

**NOTE: Clause G.4 applies only to Task Orders issued for End-Items.**

(a) The contractor can earn award fee, or base fee, if any, from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause [1852.216-85](#), "Estimated Cost and Award Fee" in this contract. All award fee evaluations, with the exception of the last evaluation, will be interim evaluations. At the last evaluation, which is final, the Contractor's performance for the entire contract will be evaluated to determine total earned award fee. No award fee or base fee will be paid to the Contractor if the final award fee evaluation is "poor/unsatisfactory."

(b) Beginning 6 months after the effective date of this contract, the Government will evaluate the Contractor's interim performance every 6\* months to monitor Contractor performance prior to contract completion and to provide feedback to the Contractor. The evaluation will be performed in accordance with the Performance Evaluation Plan of this contract. The Contractor may submit a self-evaluation of performance for each period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government will advise the Contractor in writing of the evaluation results. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.

(c) (1) Base fee, if applicable, will be paid in N/A installments based on the percent of completion of the work as determined by the Contracting Officer.

(2) Interim award fee payments will be made to the Contractor based on each interim evaluation. The amount of the interim award fee payment is limited to the lesser of the interim evaluation score or 80 percent of the fee allocated to that period less any provisional payments made during the period. All interim award fee payments will be superseded by the final award fee determination.

(3) Provisional award fee payments will be made under this contract pending each interim evaluation. If applicable, provisional award fee payments will be made to the Contractor on monthly basis. The amount of award fee which will be provisionally paid in each evaluation period is limited to *80 percent* of the prior interim evaluation score (see Government Performance Evaluation Plan). Provisional award fee payments made each evaluation period will be superseded by the interim award fee evaluation for that period. If provisional payments made exceed the interim evaluation score, the Contractor will either credit the next payment voucher for the amount of such

overpayment or refund the difference to the Government, as directed by the Contracting Officer. If the Government determines that (i) the total amount of provisional fee payments will apparently substantially exceed the anticipated final evaluation score, or (ii) the prior interim evaluation is "poor/unsatisfactory," the Contracting Officer will direct the suspension or reduction of the future payments and/or request a prompt refund of excess payments as appropriate. Written notification of the determination will be provided to the Contractor with a copy to the Deputy Chief Financial Officer (Finance).

(4) All interim (and provisional, if applicable) fee payments will be superseded by the fee determination made in the final award fee evaluation. The Government will then pay the Contractor, or the Contractor will refund to the Government the difference between the final award fee determination and the cumulative interim (and provisional, if applicable) fee payments. If the final award fee evaluation is "poor/unsatisfactory", any base fee paid will be refunded to the Government.

(5) Payment of base fee, if applicable, will be made based on submission of an invoice by the Contractor. Payment of award fee will be made by the NASA/Shared Services Center Financial Management Division (FMD) Accounts Payable based on the issuance of a unilateral modification by the Contracting Officer.

(d) The Contracting Officer may direct the withholding of interim award fee payments until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest relative to an orderly and timely closeout of the contract. This reserve shall not exceed 15 percent of the contracts total potential award fee or \$100,000, whichever is less.

(e) Award fee determinations are unilateral decisions made solely at the discretion of the Government.

\* [A period of time greater or lesser than 6 months may be substituted in accordance with [1816.405-272\(a\)](#).]

(End of clause)

## **G.5 FINANCIAL MANAGEMENT REPORTING (GSFC 52.242-90) (JAN 2012)**

(a) Requirements. This clause provides the supplemental instructions referred to in NASA FAR Supplement (NFS) clause 1852.242-73. The NFS clause and NASA Procedural Requirements (NPR) 9501.2E, "NASA Contractor Financial Management Reporting", establish report due dates and other financial management reporting requirements. NPR 9501.2E permits withholding of payment for noncompliance.

(b) Supplemental instructions. (1) Monthly (NF 533M) reports are required. Quarterly (NF 533Q) reports are also required. The reporting structure shall be in accordance with Attachment C of Section J of this contract.

(2) As stated in NPR 9501.2E, NASA strongly encourages electronic contractor cost reporting. The preferred formats are Excel and Adobe. Contact the Contracting Officer for any E-Mail addresses that are not provided or which become noncurrent.

Distribution shall be as follows:

Contracting Officer, Code 210.M  
E-Mail: Kelly.D.Jonas@nasa.gov

Contracting Officer's Representative, Code 560  
E-Mail: Anthony.B.Sanders@nasa.gov

Resources Analyst, Code 501  
E-Mail: Susan.R.Grieve@nasa.gov

Regional Finance Office Cost Team, Code 155  
E-Mail: GSFC-rfocateam@lists.nasa.gov

Administrative Contracting Officer (if delegated)

(c) Web site. NPR 9501.2E, "NASA Contractor Financial Management Reporting":

<http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=9501&s=2E>

(End of clause)

**G.6 ADVANCED AGREEMENT BETWEEN THE PARTIES: REQUIREMENT TO PROVIDE CONTRACT HISTORICAL DATA (GSFC 52.242-91) (MAR 2011)**

- (a) NASA may issue a competitive solicitation for a follow-on effort for services similar to those provided under this contract. As part of this follow-on competition, NASA may include historical labor category descriptions, full-time equivalents (FTEs), average weighted direct labor rates, and other information from this contract in the follow-on solicitation for use by all potential offerors. Including this data in the solicitation is intended to ensure a comprehensive and fair evaluation of competitive proposals and increase the probability that realistic pricing is provided in future proposals submitted. Minimizing the potential risk for unrealistic or unsubstantiated pricing materially reduces the risk that cost could become an inappropriate discriminator among competing offerors.
- (b) Based on the above, the Contractor shall, within 30 days of a written request from the Contracting Officer, provide and deliver all of the information included in **Attachment I, CONTRACT HISTORICAL DATA**, of the contract.

(End of Clause)

**G.7 PROPERTY CLAUSE APPLICABILITY—ON-SITE AND OFF-SITE  
(GSFC 52.245-96) (MAR 2011)**

(a) Performance of this contract requires that Contractor personnel and any furnished and/or acquired Government property be located at both Government controlled and managed premises (on-site) and at Contractor controlled and managed premises (off-site). The requirements for control and accountability of Government property differ depending upon the location of the property. The applicability of the clauses in this contract to on-site and to off-site locations is indicated below.

(b) Clauses applicable to both on-site and off-site locations.

FAR clause 52.245-1, “Government Property”

FAR clause 52.245-9, “Use and Charges”

NASA FAR Supplement clause 1852.245-70, “Contractor Requests for Government-Provided Equipment”

NASA FAR Supplement clause 1852.245-72, “Liability for Government Property Furnished for Repair or Other Services”

NASA FAR Supplement clause 1852.245-74, “Identification and Marking of Government Equipment”

NASA FAR Supplement clause 1852.245-75, “Property Management Changes”

NASA FAR Supplement clause 1852.245-78, “Physical Inventory of Capital Personal Property”

NASA FAR Supplement clause 1852.245-79, “Records and Disposition Reports for Government Property with Potential Historic or Significant Real Value”

NASA FAR Supplement clause 1852.245-83, “Real Property Management Requirements”

(c) Clauses applicable only to off-site locations.

NASA FAR Supplement clause 1852.245-73, “Financial Reporting of NASA Property in the Custody of Contractors”

NASA FAR Supplement clause 1852.245-76, “List of Government Property Furnished Pursuant to FAR 52.245-1”

(d) Clauses applicable only to on-site locations.

FAR clause 52.245-2, “Government Property Installation Operation Services”

NASA FAR Supplement clause 1852.245-71, "Installation-Accountable Government Property"

NASA FAR Supplement clause 1852.245-77, "List of Government Property Furnished Pursuant to FAR 52.245-2"

NASA FAR Supplement clause 1852.245-82, "Occupancy Management Requirements"

GSFC clause 52.245-93, "Reports of Contractor Acquired Government Property"

(End of clause)

**G.8 1852.216-87 SUBMISSION OF VOUCHERS FOR PAYMENT (MAR 1998)**

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

NASA Shared Services Center (NSSC),  
Financial Management Division (FMD) – Accounts Payable,  
Bldg 1111, C. Road, Stennis Space Center, MS 39529  
Email: [NSSC-AccountsPayable@nasa.gov](mailto:NSSC-AccountsPayable@nasa.gov).

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:

(1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment to:

DCAA Columbia Branch  
10025 Governor Warfield Parkway  
One Mall North  
Columbia, MD 21049

(2) RESERVED

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

(d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and be forwarded to:

NASA Shared Services Center (NSSC),  
Financial Management Division (FMD) – Accounts Payable,  
Bldg 1111, C. Road, Stennis Space Center, MS 39529  
Email: [NSSC-AccountsPayable@nasa.gov](mailto:NSSC-AccountsPayable@nasa.gov).

This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

(End of clause)

**G.9 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (JUL 1997)**

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

New Technology Representative  
Code 504, NASA Goddard Space Flight Center, Greenbelt, MD 20771

Patent Representative  
Code 140.1, NASA Goddard Space Flight Center, Greenbelt, MD 20771

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Ownership by the Contractor" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

**G.10 1852.245-70 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED EQUIPMENT (JAN 2011)**

(a) The Contractor shall provide all property required for the performance of this contract. The Contractor shall not acquire or construct items of property to which the Government will have title under the provisions of this contract without the Contracting Officer's written authorization. Property which will be acquired as a deliverable end item as material or as a component for incorporation into a deliverable end item is exempt from this requirement. Property approved as part of the contract award or specifically required within the statement of work is exempt from this requirement.

(b)(1) In the event the Contractor is unable to provide the property necessary for performance, and the Contractor requests provision of property by the Government, the Contractor's request shall -

(i) Justify the need for the property;

(ii) Provide the reasons why contractor-owned property cannot be used;

(iii) Describe the property in sufficient detail to enable the Government to screen its inventories for available property or to otherwise acquire property, including applicable manufacturer, model, part, catalog, National Stock Number or other pertinent identifiers;

(iv) Combine requests for quantities of items with identical descriptions and estimated values when the estimated values do not exceed \$100,000 per unit; and

(v) Include only a single unit when the acquisition or construction value equals or exceeds \$100,000.

(2) Contracting Officer authorization is required for items the Contractor intends to manufacture as well as those it intends to purchase.

(3) The Contractor shall submit requests to the Contracting Officer no less than 30 days in advance of the date the Contractor would, should it receive authorization, acquire or begin fabrication of the item.

(c) The Contractor shall maintain copies of Contracting Officer authorizations, appropriately cross-referenced to the individual property record, within its property management system.

(d) Property furnished from Government excess sources is provided as-is, where-is. The Government makes no warranty regarding its applicability for performance of the contract or its ability to operate. Failure of property obtained from Government excess



sources under this clause is insufficient reason for submission of requests for equitable adjustments discussed in the clause at FAR 52.245-1, Government Property, as incorporated in this contract.

(End of clause)

**G.11 1852.245-71 INSTALLATION - ACCOUNTABLE GOVERNMENT PROPERTY (JAN 2011)**

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

- (1) NASA Procedural Requirements (NPR) 4100.1, NASA Materials Inventory Management Manual;
- (2) NASA Procedural Requirements (NPR) 4200.1, NASA Equipment Management Procedural Requirements;
- (3) NASA Procedural Requirement (NPR) 4300.1, NASA Personal Property Disposal Procedural Requirements;
- (4) Notify the cognizant property custodian, COTR, and the Installation Security Officer immediately if theft of Government property is suspected or property cannot be located
- (5) Identify Government property equipment that is no longer considered necessary for performance of the contract.
- (6) Ensure that equipment is turned in to the Property Disposal Officer through the cognizant property custodian when no longer needed. This is the only acceptable procedure for disposal of Government property.
- (7) Do not relocate Government property within Government premises or remove Government property from Government premises without written approval.
- (8) Ensure that Government property, including property leased to the Government, is used only for the purposes of performing the contract.
- (9) Ensure that Government property is protected and conserved.

Property not recorded in NASA property systems must be managed in accordance with the requirements of the clause at FAR 52.245-1, as incorporated in this contract.

The Contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and compliance with these user responsibilities. In accordance with FAR 52.245-1(h)(1) the contractor shall be liable for property lost, damaged, destroyed or stolen by the contractor or their employees when determined responsible by a NASA Property Survey Board, in accordance with the NASA guidance in this clause.

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

(i) The Contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area.

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

(iii) The Contractor shall establish a record for Government titled property as required by FAR 52.245-1, as incorporated in this contract, and shall maintain that record until accountability is accepted by the Government.

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

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

(c) The following property and services are provided:

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

(2) Office furniture.

(3) Property will be listed in Task Orders, if applicable.

(i) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records.

(ii) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

(4) Supplies from stores stock.

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

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

(7) Installation service facilities: Agency Consolidated End-User Services (ACES) IT Services.

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

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

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

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

(End of clause)

**G.12 1852.245-73 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (JAN 2011)**

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

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

(2) The Contractor shall mail the original signed NF 1018 directly to the NASA Goddard Space Flight Center (GSFC) General Accounting Department, General Ledger Section, Code 157 Greenbelt, MD 20771, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(3) One copy shall be submitted (through the Department of Defense (DOD) Property Administrator if contract administration has been delegated to DOD) to the following address: : **NASA Goddard Space Flight Center, Supply and Equipment Management Branch, Code 273, Greenbelt, MD 20771**, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(c)(1) The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. Some activity may be estimated for the month of September, if necessary, to ensure the NF 1018 is received when due. However, contractors' procedures must document the process for developing these estimates based on planned activity such as planned purchases or NASA Form 533 (NF 533 Contractor Financial Management Report) cost estimates. It should be supported and documented by historical experience or other corroborating evidence, and be retained in accordance with FAR Subpart 4.7, Contractor Records Retention. Contractors shall validate the reasonableness of the estimates and associated

methodology by comparing them to the actual activity once that data is available, and adjust them accordingly. In addition, differences between the estimated cost and actual cost must be adjusted during the next reporting period. Contractors shall have formal policies and procedures, which address the validation of NF 1018 data, including data from subcontractors, and the identification and timely reporting of errors. The objective of this validation is to ensure that information reported is accurate and in compliance with the NASA FAR Supplement. If errors are discovered on NF 1018 after submission, the contractor shall contact the cognizant NASA Center Industrial Property Officer (IPO) within 30 days after discovery of the error to discuss corrective action.

(2) The Contracting Officer may, in NASA's interest, withhold payment until a reserve not exceeding \$25,000 or 5 percent of the amount of the contract, whichever is less, has been set aside, if the Contractor fails to submit annual NF 1018 reports in accordance with NFS subpart 1845.71 and any supplemental instructions for the current reporting period issued by NASA. Such reserve shall be withheld until the Contracting Officer has determined that NASA has received the required reports. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

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

(End of clause)

**G.13 1852.245-74 IDENTIFICATION AND MARKING OF GOVERNMENT EQUIPMENT (JAN 2011)**

(a) The Contractor shall identify all equipment to be delivered to the Government using NASA Technical Handbook (NASA-HDBK) 6003, Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques, and NASA Standard (NASA-STD) 6002, Applying Data Matrix Identification Symbols on Aerospace Parts or through the use of commercial marking techniques that: (1) are sufficiently durable to remain intact through the typical lifespan of the property: and, (2) contain the data and data format required by the standards. This requirement includes deliverable equipment listed in the schedule and other equipment when no longer required for contract performance and NASA directs physical transfer to NASA or a third party. The Contractor shall identify property in both machine and human readable form unless the use of a machine readable-only format is approved by the NASA Industrial Property Officer.

(b) Equipment shall be marked in a location that will be human readable, without disassembly or movement of the equipment, when the items are placed in service unless such placement would have a deleterious effect on safety or on the item's operation.

(c) Concurrent with equipment delivery or transfer, the Contractor shall provide the following data in an electronic spreadsheet format:

- (1) Item Description.
- (2) Unique Identification Number (License Tag).
- (3) Unit Price.
- (4) An explanation of the data used to make the unique identification number.

(d) For equipment no longer needed for contract performance and physically transferred under paragraph (a) of this clause, the following additional data is required:

- (1) Date originally placed in service.
- (2) Item condition.

(e) The data required in paragraphs (c) and (d) of this clause shall be delivered to the NASA center receiving activity listed below:

NASA Goddard Space Flight Center  
Building 35, Code 279  
Greenbelt, MD 20771

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

(End of clause)

#### **G.14 1852.245-75 PROPERTY MANAGEMENT CHANGES (JAN 2011)**

(a) The Contractor shall submit any changes to standards and practices used for management and control of Government property under this contract to the assigned property administrator prior to making the change whenever the change -

- (1) Employs a standard that allows increase in thresholds or changes the timing for reporting loss, damage, or destruction of property;
- (2) Alters physical inventory timing or procedures;
- (3) Alters recordkeeping practices;
- (4) Alters practices for recording the transport or delivery of Government property; or

(5) Alters practices for disposition of Government property.

(End of clause)

**G.15 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (1852.245-76) (JAN 2011)**

For performance of work under this contract, the Government will make available Government property identified on a task by task basis within the Task Order issued, if applicable, on a no charge-for-use basis pursuant to the clause at FAR 52.245-1, Government Property, as incorporated in this contract. The Contractor shall use this property in the performance of this contract at the Contractor's facilities and at other location(s) as may be approved by the Contracting Officer. Under FAR 52.245-1, the Contractor is accountable for the identified property.

(End of clause)

**G.16 1852.245-78 PHYSICAL INVENTORY OF CAPITAL PERSONAL PROPERTY (JAN 2011)**

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

(1) The Contractor shall inventory—

(i) Items of property furnished by the Government;

(ii) Items acquired by the Contractor and titled to the Government under the clause at FAR 52.245-1;

(iii) Items constructed by the Contractor and not included in the deliverable, but titled to the Government under the clause at FAR 52.245-1; and

(iv) Complete but undelivered deliverables.

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

(b) Unless specifically authorized in writing by the Property Administrator, the inventory shall be performed and posted by individuals other than those assigned custody of the items, responsibility for maintenance, or responsibility for posting to the property record. The Contractor may request a waiver from this separation of duties requirement from the Property Administrator, when all of the conditions in either (1) or (2) of this paragraph are met.

(1) The Contractor utilizes an electronic system for property identification, such as a laser bar-code reader or radio frequency identification reader, and

(i) The programs or software preclude manual data entry of inventory identification

data by the individual performing the inventory; and

(ii) The inventory and property management systems contain sufficient

management controls to prevent tampering and assure proper posting of collected inventory data.

(2) The Contractor has limited quantities of property, limited personnel, or limited property systems; and the Contractor provides written confirmation that the Government property exists in the recorded condition and location;

(3) The Contractor shall submit the request to the cognizant property administrator and obtain approval from the property administrator prior to implementation of the practice.

(c) The Contractor shall report the results of the physical inventory to the property administrator within 10 calendar days of completion of the physical inventory. The report shall—

(1) Provide a summary showing number and value of items inventoried; and

(2) Include additional supporting reports of—

(i) Loss in accordance with the clause at 52.245-1, Government Property;

(ii) Idle property available for reuse or disposition; and

(iii) A summary of adjustments made to location, condition, status, or user as a result of the physical inventory reconciliation.

(d) The Contractor shall retain auditable physical inventory records, including records supporting transactions associated with inventory reconciliation. All records shall be subject to Government review and/or audit.

(End of clause)

## **G.17 RESERVED**

## **G.18 1852.245-82 OCCUPANCY MANAGEMENT REQUIREMENTS (JAN 2011)**

(a) In addition to the requirements of the clause at FAR 52.245-1, Government Property, as included in this contract, the Contractor shall comply with the following in performance of work in and around Government real property:

(1) NPD 8800.14, Policy for Real Property Management.

(2) NPR 8831.2, Facility Maintenance Management.

(b) The Contractor shall obtain the written approval of the Contracting Officer before installing or removing Contractor-owned property onto or into any Government real property or when movement of Contractor-owned property may damage or destroy Government-owned property. The Contractor shall restore damaged property to its original condition at the Contractor's expense.

(c) The Contractor shall not acquire, construct or install any fixed improvement or structural alterations in Government buildings or other real property without the advance, written approval of the Contracting Officer. Fixed improvement or structural alterations, as used herein, means any alteration or improvement in the nature of the building or other real property that, after completion, cannot be removed without substantial loss of value

or damage to the premises. Title to such property shall vest in the Government.

(d) The Contractor shall report any real property or any portion thereof when it is no longer required for performance under the contract, as directed by the Contracting Officer.

(End of Clause)

### **G.19 INDIVIDUALS AUTHORIZED TO ISSUE ORDERS**

The following personnel are authorized to issue orders under this contract. All designated personnel are employed by the NASA Goddard Space Flight Center unless otherwise indicated:

**Contracting Officer, Code 210**

(End of Text)

### **G.20 1852.227-86 COMMERCIAL COMPUTER SOFTWARE - LICENSING (DEC 1987)**

(a) Any delivered commercial computer software (including documentation thereof) developed at private expense and claimed as proprietary shall be subject to the restricted rights in paragraph (d) of this clause. Where the vendor/contractor proposes its standard commercial software license, those applicable portions thereof consistent with Federal laws, standard industry practices, the Federal Acquisition Regulations (FAR) and the NASA FAR Supplement, including the restricted rights in paragraph (d) of this clause, are incorporated into and made a part of this purchase order/contract.

(b) Although the vendor/contractor may not propose its standard commercial software license until after this purchase order/contract has been issued, or at or after the time the computer software is delivered, such license shall nevertheless be deemed incorporated into and made a part of this purchase order/contract under the same terms and conditions as in paragraph (a) of this clause. For purposes of receiving updates, correction notices, consultation, and similar activities on the computer software, the NASA Contracting Officer or the NASA Contracting Officer's Technical Representative/User may sign any agreement, license, or registration form or card and return it directly to the vendor/contractor; however, such signing shall not alter any of the terms and conditions of this clause.

(c) The vendor's/contractor's acceptance is expressly limited to the terms and conditions of this purchase order/contract. If the specified computer software is shipped or delivered to NASA, it shall be understood that the vendor/contractor has unconditionally accepted the terms and conditions set forth in this clause, and that such terms and conditions (including the incorporated license) constitute the entire agreement between the parties concerning rights in the computer software.

(d) The following restricted rights shall apply:



(1) The commercial computer software may not be used, reproduced, or disclosed by the Government except as provided below or otherwise expressly stated in the purchase order/contract.

(2) The commercial computer software may be--

(i) Used, or copied for use, in or with any computer owned or leased by, or on behalf of, the Government; provided, the software is not used, nor copied for use, in or with more than one computer simultaneously, unless otherwise permitted by the license incorporated under paragraphs (a) or (b) of this clause;

(ii) Reproduced for safekeeping (archives) or backup purposes;

(iii) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software shall be subject to the same restricted rights; and

(iv) Disclosed and reproduced for use by Government contractors or their subcontractors in accordance with the restricted rights in subparagraphs (d)(2)(i), (ii), and (iii) of this clause; provided they have the Government's permission to use the computer software and have also agreed to protect the computer software from unauthorized use and disclosure.

(3) If the incorporated vendor's/contractor's software license contains provisions or rights that are less restrictive than the restricted rights in paragraph (d)(2) of this clause, then the less restrictive provisions or rights shall prevail.

(4) If the computer software is published, copyrighted computer software, it is licensed to the Government, without disclosure prohibitions, with the rights in paragraphs (d)(2) and (3) of this clause.

(5) The computer software may be marked with any appropriate proprietary notice that is consistent with the rights in paragraphs (d)(2), (3), and (4) of this clause.

(End of clause)

## **G.21 CLAUSES INCORPORATED BY REFERENCE -- SECTION G**

Clause(s) G.1 and G.2 at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

**[END OF SECTION G]**

**SECTION H - SPECIAL CONTRACT REQUIREMENTS**

**H.1 1852.208-81 RESTRICTIONS ON PRINTING AND DUPLICATING  
(NOV 2004)**

**H.2. 1852.244-70 GEOGRAPHIC PARTICIPATION IN THE AEROSPACE  
PROGRAM (APR 1985)**

**H.3 1852.225-70 EXPORT LICENSES (FEB 2000)**

(a) The Contractor shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.

(b) The Contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at NASA Goddard Space Flight Center, where the foreign person will have access to export-controlled technical data or software.

(c) The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(d) The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

**ALTERNATE I (FEB 2000)**

(e) The Contractor may request, in writing, that the Contracting Officer authorize it to export ITAR-controlled technical data (including software) pursuant to the exemption at 22 CFR 125.4(b)(3). The Contracting Officer or designated representative may authorize or direct the use of the exemption where the data does not disclose details of the design, development, production, or manufacture of any defense article.

(End of clause)

**H.4 GOVERNMENT PREMISES—PHYSICAL ACCESS AND COMPLIANCE WITH PROCEDURES (GSFC 52.211-95) (APR 2012)**

(a)(1) The Contractor must apply for permanent NASA/GSFC Personal Identity Verification (PIV) cards (badges) for those employees that will be employed by the Contractor and subcontractors and that will be resident for at least six months at GSFC or at locations controlled by GSFC, such as GSFC leased space. Other personnel may be issued a temporary badge. All personnel must conspicuously display the GSFC PIV card at, or above, the waistline. Refer to GSFC clause 52.204-99, “Contractor Personnel—Identification, Onsite Reporting, and Checkout Procedures” for permanent PIV card issuance procedures.

(2) Visits by foreign nationals are restricted and must be necessary for the performance of the contract and concurred with by the Contracting Officer or by the Contracting Officer’s Representative. Approval of such visits must be approved in advance in accordance with Goddard Procedural Requirement (GPR) 1600.1.

(3) Access to the GSFC may be changed or adjusted in response to threat conditions or special situations.

(b) While on Government premises, the Contractor shall comply with all requirements governing the conduct of personnel and the operation of the facility. These requirements are set forth in NASA Procedural Requirements (NPR), NASA Policy Directives (NPD), GPRs, GSFC Policy Directives (GPD), handbooks and announcements. The following cover many of the requirements:

- (1) Harassment and Discrimination Announcements  
<http://eeo.gsfc.nasa.gov/policy.html>
- (2) GSFC Workplace Violence Announcement  
[https://gs279gdmsias.gsfc.nasa.gov/srv/GDMSNEWDatabaseObject?document\\_id=21144](https://gs279gdmsias.gsfc.nasa.gov/srv/GDMSNEWDatabaseObject?document_id=21144)
- (3) GPR 1600.1, GSFC Security Requirements
- (4) NPD 1600.3, Policy on Prevention of and Response to Workplace Violence
- (5) GPR 1700.1, Occupational Safety Program at GSFC
- (6) GPR 1700.2, Chemical Hygiene Plan
- (7) GPR 1700.8, GSFC Hazard Communication Program
- (8) GPR 1800.1, GSFC Smoking and Other Tobacco Use Requirements
- (9) GPR 1800.6, Occupational Health, Medicine and Employee Assistance Programs
- (10) GPR 1860.1, Ionizing Radiation Protection
- (11) GPR 1860.2, Laser Radiation Protection
- (12) GPR 1860.3, Radio Frequency Radiation Protection
- (13) GPR 1860.4, Ultraviolet and High Intensity Light Radiation Protection
- (14) NPD 2540.1, Personal Use of Government Office Equipment Including Information Technology
- (15) GPR 2570.1, Spectrum Management and Radio Frequency (RF)

Equipment Licensing

- (16) NPR 3713.3, Anti-Harassment Procedures
- (17) GPD 8500.1, Environmental Policy and Program Management
- (18) GPR 8710.2, GSFC Emergency Management Program Plan
- (19) GPR 8710.7, Cryogenic Safety
- (20) GPR 8710.8, GSFC Safety Program Management
- (21) GPD 8715.1, GSFC Safety Policy
- (22) GPR 8715.1, Processing of NASA Safety Reporting System (NSRS) Incident Reports

Copies of the current issuances of the GPD/GPRs may be obtained at <http://gdms.gsfc.nasa.gov> from a computer onsite (GSFC Government Facility or from the Contracting Officer. Copies of the current issuances of the NPD/NPRs may be obtained at <http://nodis3.gsfc.nasa.gov> or from the Contracting Officer. The above list may be modified by the Contracting Officer to include additional issuances pertaining to the conduct of personnel and the operation of the facility.

(c) The Contractor may not use official Government mail (indicia or "eagle" mail). Contractors found in violation could be liable for a fine of \$300 per piece of indicia mail used. However, the Contractor is allowed to use internal GSFC mail to the extent necessary for purposes of the contract.

(End of clause)

**H.5 CONTRACTOR PERSONNEL—IDENTIFICATION, ONSITE REPORTING, AND CHECKOUT PROCEDURES (GSFC 52.204-99) (APR 2013)**

(a) In accordance with FAR 52.204-9, Personal Identity Verification of Contractor Personnel, the Contractor shall follow Steps 1 through 7 described in Attachment J Personal Identity Verification (PIV) Card Issuance Procedures, for each contract employee (prime and subcontractor) who will have physical access to a NASA-controlled facility (also referred to as “onsite”). The Contractor must apply for permanent NASA/GSFC PIV cards for those contract employees who will be employed by the Contractor onsite for at least six months. The GSFC Security Division will consider permanent PIV cards for other employees of the Contractor on a case-by-case basis, such as employees that are not resident onsite, but must frequently visit. In the future, upon written notice from the Contracting Officer, the Contractor shall follow Steps 1 through 7 in Attachment J for each offsite contract employee (prime and subcontractor) who require remote access to a NASA information system for contract performance.

(b) The Contractor shall notify the GSFC Security Division, Code 240, Attention: PIV Manager, and the Contracting Officer’s Representative (COR) of the contractor’s designated PIV Requester within 15 calendar days after award of this contract. The NASA maintained PIV system contains work and home location and contact information for personnel that have permanent NASA PIV cards. The Contractor may contact the PIV Manager, Tel 301-286-2306 for assistance regarding the PIV system.

(c) Each contract employee shall provide to the Contractor's designated PIV Requester the basic identifying information required for a PIV Request to be initiated in the PIV System. The PIV Request must be approved by the PIV Sponsor (COR or the Contracting Officer). The COR will resolve any housing or access issues, and review the request for accuracy and completeness. Requests that are approved by the PIV Sponsor will be forwarded to the GSFC Security Division, Code 240, PIV Authorization, Badge enrollment, and Badge issuance.

(d) The Contractor shall submit an annotated PIV Report each month. The GSFC PIV Manager will furnish a PIV print-out to the Contractor no later than the end of each month. The Contractor shall annotate this provided report monthly to correct and update the information as follows:

- (1) Draw a line through the names of employees who are no longer employed by the contractor or that no longer work onsite under the contract, and;
- (2) Make handwritten changes to any other incorrect data.

The annotated PIV Report shall be separately submitted to the GSFC Security Division, Code 240, Attention: PIV Manager, and to the COR by the 10th calendar day of the month.

For the final PIV Report under the contract, the GSFC PIV Manager will furnish a PIV print-out to the Contractor no later than two weeks prior to the end of the contract. The Contractor shall submit its annotated final PIV Report no later than 3 days prior to the end of the contract.

If this is a follow-on contract, at the end of the phase-in period (if any)/start of the basic contract period, the GSFC Security Division will provide the Contractor a copy of the final PIV Report from the previous contract. The Contractor shall review the list and redline it as necessary to reflect its employees requiring PIV cards. The redlined list shall be provided the GSFC Security Division within 30 days after the start of the contract.

(e) The Contractor shall ensure that all personnel who have NASA/GSFC issued PIV cards, keys or other property who leave its employment or that no longer work onsite, process out through the GSFC Security Division, Code 240. Employees must return all GSFC issued identification and any Government property no later than the last day of their employment or the last day they work onsite under this contract. The Contractor shall establish appropriate procedures and controls to ensure this is accomplished. Failure to comply may result in the exercise of Government rights to limit and control access to Government premises, including denial of access and invalidation of NASA issued PIV cards and identification.

(End of clause)

**H.6 1852.209-71 LIMITATION OF FUTURE CONTRACTING (DEC 1988)**

- (a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of prospective offerors is invited to FAR Subpart 9.5--Organizational Conflicts of Interest.
- (b) The nature of this conflict, in general terms, is that:
  - (1) The contractor, or first-tier subcontractor, may be tasked to develop statements of work and/or specifications, which may be used in subsequent, competitive acquisitions. The specific nature of any potential or actual conflict that may arise during contract performance will be identified in each individual task order, as appropriate, and
  - (2) The contractor, or first-tier subcontractor, may require access to other NASA contractor data.
- (c) The restrictions upon future contracting are as follows:
  - (1) If the Contractor, or first-tier subcontractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor, or first-tier subcontractor, shall be ineligible to perform the work described in that solicitation under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, or first-tier subcontractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor, or first-tier subcontractor, to prepare such specifications or statements of work under this contract.
  - (2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as these data remain proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

(End of clause)

**H.7 1852.223-70 SAFETY AND HEALTH (APR 2002)**

- (a) Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

(b) The Contractor shall take all reasonable safety and occupational health measures in performing this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and occupational health and with the safety and occupational health standards, specifications, reporting requirements, and any other relevant requirements of this contract.

(c) The Contractor shall take, or cause to be taken, any other safety, and occupational health measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the changes clause of this contract; provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other clause of the contract.

(d) The Contractor shall immediately notify and promptly report to the Contracting Officer or a designee any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property beyond any stated acceptable limits set forth in the contract Schedule; or property loss of \$25,000 or more, or Close Call (a situation or occurrence with no injury, no damage or only minor damage (less than \$1,000) but possesses the potential to cause any type mishap, or any injury, damage, or negative mission impact) that may be of immediate interest to NASA, arising out of work performed under this contract. The Contractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. In addition, service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract Schedule.

(e) The Contractor shall investigate all work-related incidents, accidents, and Close Calls, to the extent necessary to determine their causes and furnish the Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.

(f) (1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. When the Contracting Officer becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. The Contractor shall promptly take and report any necessary corrective action.

(2) If the Contractor fails or refuses to institute prompt corrective action in accordance with subparagraph (f) (1) of this clause, the Contracting Officer may invoke the stop-work order clause in this contract or any other remedy available to the Government in the event of such failure or refusal.

(g) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (g) and any applicable Schedule provisions and clauses, with appropriate changes of designations of the parties, in all solicitations and subcontracts of every tier, when one or more of the following conditions exist:

(1) The work will be conducted completely or partly on premises owned or controlled by the Government.

(2) The work includes construction, alteration, or repair of facilities in excess of the simplified acquisition threshold.

(3) The work, regardless of place of performance, involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value equipment or property, and the hazards are not adequately addressed by Occupational Safety and Health Administration (OSHA) or Department of Transportation (DOT) regulations (if applicable).

(4) When the Contractor (or subcontractor or supplier) determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.

(h) The Contractor (or subcontractor or supplier) may exclude the provisions of paragraph (g) from its solicitation(s) and subcontract(s) of every tier when it determines that the clause is not necessary because the application of the OSHA and DOT (if applicable) regulations constitute adequate safety and occupational health protection. When a determination is made to exclude the provisions of paragraph (g) from a solicitation and subcontract, the Contractor must notify and provide the basis for the determination to the Contracting Officer. In subcontracts of every tier above the micro-purchase threshold for which paragraph (g) does not apply, the Contractor (or subcontractor or supplier) shall insert the substance of paragraphs (a), (b), (c), and (f) of this clause).

(i) Authorized Government representatives of the Contracting Officer shall have access to and the right to examine the sites or areas where work under this contract is being performed in order to determine the adequacy of the Contractor's safety and occupational health measures under this clause.

(j) The contractor shall continually update the safety and health plan when necessary. In particular, the Contractor shall furnish a list of all hazardous



operations to be performed, and a list of other major or key operations required or planned in the performance of the contract, even though not deemed hazardous by the Contractor. NASA and the Contractor shall jointly decide which operations are to be considered hazardous, with NASA as the final authority. Before hazardous operations commence, the Contractor shall submit for NASA concurrence -

(1) Written hazardous operating procedures for all hazardous operations; and/or

(2) Qualification standards for personnel involved in hazardous operations.

(End of clause)

#### **H.8 SAFETY AND HEALTH--ADDITIONAL REQUIREMENTS (GSFC 52.223-91) (APR 2013)**

In addition to compliance with all Federal, state, and local laws as required by paragraph (b) of NFS clause 1852.223-70, the Contractor shall comply with the following:

(a) Incident Reporting: The immediate notification and prompt reporting requirement included in paragraph (d) of NFS clause 1852.223-70 shall be to the Goddard Space Flight Center Occupational Safety and Health Division, Code 350, Tel 301-356-3224 and to the Contracting Officer (CO). This verbal notification should be confirmed in writing via E-Mail to the CO and [Jimmy.R.McLaughlin@nasa.gov](mailto:Jimmy.R.McLaughlin@nasa.gov) and entered into IRIS within 24 hours. This notification is also required for any unsafe or environmentally hazardous condition associated with Government-owned property that is provided or made available for the performance of the contract.

(b) Submit a monthly safety and health report using NASA Incident Reporting Information System (IRIS). Specify incidents (mishaps and close calls), total number of employees working on this contract, and man-hours worked/month. Access to IRIS must be requested through the NASA Access Management System (NAMS) at <https://idmax.nasa.gov>. Until access is approved, use the [Contractor Monthly Statistics Report Template](#) available at <http://safety1st.gsfc.nasa.gov> under Contractor Safety and e-mail the completed form to [Hernan.Castellanos@nasa.gov](mailto:Hernan.Castellanos@nasa.gov).

(End of clause)

**H.9 1852.223-75 MAJOR BREACH OF SAFETY OR SECURITY (FEB 2002)**

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. Safety is essential to NASA and is a material part of this contract. NASA's safety priority is to protect: (1) the public; (2) astronauts and pilots; (3) the NASA workforce (including contractor employees working on NASA contracts); and (4) high-value equipment and property. A major breach of safety may constitute a breach of contract that entitles the Government to exercise any of its rights and remedies applicable to material parts of this contract, including termination for default. A major breach of safety must be related directly to the work on the contract. A major breach of safety is an act or omission of the Contractor that consists of an accident, incident, or exposure resulting in a fatality or mission failure; or in damage to equipment or property equal to or greater than \$1 million; or in any "willful" or "repeat" violation cited by the Occupational Safety and Health Administration (OSHA) or by a state agency operating under an OSHA approved plan.

(b) Security is the condition of safeguarding against espionage, sabotage, crime (including computer crime), or attack. A major breach of security may constitute a breach of contract that entitles the Government to exercise any of its rights and remedies applicable to material parts of this contract, including termination for default. A major breach of security may occur on or off Government installations, but must be related directly to the work on the contract. A major breach of security is an act or omission by the Contractor that results in compromise of classified information, illegal technology transfer, workplace violence resulting in criminal conviction, sabotage, compromise or denial of information technology services, equipment or property damage from vandalism greater than \$250,000, or theft greater than \$250,000.

(c) In the event of a major breach of safety or security, the Contractor shall report the breach to the Contracting Officer. If directed by the Contracting Officer, the Contractor shall conduct its own investigation and report the results to the Government. The Contractor shall cooperate with the Government investigation, if conducted.

(End of clause)

**H.10 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992) –  
ALTERNATE II (OCT 2000)**

(a) The on-site Government personnel observe the following holidays:

New Year's Day  
Labor Day  
Martin Luther King, Jr.'s Birthday  
Columbus Day  
President's Day  
Veterans Day

Memorial Day  
Thanksgiving Day  
Independence Day  
Christmas Day  
Any other day designated by Federal statute, Executive order, or the President's proclamation.

(b) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(c) 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), Contractor personnel working on-site should also be dismissed. However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

(d) Whenever administrative leave is granted to Contractor personnel pursuant to paragraph (c) of this clause, it shall be without loss to the Contractor. The cost of salaries and wages to the Contractor for the period of any such excused absence shall be a reimbursable item of cost under this contract for employees in accordance with the Contractor's established accounting policy.

(End of clause)

#### **H.11 RIGHTS IN DATA (GSFC 52.227-99) (MAR 2008)**

The default Data Rights clause under this contract is FAR 52.227-14 RIGHTS IN DATA-GENERAL as modified by NASA FAR Supplement 1852.227-14—Alternate II and Alternate III and GSFC 52.227-90. Any exceptions to this clause will be covered by FAR 52.227-17 RIGHTS IN DATA--SPECIAL WORKS as modified by NASA FAR Supplement 1852.227-17, and, if applicable, GSFC 52.227-93.

(End of clause)

#### **H.12 1852.216-80 TASK ORDERING PROCEDURE (OCTOBER 1996)**

(a) Only the Contracting Officer may issue task orders to the Contractor, providing specific authorization or direction to perform work within the scope of the contract and as specified in the schedule. The Contractor may incur costs under this contract in performance of task orders and task order modifications issued in accordance with this clause. No other costs are authorized unless otherwise specified in the contract or expressly authorized by the Contracting Officer.

(b) Prior to issuing a task order, the Contracting Officer shall provide the Contractor with the following data:

(1) A functional description of the work identifying the objectives or results desired from the contemplated task order.

(2) Proposed performance standards to be used as criteria for determining whether the work requirements have been met.

(3) A request for a task plan from the Contractor to include the technical approach, period of performance, appropriate cost information, and any other information required to determine the reasonableness of the Contractor's proposal.

(c) Within fourteen (14) calendar days after receipt of the Contracting Officer's request, the Contractor shall submit a task plan conforming to the request.

(d) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as a minimum, the following:

(1) Date of the order.

(2) Contract number and order number.

(3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.

(4) Performance standards, and where appropriate, quality assurance standards.

(5) Maximum dollar amount authorized (cost and fee). This includes allocation of award fee among award fee periods, if applicable.

(6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.

(7) Delivery/performance schedule including start and end dates.

(8) If contract funding is by individual task order, accounting and appropriation data.

(e) The Contractor shall provide acknowledgment of receipt to the Contracting Officer within three (3) calendar days after receipt of the task order.

(f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.

(g) The Contracting Officer may amend tasks in the same manner in which they were issued.

(h) In the event of a conflict between the requirements of the task order and the Contractor's approved task plan, the task order shall prevail.

(End of clause)

### **H.13 1852.228-76 CROSS-WAIVER OF LIABILITY FOR INTERNATIONAL SPACE STATION ACTIVITIES (OCT 2012)**

(a) The Intergovernmental Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America concerning Cooperation on the Civil International Space Station (IGA) for the International Space Station (ISS) contains a cross-waiver of liability provision to

encourage participation in the exploration, exploitation, and use of outer space through the ISS. The objective of this clause is to extend this cross-waiver of liability to NASA contracts in the interest of encouraging participation in the exploration, exploitation, and use of outer space through the International Space Station (ISS). The Parties intend that this cross-waiver of liability be broadly construed to achieve this objective.

(b) As used in this clause, the term:

(1) “Agreement” refers to any NASA Space Act agreement that contains the cross-waiver of liability provision authorized by 14 CFR Part 1266.102.

(2) “Damage” means:

- (i) Bodily injury to, or other impairment of health of, or death of, any person;
- (ii) Damage to, loss of, or loss of use of any property;
- (iii) Loss of revenue or profits; or
- (iv) Other direct, indirect, or consequential Damage.

(3) “Launch Vehicle” means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both.

(4) “Partner State” includes each Contracting Party for which the IGA has entered into force, pursuant to Article 25 of the IGA or pursuant to any successor agreement. A Partner State includes its Cooperating Agency. It also includes any entity specified in the Memorandum of Understanding (MOU) between NASA and the Government of Japan to assist the Government of Japan's Cooperating Agency in the implementation of that MOU.

(5) “Party” means a party to a NASA Space Act agreement involving activities in connection with the ISS and a party that is neither the prime contractor under this contract nor a subcontractor at any tier.

(6) “Payload” means all property to be flown or used on or in a Launch Vehicle or the ISS.

(7) “Protected Space Operations” means all Launch or Transfer Vehicle activities, ISS activities, and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of the IGA, MOUs concluded pursuant to the IGA, implementing arrangements, and contracts to perform work in support of NASA’s obligations under these Agreements. It includes, but is not limited to:

(i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, the ISS, Payloads, or instruments, as well as related support equipment and facilities and services; and

(ii) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services. “Protected Space Operations” also includes all activities related to evolution of the ISS, as provided for in Article 14 of the IGA. “Protected Space Operations” excludes activities on Earth which are conducted on return from the ISS to develop further a Payload's product or process for use other than for ISS-related activities in implementation of the IGA.

(8) “Related Entity” means:

- (i) A contractor or subcontractor of a Party or a Partner State at any tier;
- (ii) A user or customer of a Party or a Partner State at any tier; or
- (iii) A contractor or subcontractor of a user or customer of a Party or a Partner State at any tier. The terms “contractor” and “subcontractor” include suppliers of any kind.

(9) “Transfer Vehicle” means any vehicle that operates in space and transfers Payloads or persons or both between two different space objects, between two different locations on the same space object, or between a space object and the surface of a celestial body. A Transfer Vehicle also includes a vehicle that departs from and returns to the same location on a space object.

(c) Cross-waiver of liability:

(1) The Contractor agrees to a cross-waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against:

- (i) A Party as defined in (b)(5) of this clause;
- (ii) A Partner State other than the United States of America;
- (iii) A Related Entity of any entity identified in paragraph (c)(1)(i) or (c)(1)(ii)

of this clause; or

(iv) The employees of any of the entities identified in paragraphs (c)(1)(i) through (c)(1)(iii) of this clause.

(2) In addition, the contractor shall, by contract or otherwise, extend the cross-waiver of liability set forth in paragraph (c)(1) of this clause to its subcontractors at any tier by requiring them, by contract or otherwise, to:

(i) Waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause; and

(ii) Require that their subcontractors waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause.

(3) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of claims arising from the *Convention on International Liability for Damage Caused by Space Objects*, which entered into force on September 1, 1972, where the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

(4) Notwithstanding the other provisions of this clause, this cross-waiver of liability shall not be applicable to:

(i) Claims between the Government and its own contractors or between its own contractors and subcontractors;

(ii) Claims made by a natural person, his/her estate, survivors or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health of, or death of, such person;

(iii) Claims for Damage caused by willful misconduct;

(iv) Intellectual property claims;

(v) Claims for Damage resulting from a failure of the contractor to extend the cross-waiver of liability to its subcontractors and related entities, pursuant to paragraph (c)(2) of this clause;

(vi) Claims by the Government arising out of or relating to the contractor's failure to perform its obligations under this contract.

(5) Nothing in this clause shall be construed to create the basis for a claim or suit where none would otherwise exist.

(6) This cross-waiver shall not be applicable when 49 U.S.C. Subtitle IX, Chapter. 701 is applicable.

(End of clause)

**H.14 1852.228-78 CROSS-WAIVER OF LIABILITY FOR SCIENCE OR SPACE EXPLORATION ACTIVITIES UNRELATED TO THE INTERNATIONAL SPACE STATION (OCT 2012)**

(a) The purpose of this clause is to extend a cross-waiver of liability to NASA contracts for work done in support of Agreements between Parties involving Science or Space Exploration activities that are not related to the International Space Station (ISS) but involve a launch. This cross-waiver of liability shall be broadly construed to achieve the objective of furthering participation in space exploration, use, and investment.

(b) As used in this clause, the term:

(1) "Agreement" refers to any NASA Space Act agreement that contains the cross-waiver of liability provision authorized in 14 CFR Part 1266.104.

(2) "Damage" means:

- (i) Bodily injury to, or other impairment of health of, or death of, any person;
- (ii) Damage to, loss of, or loss of use of any property;
- (iii) Loss of revenue or profits; or
- (iv) Other direct, indirect, or consequential Damage;

(3) "Launch Vehicle" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both.

(4) "Party" means a party to a NASA Space Act agreement for Science or Space Exploration activities unrelated to the ISS that involve a launch and a party that is neither the prime contractor under this contract nor a subcontractor at any tier hereof.

(5) "Payload" means all property to be flown or used on or in a Launch Vehicle.

(6) "Protected Space Operations" means all Launch or Transfer Vehicle activities and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of an Agreement for Science or Space Exploration activities unrelated to the ISS that involve a launch. Protected Space Operations begins at the signature of the Agreement and ends when all activities done in implementation of the Agreement are completed. It includes, but is not limited to:

(i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, Payloads, or instruments, as well as related support equipment and facilities and services; and

(ii) All activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.

Protected Space Operations excludes activities on Earth which are conducted on return from space to develop further a payload's product or process other than for the activities within the scope of an Agreement.

(7) "Related entity" means:

- (i) A contractor or subcontractor of a Party at any tier;
- (ii) A user or customer of a Party at any tier; or
- (iii) A contractor or subcontractor of a user or customer of a Party at any tier.

The terms "contractors" and "subcontractors" include suppliers of any kind.

(8) "Transfer Vehicle" means any vehicle that operates in space and transfers Payloads or persons or both between two different space objects, between two different locations on the same space object, or between a space object and the surface of a celestial body. A Transfer Vehicle also includes a vehicle that departs from and returns to the same location on a space object.

(c) Cross-waiver of liability:

(1) The Contractor agrees to a waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against:

- (i) A Party;
- (ii) A Party to another NASA Agreement or contract that includes flight on the same Launch Vehicle;
- (iii) A Related Entity of any entity identified in paragraphs (c)(1)(i) or (c)(1)(ii) of this clause; or
- (iv) The employees of any of the entities identified in (c)(1)(i) through (iii) of this clause.

(2) The Contractor agrees to extend the cross-waiver of liability as set forth in paragraph (c)(1) of this clause to its own subcontractors at all tiers by requiring them, by contract or otherwise, to:

- (i) Waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause; and
- (ii) Require that their Related Entities waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause.

(3) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of claims arising from the *Convention on International Liability for Damage Caused by Space Objects*, entered into force on 1 September 1972, in which the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

(4) Notwithstanding the other provisions of this clause, this cross-waiver of liability shall not be applicable to:

- (i) Claims between the Government and its own contractors or between its own contractors and subcontractors;
- (ii) Claims made by a natural person, his/her estate, survivors, or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health, or death of such person;
- (iii) Claims for Damage caused by willful misconduct;
- (iv) Intellectual property claims;



(v) Claims for damages resulting from a failure of the contractor to extend the cross-waiver of liability to its subcontractors and related entities, pursuant to paragraph (c)(2) of this clause; or

(vi) Claims by the Government arising out of or relating to a contractor's failure to perform its obligations under this contract.

(5) Nothing in this clause shall be construed to create the basis for a claim or suit where none would otherwise exist.

(6) This cross-waiver shall not be applicable when 49 U.S.C. Subtitle IX, Chapter 701 is applicable.

(End of clause)

## **H.15 AVOIDANCE OF ORGANIZATIONAL CONFLICTS OF INTEREST**

(a) Avoidance plan. The Organizational Conflicts of Interest (OCI) Avoidance Plan and its obligations are hereby incorporated in the contract by reference as Attachment H.

(b) Changes. (1) Either the Contractor or the Government may propose changes to the Organizational Conflicts of Interest Avoidance Plan. Such changes are subject to the mutual agreement of the parties and will become effective only upon incorporating the change into the plan by contract amendment. (2) In the event that the Government and the Contractor cannot agree upon a mutually acceptable change, the Government reserves the right to make a unilateral change to the OCI Avoidance Plan as necessary, with the approval of the Procurement Officer, subject to Contractor appeal as provided in the Disputes clause.

(c) Violation. The Contractor shall report any violation of the Organizational Conflicts of Interest Avoidance Plan, whether by its own personnel or those of the Government or other contractors, to the Contracting Officer. This report shall include a description of the violation and the actions the Contractor has taken or proposes to take to mitigate and avoid repetition of the violation. After conducting such further inquiries and discussions as may be necessary, the Contracting Officer and the Contractor shall agree on appropriate corrective action, if any, or the Contracting Officer shall direct corrective action.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in subcontracts where the work includes or may include tasks related to the organizational conflicts of interest. The terms "Contractor" and "Contracting Officer" shall be appropriately modified to reflect the change in parties and to preserve the Government's rights.

(End of text)

**H.16 REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFEROR**

The completed provision 52.204-8, Annual Representations and Certifications, including any amended representation(s) made at paragraph (b) of the provision; and other representations, certifications and other statements contained in Section K completed and submitted as part of the offer dated **February 26, 2013**, are hereby incorporated by reference in this resulting contract.

(End of Clause)

**H.17 CLAUSES INCORPORATED BY REFERENCE -- SECTION H**

Clause(s) H.1 and H.2 at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

**[END OF SECTION H]**

**SECTION I - CONTRACT CLAUSES**

- I.1 52.202-1 DEFINITIONS (JAN 2012)**
- I.2 52.203-3 GRATUITIES (APR 1984)**
- I.3 52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)**
- I.4 52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)**
- I.5 52.203-7 ANTI-KICKBACK PROCEDURES (OCT 2010)**
- I.6 52.203-8 CANCELLATION, RECISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)**
- I.7 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)**
- I.8 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (OCT 2010)**
- I.9 52.203-13 CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (APR 2010)**
- I.10 52.204-2 SECURITY REQUIREMENTS AUG 1996)**
- I.11 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON POSTCONSUMER FIBER CONTENT PAPER (MAY 2011)**
- I.12 52.204-7 CENTRAL CONTRACTOR REGISTRATION (DEC 2012)**
- I.13 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011)**
- I.14 52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (AUG 2012)**
- I.15 52.209-6 PROTECTING THE GOVERNMENT’S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (DEC 2010)**
- I.16 52.209-9 UPDATES OF PUBLICILY AVAILABLE INFORMATION (FEB 2012)**

**I.17 52.209-10 PROHIBITION ON CONTRACTING WITH INVERTED DOMESTIC CORPORATIONS (MAY 2012)**

**I.18 52.210-1 MARKET RESEARCH (APR 2011)**

(a) *Definition.* As used in this clause—

“Commercial item” and “nondevelopmental item” have the meaning contained in Federal Acquisition Regulation [2.101](#).

(b) Before awarding subcontracts over the simplified acquisition threshold for items other than commercial items, the Contractor shall conduct market research to—

(1) Determine if commercial items or, to the extent commercial items suitable to meet the agency’s needs are not available, nondevelopmental items are available that—

- (i) Meet the agency’s requirements;
- (ii) Could be modified to meet the agency’s requirements; or
- (iii) Could meet the agency’s requirements if those requirements were modified to a reasonable extent; and

(2) Determine the extent to which commercial items or nondevelopmental items could be incorporated at the component level.

(End of clause)

**I.19 52.215-2 AUDIT AND RECORDS -- NEGOTIATION (OCT 2010)**

**I.20 52.215-8 ORDER OF PRECEDENCE – UNIFORM CONTRACT FORMAT (OCT 1997)**

**I.21 52.215-11 PRICE REDUCTION FOR DEFECTIVE CERTIFIED COST OR PRICING DATA -- MODIFICATIONS (AUG 2011)**

**I.22 52.215-13 SUBCONTRACTOR CERTIFIED COST OR PRICING DATA – MODIFICATIONS (OCT 2010)**

**I.23 52.215-14 INTEGRITY OF UNIT PRICES (OCT 2010)**

**I.24 52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2010)**

- I.25 52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (JUL 2005)**
- I.26 52.215-21 REQUIREMENTS FOR CERTIFIED COST OR PRICING DATE AND DATA OTHER THAN CERTIFIED COST OR PRICING DATA—MODIFICATONS (OCT 2010)**
- I.27 52.215-23 LIMITATIONS ON PASS-THROUGH CHARGES (OCT 2009)**
- I.28 52.216-7 ALLOWABLE COST AND PAYMENT (JUN 2011)**

a) Invoicing.

(1) The Government will make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks, in amounts determined to be allowable by the Contracting Officer in accordance with Federal Acquisition Regulation (FAR) [Subpart 31.2](#) in effect on the date of this contract and the terms of this contract. The Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as the representative may require, an invoice or voucher supported by a statement of the claimed allowable cost for performing this contract.

(2) Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act. Interim payments made prior to the final payment under the contract are contract financing payments, except interim payments if this contract contains Alternate I to the clause at [52.232-25](#).

(3) The designated payment office will make interim payments for contract financing on the 30th day after the designated billing office receives a proper payment request. In the event that the Government requires an audit or other review of a specific payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date.

(b) Reimbursing costs.

(1) For the purpose of reimbursing allowable costs (except as provided in paragraph (b)(2) of this clause, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term “costs” includes only—

(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract;

(ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for—

(A) Supplies and services purchased directly for the contract and associated financing payments to subcontractors, provided payments determined due will be made—

(1) In accordance with the terms and conditions of a subcontract or invoice;  
and

(2) Ordinarily within 30 days of the submission of the Contractor's payment request to the Government;

(B) Materials issued from the Contractor's inventory and placed in the production process for use on the contract;

(C) Direct labor;

(D) Direct travel;

(E) Other direct in-house costs; and

(F) Properly allocable and allowable indirect costs, as shown in the records maintained by the Contractor for purposes of obtaining reimbursement under Government contracts; and

(iii) The amount of financing payments that have been paid by cash, check, or other forms of payment to subcontractors.

(2) Accrued costs of Contractor contributions under employee pension plans shall be excluded until actually paid unless—

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's indirect costs for payment purposes).

(3) Notwithstanding the audit and adjustment of invoices or vouchers under paragraph (g) of this clause, allowable indirect costs under this contract shall be obtained by applying indirect cost rates established in accordance with paragraph (d) of this clause.

(4) Any statements in specifications or other documents incorporated in this contract by reference designating performance of services or furnishing of materials at the Contractor's expense or at no cost to the Government shall be disregarded for purposes of cost-reimbursement under this clause.

(c) *Small business concerns.* A small business concern may receive more frequent payments than every 2 weeks.

(d) Final indirect cost rates.

(1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with [Subpart 42.7](#) of the Federal Acquisition Regulation (FAR) in effect for the period covered by the indirect cost rate proposal.

(2)(i) The Contractor shall submit an adequate final indirect cost rate proposal to the Contracting Officer (or cognizant Federal agency official) and auditor within the 6-month period following the expiration of each of its fiscal years. Reasonable extensions, for exceptional circumstances only, may be requested in writing by the Contractor and granted in writing by the Contracting Officer. The Contractor shall support its proposal with adequate supporting data.

(ii) The proposed rates shall be based on the Contractor's actual cost experience for that period. The appropriate Government representative and the Contractor shall establish the final indirect cost rates as promptly as practical after receipt of the Contractor's proposal.

(iii) An adequate indirect cost rate proposal shall include the following data unless otherwise specified by the cognizant Federal agency official:

(A) Summary of all claimed indirect expense rates, including pool, base, and calculated indirect rate.

(B) *General and Administrative expenses (final indirect cost pool)*. Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts).

(C) *Overhead expenses (final indirect cost pool)*. Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) for each final indirect cost pool.

(D) *Occupancy expenses (intermediate indirect cost pool)*. Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) and expense reallocation to final indirect cost pools.

(E) Claimed allocation bases, by element of cost, used to distribute indirect costs.

(F) Facilities capital cost of money factors computation.

(G) Reconciliation of books of account (*i.e.*, General Ledger) and claimed direct costs by major cost element.

(H) Schedule of direct costs by contract and subcontract and indirect expense applied at claimed rates, as well as a subsidiary schedule of Government participation percentages in each of the allocation base amounts.

(I) Schedule of cumulative direct and indirect costs claimed and billed by contract and subcontract.

(J) *Subcontract information*. Listing of subcontracts awarded to companies for which the contractor is the prime or upper-tier contractor (include prime and subcontract numbers; subcontract value and award type; amount claimed during the fiscal year; and the subcontractor name, address, and point of contact information).

(K) Summary of each time-and-materials and labor-hour contract information, including labor categories, labor rates, hours, and amounts; direct materials; other direct costs; and, indirect expense applied at claimed rates.

- (L) Reconciliation of total payroll per IRS form 941 to total labor costs distribution.
- (M) Listing of decisions/agreements/approvals and description of accounting/organizational changes.
- (N) Certificate of final indirect costs (see [52.242-4](#), Certification of Final Indirect Costs).
- (O) Contract closing information for contracts physically completed in this fiscal year (include contract number, period of performance, contract ceiling amounts, contract fee computations, level of effort, and indicate if the contract is ready to close).
- (iv) The following supplemental information is not required to determine if a proposal is adequate, but may be required during the audit process:
  - (A) Comparative analysis of indirect expense pools detailed by account to prior fiscal year and budgetary data.
  - (B) General Organizational information and Executive compensation for the five most highly compensated executives. See [31.205-6\(p\)](#). Additional salary reference information is available at [http://www.whitehouse.gov/omb/procurement\\_index\\_exec\\_comp/](http://www.whitehouse.gov/omb/procurement_index_exec_comp/).
  - (C) Identification of prime contracts under which the contractor performs as a subcontractor.
  - (D) Description of accounting system (excludes contractors required to submit a CAS Disclosure Statement or contractors where the description of the accounting system has not changed from the previous year's submission).
  - (E) Procedures for identifying and excluding unallowable costs from the costs claimed and billed (excludes contractors where the procedures have not changed from the previous year's submission).
  - (F) Certified financial statements and other financial data (*e.g.*, trial balance, compilation, review, *etc.*).
  - (G) Management letter from outside CPAs concerning any internal control weaknesses.
  - (H) Actions that have been and/or will be implemented to correct the weaknesses described in the management letter from subparagraph (G) of this section.
  - (I) List of all internal audit reports issued since the last disclosure of internal audit reports to the Government.
  - (J) Annual internal audit plan of scheduled audits to be performed in the fiscal year when the final indirect cost rate submission is made.
  - (K) Federal and State income tax returns.
  - (L) Securities and Exchange Commission 10-K annual report.
  - (M) Minutes from board of directors meetings.



(N) Listing of delay claims and termination claims submitted which contain costs relating to the subject fiscal year.

(O) Contract briefings, which generally include a synopsis of all pertinent contract provisions, such as: contract type, contract amount, product or service(s) to be provided, contract performance period, rate ceilings, advance approval requirements, pre-contract cost allowability limitations, and billing limitations.

(v) The Contractor shall update the billings on all contracts to reflect the final settled rates and update the schedule of cumulative direct and indirect costs claimed and billed, as required in paragraph (d)(2)(iii)(I) of this section, within 60 days after settlement of final indirect cost rates.

(3) The Contractor and the appropriate Government representative shall execute a written understanding setting forth the final indirect cost rates. The understanding shall specify (i) the agreed-upon final annual indirect cost rates, (ii) the bases to which the rates apply, (iii) the periods for which the rates apply, (iv) any specific indirect cost items treated as direct costs in the settlement, and (v) the affected contract and/or subcontract, identifying any with advance agreements or special terms and the applicable rates. The understanding shall not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in this contract. The understanding is incorporated into this contract upon execution.

(4) Failure by the parties to agree on a final annual indirect cost rate shall be a dispute within the meaning of the Disputes clause.

(5) Within 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, the Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates. The completion invoice or voucher shall include settled subcontract amounts and rates. The prime contractor is responsible for settling subcontractor amounts and rates included in the completion invoice or voucher and providing status of subcontractor audits to the contracting officer upon request.

(6)(i) If the Contractor fails to submit a completion invoice or voucher within the time specified in paragraph (d)(5) of this clause, the Contracting Officer may—

(A) Determine the amounts due to the Contractor under the contract; and

(B) Record this determination in a unilateral modification to the contract.

(ii) This determination constitutes the final decision of the Contracting Officer in accordance with the Disputes clause.

(e) *Billing rates.* Until final annual indirect cost rates are established for any period, the Government shall reimburse the Contractor at billing rates established by the Contracting Officer or by an authorized representative (the cognizant auditor), subject to adjustment when the final rates are established. These billing rates—

(1) Shall be the anticipated final rates; and

(2) May be prospectively or retroactively revised by mutual agreement, at either party's request, to prevent substantial overpayment or underpayment.

(f) *Quick-closeout procedures.* Quick-closeout procedures are applicable when the conditions in FAR [42.708\(a\)](#) are satisfied.

(g) *Audit.* At any time or times before final payment, the Contracting Officer may have the Contractor's invoices or vouchers and statements of cost audited. Any payment may be—

(1) Reduced by amounts found by the Contracting Officer not to constitute allowable costs; or

(2) Adjusted for prior overpayments or underpayments.

(h) Final payment.

(1) Upon approval of a completion invoice or voucher submitted by the Contractor in accordance with paragraph (d)(5) of this clause, and upon the Contractor's compliance with all terms of this contract, the Government shall promptly pay any balance of allowable costs and that part of the fee (if any) not previously paid.

(2) The Contractor shall pay to the Government any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Contractor or any assignee under this contract, to the extent that those amounts are properly allocable to costs for which the Contractor has been reimbursed by the Government. Reasonable expenses incurred by the Contractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Contracting Officer. Before final payment under this contract, the Contractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver—

(i) An assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) A release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, except—

(A) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;

(B) Claims (including reasonable incidental expenses) based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided, that the claims are not known to the Contractor on the date of the execution of the release, and that the Contractor gives notice of the claims in writing to the Contracting Officer within 6 years following the release date or notice of final payment date, whichever is earlier; and

(C) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Contractor under the patent clauses of this contract, excluding, however, any expenses arising from the Contractor's indemnification of the Government against patent liability.

(End of clause)

**I.29 52.204-13 CENTRAL CONTRACTOR REGISTRATION MAINTENANCE  
(DEC 2012)**

**I.30 52.219-6 NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (NOV 2011)**

(a) *Definition.* "Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) *Applicability.* This clause applies only to—

- (1) Contracts that have been totally set aside or reserved for small business concerns; and
- (2) Orders set aside for small business concerns under multiple-award contracts as described in 8.405-5 and 16.505(b)(2)(i)(F).

(c) *General.*

- (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.
- (2) Any award resulting from this solicitation will be made to a small business concern.

(d) *Agreement.* A small business concern submitting an offer in its own name shall furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States or its outlying areas. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This paragraph does not apply to construction or service contracts.

(End of clause)

- I.31 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (JAN 2011)**
- I.32 52.219-14 LIMITATIONS ON SUBCONTRACTING (NOV 2011)**
- I.33 RESERVED**
- I.34 52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES  
(FEB 1997)**
- I.35 52.222-3 CONVICT LABOR (JUN 2003)**
- I.36 52.222-17 NONDISPLACEMENT OF QUALIFIED WORKERS (JAN 2013)**
- I.37 52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)**
- I.38 52.222-26 EQUAL OPPORTUNITY (MAR 2007)**
- I.39 52.222-35 EQUAL OPPORTUNITY FOR VETERANS. (SEP 2010)**
- I.40 52.222-36 AFFIRMATIVE ACTIONS FOR WORKERS WITH  
DISABILITIES (OCT 2010)**
- I.41 52.222-37 EMPLOYMENT REPORTS ON VETERANS (SEP 2010)**
- I.42 52.222-40 NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE  
NATIONAL LABOR RELATIONS ACT (DEC 2010)**
- I.43 52.222-50 COMBATING TRAFFICKING IN PERSONS (FEB 2009)**
- I.44 52.222-54 EMPLOYMENT ELIGIBILITY VERIFICATION (JUL 2012)**
- I.45 52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL  
SAFETY DATA (JAN 1997) – ALTERNATE I (JUL 1995)**

(a) "Hazardous material," as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material (*If none, insert "None"*) Identification No.

**None**

_____	_____
_____	_____
_____	_____

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to-

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with paragraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(i) Except as provided in paragraph (i)(2), the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSDS's), meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in paragraph (b) of this clause.

(1) For items shipped to consignees, the Contractor shall include a copy of the MSDS's with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to transmit MSDS's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.

(2) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSDS's in or on each shipping container. If affixed to the outside of each container, the MSDS's must be placed in a weather resistant envelope.

(End of clause)

**I.46 RESERVED**

**I.47 52.223-7 NOTICE OF RADIOACTIVE MATERIALS (JAN 1997)**

a) The Contractor shall notify the Contracting Officer or designee, in writing, 30 days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in Title 10 of the *Code of Federal Regulations*, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items which contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

\* The Contracting Officer shall insert the number of days required in advance of delivery of the item or completion of the servicing to assure that required licenses are obtained and appropriate personnel are notified to institute any necessary safety and health precautions. See FAR [23.601](#)(d).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior contracts, the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall—

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted.

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and all containers in which such items, parts or subassemblies are delivered to the Government shall be clearly marked and labeled as required by the latest revision of MIL-STD 129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

(End of clause)

**I.48 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW  
INFORMATION (MAY 2011 – ALTERNATE I (MAY 2011) –  
ALTERNATE II (MAY 2011))**

**I.49 52.223-6 DRUG-FREE WORKPLACE (MAY 2001)**

**I.50 52.223-10 WASTE REDUCTION PROGRAM (MAY 2011)**

**I.51 RESERVED**

**I.52 52.223-18 CONTRACTOR POLICY TO BAN TEXT MESSAGING WHILE  
DRIVING (AUG 2011)**

**I.53 52.225-1 BUY AMERICAN ACT - SUPPLIES (FEB 2009)**

**I.54 52.225-8 DUTY-FREE ENTRY. (OCT 2010)**

**I.55 52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES  
(JUN 2008)**

**I.56 RESERVED**

**I.57 52.227-1 AUTHORIZATION AND CONSENT (DEC 2007)**

**I.58 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)**

**I.59 52.227-11 PATENT RIGHTS – OWNERSHIP BY THE CONTRACTOR (DEC 2007) as modified by NFS 1852.227-11**

**I.60 52.227-14 RIGHTS IN DATA-GENERAL (DEC 2007) as modified by NASA FAR Supplement 1852.227-14—ALTERNATE II (DEC 2007) AND ALTERNATE III (DEC 2007)**

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

"Computer database" or "database means" a collection of recorded information in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

"Computer software"-

(1) Means

(i) Computer programs that comprise a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations; and

(ii) Recorded information comprising source code listings, design details, algorithms, processes, flow charts, formulas, and related material that would enable the computer program to be produced, created, or compiled.

(2) Does not include computer databases or computer software documentation.

"Computer software documentation" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

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

"Form, fit, and function data" means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, and data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements. For computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithms, processes, formulas, and flow charts of the software.

"Limited rights" means the rights of the Government in limited rights data as set forth in the Limited Rights Notice of paragraph (g)(3) if included in this clause.



"Limited rights data" means data, other than computer software, that embody trade secrets or are commercial or financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications.

"Restricted computer software" means computer software developed at private expense and that is a trade secret, is commercial or financial and confidential or privileged, or is copyrighted computer software, including minor modifications of the computer software.

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

"Technical data" means recorded information (regardless of the form or method of the recording) of a scientific or technical nature (including computer databases and computer software documentation). This term does not include computer software or financial, administrative, cost or pricing, or management data or other information incidental to contract administration. The term includes recorded information of a scientific or technical nature that is included in computer databases (See [41 U.S.C. 403\(8\)](#)).

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

(b) Allocation of rights.

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

(i) Data first produced in the performance of this contract;

(ii) Form, fit, and function data delivered under this contract;

(iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this contract; and

(iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause.

(2) The Contractor shall have the right to-

(i) Assert copyright in data first produced in the performance of this contract to the extent provided in paragraph (c)(1) of this clause;

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

(iii) Substantiate the use of, add, or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and

(iv) Protect from unauthorized disclosure and use those data that are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause.

(c) Copyright-

(1) Data first produced in the performance of this contract.

(i) Unless provided otherwise in paragraph (d) of this clause, the Contractor may, without prior approval of the Contracting Officer, assert copyright in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings, or similar works. The prior, express written permission of the Contracting Officer is required to assert copyright in all other data first produced in the performance of this contract.

(ii) When authorized to assert copyright to the data, the Contractor shall affix the applicable copyright notices of [17 U.S.C. 401 or 402](#), and an acknowledgment of Government sponsorship (including contract number).

(iii) For data other than computer software, the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly by or on behalf of the Government. For computer software, the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly (but not to distribute copies to the public) by or on behalf of the Government.

(2) *Data not first produced in the performance of this contract.* The Contractor shall not, without the prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract unless the Contractor-

(i) Identifies the data; and

(ii) Grants to the Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (c)(1) of this clause or, if such data are restricted computer software, the Government shall acquire a copyright license as set forth in paragraph (g)(4) of this clause (if included in this contract) or as otherwise provided in a collateral agreement incorporated in or made part of this contract.

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

(d) *Release, publication, and use of data.* The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except-

(1) As prohibited by Federal law or regulation (*e.g.*, export control or national security laws or regulations);

(2) As expressly set forth in this contract; or

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

(i) The Contractor agrees not to establish claim to copyright, publish or release to others any computer software first produced in the performance of this contract without the Contracting Officer's prior written permission.

(ii) If the Government desires to obtain copyright in computer software first produced in the performance of this contract and permission has not been granted as set forth in paragraph (d)(3)(i) of this clause, the Contracting Officer may direct the contractor to assert, or authorize the assertion of, claim to copyright in such data and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.

(iii) Whenever the word "establish" is used in this clause, with reference to a claim to copyright, it shall be construed to mean "assert".

(e) Unauthorized marking of data.

(1) Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked with the notices specified in paragraph (g)(3) or (g) (4) if included in this clause, and use of the notices is not authorized by this clause, or if the data bears any other restrictive or limiting markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, pursuant to [41 U.S.C. 253d](#), the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer will make written inquiry to the Contractor affording the Contractor 60 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 60-day period (or a longer time approved in writing by the Contracting Officer for good cause shown), the Government

shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in paragraph (e)(1)(i) of this clause, the Contracting Officer will consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor will be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer will furnish the Contractor a written determination, which determination will become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government will continue to abide by the markings under this paragraph (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government will thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in paragraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act ([5 U.S.C. 552](#)) if necessary to respond to a request thereunder.

(3) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by paragraph (e) of the clause from bringing a claim, in accordance with the Disputes clause of this contract, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) Omitted or incorrect markings.

(1) Data delivered to the Government without any restrictive markings shall be deemed to have been furnished with unlimited rights. The Government is not liable for the disclosure, use, or reproduction of such data.

(2) If the unmarked data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer in writing for good cause shown) after delivery of the data, permission to have authorized notices placed on the data at the Contractor's expense. The Contracting Officer may agree to do so if the Contractor-

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability for the disclosure, use, or reproduction of any data made prior to the addition of the notice or resulting from the omission of the notice.

(3) If data has been marked with an incorrect notice, the Contracting Officer may-

(i) Permit correction of the notice at the Contractor's expense if the Contractor identifies the data and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

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

(1) The Contractor may withhold from delivery qualifying limited rights data or restricted computer software that are not data identified in paragraphs (b)(1)(i), (ii), and (iii) of this clause. As a condition to this withholding, the Contractor shall-

(i) Identify the data being withheld; and

(ii) Furnish form, fit, and function data instead.

(2) Limited rights data that are formatted as a computer database for delivery to the Government shall be treated as limited rights data and not restricted computer software.

(3) Notwithstanding paragraph (g)(1) of this clause, the contract may identify and specify the delivery of limited rights data, or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be entitled to be withheld. If delivery of that data is required, the Contractor shall affix the following "Limited Rights Notice" to the data and the Government will treat the data, subject to the provisions of paragraphs (e) and (f) of this clause, in accordance with the notice:

Limited Rights Notice (Dec 2007)

(a) These data are submitted with limited rights under Government Contract No. \_\_\_\_\_ (and subcontract \_\_\_\_\_, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure:

(i) Use (except for manufacture) by support service contractors.

(ii) Evaluation by nongovernment evaluators.

(iii) Use (except for manufacture) by other contractors participating in the Government's program of which the specific contract is a part.

(iv) Emergency repair or overhaul work.

(v) Release to a foreign government, or its instrumentalities, if required to serve the interests of the U.S. Government, for information or evaluation, or for emergency repair or overhaul work by the foreign government.

(vi) or any other legitimate government use

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

(End of notice)

(4)(i) Notwithstanding paragraph (g)(1) of this clause, the contract may identify and specify the delivery of restricted computer software, or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be entitled to be withheld. If delivery of that computer software is required, the Contractor shall affix the following "Restricted Rights Notice" to the computer software and the Government will treat the computer software, subject to paragraphs (e) and (f) of this clause, in accordance with the notice:

Restricted Rights Notice (Dec 2007)

(a) This computer software is submitted with restricted rights under Government Contract No. \_\_\_\_\_ (and subcontract \_\_\_\_\_, if appropriate). It may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b) of this notice or as otherwise expressly stated in the contract.

(b) This computer software may be-

(1) Used or copied for use with the computer(s) for which it was acquired, including use at any Government installation to which the computer(s) may be transferred;

(2) Used or copied for use with a backup computer if any computer for which it was acquired is inoperative;

(3) Reproduced for safekeeping (archives) or backup purposes;

(4) Modified, adapted, or combined with other computer software, *provided* that the modified, adapted, or combined portions of the derivative software incorporating any of the delivered, restricted computer software shall be subject to the same restricted rights;

(5) Disclosed to and reproduced for use by support service Contractors or their subcontractors in accordance with paragraphs (b)(1) through (4) of this notice; and

(6) Used or copied for use with a replacement computer and other legitimate government use.

(c) Notwithstanding the foregoing, if this computer software is copyrighted computer software, it is licensed to the Government with the minimum rights set forth in paragraph (b) of this notice.

(d) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the contract.

(e) This notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

(ii) Where it is impractical to include the Restricted Rights Notice on restricted computer software, the following short-form notice may be used instead:

Restricted Rights Notice Short Form (Jun 1987)

Use, reproduction, or disclosure is subject to restrictions set forth in Contract No. \_\_\_\_\_ (and subcontract, if appropriate) with \_\_\_\_\_ (name of Contractor and subcontractor).

(End of notice)

(iii) If restricted computer software is delivered with the copyright notice of [17 U.S.C. 401](#), it will be presumed to be licensed to the Government without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this clause.

(h) *Subcontracting*. The Contractor shall obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government those rights, the Contractor shall promptly notify the Contracting Officer of the refusal and shall not proceed with the subcontract award without authorization in writing from the Contracting Officer.

(i) *Relationship to patents or other rights*. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

(End of clause)

**I.61 52.227-16 ADDITIONAL DATA REQUIREMENTS (JUN 1987)**

**I.62 52.228-7 INSURANCE – LIABILITY TO THIRD PERSONS (MAR 1996)**

**I.63 52.227-17 RIGHTS IN DATA—SPECIAL WORKS (DEC 2007) as modified by NFS 1852.227-17**

**I.64 RESERVED**

**I.65 52.232-9 LIMITATION ON WITHOLDING OF PAYMENTS (APR 1984)**

**I.66 52.232-17 INTEREST (OCT 2010)**

- I.67 52.232-22 LIMITATION OF FUNDS (APR 1984)
- I.68 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)
- I.69 52.232-25 PROMPT PAYMENT (OCT 2008) – ALTERNATE I (FEB 2002)
- I.70 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER –  
CENTRAL CONTRACTOR REGISTRATION (OCT 2003)
- I.71 52.233-1 DISPUTES (JUL 2002) – ALTERNATE I (DEC 1991)
- I.72 52.233-3 PROTEST AFTER AWARD (AUG 1996) – ALTERNATE I  
(JUN 1985)
- I.73 52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM  
(OCT 2004)
- I.74 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS,  
EQUIPMENT, AND VEGETATION (APR 1984)
- I.75 52.237-3 CONTINUITY OF SERVICES (JAN 1991)
- I.76 52.239-1 PRIVACY OR SECURITY SAFEGUARDS (AUG 1996)
- I.77 52.242-1 NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)
- I.78 52.242-3 PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)
- I.79 52.242-4 CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)
- I.80 52.242-13 BANKRUPTCY (JUL 1995)
- I.81 52.243-2 CHANGES – COST-REIMBURSEMENT (AUG 1987) –  
ALTERNATE II (APR 1984)
- I.82 52.244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)
- I.83 52.245-1 GOVERNMENT PROPERTY (APR 2012)
- I.84 52.245-9 USE AND CHARGES (APR 2012)
- I.85 52.246-25 LIMITATION OF LIABILITY – SERVICES (FEB 1997)



**I.86 52.247-1 COMMERCIAL BILL OF LADING NOTATIONS (FEB 2006)**

Paragraph (a) NASA/GSFC

Paragraph (b) NASA/GSFC, Contract No. NNG13CR48C, NASA/GSFC, Contracting Officer, Code 210.3, Greenbelt, MD 20771

**I.87 52.247-63 PREFERENCE FOR U.S.-FLAG AIR CARRIERS (JUN 2003)**

**I.88 52.247-67 SUBMISSION OF TRANSPORTATION DOCUMENTS FOR AUDIT (FEB 2006)**

Paragraph I NASA/GSFC, Contracting Officer, Code 210.3, Greenbelt, MD 20771

**I.89 RESERVED**

**I.90 52.249-6 TERMINATION (COST-REIMBURSEMENT) (MAY 2004)**

**I.91 52.249-14 EXCUSABLE DELAYS (APR 1984)**

**I.92 52.251-1 GOVERNMENT SUPPLY SOURCES (APR 2012)**

**I.93 52.253-1 COMPUTER GENERATED FORMS (JAN 1991)**

**I.94 52.203-14 DISPLAY OF HOTLINE POSTER(S) (DEC 2007)**

(a) Definition.

“United States,” as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) Display of fraud hotline poster(s). Except as provided in paragraph (c)–

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites–

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Poster(s) Obtain from

Inspector General Hotline Posters may be obtained from NASA Office of Inspector General, Code W, Washington, DC 20546-001

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed \$5,000,000, except when the subcontract—

(1) Is for the acquisition of a commercial item; or

(2) Is performed entirely outside the United States.

(End of clause)

#### **I.95 52.204-1 APPROVAL OF CONTRACT (DEC 1989)**

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

(End of clause)

#### **I.96 52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)**

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall –

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

**I.97 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REPRESENTATION (APR 2012)**

a) *Definitions.* As used in this clause—

*Long-term contract* means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at [52.217-8](#), Option to Extend Services, or other appropriate authority.

*Small business concern* means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is “not dominant in its field of operation” when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

- (1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.
- (2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.
- (3) For long-term contracts—
  - (i) Within 60 to 120 days prior to the end of the fifth year of the contract; and
  - (ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.
- (c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.
- (d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.
- (e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure that they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.
- (f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.
- (g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it \_\_\_ is, \_\_\_ is not a small business concern under NAICS Code \_\_\_\_\_ assigned to contract number \_\_\_\_\_.

[Contractor to sign and date and insert authorized signer's name and title].

(End of clause)

**I.98 RESERVED**

**I.99 52.227-23 RIGHTS TO PROPOSAL DATA (TECHNICAL) (JUN 1987)**

Except for data contained on pages **none**, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data – General" clause contained in this contract) in and to the technical data contained in the proposal dated **February 26, 2013**, upon which this contract is based.

(End of clause)

**I.100 1852.225-74 NOTIFICATION PRIOR TO ACQUIRING INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED BY THE PEOPLE'S REPUBLIC OF CHINA (JUN 2013) (DEVIATION)**

(a) Definitions –

**"Acquire"** means procure with appropriated funds by and for the use of NASA through purchase or lease.

**"Entity owned, directed or subsidized by the People's Republic of China"** means any organization incorporated under the laws of the People's Republic of China.

**"Information Technology (IT) System"** means the combination of hardware components, software, and other equipment to make a system whose core purpose is to accomplish a data processing need such as the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data. IT systems include ground systems in support of flight hardware. IT systems do not include—

- (i) Systems acquired by a contractor incidental to a contract;
- (ii) Imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control

- devices, and medical equipment where information technology is integral to its operation, are not information technology systems;
- (iii) Services in support of IT systems, such as help desk services; or
  - (iv) Flight hardware, which includes aircraft, spacecraft, artificial satellites, launch vehicles, balloon systems, sounding rockets, on-board instrument and technology demonstration systems, and equipment operated on the International Space Station; as well as prototypes, and engineering or brass boards created and used to test, troubleshoot, and refine air- and spacecraft hardware, software and procedures.

(b) Section 516 of the Consolidated and Further Continuing Appropriation Act, 2013 (Pub. L.113-6), requires NASA's Office of the Chief Information Officer (OCIO) to assess the risk of cyber-espionage or sabotage of an information technology (IT) system that is produced, manufactured, or assembled by an entity owned, directed or subsidized by the People's Republic of China (PRC). The Government retains the right to reject any IT system tendered for acceptance under this Contract, without any further recourse by, or explanation to, the Contractor, if the Government determines the IT system, in whole or in part, presents an unacceptable risk to national security.

(c) The Contractor shall obtain the approval of the Contracting Officer before acquiring any IT system(s) from entities owned, directed or subsidized by the People's Republic of China under this contract. Any Contractor request to use such items shall include adequate information for Government evaluation of the request, including—

- (1) A brief description of the item(s); and
- (2) Vendor/manufacturer's company name and address;

(d) The Contracting Officer will provide the information referenced in paragraph (c) to the NASA Office of the Chief Information Officer (OCIO) which will assess the risk of cyber-espionage or sabotage and make a determination if the acquisition of such system is in the national interest. Only items so approved shall be provided under the contract.

**(End of clause)**

#### **I.101 52.244-2 SUBCONTRACTS (OCT 2010)**

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

“Approved purchasing system” means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

“Consent to subcontract” means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

“Subcontract” means any contract, as defined in FAR Subpart 2.1, entered into by

a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (c) or (d) of this clause.

(c) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that –

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds –

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(d) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts: **Professional and consultant costs as defined in FAR 31.205-33**

(e)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (b), (c) or (d) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate certified cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting –

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason certified cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's certified cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's certified cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (b), (c) or (d) of this clause.

(f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination –

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or



(3) To relieve the Contractor of any responsibility for performing this contract.

(g) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4I(4)(i).

(h) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(i) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations: **None**

(End of clause)

#### **I.102 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2010)**

(a) Definitions. As used in this clause—

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

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

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

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

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)), if the subcontract exceeds \$5,000,000 and has a performance period of more than 120 days. In altering this clause to identify the appropriate parties, all disclosures of violation of the civil False Claims Act or of Federal criminal law shall be directed to the agency Office of the Inspector

General, with a copy to the Contracting Officer.

(ii) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (JUN 2010) (Section 1553 of Pub. L. 111-5), if the subcontract is funded under the Recovery Act.

(iii) 52.219-8, Utilization of Small Business Concerns (DEC 2010) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iv) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Veterans (SEP 2010) (38 U.S.C. 4212(a)).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (OCT 2010) (29 U.S.C. 793).

(vii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496), if flow down is required in accordance with paragraph (f) of FAR clause 52.222-40.

(viii) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

(ix) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. App. 1241 and 10 U.S.C. 2631), if flow down is required in accordance with paragraph (d) of FAR clause 52.247-64.

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

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

(End of clause)

**I.103 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)**

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

<https://www.acquisition.gov/far/>

NASA FAR Supplement (NFS) clauses:

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

(End of clause)

**I.104 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)**

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

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

(End of clause)

**I.105 1852.203-70 DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS (JUN 2001)**

**I.106 1852.228-75 MINIMUM INSURANCE COVERAGE (OCT 1988)**

**I.107 1852.223-74 DRUG-AND ALCOHOL-FREE WORKFORCE (MAR 1996)**

**I.108 1852.237-70 EMERGENCY EVACUATION PROCEDURES (DEC 1988)**

**I.109 1852.242-78 EMERGENCY MEDICAL SERVICES AND EVACUATION (APR 2001)**

**I.110 1852.243-71 SHARED SAVINGS (MAR 1997)**

**I.111 1852.204-75 SECURITY CLASSIFICATION REQUIREMENTS. (SEP 1989)**

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of **SECRET**. See Federal

Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Attachment D.

(End of clause)

**I.112 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (JAN 2011)**

(a) The contractor shall protect the confidentiality, integrity, and availability of NASA Electronic Information and IT resources and protect NASA Electronic Information from unauthorized disclosure.

(b) This clause is applicable to all NASA contractors and sub-contractors that process, manage, access, or store unclassified electronic information, to include Sensitive But Unclassified (SBU) information, for NASA in support of NASA's missions, programs, projects and/or institutional requirements. Applicable requirements, regulations, policies, and guidelines are identified in the Applicable Documents List (ADL) provided as an attachment to the contract. The documents listed in the ADL can be found at: <http://www.nasa.gov/offices/ocio/itsecurity/index.html>. For policy information considered sensitive, the documents will be identified as such in the ADL and made available through the Contracting Officer.

(c) Definitions.

(1) IT resources means any hardware or software or interconnected system or subsystem of equipment, that is used to process, manage, access, or store electronic information.

(2) NASA Electronic Information is any data (as defined in the Rights in Data clause of this contract) or information (including information incidental to contract administration, such as financial, administrative, cost or pricing, or management information) that is processed, managed, accessed or stored on an IT system(s) in the performance of a NASA contract.

(3) IT Security Management Plan—This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. Unlike the IT security plan, which addresses the IT system, the IT Security Management Plan addresses how the contractor will manage personnel and processes associated with IT Security on the instant contract.

(4) IT Security Plan—this is a FISMA requirement; see the ADL for applicable requirements. The IT Security Plan is specific to the IT System and not the contract. Within 30 days after award, the contractor shall develop and deliver an IT Security Management Plan to the Contracting Officer; the approval authority will be included in the ADL. All contractor personnel requiring physical or logical access to NASA IT resources must complete NASA's annual IT Security Awareness training. Refer to the IT Training policy located in the IT Security Web site at <https://itsecurity.nasa.gov/policies/index.html>.

(d) The contractor shall afford Government access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection (to include vulnerability testing), investigation and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA Electronic Information or to the function of IT systems operated on behalf of NASA, and to preserve evidence of computer crime.

(e) At the completion of the contract, the contractor shall return all NASA information and IT resources provided to the contractor during the performance of the contract in accordance with retention documentation available in the ADL. The contractor shall provide a listing of all NASA Electronic information and IT resources generated in performance of the contract. At that time, the contractor shall request disposition instructions from the Contracting Officer. The Contracting Officer will provide disposition instructions within 30 calendar days of the contractor's request. Parts of the clause and referenced ADL may be waived by the contracting officer, if the contractor's ongoing IT security program meets or exceeds the requirements of NASA Procedural Requirements (NPR) 2810.1 in effect at time of award. The current version of NPR 2810.1 is referenced in the ADL. The contractor shall submit a written waiver request to the Contracting Officer within 30 days of award. The waiver request will be reviewed by the Center IT Security Manager. If approved, the Contractor Officer will notify the contractor, by contract modification, which parts of the clause or provisions of the ADL are waived.

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

(End of clause)

**I.113 1852.215-84 OMBUDSMAN (NOV 2011), ALTERNATE I (JUN 2000)**

(a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.

(b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman, whose name, address, telephone number, facsimile number, and e-mail address may be found at:  
[http://prod.nais.nasa.gov/pub/pub\\_library/Omb.html](http://prod.nais.nasa.gov/pub/pub_library/Omb.html). Concerns, issues, disagreements,

and recommendations which cannot be resolved at the installation may be referred to the Agency ombudsman identified at the above URL. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

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

(End of clause)

**I.114 1852.216-89 ASSIGNMENT AND RELEASE FORMS. (JUL 1997)**

**I.115 1852.219-74 USE OF RURAL AREA SMALL BUSINESSES. (SEP 1990)**

**I.116 1852.219-76 NASA 8 PERCENT GOAL (JUL 1997)**

(a) Definitions.

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

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

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

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

more women, and (2) whose management and daily business operations are controlled by one or more women.

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

(c) the contractor hereby agree to assist NASA in achieving this goal by using its best efforts to award subcontracts to such entities to the fullest extent consistent with efficient contract performance.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns.

(End of clause)

**L.117 1852.225-71 RESTRICTION ON FUNDING ACTIVITY WITH CHINA  
(DEVIATION FEB 2012)**

(a) Definition - "China" or "Chinese-owned company" means the People's Republic of China, any company owned by the People's Republic of China or any company incorporated under the laws of the People's Republic of China.

(b) Public Laws 112-10, Section 1340(a) and 112-55, Section 539, restrict NASA from contracting to participate, collaborate, coordinate bilaterally in any way with China or a Chinese-owned company using funds appropriated on or after April 25, 2011. Contracts for commercial and non developmental items are exempted from the prohibition because they constitute purchase of goods or services that would not involve participation, collaboration, or coordination between the parties.

(c) This contract may use restricted funding that was appropriated on or after April 25, 2011. The contractor shall not contract with China or Chinese-owned companies for any effort related to this contract except for acquisition of commercial and non-developmental items. If the contractor anticipates making an award to China or Chinese-owned companies, the contractor must contact the contracting officer to determine if funding on this contract can be used for that purpose.

(d) Subcontracts - The contractor shall include the substance of this clause in all subcontracts made hereunder.

(End of clause)

**I.118 1852.235-70 CENTER FOR AEROSPACE INFORMATION (DEC 2006)**

**I.119 1852.235-73 FINAL SCIENTIFIC AND TECHNICAL REPORTS  
(DEC 2006) – ALT II (DEC 2005)**

**I.120 1852.237-72 ACCESS TO SENSITIVE INFORMATION (JUNE 2005)**

(a) As used in this clause, “sensitive information” refers to information that a contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.

(b) To assist NASA in accomplishing management activities and administrative functions, the Contractor shall provide the services specified elsewhere in this contract.

(c) If performing this contract entails access to sensitive information, as defined above, the Contractor agrees to -

(1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in procurement.

(2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(3) Allow access to sensitive information only to those employees that need it to perform services under this contract.

(4) Preclude access and disclosure of sensitive information to persons and entities outside of the Contractor’s organization.

(5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.

(6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(d) The Contractor will comply with all procedures and obligations specified in its Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.

(e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of government



contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a government contractor.

(f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information

(End of clause)

**I.121 1852.237-73 RELEASE OF SENSITIVE INFORMATION (JUN 2005)**

(a) As used in this clause, "Sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.

(b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

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

Mark the title page with the following legend:

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

this restriction is contained in pages [*insert page numbers or other identification of pages*]. Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

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

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is “sensitive.” This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor’s claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

(d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

- (1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.
- (2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.
- (3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
- (4) Allow access to sensitive information only to those employees that need it to perform services under its contract.
- (5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider’s organization.
- (6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.
- (7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

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

(End of clause)

**I.122 CLAUSES INCORPORATED BY REFERENCE -- SECTION I**

Clause(s) incorporated by reference in this Section have the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

**[END OF SECTION I]**

**SECTION J - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**

**J.1 LIST OF ATTACHMENTS**

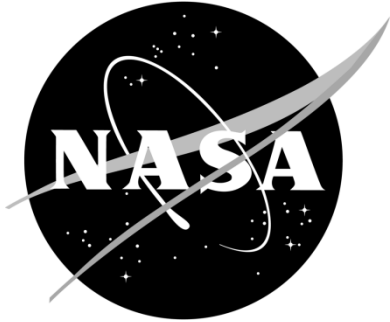
The following documents are attached hereto and made a part of this contract:

<b>Attachment</b>	<b>Description</b>	<b>Date</b>	<b>No. of Pages</b>
A	Statement of Work	7/06/2011	42
B	Direct Labor Rates, Indirect Rates, and Award Fee Matrices	2/26/2013	18
C	Financial Management Reporting Requirement	5/27/2011	4
C – Addendum	Financial Management Reporting Requirement – Addendum: Supplemental Contractor Financial Management Requirements	4/2013	2
D	DD Form 254 Contract Security Classification Specification	7/3/2013	3
E	Safety and Health Plan	2/26/2013	55
F	Quality Assurance Plan	2/26/2013	45
G	IT Security Management Plan	To be submitted thirty (30) days after contract award.	TBP
H	Organizational Conflicts of Interest (OCI) Avoidance Plan	To be submitted thirty (30) days after contract award.	TBP
I	Contract Historical Data	3/30/11	2
J	Personal Identity Verification (PIV) Procedures	2/11/2011	4

K	Performance Evaluation Plan	7/3/2013	24
L	IT Security Applicable Documents List (ADL)	1/13	4

(End of Clause)

**[END OF SECTION J]**



**NASA  
GODDARD SPACE FLIGHT CENTER**

**ATTACHMENT A  
STATEMENT OF WORK  
FOR  
ELECTRICAL SYSTEMS  
ENGINEERING SERVICES II (ESES-II)  
FOR THE  
APPLIED ENGINEERING AND  
TECHNOLOGY DIRECTORATE (AETD)  
9 January, 2012**

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## **INTRODUCTION**

The National Aeronautics and Space Administration (NASA) was established to plan, direct, and conduct aeronautical and space activities for peaceful purposes for the benefit of all mankind. The operational aspects of NASA's work are divided among field installations around the country and involve research and development activities under the responsibility of the technical program offices at NASA Headquarters.

The Goddard Space Flight Center (GSFC) - located in Greenbelt, Maryland, along with its Wallops Flight Facility in Virginia, supports NASA's Science Mission Directorate (SMD), as well as the other NASA mission directorates, and the Office of Chief Technologist. The GSFC is chartered to expand the knowledge of the Earth and its environment, the Solar System, and the Universe through observations from space. To this end, the GSFC's primary emphasis is in scientific investigation, in the development and operation of space systems, and in the advancement of essential technologies. In accomplishing this responsibility, the GSFC has undertaken a broad program of scientific research, both theoretical and experimental, in the study of space phenomena and earth sciences. The program ranges from basic research to flight experiment development, and from mission operations to data analysis.

Within the GSFC, the Applied Engineering and Technology Directorate (AETD) plans, organizes, and conducts a broad range of technical research and development activities in support of science applications. The AETD is responsible for providing engineering expertise and support in the design, development, fabrication, integration, test, and verification of components, subsystems, systems, science instruments, and complete spacecraft for multiple projects. The specific components, subsystems, systems, and science instruments are ultimately integrated into the spacecraft to form a science observatory. It is these observatories that are launched to fulfill the mission of the GSFC. The AETD comprises five engineering divisions: the Mechanical Systems Division (MSD), the Software Engineering Division (SED), the Instrument Systems and Technology Division (ISTD), the Electrical Engineering Division (EED), and the Mission Engineering and Systems Analysis Division (MESA).

To fulfill these responsibilities and ultimately achieve their missions, the AETD must acquire a wide range of engineering services in support of its divisions to implement the GSFC mission.

## **SCOPE OF WORK**

The principal purpose of this contract is to provide electrical engineering support services and related work to EED, ISTD, SED, MESA, and related organizations, as required, for the study, design, development, fabrication, integration, testing, verification, and operations of

space flight, airborne, and ground system hardware and software, including development and validation of new technologies to enable future space and science missions.

To this end, the Contractor shall provide on/off-site multidisciplinary engineering services, pursuant to task orders issued by the Contracting Officer. These services shall include the personnel, facilities, and materials (unless otherwise provided by the Government) to accomplish the tasks.

Task orders will be issued to perform services in the following areas: the design, development, analysis, fab/build, assembly, integration, test, verification, and launch and mission support operations of parts, components, subsystems, systems, science instruments/experiments, airborne/suborbital systems (e.g., aircraft, sounding rockets, UAVs, balloons), free-flying spacecraft, airborne/suborbital/orbital payloads, and Space Station payloads. To include related ground support equipment, simulators, non-flight models, and prototypes. Additionally perform candidate, feasibility, and systems definition studies; project management; systems engineering; analysis; preliminary design; detailed design; fabrication; assembly; integration; test and verification; test instrumentation; data systems management; launch and post-launch operations; research and technology unique to system development; parts screening and materials selection/analysis; documentation; maintenance; sustaining engineering; configuration management; performance assurance; systems safety; and contamination control.

## **I. GENERAL RESPONSIBILITIES**

The Contractor's responsibilities shall include the management of personnel, timely and effective implementation of task orders, control and monitoring of contract and subcontract performance, management of scheduled deliveries, and timely and effective reporting to the Government. These responsibilities shall also include efficient cost management methods as well as procedures to ensure that the Government is aware of task order status and progress achieved.

The Contractor shall be responsible for ensuring that all contractor and subcontractor personnel engaged in performance of this Statement of Work have appropriate qualifications, knowledge, and certification to perform work in accordance with the task orders. Most importantly, to ensure safety of personnel and property, all contractor personnel shall be familiar with and adhere to the Center's Occupational Safety Program (GPR-1700.1A) and AETD's Safety Manual (500-PG-8715.1.2B) as well as specific division, and facility/lab safety policies (ref GDMS, GIDs).

## **II. PERFORMANCE MEASUREMENT**

Performance-based statements of work/specifications will be used for establishing contract requirements. Therefore, each task order issued by the Contracting Officer will include, as a minimum, the following:

1. Statement of Work, including the requirements to be met, the standard(s) of performance/quality of work, and required deliverables (or other output)
2. Performance Specification (if applicable)
3. Applicable Documents (if required)
4. Period of Performance
5. Surveillance Plan

The Contractor shall be required to adhere to the performance measurements detailed in each task order.

## **III. TASKS**

Services shall be required in one or more of the areas described in the scope above for any given task order. Services within the scope of this Statement of Work and specified in task orders shall include, but not be limited to, the specific services delineated in the following sections.

### **FUNCTION 1 – PRE-FORMULATION AND FORMULATION SERVICES: CANDIDATE, PRELIMINARY ANALYSIS, AND SYSTEMS DEFINITION STUDIES**

The Contractor shall provide study services with emphasis on electrical systems engineering that integrate the aspects of flight systems, ground systems, instrument systems and launch systems.

In general, the Contractor shall:

- Produce pre-formulation and formulation phase study inputs for spacecraft, airborne/suborbital craft, instruments and ground systems.
- Develop mission needs (mission objectives, measurement concept, and instrument concept) and mission design (mission requirements, architectural design, and operations concept).

- Develop preliminary, relative cost and schedule estimates based on design alternatives, and identify and assess high-risk elements in designs.
- Document the history of design, qualification, flight experience, and modifications where existing components or subsystems are to be utilized.
- Identify interface requirements for pre-launch, launch, on-orbit servicing, or retrieval of flight hardware.
- Define interface engineering and management requirements.
- Prepare mission systems and operations documentation.
- Prepare requirements and specification packages that conform to applicable standards defined within Task Order statement.
- Identify interfaces and prepare interface control documents.
- Provide technical inputs for problem-solving and/or design inputs in selected spacecraft, instruments, suborbital craft, ground system, and data disciplines.
- Analyze various reports (i.e., progress reports) delivered by the GSFC mission Contractor(s) and provide recommendations to the project.
- Provide liaison and coordination services for project activities.
- Perform hardware and software design and trade-off analyses.
- Provide design services that include performance of preliminary design (leading to a Preliminary Design Review) of the subsystems, components, and assemblies that comprise the instrument/spacecraft/platform/launch system.

#### **A. Candidate Study Services**

The Contractor shall provide study services for the conceptual development of subsystems and systems thereby participating in the identification of scientific objectives, mission requirements and technical concepts. Study products produced during this phase shall include, but not be limited to:

- Strategic technology planning;
- Integration of joint missions, partnerships, and other collaborative efforts;
- Research/science/technology/cost trade studies;
- Candidate operations concepts;

- Candidate system architectures;
- Cost, schedule, and risk estimates;
- Research and technology unique to system development;
- Customer development support and outreach; and
- Mission justification and objectives.

## **B. Preliminary Analysis Study Services**

The Contractor shall provide preliminary analysis study services focusing on analyzing mission requirements and establishing mission architectures in order to demonstrate that a credible, feasible design(s) exist(s). The Contractor shall develop top-level requirements and evaluation criteria, identify alternative operations/logistics concepts, and identify project constraints and system boundaries. Contractor activities shall include the consideration of alternative design concepts including feasibility and risk studies, cost and schedule estimates, and advanced technology requirements. The Contractor shall prepare for and support the appropriate Phase A project and technical reviews and prepare Phase A project documentation as appropriate (ref the NASA Systems Engineering Handbook, SP-6105 and NPR 7120.5, “NASA Space Flight Program and Project Management Requirements”).

## **C. System Definition Study Services**

The Contractor shall provide system definition and preliminary design study services to establish (and evolve) project baseline(s) which includes a formal flowdown of project-level performance requirements to a complete set of system and subsystem design specifications for both flight and ground elements. The Contractor shall produce technical requirements that are sufficiently detailed to establish firm schedules and cost estimates for the project. Phase B baseline information shall be developed including system requirements and verification requirements matrices, system architecture and work breakdown structures, operations concepts, “design-to” specifications at all levels, and project plans including schedule, resources, acquisition strategies, and risk management. The Contractor shall prepare for and support the appropriate Phase B project and technical reviews and prepare Phase B project documentation as appropriate (ref the NASA Systems Engineering Handbook, SP-6105 and NPR 7120.5, “NASA Space Flight Program and Project Management Requirements”).

## **FUNCTION 2 – IMPLEMENTATION PHASE SERVICES**

The Contractor shall provide services to design, develop, fabricate/code, assemble, unit test, system integrate, verify, integrate, deploy, and operate hardware and software on spacecraft,

platform, and/or payload as defined by this Statement of Work. The implementation phase services shall include:

#### **A. Project Management**

The Contractor shall provide management services, including establishment of a management organization that ensures that all the assigned task objectives are accomplished within specified schedule and cost constraints. Management shall provide frequent and timely status to the Government via cost, schedule, progress and other reports during all phases of work.

#### **B. Systems Engineering**

The Contractor shall provide systems engineering support for project development, reporting progress and conformance to appropriate practices and specifications (per GPR 7123.1 Systems Engineering). The Contractor shall support system engineering activities required during the Implementation phases including design (Phase C), development (Phase D), and operations (Phase E).

The Contractor shall support Phase C Design systems engineering activities to complete the detailed design of systems and associated subsystems, and operational systems, ensuring compliance with GSFC's Gold Rules (GPR 8070.4 and GSFC-STD-1000). The Contractor shall add remaining lower-level design specifications to the systems architecture, refine requirements document and verification plans, prepare interface documents, evolve and mature the design, augment baseline documentation, perform and archive trade studies, and complete manufacturing plans. The Contractor shall prepare for and support the appropriate Phase C project and technical reviews and prepare Phase C project documentation as appropriate (ref the NASA Systems Engineering Handbook, SP-6105 and NPR 7120.5).

The Contractor shall support Phase D Development systems engineering activities to build the subsystems (including operations systems) and integrate them to create the system(s). The Contractor shall develop verification procedures, archive documentation for verifications performed, audit "as-built" configurations, document lessons learned, prepare operator's manuals and maintenance manuals, and perform operational verification. The Contractor shall prepare for and support the appropriate Phase D project and technical reviews and prepare Phase D project documentation as appropriate (ref the NASA Systems Engineering Handbook, SP-6105 and NPR 7120.5).

The Contractor shall support Phase E Operations systems engineering activities to perform the mission and then dispose of the system in a responsible manner. The Contractor shall prepare for and support the appropriate Phase E project and technical reviews and prepare Phase E project documentation as appropriate (ref the NASA Systems Engineering Handbook, SP-6105 and NPR 7120.5).

Specific tasks over the various phases shall include:

1. Mission Systems Engineering

The Contractor shall perform key mission and spacecraft level systems engineering functions that include, but are limited to:

- a. Operations Concept & Support;
- b. Architecture & Design Development;
- c. Requirements Analysis, Identification & Management;
- d. Verification and Validation;
- e. Interface and Interface Control Documents;
- f. Mission Environment;
- g. Technical Resource Budget Tracking;
- h. Risk Analysis, Reduction and Management;
- i. System Milestone Review;
- j. Configuration Management (CM); and
- k. Systems Engineering Management Plan.

2. Instrument Systems Engineering

The Contractor shall perform instrument systems engineering functions that include, but are limited to:

- a. Instrument Data Processing Development & Support ;
- b. Instrument Architecture & Design Development;
- c. Requirements Analysis, Identification and Management;
- d. Verification and Validation;
- e. Interface and Interface Control Documents;
- f. Instrument Environment;
- g. Technical Resource Budget Tracking;
- h. Risk Analysis, Reduction and Management
- i. Instrument System Milestone Review;
- j. CM; and
- k. Instrument Systems Engineering Management Plan.

### **C. Multidisciplinary Analyses Services**

The Contractor shall provide analytical and detailed design support that includes multi-disciplinary system analyses and trade studies involving, but not limited to, mechanical, thermal, optics (including radiometrics and stray light), contamination, control, guidance, navigation, detector, electrical, electronic, and software aspects of flight and ground systems, including associated ground support equipment. Services shall include the definition, development and use of models and simulations to study and quantify system performance and to conduct system trade studies. This includes, but is not limited to, such specific efforts

as electromagnetic interference/electromagnetic compatibility (EMI/EMC) analysis, environmental testing, magnetics testing, thermal vacuum testing, systems performance error budgets, power and weight budgeting and tracking, microphonics analyses, fracture control analyses, microwave communication system analyses (including link margin availability), controls-structures analyses, control-structural-thermal-optical analyses, instrument system analyses (including system sensitivities), computer performance analyses (including Central Processing Unit (CPU), memory, simulations, etc), and systems reviews of selected critical subsystems. Services shall also include the development of measurement tools and models, analysis of measurement data, defect tracking, process improvement, cost estimation of hardware and software systems, modeling of organizational processes, electrical parts analyses, electrostatic discharge prevention, printed wiring board layouts, fiber optic cable construction (test, validation, & assembly), electro-optic/photonic analyses, thermal analysis, printed-wiring board fabrication, mechanical enclosure design, and technical writing documentation.

#### **D. Detailed Design Services**

The Contractor shall provide design services that include performance of detailed (leading to a Critical Design Review) design of the subsystems, components and assemblies that comprise the instrument/spacecraft/platform in accordance with current NASA/GSFC design standards, specifications and best practices or commercial equivalent that meets/exceeds their intent. This effort includes hardware and software (flight and ground) as well as ground support equipment (electrical, thermal, contamination, mechanical, and cryogenic). Documentation, including technical reports, drawings, schematics, block diagrams, layouts, parts and materials list, and equipment lists, shall be provided. Specific tasks shall include:

1. **Optical Specific Tasks** – The Contractor shall provide optical design services, including the design, development and analysis of the following:
  - a. Geometric optical design;
  - b. Diffraction analysis;
  - c. Tolerancing of components;
  - d. Gaussian beam analysis;
  - e. Interferometry;
  - f. Radiometry;
  - g. Stray light/energy analysis;
  - h. Alignment and calibration; and
  - i. Optical communications systems design.
  
2. **Mechanical Specific Tasks** – The Contractor shall provide mechanical design services, including the design, development and analysis of the following:
  - a. Assembly and subassembly hardware to house flight components;
  - b. Mechanisms and electromechanical assemblies;



- c. Component mount design;
  - d. Structure;
  - e. Ground support and bench test equipment;
  - f. Analytical studies, including structural analyses (stress, dynamics, thermal, deformation, jitter, etc.); mechanical alignment; interfaces; fracture control; controls analysis; mechanism dynamics; composite material/structure dimensional stability; and load analyses;
  - g. Associated instrumentation and control systems;
  - h. Mechanical analysis of large instrument antenna structures including interferometric systems;
  - i. Finite element model analysis;
  - j. Flight loads analysis;
  - k. On-orbit loads analysis;
  - l. Stress analysis;
  - m. Dynamic analysis;
  - n. Fracture control; and
  - o. Mechanical design and drawing production/verification.
3. **Electromechanical Specific Tasks** – The Contractor shall provide electromechanical design services, including the design, development and analysis of the following:
- a. Concept trades, concept design, and detailed design of electromechanical systems and their components;
  - b. Fabrication, assembly, and testing services, including life testing;
  - c. Magnetic bearings, active/smart structures, vibration isolation, and large aperture, lightweight systems;
  - d. Analyses using Computer-aided Design (CAD) and simulation tools utilizing hardware and software compatible with those used by the Mechanical Systems Division (MSD);
  - e. Set-up and operate electronic design and test equipment compatible with equipment used by the MSD;
  - f. Design, analysis, selection, implementation, and testing of bearings, flex-pivots, and flexures;
  - g. Robotics;
  - h. micro electromechanical systems (MEMS);
  - i. Micro-miniaturization of mechanisms, or sub-assemblies of conventional mechanisms;
  - j. Small scale structures, materials, fabrication techniques, packaging, photolithography, lithography electroforming and molding (LIGA in German), interfacing with macro-components, micro-actuators, focused ion-beam milling and welding, and coatings and tribology issues; and
  - k. Single Input Single Output (SISO) and Multiple-Input-Multiple-Output (MIMO) controllers.

4. **Thermal Specific Tasks** – The Contractor shall provide thermal design services, including the design, development and analysis of the following:
  - a. Thermal system design, active and passive;
  - b. Component/subassembly/assembly cooling, including electronics and detectors;
  - c. Cryogenic design, including detectors, optics, and mechanisms;
  - d. Advanced thermal control systems;
  - e. Associated instrumentation and control systems;
  - f. Thermal analyses compatible with Systems Improved Numerical Differencing Analyzer (SINDA), Thermal Radiation Analyzer System (TRASYS), Thermal Synthesizer Systems (TSS), Finite Element Modeling and Post-processing (FEMAP/TCON), Simplified Space Payload Thermal Analyzer (SSPTA), Thermal Desktop, or Thermal Model Generator (TMG) software packages;
  - g. Cryogenic GSE thermal analysis and design, including dewar system;
  - h. Thermal laboratory support; and
  - i. Thermal vacuum test support.
  
5. **Detector Specific Tasks** – The Contractor shall provide engineering services for state-of-the-art detection systems requiring low noise levels and calibrations traceable to physical standards including the design, development, test, and analysis of the following systems:
  - a. Radio Frequency (RF);
  - b. Submillimeter wave;
  - c. Microwave;
  - d. Millimeter wave;
  - e. Infrared;
  - f. Visible;
  - g. X-ray;
  - h. Gamma-ray;
  - i. Neutral and charged particle detection;
  - j. MEMS; and
  - k. Nanotechnology.
  
6. **Electrical/Electronics Specific Tasks** – The Contractor shall provide electrical/electronic design services, including the design, development and analysis of the following:
  - a. Flight electronic subsystems;
  - b. Command and data handling systems;
  - c. Flight and ground data systems;
  - d. Low noise electronics;
  - e. Digital and microprocessor based designs;
  - f. Analog control circuits;

- g. Control systems;
- h. Low voltage systems;
- i. High voltage systems;
- j. Power supplies with programmable voltage and current outputs;
- k. Electromagnetic field analysis;
- l. Electromagnetic compatibility and interference (EMC/EMI);
- m. Test circuitry and equipment, including interface to computer-based systems;
- n. Bench test equipment;
- o. Electrical ground support equipment;
- p. High speed electronics;
- q. Communication electronics;
- r. Microcontroller based systems and embedded systems;
- s. Flight and test harnesses (conventional wire and fiber optic);
- t. Breakout boxes;
- u. Pyrotechnics;
- v. Simulators;
- w. Field Programmable Gate Array (FPGA)-based reconfigurable computing systems;
- x. Analog and mixed-signal Application-Specific Integrated Circuit (ASIC) devices; and
- y. Programmable logic devices (FPGA and ASIC devices).

In addition, analyses include, but are not limited to: Worst-case analysis, Parts Stress analysis, reliability analysis, thermal analysis, structural analysis, signal integrity analysis and performance/throughput analysis. Peer design reviews shall be an integral part of the overall development cycle. Test support includes shift support for environmental tests (thermal-vacuum, EMI, vibration, etc).

## 7. **Flight Software (FSW) Systems**

The Contractor shall support the planning, formulating, designing, developing, testing, and sustaining engineering of flight software systems for instruments and spacecraft associated with in-house GSFC projects and other multi-center commitments in accordance with established organizational compliance of procedures and policies such as NPR 7150.2. The Contractor shall manage, refine, and extend the flight software infrastructure, products, plans, and processes related to new flight software developments, flight software reuse libraries, flight software configuration management systems, flight software test, verification and validation systems, and flight software lessons learned databases. The Contractor may develop simulation capabilities for all aspects of the flight software including, dynamic simulation, command and data handling simulation and science data simulation.

FSW Services shall include:

- a. Flight Software Engineering;
- b. Flight Software Development;
- c. Flight Software Verification and Validation;
- d. Flight Software Maintenance and On-orbit Sustaining Engineering;
- e. Flight Software High Fidelity Testbeds and Simulations;
- f. Flight Software Infrastructure/Support; and
- g. Flight Software Technology Development.

## 8. **Ground Software and Systems**

The Contractor shall perform new or ongoing development and sustaining engineering of ground software and data systems. Contractor activities may include participation as a part of a mission's or project's ground system development team. Ground systems development includes software design, development, test, and deployment, and associated hardware integration, test, and delivery. The software may include commercial off-the-shelf (COTS), government off-the-shelf (GOTS), new development, or some combination of the aforementioned. The Contractor may perform hardware systems and associated material procurement/inventory management. The procured hardware systems shall comply with established NASA safety protocols including at least Hazardous Material Management and Electrostatic Discharge (ESD).

Ground Software Services shall include:

- a. Ground Software Architectures;
- b. Ground Software Development; and
- c. Ground Software Sustaining Engineering.

## 9. **Flight Software System Verification, and Validation**

The Contractor shall support flight mission operations including build verification testing, system validation testing, and flight software and flight operations test tools development for the mission.

Validation and Verification Functional Areas:

- a. Utilize flight software test-beds and simulators required for verification and validation of flight and ground software related products;
- b. Support mission readiness testing to include communication and functional test of the mission ground system, ground station interfaces, and end-to-end testing of the communication path from the spacecraft to the ground and/or science operations systems;

- c. Generate and/or review Verification Plans;
- d. Support the design, drawing, and specification reviews;
- e. Prepare documentation and/or review of system qualification requirements;
- f. Prepare and/or review hardware and software integration plans and procedures, and witnessing execution;
- g. Prepare and/or review detailed functional and environmental test plans and procedures, and witness test execution;
- h. Prepare and/or review plans for launch site checkout, integration and testing of flight systems, including adequacy of the launch site facility;
- i. Analyze data from spacecraft telemetry data sources to ensure total system compatibility; and
- j. Analyze flight performance from flight data.

#### 10. **Software Science System Development**

The Contractor shall provide science data system engineering, software system engineering and software engineering services to design, develop and deploy science systems and applications for science operations, data processing, data management, and data analysis and visualization. Data system engineering may include problem definition, solution analysis, process planning and control, system documentation development and maintenance, system integration, and product evaluation. Software system engineering may include requirements definition and analysis, software design, process planning and control, software documentation development and maintenance, verification, validation and test, and software integration. Software engineering may include detailed software design, implementation, and unit testing. The science system software may include COTS, GOTS, new development, legacy code, or some combination of the aforementioned. Science systems development may include hardware definition, integration, test and deployment. The Contractor may provide science operations support for ongoing missions.

Software Science System Development Services shall include:

- a. Science Data Systems Engineering;
- b. Science Operations Systems;
- c. Science Data Processing Systems;
- d. Science Data Management Systems; and
- e. Science Data Analysis and Visualization Applications.

#### 11. **Power Specific Tasks** – The Contractor shall provide power design services, including the design, development, and analysis:

- a. Power system design and analysis tools for energy balance and regulation;

- b. Spacecraft power management and distribution electronics;
- c. Photovoltaic energy conversion cells, arrays, and associated ground testing;
- d. Electrochemical energy storage cells, batteries, and associated destructive physical analysis and ground testing; and
- e. Payload and instrument low and high voltage power conditioning electronics (converters, filters, regulators).

12. **Radiation Effects and Analysis (REA) Specific Tasks** – The Contractor shall provide radiation services for the design, development, testing, and analysis of EEE components, including:

- a. Space radiation environmental analysis and specification including nuclear interaction simulations;
- b. Design and development of test plans and test suite hardware and software to support research and flight project efforts;
- c. Documentation of radiation test techniques and research results;
- d. Determination of mission-specific system level impact of radiation test results and evaluate mission radiation risk assessment;
- e. Screening of parts list for radiation vulnerable devices;
- f. Dissemination of radiation effects research results via paper and presentations;
- g. Curator capabilities for maintenance and upgrade of the Radiation and Analysis (REA) WEB site;
- h. Database development and management of the REA radiation effects test data;
- i. General REA services in the area of graphics, schedules, and reporting requirements;
- j. Development of user interface software for REA-developed environment models;
- k. Instrument calibration;
- l. Operation and maintenance of GSFC's radiation facility;
- m. Design and fabrication of radiation flight experiments and providing services to support data analysis;
- n. Analysis of in-flight data on experimental and operational systems to determine system performance in radiation environment;
- o. Analysis of instrument data to support space environment modeling; and
- p. Analysis Performance of tests at established radiation test facilities (requires travel).

13. **Component Technologies Specific Tasks** – The Contractor shall provide component technology specific services for design, development, and analysis, including:

- a. Non-destructive Evaluation (NDE) of complex integrated circuits employing Finite Element Analysis, Scanning Acoustic Microscope, X-Ray, and thermal analyses;
- b. Analysis of novel microelectronic materials;
- c. Environmental analysis of active and passive fiber optic components;

- d. Microelectronic assembly, including ASICs and custom hybrids; and
- e. Lightweight, low-power transmitters and receivers for active and passive microwave instrument system.

14. **Environmental Testing Specific Tasks** – The Contractor shall provide environmental test services for design, development, and analysis, including:

- a. Vibration;
- b. Acoustic;
- c. EMI/EMC;
- d. Thermal; and
- e. Vacuum.

15. **RF Specific Tasks** – The Contractor shall provide RF design services, including the design, development and analysis of the following:

- a. RF Component design;
- b. Communications systems design;
- c. Communications systems component design;
- d. RF Modulator design (Binary Phase-shift keying (BPSK), Quadrature Phase-shift keying (QPSK), 64 Quadrature Amplitude Modulation (QAM), Code Division Multiple Access (CDMA), 8 Phase-shift keying (PSK) etc.);
- e. Antenna Design L - Ka bands;
- f. Phased Array antenna design;
- g. Solid State Power Amplifier Design S to Ka bands;
- h. Transponder design S to Ka bands; and
- i. Millimeter wave systems instrument and components design (50 –300 GHz).

In addition, the Contractor shall provide independent systems engineering analysis and evaluation in support of customer mission-related activities as well as analysis and support of new capabilities considered for inclusion into the NASA Space Network (SN) and Ground Network (GN) as well as Global Positioning Satellite (GPS) Navigation. This also includes RF communications systems engineering support to independently evaluate and assess current space and ground network capabilities, system improvements, and new services to meet future mission needs.

Additionally, this effort may include performing SN analyses for current space elements (TDRS Flight-1 through Flight-10 and TDRS K,L,M & N) including the ability for modeling of multiple access interference signals and the corresponding current ground elements at the White Sands Complex (WSC), Guam Remote Ground Terminal, and Space Network Expansion (SNE) Terminals. This effort may encompass analysis related to the Ground Network assets that are used for mission support to include analysis for other networks and commercial ground stations. Maintenance & development of analytical tools to perform the required analysis and associated data bases to support the analysis are included in this effort. This effort supports standards and protocol activities. Maintenance & extension of Space and

Ground Network Users Guides are also encompassed in this effort. This effort includes the development and review of RF Interface Control Documents as well as technical reports on special studies. Analysis of new modulation schemes and transmission techniques including lasers are additionally covered under this effort activity including the ability to perform analysis of atmospheric effects of higher communication frequency bands (e.g. 37 GHz). Ability to perform dynamic analyses for Spacecraft (S/C) & launch vehicles which requires expert knowledge of trajectories, orbital mechanics & the 3-dimension modeling S/C to enable S/C & Expendable Launch Vehicle (ELV) antenna design to be compatible with the SN & GN.

Qualified personnel with security clearances of at least a DoD SECRET level (as defined in the specific Task Order), may be required by the Contractor to support certain efforts. The Contractor must also comply with applicable NASA, DoD, National Industrial Security Program Operating Manual (NISPOM) and Director of Central Intelligence Directives (DCIDs) security regulations.

16. **GN&C Component & Hardware Specific Tasks** – The Contractor shall perform specific GN&C component and hardware systems engineering tasks, including:

1. GN&C Systems Engineering;
2. GN&C Analysis & Simulation;
3. Component and Hardware Systems Engineering;
4. Test Bed & Simulator Design/ Development Services;
5. Propulsion Engineering; and
6. Propulsion System Technician.

## **E. Fabrication, Assembly and Testing Services**

The Contractor shall provide flight (including protoflight), and non-flight (including prototype) hardware fabrication and assembly facilities, and support for instrument structures, mechanical subassemblies, components, mechanisms, electronics assemblies, electromechanical devices, thermal control devices and subsystems, and thermal flight experiments. All fabrication and assembly support shall be in accordance with the workmanship requirements of NASA-STD-8739.3 thru 8739.5 and Institute for Printed Circuits (IPC) 6011, 6012, 6013, 6015, 6016, and 6018, as well as all subsequent updates to these documents. All fasteners used in assembling or installation shall conform to Goddard Procedures and Guidelines (GPG) 541-PG-8072.1.2, GSFC fastener integrity plan. Also provide support to fabricate mechanical ground support equipment, special test and evaluation equipment (including electronic equipment) necessary to support the operation of all mechanical hardware. In situations where hardware fabrication is required in a quick reaction mode and the Contractor decides to perform the task under subcontract, the



Contractor shall minimize both the subcontract implementation and fabrication phases of the task. Subcontractors used for fabrication and/or assembly shall be AS9001C compliant.

The Contractor shall provide fabrication, assembly and testing services, including breadboards, engineering models, protoflight models, and flight models at all levels of assembly specified by this Statement of Work, including:

1. **Planning Specific Tasks** – The Contractor shall provide planning services, including:
  - a. Implementation and maintenance of overall production and quality engineering plans; and
  - b. Manufacturing, integration and test plans, describing sequences, qualification and acceptance test levels, and facilities needed to accomplish assembly, integration, alignment, testing, quality control, and checkout.
  
2. **Fabrication Specific Tasks** – The Contractor shall provide fabrication services, including:
  - a. Optical, mechanical, detector, electrical/electronics, and microwave, including antennas;
  - b. Ground support equipment, including mechanical and electrical, and optical;
  - c. Laboratory control systems;
  - d. Wiring harnesses;
  - e. Special parts;
  - f. Surface mount printed circuit boards, including leadless chip carriers and chip-on-board techniques; and
  - g. Composites.
  
3. **Assembly Specific Tasks** – The Contractor shall provide assembly services, including:
  - a. Optical, mechanical, detector, electrical/electronics, and microwave, including antennas;
  - b. Ground support equipment including mechanical, electrical, and optical
  - c. Test equipment and fixtures;
  - d. Wiring harnesses;
  - e. Support for the operation of GSFC’s Board Layout Facility in Building 5 and Assembly Facility in Building 16W;
  - f. Active thermal control devices (heaters, thermostats, thermocouples, thermisters, heat pipes, Cold Plates, etc.); and
  - g. Hardware protective coatings.
  
4. **Logistics Specific Tasks** – The Contractor shall provide logistics services, including:
  - a. Identification of critical spares and material;

- b. Storage and control of critical spares and material; and
  - c. Shipment of materials, supplies, subsystems, ground support equipment, systems, and flight systems to and from integration, test and launch facilities.
5. **Testing Specific Tasks** – The Contractor shall test and/or participate in the GSFC’s testing and qualification of hardware and software, including retesting/requalification of spare units and breadboards previously developed for flight projects. These tests shall be conducted in accordance with Government-approved procedures and shall include both functional and environmental tests in accordance with GSFC-STD-7000 “General Environmental Verification Standard (GEVS). Functional tests shall be designed and performed to demonstrate compliance with the operating requirements of the system. Environmental tests shall be designed and performed using environmental conditions that meet the launch, safety, and operations requirements of the assigned task. The Contractor shall perform the following:
- a. In-process testing during the fabrication process to demonstrate that the design meets the requirements specified. In-process testing shall include:
    - 1. Component value measurements and verification of polarity prior to installation and after installation, where feasible;
    - 2. Resistance checks of point-to-point wiring and cross tie points, where applicable;
    - 3. Hi-pot operations from component-to-component, component-to-frame, etc. in accordance with the applicable GSFC specification or procedure, as required by and specified in a task order ;
    - 4. Leak/pressure testing at the lowest level of assembly possible and throughout the assembly stages;
    - 5. X-ray, dye penetrant, and eddy current inspections, as well as other forms of nondestructive analysis; and
    - 6. Tests to develop/validate models for structural, mechanical, thermal, optical, and electronic components and assemblies.
  - b. Functional testing, including:
    - 1. Verification of operational characteristics of components and equipment;
    - 2. Testing at Government facilities; and
    - 3. Testing and documentation to verify accuracy, repeatability, and stability while operating under simulated flight conditions.
  - c. Flight qualification testing on units that have successfully completed functional tests and have been prepared for space flight. These tests may be conducted at any of the levels of assembly specified in this Statement of Work, including on the spacecraft. The qualification tests shall be carried out in a test environment specified by the task order. The Government may provide test facilities and/or

test equipment to the Contractor, as specified in the task order. Flight qualification testing shall include:

1. Vibration/Shock;
2. Magnetic;
3. Thermal vacuum;
4. Thermal balance;
5. Static loads;
6. Acoustics;
7. Mass properties;
8. Alignment;
9. Electromagnetic interference (EMI);
10. Electromagnetic compatibility (EMC);
11. Gravity effects;
12. Radiation effects;
13. Modal survey;
14. Optical performance and characterization;
15. Deployments; and
16. Mechanism performance.

#### **F. Integration, Test, and Verification Services**

The Contractor shall provide engineering and test-conductor services that include integrating and verifying the flight, ground systems, and science data system/applications in accordance with applicable documentation and specifications, preparing test procedures, documenting all nonconformances and dispositions, calibrating the system and its ground support equipment, and providing operating manuals, reference documents, training, and launch site support.

1. **Integration, Test and Verification Specific Tasks** – The Contractor shall provide integration, test, and verification services, including:
  - a. Major program reviews;
  - b. Space flight subsystems;
  - c. Space flight instruments;
  - d. Space flight payloads;
  - e. Airborne/Suborbital craft instruments;
  - f. Ground instrumentation;
  - g. Ground support systems;
  - h. Science data systems/applications;
  - i. Spacecraft and science operations control rooms; and
  - j. Airborne/Suborbital craft subsystems.

Integration and test services may need to be supported at various locations, including vendor sites, NASA Centers, and Military sites.

## **G. Laboratory and Test Instrumentation Services**

The Contractor shall provide the services necessary for conceptualization, prototyping, system engineering, design, development, integration, test, sustaining engineering, maintenance and utilization of laboratory and test instrumentation.

1. **Laboratory and Test Instrumentation Specific Tasks** – The Contractor shall provide laboratory and test instrumentation services, including:
  - a. Optics/Fiber optics;
  - b. Detector engineering;
  - c. Laser communication and ranging;
  - d. Electrical ground support equipment;
  - e. Subsystem bench test equipment;
  - f. Special instrumentation;
  - g. Thermal/Cryogenics;
  - h. Contamination;
  - i. Operating power test facilities at the GSFC
    - Large Area Pulse Solar Simulator;
    - Battery handling & conditioning laboratory; and
    - High voltage partial discharge laboratory.
  - j. Calibration;
  - k. Crosstalk;
  - l. Microphonics analyses;
  - m. Analysis of instrument and spacecraft subsystem interaction; and
  - n. RF communications engineering and millimeter wave services
    - Operating microwave test equipment, including cryogenic testbeds;
    - Operating RF equipment, including radiating sources; and
    - Supporting antennae test facilities, including anechoic chamber.

## **H. Data Systems Management Services**

The Contractor shall provide data systems management services, including:

- a. Developing, reviewing, and analyzing software requirements and specifications;
- b. Contributing to the design, development, validation, implementation, certification, and maintenance of ground or on-board computer system simulators/emulators, including validation of flight systems software for ascent, transfer, or on-orbit phases and near real-time reprogramming and validation of modifications for recovery from anomalous situations; and
- c. Analyzing the design and implementation of simulators/emulators for ground crew training, systems testing and procedure validation.

## I. Launch and Post-Launch Operations Services

The Contractor shall supply launch and post-launch services, including:

1. **Launch Site Preparation Specific Tasks** – The Contractor shall provide subsystem services at the launch site, including:
  - a. Payload system and its support equipment;
  - b. Interfaces to the mission operations control centers;
  - c. Technical services to facilitate interfacing with the launch site organization;
  - d. Development of launch site support requirements; and
  - e. Providing support in shipment of the flight hardware and associated support equipment to and from the launch site.
2. **Launch Operations Specific Tasks** – The Contractor shall provide launch operations services, including:
  - a. Assuring flight readiness of the delivered subsystem;
  - b. Pre-launch testing of the delivered subsystem;
  - c. Operation of associated ground support equipment; and
  - d. Services to the launch vehicle team for payload integration to the vehicle at the launch facility.
3. **Mission Operation Support Specific Tasks** – The Contractor shall provide mission operation services, including services for the payload and for carrier and flight support system during mission operations.
4. **Landing and De-Integration Specific Tasks** – The Contractor shall provide landing and de-integration services, including services at the landing site for payload de-integration, post-flight testing, and payload shipment. This shall include airborne/suborbital craft and payloads recovery.
5. **Refurbishment of Recovered Systems Specific Tasks** – The Contractor shall provide refurbishment services for recovered flight systems.
6. **Data Reduction Specific Tasks** – The Contractor shall provide data reduction services and shall compile and analyzing systems performance data during and after the mission.
7. **Documentation Specific Tasks** – The Contractor shall provide post-flight summary reports, analyzing the performance of the subsystem during flight.

## **J. Mission Assurance and System Safety Services**

For all levels of flight hardware and software provided by the Contractor and specified by this Statement of Work, the Contractor shall establish and maintain a mission assurance program commensurate with mission requirements as specified by the task. The mission assurance program shall incorporate a system safety program which meets the requirements of NASA-STD-8719.24 (Base), “NASA Expendable Launch Vehicle Payload Safety Requirements” and NASA-STD-8719.24 (Annex), “Annex to NASA-STD-8719.24 NASA Expendable Launch Vehicle Payload Safety Requirements”, and NSTS 1700.7B (Addendum) “Safety Policy and Requirements for Payloads Using the International Space Station”.

The Contractor shall establish and maintain practices, procedures, and processes that are AS9100C, “Quality Management System Standard”, or ISO 9001 compliant when applicable.

1. **Performance Assurance Specific Tasks** – The Contractor shall provide performance assurance services, including:
  - a. Reviewing payload designs to assure their compliance with performance assurance, reliability, and safety specifications;
  - b. Developing, analyzing, and monitoring performance assurance, reliability, system safety plans, and procedures, fabrication assembly, integration and test, verification, and launch support; and
  - c. Analyzing basic plans for system safety, contamination control, integration, and testing of subsystems and systems.
2. **Safety Specific Tasks** – The Contractor shall provide safety services which conform to the system safety/mission assurance program, including:
  - a. Establishing and documenting a systems safety plan in concert with the appropriate launch vehicle and NASA safety policy;
  - b. Conducting and assessing system safety analyses for flight designs and launch/retrieval operations to satisfy NASA safety and reliability requirements;
  - c. Analyzing design changes related to minimizing hazard levels;
  - d. Participating in system safety reviews;
  - e. Reviewing the proposed systems design to ensure that proper considerations are given to safety-critical areas, and that safety problems exposed in prior analyses, testing, and operational use of instruments and subsystems are corrected;
  - f. Conducting Verification and Validation (V&V) programs for flight and critical ground systems software;
  - g. Preparing the Safety Data Package, including writing and editing;

- h. Performing hazards analysis of flight system, and ground support equipment;
- i. Participating in required inspection/testing to fulfill safety data requirements;
- j. Coordinating with the GSFC safety officer and participating in formal safety reviews; and
- k. Preparing final safety data packages.

## **K. Configuration Management Services**

The Contractor shall provide overall management and oversight of the Configuration Management (CM), Documentation Management (DM), and Quality Control Management (QCM) disciplines throughout the life cycle of flight hardware and software provided within the scope of this Statement of Work. Each discipline shall require the development, establishment, and implementation of procedures and processes and establishment of mechanisms and tools for consistency.

The Contractor shall support the planning, identification of processes, and leading GSFC Project efforts in these disciplines. This support shall also include the necessary planning and associated process development for the GSFC Project in meeting conformance requirements to NASA procedures and guidelines as well as the ISO standards.

The main CM/DM/QCM functions shall include:

- Configuration identification, configuration control, configuration accounting and reporting;
- Configuration verification and configuration auditing; and
- Implementation and maintenance of a DM system.

The Contractor shall be responsible for providing the necessary tools and databases to accomplish the above functions; developing and establishing procedures and guidelines and training in the configuration management, documentation management, and ISO 9001 disciplines.

## **L. Contamination Control Services**

1. **Contamination Control Management Specific Tasks** – The Contractor shall provide contamination control management services, including:
  - a. Developing contamination control plans for spacecraft and instruments;
  - b. Determining contamination control requirements and developing appropriate monitoring plans and procedures to assess contamination control requirement compliance; and
  - c. Monitoring, reviewing, analyzing, and reporting on overall contamination control management, implementation, and development.

2. **Contamination Control Analysis Specific Tasks** – The Contractor shall provide contamination control analysis services, including:
  - a. Developing analytical transport models (molecular and/or particulate) for spacecraft and instrument systems and/or other space flight hardware and generating contamination hazards predictions;
  - b. Performing detailed environmental analyses of all phases of assembly, integration, test, transportation, pre-launch, launch, on-orbit, and descent and comparing against requirements; and
  - c. Establishing surface contamination limits based on allowable performance degradation and conducting trade-off analyses, analyzing specifications, and reviewing requirements.
  
3. **Integration and Test Contamination Control Specific Tasks** – The Contractor shall provide integration and test contamination control services, including:
  - a. Providing direction during test planning and the test preparation phase;
  - b. Designing, developing, fabricating, and integrating contamination control monitoring devices;
  - c. Developing procedures for specific test and cleanliness requirements; and
  - d. Providing contamination control monitoring during integration and providing support during testing and integration.
  
4. **Contamination Laboratory Support Specific Tasks** – The Contractor shall provide contamination laboratory support services, including:
  - a. Perform and record outgassing measurements in the Molecular Kinetics (MOLEKIT) facility;
  - b. Provide contamination flight monitor support for fabrication, testing, integration, on-orbit data review, and data reduction; and
  - c. Provide setup and operation of airborne particle counters and microscopes.
  
5. **Development and Use of Contamination Standards Specific Tasks** – The Contractor shall provide contamination laboratory support services, including:
  - a. Analysis and support for the development of GSFC, NASA, national and international contamination control standards;
  - b. Develop, procure, calibrate, and test new equipment for the purpose of developing new standards or monitoring flight projects contamination control; and
  - c. Write and present papers documenting the development of new techniques and standards in contamination control.



6. **Cleaning Support and Technology Specific Tasks** – The Contractor shall provide cleaning support services, including:
  - a. Provide cleaning procedures and precision cleaning, for GSE and flight hardware and
  - b. Investigate, develop, procure, calibrate, and test new cleaning techniques and applications to enhance our ability to provide and validate cleanliness of flight hardware.
  
7. **Space Environmental Coatings Testing, Applications and Management Specific Tasks** – The Contractor shall provide support services, including:
  - a. Perform Flight qualification and space environment testing of coatings along with thermal radiative property measurements, thickness measurements, and coating adherence testing;
  - b. Develop, operate, and maintain GSFC unique facilities to select, apply, and qualify coatings for use on spacecraft and instrument surfaces;
  - c. Characterize thermal control surfaces and assess degradation from environmental effects due to UV radiation, thermal cycling, charged particles, electrostatic discharge, outgassing and humidity; and
  - d. Develop and maintain a database of thermal property test data and coordinate extended shelf life testing of paints.
  
8. **Thin Films Specific Tasks** – The Contractor shall provide support services, including:
  - a. Provide support in the area of vacuum vapor deposition and sputter deposited thin films; and
  - b. Provide support to apply thin film coatings on space flight parts at either government facilities and/or the contractor facilities.

### **FUNCTION 3 – RESEARCH AND TECHNOLOGY SERVICES**

The Contractor shall provide advanced research and technology support to EED, ISTD, SED, MESA, and related organizations. These services may include development, test and analysis work in support of the Research and Technology activities.

#### **A. Solid State Device Research and Development**

The Contractor shall provide research, design, development, and analysis of electronic devices for application to science missions.

1. **Electronic Device Development Specific Tasks** – The Contractor shall provide electronic device development services, including:
  - a. Activities that support the research, development, evaluation, design, manufacture, and test of semiconductor devices in current use or in development as future technology for use in aerospace applications;
  - b. Research and development of new, state-of-the-art electronic packaging techniques; and
  - c. Research and implementation to flight standards of surface mount and multi-chip modules technology.

## **B. Instrument Systems Technology Services**

The Contractor shall provide research, design, development, and testing, and analysis services for instrument systems, including:

1. **Instrument Systems Specific Tasks** – The Contractor shall provide services for the research and development of advanced analytical, engineering, integration, testing, and software engineering techniques including:
  - a. Software engineering;
  - b. Software test techniques;
  - c. System functional test techniques and methods;
  - d. Data analysis algorithms and methods;
  - e. System performance testing techniques;
  - f. Real-time computer system conceptual design;
  - g. Statistics, statistical inference, neural net applications;
  - h. Finite element analysis;
  - i. Controls and structural interaction analysis;
  - j. Laser communications analysis;
  - k. Robotic simulations;
  - l. Reconfigurable computing system conceptual design;
  - m. Instrument Systems Performance modeling;
  - n. X-Ray, Ultraviolet, Optical, and Infrared Instrument systems performance testing and analysis;
  - o. Particle and field Instrument design development and analysis;
  - p. Instrument Systems signal to noise analysis;
  - q. Advanced hyperspectral imaging concepts;
  - r. Microwave and sub-millimeter wave radiometer advanced concepts and performance modeling;
  - s. Lossless and lossy compression algorithms;
  - t. Science data archival formats and data distribution methods;
  - u. Instrument applications of computational optics;
  - v. Synthetic Aperture Radar advanced concepts;
  - w. Computational Image enhancement; and

- x. Autonomous Instrument systems.

### C. Photonics Technology Services

The Contractor shall provide research, design, development, test, and analysis services for electro-optical subsystems for scientific systems, including:

1. **Optoelectronics Specific Tasks** – The Contractor shall provide services for optoelectronics technology tasks as follows:
  - a. Read/write magnetooptical disk storage;
  - b. Optical engineering;
  - c. Opto-mechanical engineering;
  - d. Fiber optic/Photonic systems;
  - e. Calibration and test sets; and
  - f. Alignment.
2. **Opto-Mechanical Specific Tasks** – The Contractor shall provide services for opto-mechanical technology tasks as follows:
  - a. Develop advanced opto-mechanical technology for components and subsystems;
  - b. GSE optical instrumentation;
  - c. Develop novel materials for lightweight optical components, mounts, and support structures;
  - d. Develop novel thin film design, fabrication, and characterization processes;
  - e. State-of-the art diffractive optics and characterization;
  - f. New optical design concepts and analysis techniques; and
  - g. State-of-the-art optical fabrication and test methods.

### D. Microwave and Millimeter Wave Technology Services

The Contractor shall provide research, design, development, test, and analysis services for microwave and millimeter wave systems for ground and space flight applications, including:

1. **Antenna and Tracking Systems Specific Tasks** – The Contractor shall provide services for antenna and tracking system technology tasks, including:
  - a. Instrument antenna systems;
  - b. Communication antenna systems;
  - c. Antenna deployable/retractable assemblies;
  - d. Antenna feed networks/components;
  - e. Servo controls;
  - f. Gimbals; and

- g. Phased array antenna technology.
2. **Microwave and Millimeter Wave Components Specific Tasks** – The Contractor shall provide services for microwave and millimeter wave components technology tasks, including:
    - a. Research and development of high-speed analog and digital electronics for RF, microwave, and millimeter wave communications systems;
    - b. Research and development of components for space communication applications, including modulator/exciters, solid-state power amplifiers, low-noise amplifiers, low-noise mixers, and improved local oscillator technology;
    - c. Systems engineering; and
    - d. Transponder technology.
  3. **Microwave Instruments Specific Tasks** – The Contractor shall provide services for microwave instruments technology tasks, including:
    - a. Instrument antenna systems;
    - b. Low noise receivers, including improved local oscillator technology;
    - c. Instrument antenna coverage;
    - d. Microwave sources;
    - e. Studies and models;
    - f. Interferometric systems;
    - g. Polarimetric systems;
    - h. Instrument system calibration; and
    - i. Instrument maintenance, upgrades, and field campaign support.

## **E. Instrument Electronics Systems Technology Services**

The Contractor shall provide services for research, design, development, test, and analysis of advanced signal processing electronics for space flight systems, including support for language-based microelectronics development (VHDL, Verilog):

1. **Sensor Signal Processing Specific Tasks** – The Contractor shall provide services for sensor signal processing technology tasks, including:
  - a. Systems engineering;
  - b. Digital signal processing electronics development;
  - c. Analog signal processing electronics development;
  - d. Advanced flight hardware;
  - e. Applications unique electronic test equipment;
  - f. Low-level analog signal electronics development;
  - g. Software engineering;
  - h. Flight robotics; and

- i. Analog/Mixed-signal ASIC development.
2. **Digital Signal Processing Specific Tasks** – The Contractor shall provide services for digital signal processing technology tasks, including:
  - a. Microprocessor development;
  - b. Command and data handling functions (e.g, processor, command ingest, telemetry outputting, timekeeping, fault detection/correction, analog collection, custom Input/Output (I/O) interfaces, standardized data buses, data storage);
  - c. Digital logic design through schematic capture and/or Hardware Description Language (HDL) coding; and
  - d. Reconfigurable computing system design and implementation.
3. **Advanced Applications Specific Tasks** – The Contractor shall provide services for advanced applications technology tasks, including:
  - a. Data and image compression;
  - b. Data coding;
  - c. High-speed electronics development;
  - d. Packet telemetry development;
  - e. Reduced Instruction Set Computer (RISC) development;
  - f. Proof-of-concept studies; and
  - g. Electronic engineering design.
4. **Power Systems Specific Tasks** – The Contractor shall provide services for power systems technology tasks, including:
  - a. Instrument power system design and analysis; and
  - b. Instrument power distribution electronics.

## **F. Computer Support Technology Services**

The Contractor shall provide computer technology services, including:

1. **Computer Support Specific Tasks** – The Contractor shall provide computer technology services, including:
  - a. Engineering support to analyze data acquisition, processing, distribution, archival/storage, and measurement problems;
  - b. Data reduction to include statistical and thematic trends analyses;
  - c. Diagnostics support for instrument checkout between test consoles and test components;

- d. Program services to utilize test instruments in aerospace system test and analysis, including General Purpose Interface Bus (GPIB) type operation and Graphical User Interface (GUI) based software system;
- e. General in-house computer software maintenance to include, but not be limited to, updating and debugging programs;
- f. Design, coding, integration, test, documentation, and maintenance of special applications programs;
- g. Updating of existing technical in-house computer databases;
- h. Transfer of programs from one system to another and testing for functional operations and real time data transfer between dissimilar systems;
- i. Debugging of general utility programs, such as graphic packages;
- j. Providing support in analyzing and implementing solutions to computer hardware interface problems;
- k. Providing support in network and operating system configurations, troubleshooting, installation, and maintenance; and
- l. Design and debug of test procedures.
- m. Management of mission test facilities that require significant computer capabilities.

2. **IT Systems Security and System Administrator Function** – The Contractor shall provide Windows, Macintosh, Linux, UNIX, Web, LAN systems administration services to desktops, workstations and servers, including:

- a. Logging, reporting, diagnosing and correcting system faults;
- b. Configuring systems for performance, security and network compatibility;
- c. Performing updates of the operating system and associated software for desktops and workstations;
- d. Providing support in the preparation and updating of IT security and system administration documentation;
- e. Working with the Code 700 on implementing IT security initiatives;
- f. Providing support to users with software/hardware installation;
- g. Performing Help Desk functions including problem diagnosis and answering user questions regarding applications;
- h. Monitoring system and network security and availability;
- i. Repairing workstations, desktops and printers on an emergency basis; and
- j. Data backup, archive, and retrieval.

In addition to any other requirements of this contract, all individuals 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; and
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 him or herself does not constitute a "system administrator" since that individual is only providing or accepting responsibility for their system. Such an individual that is only is not required to obtain a System Administrator Certification.

3. **Web Page Development and Maintenance Function** – The Contractor shall provide web development services to help promote organizational capabilities, including:
  - a. Development, maintenance, and upgrade of web sites;
  - b. Compliance to Agency and Center policy (GSFC Webmaster) such as 508 compliance and Post 9-11 accessibility compatibility;
  - c. Defining with customer the look and feel of the web site, and reviewing web site requirements;
  - d. Developing prototype web sites for maturing web based concepts; and
  - e. Providing maintenance services to keep web site up to date and 508 compliant.

## **G. Thermal Control Systems Technology Services**

The Contractor shall provide technology services for the research and development of advanced, two-phase thermal control systems, and cryogenic systems for instruments, systems, and spacecraft, including:

1. **Thermal Control Systems Specific Tasks** – The Contractor shall provide thermal design, fabrication, test, and analysis technology services for thermal control systems, including:
  - a. Engineering design, analysis, fabrication, testing, and analysis for fixed and variable conductance heat pipes, diode heat pipes, and phase change materials;
  - b. Design, analysis, fabrication, and test of mechanically and capillary pumped thermal control systems;
  - c. Systems engineering to define and recommend appropriate enhancements to existing thermal control technology;
  - d. Testing facilities and services for testing two-phase heat transfer systems containing ammonia and other working fluids;
  - e. Thermal/mechanical capabilities to perform Phase A and Phase B studies for proposed flight experiments to demonstrate two phase heat transfer technology;
  - f. Thermal/mechanical/electrical/system engineering capabilities to perform testing on mechanical cryocoolers. This includes the design, fabrication, and testing of cryocooler drive electronics and analysis of thermal performance test results;
  - g. Mechanical/electrical/thermal support for on-going flight projects using mechanical cryocoolers;
  - h. Variable emittance thermal control surfaces, alternative materials; and
  - i. Supporting the development of thermal flight experiments.

## **H. Power Systems Technology Services**

The Contractor shall provide research, design, development, evaluation, and qualification of power system designs and components for space flight applications, including:

1. **Power System Architecture Specific Tasks** – The Contractor shall provide services for power system architecture technology, including:
  - a. Direct energy transfer; and
  - b. Peak power tracker.
2. **Energy Conversion Devices Specific Tasks** – The Contractor shall provide services for energy conversion device technology, including:
  - a. Multi-junction solar cells;
  - b. Thin film solar cells; and
  - c. Concentrators.
3. **Energy Storage Devices Specific Tasks** – The Contractor shall provide services for energy storage device technology, including:



- a. Li Ion;
- b. Flywheel technology;
- c. Fuel cells; and
- d. Li Polymer.

4. **Power Electronics Specific Tasks** – The Contractor shall provide services for power electronics technology, including:

- a. Low and High voltage dc-dc converters; and
- b. Microprocessor controlled spacecraft power management and distribution.

### **I. Software Systems Technology Services**

The Contractor shall provide technology services formulating and developing advanced technology concepts and the advancement of its associated technology readiness level (TRL).

1. **Science Data Processing Technology Specific Tasks** – The Contractor shall provide services, including:

- a. Plan and accomplish the infusion of the resulting technology into mission or project systems for data processing or the implementation of data processing prototypes; and
- b. Design and develop advanced concepts for all aspects of mission including hardware, complex electronics, reconfigurable computing, and software solutions to meet highly complex mission data processing objectives.

### **J. Demonstration, Presentation and Conference Services**

The Contractor shall provide technology services for hardware and software demonstrations, technical/project/conference presentations, and conference planning/implementation for items within the scope of this Statement of Work, including:

- 1. **Demonstration Specific Tasks** – The Contractor shall provide hardware, software, support equipment, and technical services for onsite and offsite demonstrations.
- 2. **Presentation Specific Tasks** – The Contractor shall provide materials for inclusion in technical/project/conference presentations, including viewgraphs, information, photographs, etc. In addition, the Contractor shall perform the presentation.
- 3. **Conference Specific Tasks** – The Contractor shall provide support to the Government by providing services in the planning and implementation of conferences.

## **K. Guidance, Navigation and Control (GN&C) Technology Services**

The Contractor shall provide services for the research and development of advanced GN&C technology for systems, subsystems, components, devices, and elements for spacecraft, balloons, UAV's, sounding rockets, instruments, systems, and other platforms.

1. **Advanced GN&C Sensor/Actuator Design** – The Contractor shall provide hardware systems engineering to design, develop and test sensor/actuator hardware and software.

## **L. Cryogenic and Fluids Systems Technology Services**

The Contractor shall provide technology services for developing advanced cryogenic and fluid systems to support new NASA missions and applications:

1. **Cryogenic and Fluids Systems Specific Tasks** – The Contractor shall provide services, including:
  - a. Structural and thermal interfaces to mechanical refrigerators;
  - b. Components for an advanced adiabatic demagnetization refrigerator;
  - c. Cryogenic actuators; and
  - d. Design & develop monopropellant, bi-propellant and cryogenic fluid transfer systems for in-space refueling.

## **M. Advanced Coating and Film Technology Services**

The Contractor shall provide technology services for developing advanced coating and film technologies to support new NASA missions and applications:

1. **Advanced Coating and Film Technology Specific Tasks** – The Contractor shall provide services, including:
  - a. Developing, procuring, calibrating, testing, and maintaining new or existing coatings and films; and
  - b. Writing and presenting papers documenting the development and application of this new technology.

## **FUNCTION 4 – PARTS AND MATERIALS PROGRAM SERVICES**

The Contractor shall provide parts and materials services for hardware/software within the scope of this contract, including:

### **A. Materials and Processes Services**

1. **Materials and Processes Specific Tasks** – The Contractor shall provide materials and process services, including:
  - a. Contamination analysis and control;
  - b. Construction analysis;
  - c. Design compatibility; and
  - d. Material evaluation,

### **B. Protective Coating and Encapsulation Services**

1. **Protective Coating and Encapsulation Specific Tasks** – The Contractor shall provide protective coating and encapsulation services, including:
  - a. Iridite, anodize, or use comparable coating processes to finish metal surfaces;
  - b. Conformal coat and/or encapsulate components, parts, and fixtures in accordance with task orders and applicable flight application documentation; and
  - c. Prime and paint surfaces, parts, and assemblies.

### **C. Component and Parts Labeling Services**

1. **Component and Parts Labeling Specific Tasks** – The Contractor shall provide component and parts labeling, including:
  - a. Label and identify parts with location as specified by the applicable document or drawing; and
  - b. Cover labels with GSFC approved protective finish where required.

### **D. Electronics Packaging Services**

The Contractor shall provide Space Electronics Packaging Services, including:

1. **Packaging Design**
  - a. Circuit board design and layout;
  - b. Enclosure design and layout;
  - c. Mechanical mounting including thermal and vibration isolation;

- d. Board-mounted mechanical parts;
- e. EMI/EMC isolation and protection;
- f. Ground support equipment including mechanical electrical and optical;
- g. Test Equipment;
- h. Mechanical analysis;
- i. Thermal analysis;
- j. Contamination analysis; and
- k. Radiation mitigation analysis.

2. **Manufacturing and Assembly Services**

- a. Circuit board manufacturing and assembly;
- b. Enclosure and circuit board mechanical parts manufacturing and assembly;
- c. Manufacturing and assembly of optical, mechanical, detector, electrical/electronics, RF and microwave boards and components;
- d. Ground support equipment manufacturing and assembly, including mechanical, electrical, and optical ;
- e. Test equipment and test fixture manufacturing and assembly;
- f. Electrical test assembly support;
- g. Wiring harness manufacturing and assembly;
- h. Mechanical and electronics protective coatings; and
- i. Implementation of advanced technology manufacturing and assembly services/techniques, such as Column Grid Arrays, Chip-On-Board, etc.

3. **Support for the Operation of GSFC's Board Layout Facility in Building 5 and Assembly Facility in Building 16W**

Support for operations of GSFC's Board Layout Facility in Building 5 and Assembly Facility in Building 16W included all the functions identified in the two previous sections (4.D.1 and 4.D.2).

**E. EEE Parts Services**

1. **Project Parts Engineering and Program Management Specific Tasks** – The Contractor shall provide parts engineering and program management services, including:

- a. Commodity Expertise for all EEE part categories listed in EEE-INST-002, and Detectors, Microwave, and Fiber optics/Photonics;
- b. Establishment of parts selection and approval criteria for Grade 1, 2 and 3 level programs and projects;
- c. Develop, review and implement Parts Control Plans;
- d. Interface with Designers, Radiation Engineers and Chief Safety and Mission Assurance Officer (CSO) in parts selection and approval process;
- e. Develop, review and maintain parts lists (PIL, PAPL, ADPL, & ABPL);

- f. Conduct and participate in Parts Control Boards;
  - g. Review and disposition all Government-Industry Data Exchange Program (GIDEP) Alerts and NASA Advisories;
  - h. Specification preparation and interfacing with manufacturers for custom flight parts;
  - i. Investigations of reliability issues related to parts failures;
  - j. Evaluation of advanced technology parts;
  - k. Prepare and implement a Counterfeit Avoidance Plan for EEE Parts and implement this plan with Code 270 in the procurement of flight and ground support electronic parts;
  - l. Prepare and implement a plan to address issues related to EEE Parts with lead free finishes; and
  - m. Prepare and implement a plan to address issues related to the assembly of Printed Wiring Boards using lead free solders.
2. **Parts Testing and Analysis Laboratory Specific Tasks** – The Contractor shall provide parts testing and analysis laboratory services, including:
- a. Failure Analysis- Conduct analysis of failed parts, materials and components to determine and classify the physical mechanisms of failures;
  - b. Destructive Physical Analysis (DPA)- Conduct DPA to determine if the part quality and workmanship meet the requirements of applicable NASA or Manufacturer specification. DPA shall include electrical, mechanical, environmental and analytical testing;
  - c. Incoming Test and Inspection, Screening, Evaluation and qualification testing - Conduct these tests in accordance with appropriate part specification and test procedures. Analyze test results and provide summary reports and certification logs as required;
  - d. Test Equipment specific tasks- Support the calibration, maintenance and upgrading of test equipment related activities and support property system requirements; and
  - e. Ensure safe operating procedures, practices and availability of personal protection equipment in the laboratory.
3. **Photonics Tasks** - The Contractor shall provide following test laboratory services:
- a. Building fiber optic cables and arrays for spaceflight and ground test using a wide variety of fiber optic components. Conducting investigations into fiber optic and photonic reliability, radiation effects and other related engineering tasks, including design of optical fiber and optical free space components;
  - b. Operating a Technology Validation laboratory with a variety of environmental, optical microscopy and x-ray microscopy equipment for the purpose of investigating the reliability of EEE parts and technologies; and

- c. Evaluating new photonics technologies for suitability for use in space flight application.
4. **Parts Information System Specific Tasks** – The Contractor shall provide parts information system services, including:
- a. Develop, update, and maintain an electronic parts database, that includes candidate parts lists, as designed parts lists and approved parts lists of all GSFC projects;
  - b. Develop, update, and maintain the on-line NASA Parts Selection List (NPSL), and EEE Parts Selection, Qualification, Screening and Derating Guidelines (EEE-INST-002);
  - c. Update and maintain Parts Analysis Lab website, NASA Electronics Parts & Packaging (NEPP) website and the Parts Engineers website;
  - d. Maintenance of the Parts Analysis (PA) laboratory network to include on line storage of all test reports; and
  - e. Maintenance of EEE parts specification library. This includes working with the NASA Standard's organization.

## **FUNCTION 5 – DOCUMENTATION SERVICES**

The Contractor shall provide documentation services for all levels of hardware and software within the scope of this Statement of Work, as specified in task orders. Documents shall conform to applicable documents and specifications. These shall include pertinent NASA Handbook (NHBs), Safety and Mission Assurance Programs (SMAP), quality standards, GSFC standards, documents of other NASA Centers, Federal standards, military standards, and commercial standards.

### **A. Document Services**

The Contractor shall provide documentation services, including instrument conceptual designs, program plans, systems analyses, illustrations, technical and implementation plans, test plans, test procedures, test scripts, software documentation, and the full range of system hardware and software documentation. These shall also include up-to-date drawings, specifications, certifications, reports, interface control documents, and agreements.

1. **Document Services Specific Tasks** – The Contractor shall provide electronic media and document services, including:
- a. Technical writing;
  - b. Editing;
  - c. Drafting;
  - d. CAD/CAM;
  - e. Photographic;

- f. Video;
- g. Reproduction;
- h. CD and DVD; and
- i. Posters and Displays.

2. **Photo and Video Specific Tasks** – The Contractor shall use photos and video for maintenance, engineering, or as documentation to explain a problem. They shall become supplemental to assist in unit repair or future development and maintenance. A scale shall be included to indicate relative dimensions in photographs and/or video, where appropriate.

## **FUNCTION 6 – MAINTENANCE SERVICES**

The Contractor shall provide maintenance support, including:

### **A. Preventive Maintenance**

The Contractor shall perform preventative maintenance on hardware and software within the scope of this Statement of Work as specified in task orders.

### **B. Emergency Repair Services**

The Contractor shall provide expeditious emergency repair services for hardware and software within the scope of this Statement of Work, as specified in task orders. The Contractor shall respond to the Government within four hours of notification to determine and implement a mutually agreeable course of action. In some cases, there shall be 24-hour coverage during flight hardware and software evaluation, verification, and test. This service shall comprise of repair, modification, or replacement of components, codes, subassemblies, and assemblies. Documentation updates shall be required as a result of any design change.

## **FUNCTION 7 – SUSTAINING ENGINEERING SERVICES**

The Contractor shall provide sustaining engineering services for hardware and software within the scope of this Statement of Work, including:

1. Modifications of hardware/firmware, including installation of circuits for improved reliability and/or performance;
2. Modifications of wiring to improve circuit performance;
3. Fabrication, assembly, wiring, and testing of printed circuit assemblies where necessary to update old circuitry or improve reliability;

4. Engineering, fabrication, testing of assemblies or sub-assemblies to replace outdated circuitry to eliminate component or circuit failures;
5. Engineering, fabrication, assembly, and testing of engineering circuits to correct problems encountered;
6. Modifications of mechanical assemblies, structures, and mechanisms to correct or improve the design; and
7. Update of drawings, manuals, and technical data to reflect current status at the time of modifications.

### **FUNCTION 8 – EDUCATION SERVICES**

The Contractor shall provide support and/or development of education services. This support encompasses a wide range of activities that include but are not limited to: a) the development of engineering/scientific educational courses either by providing support to NASA/Goddard in putting together educational topics or completely developing a topic based on the Contractor's area of expertise; b) the development of partnerships with universities for the purpose of educating the next generation engineers and scientists on state-of-the-art spacecraft and instrument systems; c) the development of specific engineering topics, such as Advancement in Spacecraft Avionics Systems; and d) the development of Programs, such as internships that help feed the pipeline for NASA's future engineers and scientists. Some of the specific areas the Contractor may be asked to support are the following:

1. AETD Engineering mini-course series;
2. GSFC's partnership with the University of Maryland Aerospace Department to teach courses in satellite design;
3. The NASA Engineering Training (NET) activity; and
4. Programs with universities and NASA headquarters.

### **FUNCTION 9 – STANDARDS AND PROCESS**

The Contractor shall provide support for engineering standards work and engineering process work, including:

1. ISO documentation and process generation;
2. Engineering standards documentation and review;



3. Engineering process documentation; and
4. Activities in support of engineering process improvement.

## APPLICABLE DOCUMENTS AND SPECIFICATIONS

The Contractor shall adhere to all applicable portions of the following documents and specifications in the performance of this contract. Most all documents can be found at NASA's Technical Standards Program (<https://standards.nasa.gov>); NASA's Online Directives Information System (NODIS) (<http://nodis3.gsfc.nasa.gov>); the Goddard - Directives Management System (GDMS) (<http://gdms.gsfc.nasa.gov>). The latest updated version shall apply:

### General:

NPR 7120.5, "NASA Space Flight Program and Project Management Requirements"  
NASA SP-2007-6105 Rev1, The NASA Systems Engineering Handbook -  
NPR-7150.2, "NASA Software Engineering Requirements"  
NASA-STD-8719.13, "NASA Software Safety Standard"  
GPR 7123.1 "Systems Engineering"  
GPR 8070.4, "Administration and Application of the Goddard Rules for the Design,  
Development, Verification and Operation of Flight Systems"  
GSFC-STD-1000, "Rules for the Design, Development, Verification, and Operation of  
Flight Systems."

### Safety and Mission Assurance:

NSTS 1700.7B (Addendum) "Safety Policy and Requirements for Payloads Using the  
International Space Station".  
NASA-STD-8719.13, "NASA Software Safety Standard"  
NASA-STD-8719.24 (Base), "NASA Expendable Launch Vehicle Payload Safety  
Requirements"  
NASA-STD-8719.24 (Annex), "Annex to NASA-STD-8719.24 NASA Expendable  
Launch Vehicle Payload Safety Requirements",  
GPR 1700.1A, "Goddard Space Flight Center Occupational Safety Program"  
500-PG-8715, "AETD Safety Manual"  
AS9100C, "Quality Management System Standard"  
ISO 9001, "Quality Management"

### Conformal Coating and Staking:

NASA-STD-8739.1, "Workmanship Standard for Polymeric Application on Electronic  
Assemblies"

### Soldering – Flight, Surface Mount Technology:

NASA-STD-8739.2, "Workmanship Standard for Surface Mount Technology"

Soldering – Flight, Manual (hand):

NASA-STD-8739.3, “Soldered Electrical Connections”

Soldering – Ground Systems:

Association Connecting Electronics Industries (IPC)/Electronics Industry Alliance (EIA)  
J-STD-001D AMD1, “Requirements for Soldered Electrical and Electronic Assemblies”

Electronic Assemblies – Ground Systems:

IPC-A-610, “Acceptability of Electronic Assemblies”

Crimping, Wiring, and Harnessing:

NASA-STD-8739.4, “Crimping, Interconnecting Cables, Harnesses, and Wiring”  
565-PG-8700.2.1 “Design and Development Guidelines for Spaceflight Electrical Harnesses”

Fiber Optics:

NASA-STD-8739.5 "Fiber Optic Terminations, Cable Assemblies, and Installation"

Electro-Static Discharge (ESD) Control:

GPR 8730.6, Electrostatic Discharge (ESD) Control

Printed Wiring Board (PWB) Design:

500-PG-8700.2.2, Electronics Design and Development Guidelines  
500-PG-8700.2.4, Mechanical Design and Development Guidelines,  
GSFC X-673-64-1F, “Engineering Drawing Standards Manual” (December 1994)  
IPC-2221, “Generic Standard on Printed Wiring Board Design”  
IPC-2222, “Sectional Standard on Rigid Printed Wiring Boards Design”  
IPC-2223A, “Sectional Design Standard for Flexible Printed Boards”

PWB Manufacture:

GSFC EEE-INST-002, “Instructions for EEE Parts Selection, Screening,  
Qualification, and Derating”  
IPC A-600, “Acceptability of Printed Boards”  
IPC-6011, “Generic Performance Specification for Printed Boards”  
IPC-6012, “Qualification and Performance Specification for Rigid Printed Boards”  
Flight Applications – Supplemented with: GSFC/S312-P-003, Procurement  
Specification for Rigid Printed Boards for Space Applications and Other High  
Reliability Uses  
IPC-6013 “Qualification and Performance Specification for Flexible Printed Boards”  
IPC-6018 “Microwave End Product Board Inspection and Test”

Section 508 Electronic and Information Technology (EIT) Standards

(<http://www.access-board.gov/sec508/standards.htm>).

1194.21 Software Applications and Operating Systems

1194.22 Web-based Intranet and Internet Information and Applications

1194.24 Video and Multimedia Products

Mechanical Design

541-PG-8072.1.2A “GSFC Fastener Integrity Requirement”,

Testing

GSFC-STD-7000 “General Environmental Verification Standard (GEVS)

**REFERENCE DOCUMENTS AND SPECIFICATIONS**

The following documents and/or specifications are provided as reference material for the performance of this contract. The 1st updated version shall apply:

NPR 7120.5D, “NASA Space Flight Program and Project Management Requirements”\*

NPR 7120.5, “NASA Space Flight Program and Project Management Handbook, Feb 2010”

SP-6105, “The NASA Systems Engineering Handbook, December 2007”

\* Note: NASA Interim Directive (NID) NM 7120-97 in effect until revised to version “E”

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## **Supplemental Contractor Financial Management Reporting Requirements**

These requirements supplement the Contractor Financial Management Reporting requirements set forth elsewhere in the contract and in NASA Procedural Requirements (NPR) 9501.2, NASA Contractor Financial Management Reporting.

The following supplemental requirements apply to prime contractor and subcontractor Financial Management Reports submitted to NASA.

- Unfilled orders (if applicable) shall be reported in column 10 of the NF 533M or column 11 of the NF 533Q.
- At the beginning of the contract and the beginning of each calendar year (January 1), the prime contractor shall provide its accounting calendar and those of all subcontractors.
- The contractor shall provide required NF 533M and Q data in the stipulated electronic format.
- Costs shall be reported on the NF 533M and NF 533Q at the subtask level.
- Subcontractors' incurred cost for the same accounting period in actual and estimated costs shall be reported by the prime

The following supplemental requirements apply only to select task orders. If these requirements are applicable to a task, the task order will so stipulate.

- The contractor shall submit NF 533Q reports in accordance with the instructions in NPR 9501.2 and on the reverse side of the NF 533Q form. If a task requires NF 533Q reporting, those reports shall display the same reporting structure (reporting categories) as the contractor's NF 533M reports.
- NF 533Q reports shall include estimates for the first six months of the periods reported by month and the next six months by quarter.
- NF 533Q reports shall include narrative remarks which explain causes of variances of +/- 10 percent for estimated hours and costs reported in columns 8a, 8b, 8c, 8d, 8e, 8f and 8g from values reported for the same periods in the most recent Contractor Task Report (CTR).
- NF 533Q reports shall include narrative remarks which explain causes of variances of +/- 10 percent between the estimated final cost (column 9a) and the contract value (column 9b).
- The prime contractor shall submit subcontractor(s) financial management reports (NF 533M and Q or similar formats) along with the prime contractor's NF 533 report when subcontractor costs are, either equal to or greater than \$100,000, or 25 percent of the total task cost or when subcontractor hours are equal to or greater than 25 percent of the total task hours. Subcontractor(s) reports shall contain the same data elements and be structured similar to the prime contractor's NF 533 reports.
-

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- Full Time Equivalents (FTEs) (in addition to hours) shall be separately reported on NF 533M and NF 533Q reports based upon the respective productive man hours per month of the prime and subcontracts.
- Upon request, by name reports for the prime contractor and cost-type subcontractors shall be submitted at the task level.
- NF 533M reports shall include narrative remarks, which explain causes of variances of +/- 10 percent for hours and costs reported in column 7a from values reported for the same periods in the most recent Contractor Task Report (CTR). NF 533M reports shall include narrative remarks, which explain causes of variances of +/- 10 percent for hours and costs reported in columns 8a and 8b from values reported for the same periods in the most recent Contractor Task Report (CTR).
- NF 533M reports shall include narrative remarks which explain causes of variances of +/- 10 percent between the estimated final cost (column 9a) and the contract value (column 9b).
- Narrative remarks shall address the following:
  - Cause of Problem -
    - Isolate significant variances
    - Discuss cost and schedule variances separately
    - Clearly identify reason for the variance
  - Impact upon Project -
    - Describe specific technical, schedule and cost impacts
    - Revise and justify Estimate at Completion and/or Estimated Completion Date
  - Corrective Action Planning -
    - Describe specific actions being taken or to be taken to alleviate or minimize impact of the problem
    - Include individual(s) or organization responsible for required actions
    - Include schedules for actions and get-well dates
    - If no corrective action is possible, explain why
    - Include results of corrective plans included in prior narrative remarks
  - Emphasis on quantitative, not qualitative
  - Emphasis on the specific, not the general
  - Emphasis on specific problems, not all problems

**ATTACHMENT C**

**FINANCIAL MANAGEMENT REPORTING REQUIREMENTS**

**General**

Financial Management Reports shall be submitted by the Contractor on the NASA 533 series reports, in accordance with the instructions on the reverse of the forms, NASA Procedural Requirements NPR 9501.2E entitled "NASA Contractor Financial Management Reporting, dated May 27, 2011, and additional instructions issued by the Contracting Officer.

a. Level of Detail

The Contractor's 533 reports shall contain a summary of total contract costs, as well as a separate 533 sheet for each Task Order. The reports shall contain a breakdown of each service area by the elements of cost listed below.

The government reserves the right to require a lower level of 533 reporting for particular Task Orders on a case by case basis as specified by the Contracting Officer. The purpose of this is to allow the government to separate costs on Task Orders that support multiple WBS elements on in-house instruments and/or missions.

b. Distribution

The Contractor shall distribute 533 reports to each addressee indicated in the Basic Contract Clause G.5 FINANCIAL MANAGEMENT REPORTING. The Contractor shall submit an initial report in the NF 533Q format within 30 working days after contract award.

After the initial report, the NF 533M reports shall be distributed not later than the tenth (10<sup>th</sup>) working day following the close of the contractors' monthly accounting period. The 533Q reports shall be distributed not later than the 15th day of the month preceding the quarter being reported.

c. Reporting Requirements

Each report shall provide cost data for reporting categories presented below:

1. Prime Direct Labor Hours:

Onsite  
(List applicable labor categories)

Offsite  
(List applicable labor categories)

Total Direct Labor Hours Onsite

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Total Direct Labor Hours Offsite  
Total Prime Direct Labor Hours

2. Subcontractor Direct Labor Hours:

Onsite  
(List applicable labor categories)

Offsite  
(List applicable labor categories)

Total Direct Labor Hours Onsite  
Total Direct Labor Hours Offsite  
Total Subcontractor Direct Labor Hours

3. Prime Direct Labor Dollars:

Onsite  
(List according to applicable labor categories)

Offsite  
(List according to applicable labor categories)

Total Direct Labor Dollars Onsite  
Total Direct Labor Dollars Offsite  
Total Prime Direct Labor Dollars

4. Overhead Expenses:

Onsite Overhead  
Offsite Overhead  
Total Prime Overhead

5. Other Direct Costs (ODCs):

- a. Subcontracts (list separately)
- b. Material
- c. Travel
- d. Other (specify)

Total ODCs

6. Subtotal (Labor, Overhead & ODCs)

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7. G&A Expense
8. Total Estimated Cost
9. Maximum Available Award Fee
10. Total Cost-Plus-Award-Fee (CPAF)

The 533 for each Task Order shall report direct labor hours by category.

d. Other Special Reports

The Contractor shall submit as required, special cost or workforce reports either in the areas of actuals, projections or both. These reports may take the form of labor, overhead, other direct charges, billing analyses or other business information. When required, specific instructions will be provided by the Contracting Officer.

e. Additional Requirements

1. Before the summary 533 sheet, the Contractor shall submit a financial summary containing a one-line summary for all Task Orders on the contracts. It shall include the following columns:

Task Order Number  
Status  
Cumulative to Date Actual \$  
Cumulative to Date Actual \$ Plus Month 1 planned \$  
Contractor Estimate \$  
Cumulative to Date Planned Hours  
Cumulative to Date Actual On-site Hours (Including Subs)  
Cumulative to Date Actual Off-site Hours (Including Subs)

2. In addition to the hardcopy of the summary sheet, the Contractor shall provide the summary sheet in an e-mail file or on a CD as a comma-delimited text file. Below are the requirements:

The contractor cost data for import into the Contractors Resources Tracking System (CORTS) application will come from the contractor as a comma-delimited text file. The layout of this import file is shown in the table below.

Only one contract can be included in one import file.

Two types of data will be included in the import file: column title and column data.

Column titles must be provided in the first row for each data column in the **import file**. The name and order of each column title must be exactly the same as illustrated in the **“Column Title in File”** column



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in the table below, with a comma as a delimiter. **NOTE:** Do not use the names in the “Data Element Name” column as the column titles for the data columns in the file being sent for import.

Column data will be provided beginning with the second row. A data element must be in each column/row in the import file. The order of each column data must be exactly the same as illustrated in the “Column Title in File” column in the table below, with a comma as a delimiter.

The Report Ending Date is in the MM/YYYY format and must be the previous month of the current import date. If it’s not, no data will be imported into CORTS.

When a Task Order/sub task number exists, the associated subtask accrued cost amount fields will be overwritten with the corresponding amounts in the import file. The pro-rate rules will then be applied to all subtask detail records

When a subtask number does not exist, a new subtask record and associated subtask detail record will be created.

No deletion will be performed in this process.

<b>Data Element Name</b>	<b>Column Title In File</b>	<b>Type</b>	<b>Size</b>	<b>Value (0-optional, 9-mandatory)</b>	<b>Mandatory</b>	<b>Comments</b>
Report Ending Date	Report Date	Text	7	“99/9999”	Yes	Must be the previous month of the current import date.
Contract Number	ContractNo	Text	10	"NNG0999999"	Yes	
Task Order Number	Task Order Number	Text	4	“0009”	Yes	
Subtask Number	Subtask	Text	4	“0009”	Yes	
Cumulative Cost	CumCost	Numeric	15.2	000000009	Yes	0 if no cumulative cost
Accrued Cost	AccruedCost	Numeric	15.2	000000009	Yes	0 if no accrued cost
Cost Estimate	CostEstimate	Numeric	15.2	000000009	Yes	0 if no cost estimate
Hours Estimated	EstHours	Numeric	9.2	000000009	Yes	0 if no hours estimated
On Site Hours	OnSiteHours	Numeric	9.2	000000009	Yes	0 if no on-site hours
Off Site Hours	OffSiteHours	Numeric	9.2	000000009	Yes	0 if no off-site hours

The contractor shall use the NASA Task Order Management System (NASATOMS) for submitting individual Task Plans in PDF format.

**DEPARTMENT OF DEFENSE  
CONTRACT SECURITY CLASSIFICATION SPECIFICATION**

*(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort)*

**1. CLEARANCE AND SAFEGUARDING**

a. FACILITY CLEARANCE REQUIRED:

**SECRET**

b. LEVEL OF SAFEGUARDING REQUIRED:

**NONE**

**2. THIS SPECIFICATION IS FOR: (X and complete as applicable)**

<b>X</b>	a. PRIME CONTRACT NUMBER <b>NNG13CR48C</b>
	b. SUBCONTRACT NUMBER
	c. SOLICITATION OR OTHER NUMBER
	DUE DATE (YYMMDD)

**3. THIS SPECIFICATION IS: (X and complete as applicable)**

<b>X</b>	a. ORIGINAL (Complete date in all cases) <b>7/3/2013</b>	Date (YYMMDD)
	b. REVISED (Supersedes all previous specs)	Revision No.
	c. FINAL (Complete item 5 in all cases)	Date (YYMMDD)

**4. IS THIS A FOLLOW-ON CONTRACT?**     YES     NO, If yes, complete the following:

Classified material received or generated under **NNG10CR08C** (Preceding Contract Number) is transferred to this follow-on contract

**5. IS THIS A FINAL DD FORM 254?**     YES     NO, If yes, complete the following:

In response to the contractors request dated \_\_\_\_\_, retention of the identified classified material is authorized for a period of: \_\_\_\_\_

**6. CONTRACTOR (Include Commercial and Government Entity (CAGE) Code)**

a. NAME, ADDRESS, AND ZIP <b>ASRC Federal Space &amp; Defense (AS&amp;D) 6303 Ivy Lane, Suite 130 Greenbelt, Maryland 20770-6322</b>	b. CAGE CODE  <b>3B3H1</b>	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code) <b>DEFENSE SECURITY SERVICE (IOFCL2) 7556 Teague Rd 5<sup>th</sup> FL Hanover, MD 21076</b>
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**7. SUBCONTRACTOR**

a. NAME, ADDRESS, AND ZIP	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
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**8. ACTUAL PERFORMANCE**

a. LOCATION <b>NASA/Goddard Space Flight Center Greenbelt, MD 20771</b>	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
--	--------------	--

**9. GENERAL IDENTIFICATION OF THIS PROCUREMENT**

Electrical Systems Engineering Services II (ESES II). The ESES II contract will support the NASA GSFC Applied Engineering and Technology Directorate (AETD)

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION	<b>X</b>		a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTORS FACILITY OR GOVERNMENT ACTIVITY	<b>X</b>	
b. RESTRICTED DATA		<b>X</b>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		<b>X</b>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		<b>X</b>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		<b>X</b>
d. FORMERLY RESTRICTED DATA		<b>X</b>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		<b>X</b>
e. INTELLIGENCE INFORMATION			e. PERFORM SERVICES ONLY		<b>X</b>
(1) Sensitive Compartmented Information (SCI)		<b>X</b>	f. HAVE ACCESS TO US CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		<b>X</b>
(2) Non-SCI		<b>X</b>	g. BE AUTHORIZED TO USE THE SERVICES OF THE DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		<b>X</b>
f. SPECIAL ACCESS INFORMATION		<b>X</b>	h. REQUIRE A COMSEC ACCOUNT		<b>X</b>
g. NATO INFORMATION		<b>X</b>	i. HAVE TEMPEST REQUIREMENTS		<b>X</b>
h. FOREIGN GOVERNMENT INFORMATION		<b>X</b>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		<b>X</b>
i. LIMITED DISSEMINATION INFORMATION		<b>X</b>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		<b>X</b>
j. FOR OFFICIAL USE ONLY INFORMATION	<b>X</b>		l. OTHER (Specify)	<b>X</b>	
k. OTHER (Specify) <b>Sensitive But Unclassified (SBU)</b>	<b>X</b>				

12. PUBLIC RELEASE. Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release

DIRECT  THROUGH (Specify)

NASA Goddard Space Flight Center, Public Affairs Office, Code 130, Greenbelt, MD 20771

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
\*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides extracts referenced herein. Add additional pages as needed to provide complete guidance.)

In performance of this contract, some personnel may require access to classified information up to and including SECRET. The contractor must have a sufficient number of cleared employee's assigned duties under this contract to be able to complete all classified work assignments up to and including SECRET.

- a. Space Network Security Classification Guide dated January 1, 2010
- b. National Industrial Security Program Operating Manual (NISPO), DOD 5220.22-M, dated February 28, 2006
- c. National Security Telecommunications and Information Systems Security Instruction (NSTISSI) 7000, Tempest Countermeasures for November 1993
- d. National Security Telecommunications and Information Systems Security Instruction (NSTISSI) 4000, Series on Communications Security September 1996
- e. COMSEC Supplement to former Industrial Security Manual, DOD 5220.22-S, current edition.
- f. OMB Circular A-130. Appendix III, Security of Federal Automated Information Resources
- g. NPD 2810.1D, NASA Information Security Policy
- h. NPD 2810.1A, Security of Information Technology
- i. Federal Information Security Management Act of 2002
- j. Security Handbooks, Manuals, Regulations, Instructions, Directives, and Guidelines (current editions) for NASA Headquarters, GSFC as other applicable policies and procedures as identified by NASA.

SEE PAGE #3

14. ADDITIONAL SECURITY. Requirements, in addition to NISPO requirements, are established for this contract. (If Yes, identify the pertinent contractual clauses in  YES  NO the contract document itself, or provide an appropriate statement which identifies additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is required.)

See Page #3

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. (If yes, explain and identify specific areas or  YES  NO elements carved out and the activity responsible for inspections. Use Item 13 if more space is needed.)

See Page #3

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE (Include Area Code)
Jeffrey W. Barrett	Industrial/Information Security Specialist	301.286.0725

d. ADDRESS (Include Zip Code)

NASA/GODDARD SPACE FLIGHT CENTER  
CODE 240 GREENBELT, MD 20771

17. REQUIRED DISTRIBUTION

- a. CONTRACTOR
- b. SUBCONTRACTOR
- c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
- d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
- e. ADMINISTRATIVE CONTRACTING OFFICER
- f. OTHERS AS NECESSARY

e. SIGNATURE

*Jeffrey W. Barrett*

**Item #13. Additional Security Requirements and/or Guidance**

- k. Internet Protocol Operational Network (IONet) Security Policy, 700-DOC-029
- l. Internet Protocol Operation Network (IONet) Access Control Compliance Checklist, Revision 3
- m. NPR 1600.1, NASA Security Program Procedural Requirements w/Change 2
- n. NPR 1620.2, Physical Security Vulnerability Risk Assessments
- o. NPR 1620.3, Physical Security Requirements for NASA Facilities and Property
- p. NPD 1660.1B, NASA Counterintelligence (CI) Policy
- q. NPR 1660.1, NASA Counterintelligence (CI)/Counterterrorism (CT) Program Procedural Requirements
- r. Homeland Security Presidential Directive /HSPD-5, National Incident Management System
- s. Homeland Security Presidential Directive/HSPD-7, Critical Infrastructure Identification, Prioritization, and Protection
- t. Homeland Security Presidential Directive/HSPD-8, National Preparedness
- u. Homeland Security Telecommunications Systems Security HSPD-12, Policy for a Common Identification Standard for Federal Employees and Contractors
- v. National Security Telecommunications Systems Security Instruction 4005
- w. NASA Central Office of Record Standard Operating Procedure (CSOP)

As a long-term visitor to NASA/GSFC, the contractor will comply with all applicable NASA/GSFC security issuances, memorandums, policies/procedures, and regulations as directed. Inspection authority of contractor activities on NASA installations it is the responsibility of NASA security officials inspections will be coordinated the GSFC Industrial Security Specialist.

NASA officials will provide additional security, technical, and/or classification guidance. Requests concerning clarification or interpretation regarding security requirements under this contract will be directed to the NASA/GSFC Industrial Security Specialist. The place of performance will be at the contractor cleared facilities, GSFC and other locations where the requirement is covered by the obligations specified in Section C of the basic document.

Any employee, who observes or becomes aware of the deliberate or suspected compromise of classified national security information shall promptly report such information personally to the GSFC Counter Intelligence (CI) Office. If unclassified but sensitive information appears compromised by or on behalf of foreign or domestic powers, organizations or persons, employees shall report such information to the GSFC CI Office. If an employee becomes aware of information pertaining to international or domestic terrorist activities, employees shall also report to the GSFC CI Office. If the information indicates a computer compromise or other cyber intrusion, the Office of Inspector General shall be promptly notified.

### CONTRACT HISTORICAL DATA

As provided in clause G.6 ADVANCED AGREEMENT BETWEEN THE PARTIES: REQUIREMENT TO PROVIDE CONTRACT HISTORICAL DATA, and based on the written request from the Contracting Officer, the Contractor shall provide all of the following historical data from this contract:

- (1) Provide all labor resources employed under this contract in the last twelve months, by Company Labor Category. For each labor category, provide the number of full-time equivalents (FTEs), the current weighted average wage rate (unburdened "straight time" rate), and the average seniority level;
- (2) For each labor category, identify the most recent date that wages were escalated and provide the percentage by which wages were escalated;
- (3) For each labor category, identify whether the category is "exempt", "non-exempt", or "union" as governed under the Services Contract Act;
- (4) For each labor category, provide a brief position description in sufficient detail to indicate the duties of each category and any minimum education and experience requirements.

Example Table of Requested Data

Labor Category	# of *FTE by Company's Title	**Current Weighted Avg. Unburdened Hourly Rate for this category	Average Seniority for this category	Date and amount of last rate escalation	Identification "exempt," "non-exempt", "union"
Engineer 4	9	\$18.20	18 months	April 2005 (2.8%)	exempt

\* 1 FTE is defined as the work of a full time equivalent. Example: Four employees working 2 hours per day make up one FTE.

\*\* Straight time labor rates only, not bid rates or burdened rates

- (5) Provide the actual non-labor (other direct costs) expenditures for the prior twelve months, delineated by each of the following cost elements: Materials, equipment, travel, supplies, and any other non-labor expenditures (e.g. service centers, training, facilities, etc.);

- (6) Provide an estimate of the number of FTEs, including associated labor category titles/descriptions, for those personnel currently supporting this contract that are accounted for as indirect. This may include administrative employees (e.g., accounting or clerical personnel), management employees and/ or technical employees (e.g. computer support personnel); and
- (7) The information required in (1) through (6) above shall be provided for the prime contractor and all significant subcontractors. Significant subcontractors are those subcontractors that have performed more than \$60 million in work over the life of this contract.

(End of Attachment)

## PERSONAL IDENTITY VERIFICATION (PIV) CARD ISSUANCE PROCEDURES

PIV Card Issuance Procedures in accordance with FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel. FIPS 201 Appendix A graphically displays the following procedure for the issuance of a PIV credential.

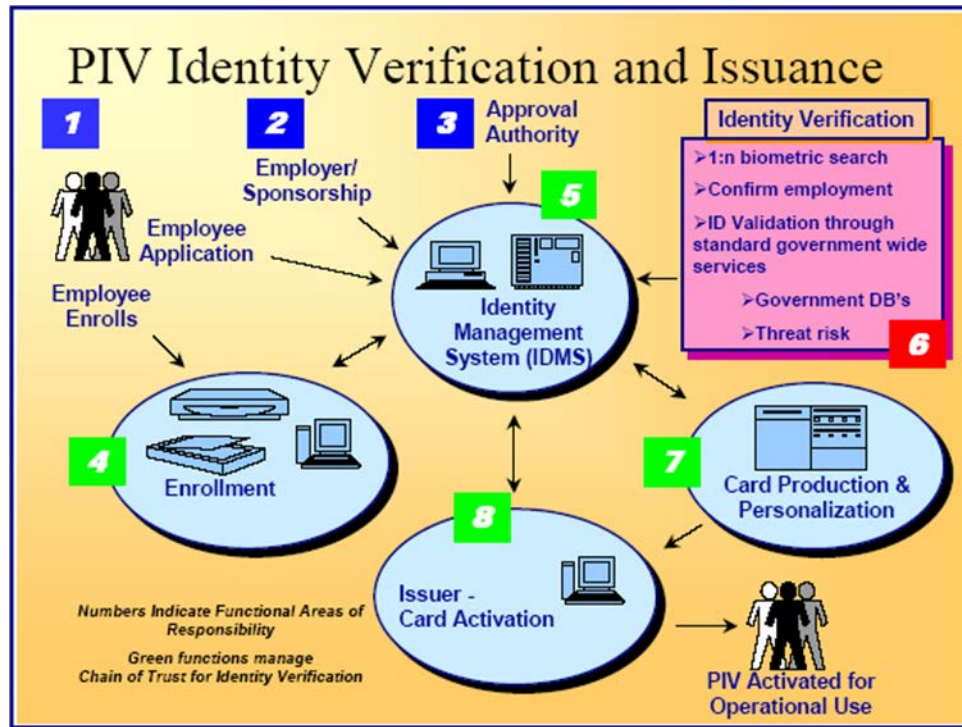


Figure A-1, FIPS 201, Appendix A

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

### Step 1:

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

investigation, the letter shall indicate the type of investigation, the agency completing the investigation, and date the investigation was completed. Also, the letter must specify the risk/sensitivity level associated with the position in which each applicant will be working (NPR 1600.1, §4.5 is germane) Further, the letter shall also acknowledge that contract employees may be denied access to NASA information or information systems based on an unsatisfactory background investigation/adjudication. .

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

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

**Step 2:**

Upon acceptance of the letter/background information, the applicant will be advised that in order to complete the investigative process, he or she must appear in-person before the authorized PIV registrar and submit two forms of identity source documents in original form. The identity source documents must come from the list of acceptable documents included in Form I-9, Employment Eligibility Verification, one which must be a Federal<sup>1</sup> or State issued picture identification. Fingerprints will be taken at this time. The applicant must appear **no later than** the entry on duty date.

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

**Step 3:**

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

**Step 4:**

Prior to authorizing physical access of a contractor employee to a federally-controlled facility or access to a Federal information system, the CCS will a National Crime Information Center

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



(NCIC) with an Interstate Identification Index check is/has been performed. In the case of a foreign national, a national check of the Bureau of Immigration and Customs Enforcement (BICE) database will be performed for each applicant. If this process yields negative information, the CCS will immediately notify the COTR/host of the determination regarding access made by the CCS.

**Step 5:**

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

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

**Step 6:**

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

**Step 7:**

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

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

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

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

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

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

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

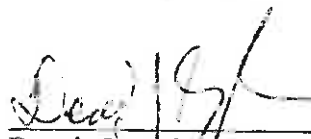
**COST-PLUS-AWARD-FEE**  
**PERFORMANCE EVALUATION PLAN**  
**FOR**  
**ELECTRICAL SYSTEMS ENGINEERING**  
**SERVICES II (ESES II)**

**INDEFINITE DELIVERY INDEFINITE QUANTITY (IDIQ)**  
**SERVICES & END-ITEM TASK ORDERS**

**CONTRACT NO. NNG13CR48C**


**WITH ASRC FEDERAL SPACE & DEFENSE (AS&D)**


CONCURRENCE:

  
\_\_\_\_\_  
Dennis J. Andronyk  
Fee Determination Official

  
\_\_\_\_\_  
Date

APPROVAL:

  
\_\_\_\_\_  
Michael E. McGrath  
Procurement Officer

  
\_\_\_\_\_  
Date

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II. ORGANIZATIONAL STRUCTURES FOR AWARD FEE ADMINISTRATION

III. EVALUATION REQUIREMENTS

IV. METHOD FOR DETERMINING AWARD FEE

V. CHANGING THE PERFORMANCE EVALUATION PLAN

VI. ATTACHMENTS

Attachment A: Evaluation Periods and Maximum Available Award Fee

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## I. INTRODUCTION

This Performance Evaluation Plan (PEP) covers the administration of the award fee provisions of Contract No. NNG13CR48C), dated July 3, 2013, with ASRC Federal Space & Defense (AS&D). The purpose of this plan is to establish a general framework for evaluating the Contractor's performance. Accordingly, all fee determinations will be based on the guidelines found herein. The plan is unilaterally established by the Government and may be revised at any time to redirect emphasis in accordance with Section V of this plan. The contract was awarded in accordance with the provisions of Request for Proposal (RFP) NNG11275927R.

The following matters, among others are covered:

- A. The Cost-Plus-Award-Fee (CPAF) contract provides for engineering services for the formulation, design, development, fabrication, integration, testing, verification, and operations of flight spacecraft, suborbital craft, instruments, and ground system hardware and software, including development and validation of new technologies to enable future space and science missions. This contract contains both NFS Clause 1852.216-76, "Award Fee for Service Contracts," and NFS Clause 1852.216-77, "Award Fee for End Item Contracts". For "service" task orders, the award fee determination each period is final. However, for each individual "end item" task, the award fee determination each period is considered interim pending the final award fee determination made in the final evaluation period of each individual end-item task completion. Each task order issued will clearly state whether it is a "service" or "end item" task.
- B. The effective ordering period of this contract is 5 years from the effective date of the contract as specified in Clause F.1 "Effective Ordering Period – Task Orders."
- C. The IDIQ minimum ordering value under this contract is \$1,500,000 and the maximum ordering value of this contract is \$475,000,000, as specified in Clause B.6, "Minimum/Maximum Amount of Supplies or Services." The award fee percentage is 3 percent and will be used to calculate the maximum available award fee dollars on all task orders issued in accordance with the "Task Ordering Procedure" clause of this contract. Due to the IDIQ characteristics of this contract, the award fee available amount may fluctuate as Task Orders are issued and/or modified during performance. Award fee for the IDIQ portion will be distributed for all IDIQ work performed during the evaluation period. Of the \$475,000,000 maximum ordering value of this contract, the potential maximum available award fee that could be made available is \$13,834,950. The estimated cost and award fee of each task order are subject to equitable adjustments arising from changes or other contract modifications.
- D. Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, a provisional award fee payment may be made to the Contractor each period after each month completed. For services task orders, the total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80 percent of that evaluation period's available award fee or the prior period's evaluation score. For each

individual end-item task order, the total amount of award fee available in an evaluation period that will be provisionally paid is limited to a percentage not to exceed 80 percent of the prior interim period's evaluation score of each individual end-item task order.

- E. The Fee Determination Official (FDO) will determine the award fee payable periodically in accordance with this plan.
- F. The Government may unilaterally change this plan, as covered in Section V and not otherwise requiring mutual agreement under the contract, provided the Contractor receives notice of the changes 30-days prior to the beginning of the evaluation period to which the changes apply.
- G. The determination of the award fee earned is a unilateral decision made solely at the discretion of the government.
- H. The unearned award fee in any given period is lost and shall not be carried forward or "rolled-over" into subsequent periods in accordance with FAR 16.401(e)(4) and NFS 1816.405-273(a).

## II. ORGANIZATIONAL STRUCTURES FOR AWARD FEE ADMINISTRATION

The following organizational structure is established for administering the fee provisions of the contract.

### A. Procurement Officer (PO)

1. The PO is located at the NASA/Goddard Space Flight Center (GSFC) in Greenbelt, MD.
2. The PO is the approval authority for any significant changes to this plan.

### B. Fee Determination Official (FDO)

The FDO for this contract is the Director of the Applied Engineering and Technology Directorate (AETD) at GSFC in Greenbelt, MD. The FDO may designate an Alternate FDO when appropriate.

The primary FDO responsibilities are:

1. Establish the Performance Evaluation Board (PEB) and appoint the voting members of the PEB by memorandum.
2. Consider the PEB findings for each evaluation period and discuss it with the PEB chair and, if appropriate, with others such as the Contractor.
3. For services tasks, determine the overall Award Fee earned and payable for each evaluation period as addressed in Section IV and ensure that the amount and percentage of award fee earned is commensurate with and accurately reflects the Contractor's performance. For each individual end-item task, determine the interim Award Fee earned and payable for each evaluation period as addressed in Section IV and ensure that the amount and percentage of award fee earned is commensurate with and accurately reflects the Contractor's performance. At the end of each individual end-item task, determine the final total Award Fee earned and payable for that specific end-item task, which will supersede all previous interim payments. Any variance between the PEB recommendation and FDO determination must be justified and documented in the official contract file.
4. Issue and sign the award fee determination letter for the evaluation period, specifying the amount of award fee determined and the basis for that determination.
5. Approve changes proposed to the Performance Evaluation Plan (PEP) as addressed in Section V, as appropriate.

### C. Performance Evaluation Board (PEB)

The PEB primary responsibilities of the Board are to:

1. Conduct ongoing evaluations of Contractor performance based upon Performance Monitor Reports and such additional performance information as may be obtained from the Contractor and other sources. The PEB will evaluate the Contractor's performance according to the standards and criteria stated in this performance evaluation plan.
2. Submit an award fee letter to the FDO for signature, which addresses the PEB's findings and recommendations for each evaluation period.
3. Recommend for approval by the FDO proposed changes in the performance evaluation plan and the PO for significant changes.

### D. PEB Chairperson

The PEB Chairperson is the Associate Division Chief for the Electrical Engineering Division at GSFC in Greenbelt, MD. The primary responsibilities of the PEB Chairperson are to:

1. Appoint non-voting members, if appropriate, to assist the PEB in performing its functions, e.g., a recording secretary.
2. Appoint performance monitors for the contract effort and assure that they are providing appropriate instructions and guidance.
3. Request and obtain performance information from other units or personnel involved in observing Contractor performance, as appropriate.
4. Call on personnel from various organizational units to consult, as needed, with the PEB.
5. Assume responsibility for the actual preparation and approval of the award fee letter and other documentation such as PEB minutes.
6. Ensure the timeliness of award fee evaluations.
7. Recommend appropriate changes in this plan for consideration, as addressed in Section V.
8. Meet with the Contractor during the evaluation period to provide preliminary performance feedback.



#### E. Contracting Officer's Representative (COR)

The COR will be located at the GSFC facility in Greenbelt, MD.

The primary responsibilities of the COR are to:

1. Receive and analyze the Monitor Evaluation Reports submitted by the Performance Monitors.
2. Monitor, evaluate, and assess Contractor performance.
3. Prepare the Contract Performance Summary Report for the Contracting Officer (CO).
4. Attend all PEB meetings, record the findings of the PEB, and prepare the award fee determination letter for the FDO's review and signature in coordination with the CO.
5. Provide technical input for the annual Contractor Performance Assessment Reporting System (CPARS) evaluation.
6. Recommend appropriate changes in this plan for consideration, as addressed in Section V.

#### F. Performance Monitors

Performance Monitors will be designated by the PEB Chairperson to each performance area to be evaluated. Generally, the task initiator for each issued task order will be the Performance Monitor for that task.

The primary responsibilities of the Performance Monitor are to:

1. Monitor, evaluate, and assess Contractor performance in assigned areas and in accordance with this award fee plan.
2. Periodically prepare a Performance Monitor Report (PMR) for the PEB that will be submitted to the COR, as described in Section II.E., or others as appropriate.
3. Recommend appropriate changes in this plan for consideration, as addressed in Section V.

#### G. Functional Monitor/Performance Evaluation Coordinator

The Functional Monitor (FM) will be the contract specialist or contracting officer who is responsible for Contract No. NNG13CR48C at the GSFC facility in Greenbelt, MD.

The primary responsibilities of the FM are to:

1. Advise the PEB on CPAF rating standards, policies, and procedures and ensure the consistent application of Agency policy in these matters.
2. Receive and analyze the Performance Monitor Evaluation Reports submitted by the Performance Monitors via the assigned COR.
3. Monitor, evaluate, and assess Contractor performance.
4. Consider changes to this plan and recommend those determined appropriate for presentation to the FDO.
5. Attend all PEB meetings and assist the COR in preparing all PEB correspondence for the FDO.

### **III. EVALUATION REQUIREMENTS**

The applicable evaluation requirements are included as attachments to this Performance Evaluation Plan. They are as follows:

<b>Attachment Title</b>	<b>Attachment</b>
Evaluation Periods and Maximum Available Award Fee	A
Performance Factors and Evaluation Criteria	B
Technical Performance	B.1
Business Management Performance	B.2
Cost Control	B.3
Award Fee Grading Tables	C
Performance Factors	C.1
Overall Total	C.2
Actions and Schedules for Award Fee Determinations	D
General Instructions for Evaluation and Monitoring of Performance	E

The percentage weights indicated in Attachment B and the grading tables in Attachment C are quantifying devices. Their sole purpose is to provide guidance in arriving at a general assessment of the amount of award fee earned. In no way do they imply an arithmetical precision to any judgmental determination of the Contractor's overall performance and amount of award fee earned.

#### **IV. METHOD FOR DETERMINING AWARD FEE**

A determination of the award fee earned for each evaluation period will be made by the FDO within forty-five (45) calendar days after the end of the period. All fee determinations shall reflect the Government's assessment of the Contractor's progress and ability to meet the contract objectives. Although award fee contracts are subjective in nature, the Government generally attempts to utilize objective and quantifiable measures to the greatest extent possible as a guide in assessing the Contractor's performance.

The method to be followed in monitoring, evaluating, and assessing Contractor performance during the period, as well as for determining the award fee earned or paid, is described below. Attachment D summarizes the principal actions and schedules involved.

- A. The PEB Chairperson will ensure that a monitor is assigned for each performance evaluation factor to be evaluated under the contract. Monitors will be selected on the basis of their expertise relative to prescribed performance area emphasis. The PEB Chairperson may change monitor assignments at any time without advance notice to the Contractor. The PEB Chairperson will notify the Contractor promptly of all monitor assignments and changes.
- B. The PEB Chairperson will ensure that each monitor receives the following:
  - 1. A copy of this plan along with any changes made in accordance with Section V.
  - 2. Appropriate orientation and guidance.
  - 3. Specific instructions applicable to the monitors' assigned performance areas.
- C. Monitors will evaluate and assess Contractor performance and discuss their observations with Contractor personnel as appropriate, in accordance with the General Instructions for Evaluation and Monitoring of Performance, Attachment E, and the specific instructions and guidance furnished by the PEB Chairperson.
- D. Monitors will submit PMRs to the COR within 15 days after the end of an evaluation period, and, if required, make oral presentations to the PEB.
- E. The Contractor may submit self-evaluation summaries to the FM/CO. The Contractor shall submit self-evaluations no later than seven (7) calendar days following the end of a performance period. Contractor self-evaluations will be forwarded through the appropriate Performance Monitors, who will reconcile differences between their reports and the Contractor self-evaluations prior to the PEB meeting. Such self-evaluation summaries will be included in the PEB package.
- F. Promptly after the end of each evaluation period, the PEB will meet to consider all the performance information it has obtained. At the meeting, the PEB will summarize its preliminary findings and recommendations for inclusion in the award fee letter for the

services tasks and each individual end-item task and other documentation such as PEB minutes.

- G. The COR, in coordination with the FM/CO, will prepare the award fee determination letter for the period, which will be reviewed by the PEB Chairperson and then submitted to the FDO for use in determining the award fee earned. The letter will include an adjectival rating and a recommended performance score with supporting documentation.
- H. The FDO will consider the recommendations of the PEB, information provided by the Contractor, if any, and any other pertinent information in determining the amount of the award fee to be paid for the period. The FDO's determination of the amount of award fee earned and the basis for this determination will be stated in the award fee determination letter.
- I. For the Core and "service" task orders, the award fee determination each period is final. For each individual end-item task order, the true quality of Contractor performance cannot be measured until the completion of the task order, therefore, only the last end-item task order evaluation is final. The total negotiated maximum available award fee for each individual end-item task order is subject to the final evaluation at the completion of the task. Prior to the final evaluation, interim evaluations will be conducted to monitor performance as a means of providing feedback to the Contractor on the Government's assessment of the quality of the performance. The final end-item task order evaluation will consider the Contractor's performance and will be evaluated against the PEP to determine the total final earned Award Fee for each individual task order. The interim payments are superseded by the fee determination made in the final end-item task order evaluation. The Government will then pay the Contractor, or the Contractor will refund to the Government, the difference between the final end-item task order award fee determination and the cumulative interim fee evaluation payments for that specific end-item task order. No award fee will be paid to the Contractor if the final end-item task order award fee evaluation is "Unsatisfactory."
- J. The FM/CO shall notify the Contractor in writing of the FDO's determination. The Contractor may request a debriefing from the PEB Chairperson.

## V. CHANGING THE PERFORMANCE EVALUATION PLAN

### A. Right to Make Unilateral Changes

The Government may unilaterally change any matters covered in this plan and not specifically identified as requiring mutual agreement under the contract, prior to the beginning of an evaluation period by providing timely notice to the Contractor in writing at least 30 calendar days prior to the start of the relevant evaluation period. Significant changes to this Plan will require the approval of the Procurement Officer.

### B. Steps to Change the PEP

The following is a summary of the principal actions involved in changing the PEP for an evaluation period (actions may be modified to reflect different approval or notification levels).

Action	Schedule
PEB members draft proposed revisions to PEP	Ongoing
PEP revisions submitted to FM/CO for drafting	Ongoing
FDO reviews and concurs on all revisions to PEP	45 days prior to the start of period
PO reviews and approves significant revisions to the PEP	45 days prior to the start of period
FDO/FM notifies the Contractor regarding revisions to the PEP	30 days prior to the start of period

### C. Method for Changing Plan Coverage

The method to be followed for changing the PEP is described below:

1. Personnel involved in the administration of the fee provisions of the contract are encouraged to recommend plan changes with a view toward changing management emphasis, motivating higher performance levels, or improving the award fee determination process. Recommended changes should be sent to the FM/CO and COR for PEB consideration and drafting.
2. Prior to the end of each evaluation period, the PEB will submit its recommended changes, if any, applicable to the next evaluation period for approval by the FDO with appropriate comments and justification. If the changes are considered to be significant by the FM/CO, then the revised plan must be sent to the Procurement Officer for approval after the FDO review/concurrence.

3. No later than thirty (30) calendar days before the beginning of each evaluation period, the FM/CO will notify the Contractor in writing of any changes to be applied during the next period. If the Contractor is not provided with this notification, or if the notification is not provided within the agreed number of calendar days before the beginning of the next period, then the existing plan will continue in effect for the next evaluation period unless bi-lateral agreement is obtained.

## **VI. ATTACHMENTS**



**ATTACHMENT A**

**EVALUATION PERIODS AND MAXIMUM AVAILABLE AWARD FEE**

<b>Period</b>	<b>Start Date</b>	<b>End Date</b>	<b>IDIQ Maximum Available Award Fee for Services Tasks</b>	<b>IDIQ Maximum Available Award Fee for End Item Tasks</b>
1	09/1/2013	2/28/2014	\$TBD*	\$TBD**
2	03/31/2014	8/31/2014	\$TBD*	\$TBD**
3	09/1/2014	2/28/2015	\$TBD*	\$TBD**
4	03/31/2015	8/31/2015	\$TBD*	\$TBD**
5	09/1/2015	2/29/2016	\$TBD*	\$TBD**
6	03/31/2016	8/31/2016	\$TBD*	\$TBD**
7	09/1/2016	2/28/2017	\$TBD*	\$TBD**
8	03/31/2017	8/31/2017	\$TBD*	\$TBD**
9	09/1/2017	2/28/2018	\$TBD*	\$TBD**
10	03/31/2018	8/31/2018	\$TBD*	\$TBD**

\*Due to the IDIQ nature of this contract, the maximum available award fee pool for each potential period will vary based upon the task orders issued against the contract. Award fee will be distributed during the evaluation periods that coincide with the period of performance of the task order.

\*\*The maximum available award fee for each individual end-item task order shall be tracked separately

## ATTACHMENT B

### PERFORMANCE FACTORS AND EVALUATION CRITERIA

The performance factors to be evaluated are identified below. The evaluation criteria for each factor are specified in the indicated section of this attachment.

<b>Factor</b>	<b>Weight</b>	<b>Section</b>
Technical Performance	50%	B.1
Business Management Performance	25%	B.2
Cost Control	25%	B.3

#### **B.1 Technical Performance**

Factor Weight: 50%

Description of Factor: For each evaluation period, the Contractor's technical performance will be assessed to determine if the work that has been performed meets the technical requirements of the Statement of Work (SOW), including a variety of subfactors related to how the work was accomplished, as indicated below:

Subfactors Considered for Evaluation:

1. **Technical Requirements** – The Contractor will be evaluated on their ability to provide effective and efficient performance based services to meet the technical requirements and schedules as described in the contract's SOW and issued task orders. The Contractor's technical performance will also be assessed for their ability to successfully meet the functional requirements and performance specifications of end-item task orders issued. These evaluations include a subjective assessment of the quality of technical performance provided, i.e., accuracy of Contractor performance in providing services; quality of hardware and software end-item developments and documentation; timely completion of key milestones and tasks identified; anticipating and resolving technical and schedule problems; recovery from delays; and reaction time and appropriateness of response to changes. Also to be considered is the quality and timeliness of technical documentation, reports, plans, and other required deliverables as outlined in the contract and task orders issued. The Government will make evaluations only on service and end-item performance that has been ordered.
2. **Innovation** – Innovations, systems transitions, and improvements in service and end-item delivery accomplished during the period will be evaluated. Innovative methods, techniques, or technologies and/or process improvements will be evaluated for their impact on effectiveness and efficiencies under the contract.
3. **Personnel Management** – The Contractor will be evaluated on the ability to provide

staffing at appropriate skill levels to provide effective and efficient performance. The Contractor will also be evaluated on the extent to which the Contractor has applied and retained competent and experienced personnel to assure successful and efficient performance.

4. Communications – The Government will assess the Contractor’s ability to maintain good communication within its organization and with the Government. The Government will also evaluate if all problems, technical issues and changes were promptly reported to all concerned.
5. Subcontracting – The Contractor will be evaluated on the overall effectiveness of their subcontractors’ technical performance. This will include the level of cooperation between all parties and the Contractor's ability to meet technical milestones and ensure quality technical performance from subcontractors.
6. Thoroughness - The Contractor will be evaluated based on their ability to provide appropriate analysis and evaluation of alternative methods, processes, or procedures to accomplish overall requirements within schedule and budget.
7. Safety and Security - The Contractor will be evaluated based on their ability to provide a safe work environment, including inspections and processes for accident and incident files, mishap reporting, and training. A major breach of safety consists of an accident, incident, or exposure resulting in a fatality or mission failure; or in damage to equipment or property equal to or greater than \$1 million; or in any "willful" or "repeat" violation cited by the Occupational Health and Safety Administration (OSHA) or by a state agency operating under an OSHA approved plan. Security is the condition of safeguarding against espionage, sabotage, crime (including computer crime), or attack. A major breach of security may occur on or off Government installations, but must be directly related to work on this contract. A major breach of security is an act or omission by the Contractor that results in compromise of classified information; illegal technology transfer; workplace violence resulting in criminal conviction; sabotage; compromise or denial of information technology services; equipment or property damage from vandalism greater than \$250,000; or theft greater than \$250,000. For all Service Task Orders, in no case shall any Award Fee be earned by the Contractor in any evaluation period in which there is a major breach of safety or security. For all End-Item Task Orders, the Contractor shall not earn any interim Award Fee in an evaluation period in which there is a major breach of safety or security and the overall maximum available award fee pool for that End-Item task order shall be reduced by the amount of the fee available for the interim evaluation period in which the major breach of safety or security occurred.
8. Risk Management – The Contractor will be evaluated on its ability to identify risks; analyze their impact and prioritize them; develop and carry out plans for risk mitigation, acceptance, or other action; track risks and the implementation of mitigation plans; support informed, timely, and effective decisions to control risks and mitigation plans; and assure that risk information is communicated among all levels of a program/project.

**Basis for Measuring Performance:** The Performance Monitors will prepare a Performance Monitor Report (PMR) that addresses the associated schedule metric for which they were the technical monitor and assess compliance with each milestone and the established schedule. On the basis of those evaluations, each PMR will be assigned a rating of "Excellent," "Very Good," "Good," "Satisfactory," or "Unsatisfactory," as specified in Attachment C, Section C.1, Award Fee Grading Table for Each Performance Factor. The PEB will give consideration to changed support requirements and/or other changes beyond the Contractor's control that impact schedule.

If an aspect of a task order is performed with less than reasonable expected competence or is outside of the contractual requirements, the PMR will characterize it as having major or minor impacts on overall performance in related areas and will describe any extraordinary circumstances relating to the task performance. These impact statements will be used by the PEB to weigh the inclusion of specific issues in the award fee letter.

## **B.2 Business Management Performance**

Factor Weight: 25%

Description of Factor: Business Management is the manner in which the Contractor implements contract provisions. It includes personnel, inter-organizational interfaces, work flow, property and materials controls, and contract management. For each evaluation period, business management performance is broadly assessed in meeting the business management requirements for the overall contract, as indicated below:

Subfactors Considered for Evaluation:

1. **Contract Administration and Compliance** – The Contractor will be evaluated on the overall administration of the contract. This will include accuracy and timeliness of all reporting requirements, task plan submissions, subcontract consent documentation, and proposal submissions; overall compliance with all terms and conditions of the contract; and responsiveness to contract issues.
2. **Contract Changes** – The Contractor will be evaluated on responsiveness to requests for Rough Order of Magnitude (ROM) estimates, Not To Exceed (NTE) estimates, and change proposals/task plans. The evaluation will include the Contractor's submission of timely, complete proposals and cooperation in negotiating changes.
3. **Financial Reporting** – The Contractor will be evaluated on the extent to which NASA Form 533 Reports are accurate, timely and complete. The Contractor will also be evaluated on the extent to which financial systems are responsive to special analyses or quickly adjusted as a result of contract changes or program events.
4. **Subcontract Management** – The Contractor will be evaluated on the extent to which subcontracts are managed to ensure compliance with subcontract terms and conditions, subcontract and cost performance reporting, and overall business management. This

includes the ability to monitor and forecast business trends that may ultimately impact overall contract performance as well as timely incorporation of subcontract changes. Technical performance of subcontractors will be evaluated under Technical Performance factor.

5. Responsiveness of Upper Management – The Contractor will be evaluated on the extent to which corporate staffing, strategies, policies, plans, procedures, and actions provide an effective context for the successful performance of the contract and its subcontracts. This includes effective and timely management actions in relationships or interfaces with all major team organizations including international aspects such as export control.
6. General Business Management - The Contractor will be evaluated on its local and corporate business management. This area will include an evaluation of the Contractor's overall ability and effectiveness in responding to management issues, identifying and correcting problems, and timeliness and accuracy of data.
7. Equal Employment Opportunity (EEO) – The Contractor shall submit SF-100 entitled, "Employer Information Report EEO-1" to GSFC's Code 120 15 days prior to closing of the evaluation period. Information regarding completion of this report is available from <http://www.eeoc.gov/employers/eeo1survey/2007instructions.cfm>. The Contractor shall provide the date and results of the most recent EEO compliance review. The Contractor shall describe the deficiencies (if known) from compliance reviews by OFCCP and what the Contractor's goals are to correct these deficiencies. Discuss Contractor's efforts in community outreach, special events, awards, and other. Additionally, the Contractor shall provide data depicting terminations, promotions, and new hires by job category, number of employees, gender and race. An assessment will be performed on the EEO-1 form in regards to changes from last performance period and comparison to census data (Washington SMSA) as well as a review of all other data and Contractor efforts.
8. Government Property – The Contractor will be evaluated on their ability to manage (control, use, preserve, protect, repair, maintain and report) all Government property in their possession (Contractor-acquired, Government-furnished and/or Installation-accountable) in accordance with the property clauses in the contract.

Basis for Measuring Performance: Using the above subfactors and a standard of reasonable performance for them, the Performance Monitors will evaluate performance and prepare a Performance Monitor Report (PMR). On the basis of those evaluations, each PMR will be assigned a rating of "Excellent," "Very Good," "Good," "Satisfactory," or "Unsatisfactory," as specified in Attachment C, Section C.1, Award Fee Grading Table for Each Performance Factor. For each applicable subfactor, the Performance Monitor report will characterize it as having major or minor impacts on overall performance in related areas and will describe any extraordinary circumstances relating to the performance of the contract. These impact statements will be used by the PEB to weigh the inclusion of specific issues in the Award Fee Letter.

### **B.3 Cost Control**

Factor Weight: 25%

Description of Factor: Cost Control is the manner in which the Contractor controls costs and manages financial resources. Cost Control includes the measure of the Contractor's success in controlling actual costs against the negotiated estimated cost of all active task orders.

For Services Task Orders, the cost control award fee shall be based on how the Contractor's (and subcontractors) actual accrued costs, contained in the monthly NASA Form 533s, compare to the negotiated estimated cost of all individual services task orders issued or active within an evaluation period. An assessment of actual technical work accomplished will be considered in the determination of the cost. The analysis of negotiated cost control will also give consideration to changed support requirements, changed statutory requirements, and/or changes beyond the Contractor's control, which impact service task order costs.

For End-Item Task Orders, the cost control award fee shall be based on how the Contractor's (and subcontractors) actual accrued cumulative costs plus the projected estimate-to-complete, contained in the monthly NASA Form 533s, compares to the negotiated estimated cost of each individual end-item task order. Cost variances for the individual period will be evaluated in combination with the overall estimated cost variance at task completion. An assessment of actual technical work accomplished will be considered in the determination of the cost control. The analysis of negotiated cost control will also give consideration to changed support requirements, changed statutory requirements, and/or changes beyond the Contractor's control, which impact individual end-item task order costs.

The evaluation of cost control will utilize the following guidelines:

- Normally, the Contractor should be given an Unsatisfactory rating for cost control when there is a significant cost overrun within its control. However, the Contractor may receive a Satisfactory or higher rating for cost control if the overrun is insignificant. Award fee ratings should decrease sharply as the size of the overrun increases. In any evaluation of Contractor overrun performance, the Government will consider the reasons for the overrun and assess the extent and effectiveness of the Contractor's efforts to control or mitigate the overrun.
- The Contractor should normally be rewarded for an underrun within its control, up to the maximum award fee rating allocated for cost control, provided the adjectival rating for other award fee evaluation factors is Very Good or higher. An underrun will be rewarded as if the Contractor has met the estimated cost of the contract when the average adjectival ratings for all other factors is less than Good but greater than Unsatisfactory.
- The Contractor should be rewarded for meeting the estimated cost of the contract, but not to the maximum rating allocated for cost control, to the degree that the Contractor has prudently managed costs while meeting contract requirements. No award will be given in

this circumstance unless the average adjectival rating for all other award fee evaluation factors is Satisfactory or higher.

Basis for Measuring Performance: Using the above subfactors and a standard of reasonable performance for them, the Performance Monitors will evaluate performance and prepare a Performance Monitor Report (PMR). On the basis of those evaluations, each PMR will be assigned a rating of "Excellent," "Very Good," "Good," "Satisfactory," or "Unsatisfactory," as specified in Attachment C, Section C.1, Award Fee Grading Table for Each Performance Factor.

**ATTACHMENT C**  
**AWARD FEE GRADING TABLES**

**C.1 Award Fee Grading Table for Each Performance Factor**

<b>Adjectival Rating</b>	<b>Range of Performance</b>	<b>Description</b>
Excellent	100-91	Contractor has exceeded almost all of the significant award-fee criteria as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	90-76	Contractor has exceeded many of the significant award-fee criteria as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	75-51	Contractor has exceeded some of the significant award-fee criteria as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	50	Contractor has met the significant award-fee criteria as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	Less than 50	Contractor has failed to meet most or all of the significant award-fee criteria as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

Any Performance Factor receiving a grade of “Unsatisfactory” (less than 50 points) will be assigned zero performance points for purposes of calculating the award fee amount for that Performance Factor (includes cost control).



## C.2 Overall Total Award Fee Grading Table

Adjectival Rating	Range of Performance	Description
Excellent	100-91	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, business and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	90-76	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, business and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	75-51	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, business and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	50	Contractor has met overall cost, schedule, and business technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	Less than 50	Contractor has failed to meet overall cost, schedule, business and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

Any factor receiving a adjectival rating of "Unsatisfactory" (less than 50) will be assigned a numerical score of Zero (0) for purposes of calculating the award fee amount to be earned (includes cost control). The Contractor will not be paid any award fee when the total award fee rating in the aggregate is "Unsatisfactory" (less than 50). As a benchmark for evaluation, in order to be rated "Excellent" overall, the contractor would typically be under cost, on or ahead of schedule, and providing outstanding technical performance. If all of these criteria are not met, the PEB or FDO must include justification for an overall "Excellent" rating.

## ATTACHMENT D

### ACTIONS AND SCHEDULES FOR AWARD FEE DETERMINATIONS

The following is a summary of the principal actions involved in determining the award fee for the evaluation periods. The PEB will establish lists of subsidiary actions and schedules as necessary to meet the schedule for principal actions.

<b>Action</b>	<b>Schedule</b>
PEB Chairperson and members appointed	Prior to first period and ongoing
PEB Chairperson appoints Performance Monitors and informs the Contractor	Prior to first period and ongoing
Monitors receive orientation and guidance	Prior to first period
Performance Monitors assess performance and discuss results with the Contractor	Ongoing
Performance Monitors submit performance reports to PEB	Not later than (NLT) 15 days after end of period
PEB meets to discuss performance reports and prepare preliminary findings and recommendations	NLT 30 days after end of period
PEB forwards findings and summary recommendations to FDO in the award fee letter	NLT 40 days after end of period
The FDO reviews and signs the award fee letter. CO forwards the award fee letter and executed contract modification to the Contractor	NLT 45 days after end of period
Award fee payment made to the Contractor via contract modification	NLT 60 days after end of period

## **ATTACHMENT E**

### **GENERAL INSTRUCTIONS FOR EVALUATION AND MONITORING OF PERFORMANCE**

1. Performance Monitors will prepare outlines of their assessment plans and coordinate them with the PEB Chairperson. Upon agreement with the PEB Chairperson, the Performance Monitor will discuss the plans with appropriate Contractor personnel to assure complete understanding of the evaluation and assessment process.
2. Performance Monitors will conduct all assessments in an open, objective, and cooperative manner so that a fair and accurate evaluation is obtained. This will ensure that both the Performance Monitor and the Contractor receive accurate and complete information from which to prepare assessments and to plan improvements in performance. Positive performance accomplishments will be emphasized just as readily as negative ones and extraordinary circumstances will be noted in reports.
3. Performance Monitors will discuss their assessments with the appropriate Contractor personnel, noting observed accomplishments, deficiencies, or unusual circumstances. This affords the Contractor an opportunity to clarify possible misunderstandings regarding areas of unsatisfactory performance and to correct or resolve deficiencies in a timely manner.
4. Performance Monitors will conduct their contacts and visits with Contractor personnel within the context of official contractual relationships. They will avoid activities or associations that might cause, or give the appearance of, a conflict of interest on either part.
5. Performance Monitor contacts with Contractor personnel will not be used to instruct, direct, or supervise or control these personnel in the performance of the contract. The role of the monitor is to monitor, assess, and evaluate, not to manage the Contractor's effort.
6. Performance Monitors will document their assessments of Contractor performance in their reports that they will submit to the PEB at the end of each evaluation period. Performance Monitors will be prepared to make verbal reports of their evaluations and assessments as required by the PEB Chairperson.