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ACCOUNTING DATA:

B.4 CONTRACT FUNDING (18-52.232-81 (JUN 1990) Obligated as follows:

PR#

Amount

Fund

WBS

4200533348 \$600,000.00 SCEX22015D 911542.01.12

3. Total Obligated at contract award is $\underline{600,000.00}$

B. 1 TYPE OF CONTRACT

- (a) This contract contains a cost-plus-fixed-fee (CPFF) Core Services requirement as outlined in clause J.1, Attachment A entitled "Statement of Work." This contract also contains an Indefinite Delivery, Indefinite Quantity (IDIQ) requirement as outlined in Attachment A, Statement of Work.
- (b) The contract type for the Core Services requirements under this contract is CPFF. Under the IDIQ portion of the contract, the following types of task orders can be issued; CPFF services and Firm-Fixed-Price (FFP) Construction. Each individual task order issued in accordance with the clauses entitled, "Task Ordering Procedures" and "Supplemental Task Ordering Procedures," will specify the applicable contract type.
- (c) Clause J.1, Attachment Q, Clause Applicability Matrix, specifies what contract clauses contained in this contract apply to the Core Services and the CPFF-type IDIQ task orders and FFP-type IDIQ task orders.

(End of text)

B.2 GSFC 52.211-90 SUPPLIES AND/OR SERVICES TO BE PROVIDED (AUG 2013)

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 Description/Specifications/Statement of Work incorporated Attachment A, Statement of Work.

Item	Description	Reference	Schedule	Delivery Method/Addressee(s)
1	Statement of Work Requirements	Clause J.1 Attachment A Statement of Work (SOW), and as defined in individual task orders	As defined in SOW & individual task orders	See SOW & individual task orders
2	Foreign Travel Requests and Foreign Travel Reports	Clause G.2	Requests - At least 30 days in advance of travel & Upon conclusion of travel	As specified in Contracting Officer's travel approval
3	Task Plans	Clause I.152	15 days after CO request	1 Elestronic Copy
4	Reports of Work	Clause C.2	As Specified in Clause	1 Electronic Copy to Contracting Officer (CO) and Contracting Officer's Representative (COR)
5	Contractor Acquired Property Reports	Clause G.17	As Required per Clause	Electronic Copy to CO & Supply and Equipment Management Officer (SEMO)
б	NASA Financial Management Reports	Clauses G.3 & G.15	Monthly and Quarterly	Electronic Copy to CO, COR, & Resources Analyst (RA)
7	Small Business Subcontracting Plan and Reports	Clause H.12 & I.171	Semi-Annual and Annual basis as specified in clause	Submitted electronically in the Electronic Subcontract Reporting System (eSRS) & the Summary Subcontract Report (Standard Form (SF) 295)

Item	Description	Reference	Schedule	Delivery Method/Addressee(s)
8	Materials Safety Data Sheets	Clause I.160	As Required per Clause	Hard Copy to CO
9	Information Technology (IT) Security Management Plan	Clause I.95	30 days after contract Effective date	2 Copies to CO
10	New Technology Reports	Clauses G.1 & G.9	When Applicable per Clause	As Specified in Clause
11	Reporting of Inventions	Clauses G.1 & G.9	When Applicable per Clause	As Specified in Clause
12	Request for Government Property	Clause G.10	30 days prior to acquire date	As Specified in Clause
13	Safety and Health Reporting	Clauses H.2, H.6 & H.11	Monthly & Quarterly	Electronic Copy to CO, COR, & Code 803.2 Wallops Safety Office & Code 350
14	Reports of NASA/GSFC Vehicles	Clause H.17	15th Day of the Month following Reporting Period	Hard Copy to Code 274, COR,
15	Personal Identity Verification (PIV) Documentation and Reporting	Clause H.9	Monthly as required	Hard Copy to COR & PIV Manager
16	Reserved			
17	Contract Historical Data	Clause H.21	30 days after written CO's request	Electronic Copy to CO
18	Organizational Conflicts of Interest Avoidance Plan	Clause I.175	30 days after contract effective date	Hard Copy to CO
19	NASA Form (NF) 1489	Clause G.17	Monthly	Electronic Copy to CO & SEMO
20	NF 1619	Clause G.17	Annually	Electronic Copy to CO & SEMO
21	Financial Report of NASA Property in the Custody of Contractors (NF 1018)	Clause G.20	Annual report due by October 15 & Final Report as specified	NF1018 Electronic Submission System (NESS)
22	List of Employees Using GSFC Motor Pool Vehicles	Clause G.16	20 days in advance of use	Electronic Copy to CO
23	Contract Phase-Out Plan	SOW Section 3.1.1	90 days prior to the end of the contract	Hardcopy & Electronic Copy to COR
24	Quality Manual	SOW Section 3.1.2	30 days after contract effective date	Electronic Copy to COR
25	Reliability and Quality Assurance Plan	SOW Sections 3.1.3 & 3.1.5	30 days after contract effective date	Electronic Copy to COR
	Government-Industry Data Exchange Program (GIDEP) Notification	SOW Section 3.1.3	As required per Clause	Electronic Copy to COR

Item	Description.	Reference	Schedule	Delivery	
27	Configuration Management Control Plan	SOW Section 3.1.4	30 days after contract effective date	Method/Addressee(s) Electronic Copy to COR	
28	Training and Certification Plan	SOW Section 3.1.7	30 days after contract effective date & Annually	Electronic Copy to COR	
29	Construction of Facilities Plan	SOW Section 3.1.13	By July 31" of each year	Electronic Copy to COR	
30	Balloon Flight Historical Data	SOW Section 3.1,15	Annually or upon	Electronic Copy to COR	
31	Annual NASA Candidate Flight Plan	SOW Section 3.2.1	By July 31st of each year	Hardcopy to COR	
32	Flight Request Packages	SOW Section 3.2.1	By July 31st of each year	Electronic Copy to COR	
33	Nuclear Launch Safety Authorization Notification	SOW Section 3.2.6	3 months prior to	Electronic Copy to COR	
34	Bailoon Flight Summary Document	SOW Section 3.2.11	Within 3 months following a	Electronic Copy to COR	
35	Columbia Scientific Balloon Facility (CSBF) Engineering Plan	SOW 3.3.2	Prior to February 1 of each year	Electronic Copy to COR	
36	Material Inspection and Receiving Reports	Clause E.7	As required per	2 Hard Copies to COR	
37	Real Property Manual	SOW Section 3.1.16	Update Annually	Electronic Copy to COR & CO	
38	NF 1324	Clause G.17	Semi-Annually	Floring C Ch	
19	Service Contract Reporting	Section I	Annually by	Electronic Copy to CO & SEMO	
	- 0	FAR 52,204-14 or FAR 52,204- 15	October 31 and Revisions, if needed by November 30	www.sam.gov	

(End of text)

B.3 ESTIMATED COST AND FIXED FEE FOR CORE REQUIREMENTS

(End of text)

BA 1852.232-81 CONTRACT FUNDING (JUN 1990)

- (a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funda clause, the total amount allotted by the Government to this contract for the Core Requirement is \$98,039. This covers the following estimated period of performance: February 1, 2015 thru February 15, 2015.
- (b) An additional amount of (3) (4) is obligated under this contract for payment of fee for the Core Requirement.

B.5 ESTIMATED COST AND FIXED FEE – INDEFINITÉ DELIVERY INDEFINITE QUANTITY (IDIQ) COST-PLUS-FIXED-FEE (CPFF) TASK ORDERS EXCLUSIVE OF CONSTRUCTION

The estimated cost is \$(To Be Negotiated (TBN) on each individual task order), exclusive of the fixed fee of \$(TBN on each individual task order). The total estimated cost and fixed fee is \$(TBN on each individual task order).

(End of text)

B.6 CPFF TASK ORDER FUNDING

- (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 for the IDIQ Requirements is [b] (c) This covers the following estimated period of performance: TBD.
- (b) An additional amount of \$9,804 is obligated under this contract for payment of fee for the IDIQ Requirements.

(End of text)

B.7 FIRM FIXED PRICE – IDIQ CONSTRUCTION TASK ORDERS

The total firm fixed price is \${To Be Negotiated on each individual firm fixed price construction task order).

(End of text)

B.8 FIRM FIXED PRICE CONSTRUCTION TASK ORDER FUNDING

The total firm fixed price funding of task orders under this contract is \$TBD.

(End of text)

B.9 MINIMUM/MAXIMUM AMOUNT OF SUPPLIES OR SERVICES (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 \$500,000. The maximum amount of supplies or services that may be ordered during the 1-year and 8 months base period of performance of this contract is \$25,000,000. 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 anthority, 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 20% of the original maximum amount.

(End of text)

B.10 SUPPLEMENTAL TASK ORDERING PROCEDURES

- (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 F, to calculate the proposed estimated costs for all task orders issued in accordance with the "Task Ordering Procedure" clause of this contract.
- (b) The Government and Contractor agree that the fixed fee percentage specified in Attachment F shall be used to calculate the fixed fee dollars on all Cost-Plus-Fixed-Fee service task orders issued in accordance with the "Task Ordering Procedure" clause of this contract.
- (c)
 When the Government issues a request for a "task plan" for Construction 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 and other direct costs required to perform the Construction task order requirements. The Contractor shall use only those appropriate fully-loaded labor rates, which may be less than but shall not exceed the rates found in Attachment F, to calculate the proposed price for all Construction task orders issued in accordance with the "Task Ordering Procedure" clause of this contract.

(End of clause)

B.11 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.12 NONPROPOSED COSTS FOR CORE REQUIREMENTS

(a) The total estimated cost of this contract for Core Requirements includes the following estimated costs:

Cost Elements		eriod of mance	Opt	ion 1	Opt	Total Estimate Cost	
	GFY 15^	GFY 16	GFY 17	GFY 18	GFY 19	GFY 20"	
Helium IsoPaks	\$1,160,000	\$1,200,000	\$1,240,000	\$1,290,000	\$1,330,000	\$0	\$6,220,0
Expendable Gases	\$1,431,000	\$2,021,000	\$611,000	\$2,167,000	\$2,034,000	\$616,000	\$8,880,0
Freight	\$155,000	\$382,000	\$383,000	\$409,000	\$378,000	\$223,000	\$1,930,0
Equipment	\$160,000	\$160,000	\$170,000	\$170,000	\$180,000	\$0	\$840,00
Range Expenses	\$196,000	\$1,004,000	\$2,925,000	\$1,073,000	\$992,000	\$820,000	\$7,010,00
Flight Hardware/Flight Electronics	\$906,000	\$1,161,000	\$1,135,000	\$1,242,000	\$1,246,000	\$230,000	\$5,920,00
Ground Support Equipment	\$121,000	\$257,000	\$166,000	\$274,000	\$237,000	\$115,000	\$1,170,00
Materials	\$708,000	\$858,000	\$798,000	\$918,000	\$878,000	\$70,000	\$4,230,00
Services	\$1,226,000	\$1,232,000	\$1,037,000	\$968,000	\$827,000	\$80,000	\$5,370,00
Total Non- Proposed Costs	\$6,063,000	\$8 275 900	\$8,465,000	\$3,511,000	\$8,102.000	\$2,154,000	\$41.570.00

[^]GFY 15 Partial (February 1, 2015 to September 30, 2015)

Note: The following cost element definitions provide examples that may or may not be procured during the life of the contract. See the Statement of Work for additional descriptions/information regarding the identified cost elements.

Helium IsoPaks - Costs associated with the lease of Helium IsoPaks (tube trailers).

Expendable Gases - Costs for compressed gases and cryogens such as: Argon, Carbon Dioxide, Helium, Nitrogen, Purified air, Liquid Helium, Liquid Nitrogen, etc.

<u>Freight</u>—Costs associated with shipping of science, support, and campaign related equipment. Science shipping costs only cover from CSBF to remote, non-domestic launch sites and return. This does not cover costs to ship science to/from science home institutions for domestic missions or to ship any science to/from CSBF for remote, non-domestic launched missions. Those costs are carried by the science users.

Equipment - Costs such as: Instron testers, digital tape recorders, LED scrolling message board, computers and printers, digital communication devices, high power AC sources, spectrum analyzers, rack mount servers, dual output power supplies, digital theodolites, hydraulic jacks, and pickup trucks. This does not include any flight hardware. This would normally include equipment that is not used in direct support of a mission as part of the Ground Support Equipment (GSE), although it may be essential for purposes of qualification, testing, etc.

^{**}GFY 20 Partial (October 1, 2019 to January 31, 2020)

Range Expenses – Costs associated with specific field campaigns (Fort Sumner, NM, Sweden, etc.) such as land and building leases, licenses, taxes and range fees which may include consumables, supplies, and equipment provided by the host range.

Flight Hardware and Flight Electronics—Costs for flight hardware and flight electronics purchases and/or refurbishments such as: test gondolas, parachutes, ripatitches, flight trains, rigging, mechanical terminate fittings, ballast systems, helium valving systems, mechanical parachute separation devices, Universal terminate packages (UTP), Remote Firing Units (RFU), Semi-Automatic Parachute Release (SAPR), Gondola Automatic Parachute Release (GAPR), Consolidated Instrument Packages (CIP), Support Instrumentation Packages (SIP), Miniature Support Instrumentation Packages (Mini-SIP), Micro Instrumentation Package (MIP), Solar Pointing Systems (SPS), Batteries, Transponders, Solar Panels, pyrotechnics, etc.

Ground Support Equipment (GSE) – Cost for procurement or rental of GSE such as: inflation spools, launch support vehicles, telemetry ground stations, telemetry transceivers and antennas, test equipment, cranes, powered industrial trucks, mobile area platforms, Heise gauges, hoses, Tracking and Data Relay Satellite System (TDRSS) simulators, etc. This would normally include such equipment as necessary to support missions.

<u>Materials</u> — Costs for expendable or less durable items such as auto supplies, vehicle fuel, electronics supplies, mechanical supplies, meteorological sounding balloons and pilot balloons, computer software, computer supplies, office supplies, etc.

<u>Services</u> — Costs for routine maintenance on equipment, vehicles, facilities, and computers. Also included are GSA Vehicle leases, medical qualifications, shipping (USPS/FedEX/UPS, etc.), utilities, professional services, and facility security.

(b) These total non-proposed costs for Core Requirements are the Government's best estimate of what the actuals will be. There will be no adjustment in the fee(s) of the contract for Core Requirements should the actuals be different than the total non-proposed cost value for the base period of performance and options 1 and 2, unless a contract modification under the Changes clause of this contract impacts these estimates.

(End of text)

SECTION C OF NNG15WA53C DESCRIPTION/SPECS/WORK STATEMENT

C.1 SCOPE OF WORK

The Contractor shall provide all management, engineering and technical services, balloon flight operations, and administrative support necessary to deliver and/or perform work in accordance with the Clause J.1, Attachment A "Statement of Work," Task Orders Issued, the Contractor's Reliability & Quality Assurance Plan and Quality Assurance Manual, and the reports of work identified in C.2.

(End of text)

C.2 REPORTS OF WORK

- A. Quarterly Progress Reports. The Contractor shall submit separate quarterly progress reports of all work accomplished during each quarter of contract performance. Reports may be in a narrative form and shall be brief and informal in content. They shall also include a section discussing work to be performed during the next Quarter.
- B. Annual Report. The Contractor shall submit an annual report that documents and summarizes the results of the annual contract performance, including recommendations, and conclusions based on the experience and results obtained. The annual report shall include tables, graphs, diagrams, photographs, and drawings, as necessary, to comprehensively explain the results achieved under the contract.
- C. Final Balloon Flight Summary Documents. Refer to NASA FAR Supplement clause 1852.235-70, "Center for AeroSpace Information—Final Scientific and Technical Reports" of this contract. The Contractor shall submit a final balloon flight summary document that documents and summarizes the results of the flight, including recommendations and conclusions based on the experience and results obtained. The document shall include tables, graphs, diagrams, curves, aketches, photographs, and drawings in sufficient detail to explain comprehensively the results achieved under the contract. The document must comply with NPG 2200.2A, "Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information."

NOTE: All reports shall cover baseline and IDIQ work. Quarterly reports shall be submitted by the 10th of the month following the quarter being reported. If the contract is awarded beyond the middle of the quarter, the first quarterly report shall cover the period from award until the end of the following quarter. Annual reports shall be submitted within one (1) month following the end of each year of the contract performance.

One copy of all reports shall be submitted to the Contracting Officer, Code 210.I, and a copy of all reports shall be submitted to the Contracting Officer's Representative (COR), Code 820, these shall be in accordance with electronic submission requirements.

(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

SECTION D OF NNG15WA53C PACKAGING AND MARKING

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

- (a) The Contractor shall comply with NASA Procedural Requirements (NPR) 6000.1, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components", as may be supplemented by the statement of work or specifications of this contract, for all items designated as Class I, II, or III.
- (b) The Contractor's packaging, handling, and transportation procedures may be used, in whole or in part, subject to the written approval of the Contracting Officer, provided (1) the Contractor's procedures are not in conflict with any requirements of this contract, and (2) the requirements of this contract shall take precedence in the event of any conflict with the Contractor's procedures.
- (c) The Contractor must place the requirements of this clause in all subcontracts for items that will become components of deliverable Class I, II, or III items.

SECTION E OF NNG15WA53C INSPECTION AND ACCEPTANCE

E.1 52.246-5 INSPECTION OF SERVICES - COST-REIMBURSEMENT (APR 1984)

- (a) Definition. "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If any of the services performed do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, for no additional fee. When the defects in services cannot be corrected by reperformance, the Government may—
- (1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and
 - (2) Reduce any fee payable under the contract to reflect the reduced value of the services performed.
- (e) If the Contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may—
- (1) By contract or otherwise, perform the services and reduce any fee payable by an amount that is equitable under the circumstances; or
 - (2) Terminate the contract for default.

(End of clause)

E.2 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (52,246-11) (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).
- (b) Reliability and Quality Assurance Plan as identified in B.1 and J.1, Attachment J.

(End of clause)

E.3 RESERVED

E.4 ACCEPTANCE—LOCATION(S) (GSFC 52.246-93) (APR 2008)

The Contracting Officer or authorized representative will accomplish acceptance at NASA/Goddard Space Flight Center/Wallops Flight Facility or other locations as specified in the Statement of Work and individual Task Orders. 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 suthorized.

SECTION E OF NNG15WA53C INSPECTION AND ACCEPTANCE

E.5 INSPECTION SYSTEM RECORDS (GSFC 52.246-102) (OCT 1988)

The Contractor shall maintain records evidencing inspections in accordance with the Inspection clause of this contract for three (3) year after delivery of all items and/or completion of all services called for by the contract.

(End of clause)

E.6 MATERIAL INSPECTION AND RECEIVING REPORT NOT REQUIRED (GSFC 52.246-94) (APR 1989)

NASA FAR Supplement clause 1852,246-72 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:

All plans, reports, manuals, documents, and lists.

(End of clause)

E.7 MATERIAL INSPECTION AND RECEIVING REPORT (1852.246-72) (AUGUST 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 2 copies, an original and 1 copies.

(b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 1846.6.
The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope, which shall be securely attached to the exterior of the package in the most protected location.
(c) When more than one package is involved in a shipment, the Contractor shall list on the DD Form 250, as additional information, the quantity of packages and the package numbers. The Contractor shall forward the DD Form 250 with the lowest numbered package of the shipment and print the words "CONTAINS DD FORM 250" on the package.

(End of clause)

E.S 52.246-12 INSPECTION OF CONSTRUCTION (MAR 1996)

E.9 CLAUSES INCORPORATED BY REFERENCE - SECTION E

Clause E.8 of this Section is 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 address contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract

(End of text)

SECTION F OF NNG15WA53C DELIVERIES OR PERFORMANCE

F.1 52.242-15 STOP-WORK ORDER (AUG 1989)

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)

FA FERIOD OF PERFORMANCE/EFFECTIVE ORDERING PERIOD

The period of performance of this contract shall be for a period of twenty (20) months from the contract effective date of February 1, 2015. The effective ordering period of the IDIQ portion of this contract coincides with the core services period of performance.

(End of text)

F.5 OPTION TO EXTEND SERVICES

In accordance with FAR clause 52,217-9, "Option to Extend the Term of the Contract" of this contract, the contracting officer may exercise the following option(a) by issuance of a unilateral contract modification. Options exercised shall be in accordance with the following:

Option	Period	Core Services Amount	Maximum IDIQ Amount
1	Twenty (20) months after the effective date of the contract through twenty-four (24) months thereafter	Estimated Cost (2) (4) Fixed Fee Total CPFF	\$28,000,000
2 .	Forty-four (44) months after the effective date of the contract through sixteen (16) months thereafter	Estimated Cost (D) (4) Fixed Fee Total CPFF	\$14,000,000

(End of text)

F.6 PLACE OF PERFORMANCE

The services specified by this contact shall be performed at the following location(s):

Columbia Scientific Balloon Facilities (CSBF) in Palestine, Texas, and Fort Summer, New Mexico, and at remote launch sites to support the balloon program; Engineering services to support NASA's Balloon Program shall be performed at GSFC/Wallops Flight Facility, Wallops Island, at CSBF in Palestine, Texas, and at the Contractor's facilities.

(End of text)

F.7 RESERVED

F.8 CLAUSES INCORPORATED BY REFERENCE - SECTION F

Clauses F.1 through F.3 of this Section is 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 address contained in clause 52.252-2, Clauses incorporated by Reference, of this contract.

(End of text)

- G.1 1852,227-70 NEW TECHNOLOGY (MAY 2002)
- G.2 1852.242-71 TRAVEL OUTSIDE OF THE UNITED STATES (DEC 1988)
- G.3 1852.242-73 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (NOV 2004)
- G.4 1852.223-71 FREQUENCY AUTHORIZATION (DEC 1988)
- G.5 1852.227-86 COMMERCIAL COMPUTER SOFTWARE LICENSING (DEC 1987)
- G.6 1852,216-75 PAYMENT OF FIXED FEE (DEC 1988)

The fixed fee shall be paid in monthly installments based upon the percentage of completion of work as determined by the Contracting Officer.

(End of clause)

G.7 52.216-103 SUBMISSION OF VOUCHERS FOR PAYMENT (JUNE 2014)

- (a) Except for classified vouchers, the Contractor shall submit interim and final cost vouchers electronically using the DOD Wide Area Work Flow (WAWF) system. Vouchers will be reviewed by DCAA based upon a risk-based sampling review process.
 - (1) To access the DOD WAWF system, the contractor shall be required to have a designated electronic business point of contact in the System for Award Management at https://www.acquisition.gov and be registered to use the DOD WAWF at https://wawf.eb.mil following the step-by-step procedures for self-registration available at this web site.
 - (2) NASA voucher payment information can be obtained at the NASA Shared Services Center (NSSC) Vendor Payment information web site at: https://www.nssc.nasa.gov/vendorpayment. For technical WAWF help, contact the WAWF helpdesk at 1-866-618-5988. Please contact the NSSC Customer Contact Center at 1-877-NSSC123 (1-877-677-2123) with any additional questions or comments.
 - (3) For interim cost voucher submissions, the vendor shall use the "Cost Voucher" document type in WAWF. In addition, the vendor shall change the contract type to "Non-DoD Contract (FAR)".

The Activity address codes to be populated in WAWF for submission of vouchers under this contract are (extension fields will not be populated):

- 8. Paying Office Activity Address Code: 803112 (NSSC)
- b. Admin Office Activity Address Code: 803249
- c. Ship To Code: 803367
- d. DCAA DoD Activity Address Code (DCAA DoDAAC): : DCAA, Shenandoah Brach Office, P.O. Box 8726, Reston VA 20195 "Jessica.bala@dcaa.mtl
- e. Service Approver DoDAAC: 803249
- f. If submitting "Final Cost Voucher," add Service Approver DoDAAC:803249

- (4) The Contractor shall ensure that the payment request includes appropriate contract line item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation to support each payment request.
- (5) The Contractor shall enter the e-mail address identified below in the "Send Additional Email Notifications" field of WAWF once a document is submitted in the system. mickey.m.merrit@nasa.gov

G.8 INVOICES FOR FIXED PRICE CONSTRUCTION TASK ORDERS

(a) Invoices shall be prepared in accordance with the Prompt Payment for Construction Contracts clause of this contract. Invoices shall be submitted to the following "Designated Billing Office":

NASA/Goddard Space Flight Center Wallops Flight Facility Code 820 Wallops Island, VA 23337

(b) At the time of submittal to the billing office, an information copy of each invoice shall be submitted to:

NASA/Goddard Space Flight Center Wallops Flight Facility Code 210.I/Attn: Mickey Marritt Wallops Island, VA 23337

(c) For purposes of the Prompt Payment for Construction Contracts clause, the "Designated Payment Office" is:

NASA Shared Service Center (NSSC)
Pinancial Management Division (FMD) — Accounts Payable
Building 1111, C Road
Stennis Space Center, MS 39529

(End of text)

G.9 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (JULY 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:

Title	Office Code	Address (including zip code)
New Technology Representative	504	Innovative Partnerships Program Office/Goddard Space Flight Center, Greenbelt., MD 20771
Patent Representative	140.1	Goddard Space Flight Center Representative, 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 PROPERTY (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) - ALT I (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:

NASA Procedural Requirements (NPR) 4100.1, NASA Materials Inventory Management Manual; NASA Procedural Requirements (NPR) 4200.1, NASA Equipment Management Procedural Requirements;

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

Requirements;

Notify the cognizant property custodian, COTR, and the Installation Security Officer immediately if theft of Government property is suspected or property cannot be located

Identify Government property equipment that is no longer considered necessary for performance of the contract.

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.

Do not relocate Government property within Government premises or remove Government property from Government premises without written approval.

Ensure that Government property, including property leased to the Government, is used only for the purposes of performing the contract.

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 shall not utilize the installation's central receiving facility for receipt of contractor-acquired property. However, the Contractor shall provide listings suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.
- (ii) The Contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area.
- (iii) The Contractor shall establish a record 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 if checked:
- X (1) Office space, work area space, and utilities. Government telephones are available for official purposes only.
 - X (2) Office furniture.
 - X (3) Property listed in Attachments B (Parts 1, 2 and 3).
- (i) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records.
- (ii) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

- (4) Supplies from stores stock.
- X (5) Publications and blank forms stocked by the installation.

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

- X (7) Installation service facilities: Motor Pool and IT Services through the Agency Consolidated Enduser Services (ACES) contract
- X (8) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.
- X (9) Cafeteria privileges for Contractor employees during normal operating hours.

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

(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 1852.245-74 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 Acrospace Parts Using Direct Part Marking Methods/Techniques, and NASA Standard (NASA-STD) 6002, Applying Data Matrix Identification Symbols on Acrospace 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:

GSFC/Wallops Flight Facility Building 19, Code 200C Wallops Island, VA 23337

(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.13 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.14 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.
- 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.

G.15 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 Attachments E and K of Section J of this contract.
- (2) As stated in NPR 9501.2E, NASA strongly encourages electronic contractor coat 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.I E-Mail: mickey.m.merritt@nasa.gov

Contracting Officer's Representative, 820 E-Mail:Janet.F.Letchworth@masa.gov

Resources Analyst, Code 820 E-Mail: jennifer.l.mcintyre@nasa.gov

Regional Finance Office Cost Team, Code 155.2 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.16 GOVERNMENT PROVIDED MOTOR VEHICLES (GSFC 52.245-91) (AUG 2008)

- (a) Authorized users. The installation accountable property and services listed in NASA FAR Supplement clause 1852.245-71 include the use of GSFC motor pool vehicles. The Contractor shall submit to the Contracting Officer, at least 20 days in advance, a list of employees intended to use the vehicles. The list shall include the type and class of State driver's license that each employee possesses. After review of the list, the Contracting Officer will provide the list to the Greenbelt Motor Pool Dispatch Office, Code 279. The motor pool dispatcher will use the list to ensure that only Contractor employee(s) on the Contracting Officer's approved list are provided vehicles and will confirm that the Contractor employee has a valid State license for the type of vehicle being requested. Any changes to the list must also be submitted to the Contracting Officer.
- (b) Restrictions and conditions. The following shall apply to the use of Government provided motor vehicles:
 - (1) Title 41 CFR 102-34.230. Also, home to work/work to home transportation is not authorized.
 - (2) The Motor Vehicle Safety requirements stated in subchapter 3.2 of NPR 8715.3, NASA General Safety Program Requirements.
 - (3) The use of hand-held wireless (cellular) phones is prohibited when driving motor vehicles

owned, leased, or rented by the Federal Government.

(End of clause)

G.17 REPORTS OF CONTRACTOR ACQUIRED GOVERNMENT PROPERTY (GSFC 52.245-93) (DEC 2007)

Refer to subparagraph (b)(1)(i) of NASA FAR Supplement clause 1852.245-71, "Installation Accountable Government Property—Alternate I" of this contract.

- (a) Definition. "Controlled equipment" means all equipment with an acquisition cost of \$5,000 or more, that has an estimated service life of 2 years or more, which will not be consumed or expended in an experiment, and selected items of equipment with an acquisition cost less than \$5,000 that are designated, and identified as sensitive by Appendix C of NPR 4200.1 and by the GSFC Information and Logistics Management Division, Supply and Equipment Management Branch, Code 273.
- (b) Property, regardless of value, shall not be purchased on the account of the Government unless authorized by the terms of the contract or approved by the Contracting Officer, including compliance by the contractor with the Subcontracts clause of this contract. Further, any purchase of equipment shall not be made until the equipment has been screened though the NASA Equipment Management System (NEMS) in accordance with NASA FAR Supplement clause 1852,245-70.
- (c) Immediately after the purchase of any controlled equipment, the Contractor shall submit a GSFC Form 20-4, Shipping Document, to the GSFC Supply and Equipment Management Branch, Code 273, for the purpose of entry of the controlled equipment data into NEMS. A copy of the GSFC Form 20-4, shall also be provided to the GSFC General Accounting Department, General Ledger Section, Code 157, within 5 working days. The GSFC Form 20-4, or other form acceptable to the GSFC Supply and Equipment Management Branch, must contain all of the data elements necessary to establish accountability, including both the contract number and the Contractor's purchase order number under which the equipment was purchased.
- (d) The Contractor shall submit, on a quarterly basis, a report of all property acquired by the Contractor under the contract during the reporting period and to which the Government has title, regardless of acquisition value. This report must be submitted within 30 calendar days after the end of each calendar year quarter; i.e., January 30, April 30, July 30, and October 30. Submittal shall be to the Contracting Officer and to the Supply and Equipment Management Officer, Code 273. For acquisitions of controlled equipment, the list shall include item description, acquisition date, acquisition value, manufacturer, model, serial number, location of the items, and GSFC property number. For all other acquisitions, the list shall include item description, quantity, cost, and location of the items. Controlled equipment previously reported on GSFC Form 20-4's or on other forms shall be included in the quarterly reports. Negative reports shall be submitted, if applicable.
- (e) If the contractor maintains a stock inventory of installation-accountable Government property with a minimum average value of \$75,000, the Contractor shall comply with NPR 4100.1D. The Contractor shall submit a monthly NASA Form 1489, Analysis of Physical Inventory Report; NASA Form 1324, Semi-annual Report of Personal Property Operations (for which periods end March 31 and September 30) and NASA Form 1619, Physical Inventory of Materials Annual Report (for which period ends September 30), within 5 working days of the end of the reporting period. The NASA Forms 1489, 1324 and 1619, should be submitted to the Supply and Equipment Management Officer, Code 273, with a copy to the Contracting Officer. A copy of NASA Form 1489 should be submitted to Code 157.2, General Ledger.

(End of clause)

G.18 PROPERTY CLAUSE APPLICABILITY-ON-SITE AND OFF-SITE (GSFC 52.245-96) (APR 2008)

- (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-aite 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.19 INDIVIDUALS AUTHORIZED TO ISSUE ORDERS

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

Contracting Officer, Code 210

(End of text)

G.20 18\$2.245-73 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 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 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: 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 withhold 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.21 FINAL SCIENTIFIC AND TECHNICAL REPORTS (1852.235-73) (DECEMBER 2006)

(a) The Contractor shall submit to the Contracting Officer a final report that summarizes the results of the entire contract, including recommendations and conclusions based on the experience and results obtained. The final report should include tables, graphs, diagrams, curves, aketches, photographs, and drawings in sufficient detail to explain comprehensively the results achieved under the contract.

- (b) The final report shall be of a quality suitable for publication and shall follow the formatting and stylistic guidelines contained in NPR 2200.2A, Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information. Electronic formats for submission of reports abound be used to the maximum extent practical. Before electronically submitting reports containing scientific and technical information (STI) that is export-controlled or limited or restricted, contact the Contracting Officer to determine the requirements to electronically transmit these forms of STI. If appropriate electronic safeguards are not available at the time of submission, a paper copy or a CD-ROM of the report shall be required. Information regarding appropriate electronic formats for final reports is available at http://www.sti.nasa.gov.under "Publish STI Electronic File Formats."
- (c) The last page of the final report shall be a completed Standard Form (SF) 298, Report Documentation Page.
- (d) In addition to the final report submitted to the Contracting Officer, the Contractor shall concurrently provide to the Center STI/Publication Manager and the NASA Center for AeroSpace Information (CASI) a copy of the letter transmitting the final report to the Contracting Officer. The copy of the letter shall be submitted to CASI at the address listed at http://www.sti.nasa.gov under the "Get Help" link.
- (e) In accordance with paragraph (d) of the Rights in Data—General clause (52,227-14) of this contract, the Contractor may publish, or otherwise disseminate, data produced during the performance of this contract, including data contained in the final report, and any additional reports required by 1852,235-74 when included in the contract, without prior review by NASA. The Contractor is responsible for reviewing publication or dissemination of the data for conformance with laws and regulations governing its distribution, including intellectual property rights, export control, national security and other requirements, and to the extent the contractor receives or is given access to data necessary for the performance of the contract which contain restrictive markings, for complying with such restrictive markings. Should the Contractor seek to publish or otherwise disseminate the final report, or any additional reports required by 1852,235-74 if applicable, as delivered to NASA under this contract, the Contractor may do so once NASA has completed its document availability authorization review, and availability of the report has been determined.

(End of clause)

G.22 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (1852.245-76) (JANUARY 2011).

For performance of work under this contract, the Government will make available Government property identified in Attachment B (Part 4 Flight Hardware) of this contract 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 facility, launch campaign sites, 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.23 RESERVED

G.24 RECORDS AND DISPOSITION REPORTS FOR GOVERNMENT PROPERTY WITH POTENTIAL HISTORIC OR SIGNIFICANT REAL VALUE (1852.245–79) (JANUARY 2011)

- (a) In addition to the property record data required by the clause at FAR 52.245-1, Government Property as incorporated in this contract, Contractor records of all Government property under this contract shall—
 - (1) Identify the projects or missions that used the items;
 - (2) Specifically identify items of flown property;
- (3) When known, associate individual items of property used in space flight operations with the using astronaut(s); and

- (4) Identify property used in test activity and, when known, the individuals who conducted the test.
- (b) The Contractor shall include this information within item descriptions—
 - (1) On any Standard Form 1428, Inventory Schedule:
 - (2) In automated disposition systems:
 - (3) In any other disposition related reports; and
 - (4) In other requests for disposition instructions.
- (c) The Contractor shall not remove NASA identification or markings from Government property prior to or during disposition without the advanced written approval of the Plant Clearance Officer.

(End of clause)

G.25 OCCUPANCY MANAGEMENT REQUIREMENTS (1852.245-82) (JANUARY 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.26 CLAUSES INCORPORATED BY REFERENCE - SECTION G

Clause(s) G.1 through G.5 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 address contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of text)

- H.1 1852.208-81 RESTRICTION ON PRINTING AND DUPLICATING (OCT 2002)
- H.2 1852.223-75 MAJOR BREACH OF SAFETY OR SECURITY (FEB 2002) -- ALT I (FEB 2006)
- H.3 1852.228-70 AIRCRAFT GROUND AND FLIGHT RISK (OCT 1996)
- H.4 1852.228-71 AIRCRAFT FLIGHT RISKS (DEC 1988)
- H.5 1852.244-70 GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM (APR 1985)

H.6 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 emitted 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(a) warrants use of the clause.
- (h) The Contractor (or subcontractor or supplier) may exclude the provisions of paragraph (g) from its solicitation(a) 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.7 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUGUST 1992) ALT 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
Thankagiving 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 diamissed. 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 (e) 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.8 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 are hereby incorporated by reference in this resulting contract.

(End of clause)

H.9 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 N, 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 N 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 ensite, 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.10 GSFC 52,211-95 GOVERNMENT PREMISES—PHYSICAL ACCESS AND COMPLIANCE WITH PROCEDURES (APR 2013)

- (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/nolicy.html

- (2) GSFC Workplace Violence Announcement
 - https://gs279gdmaias.gs/c.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 Házard 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.11 SAFETY AND HEALTH-ADDITIONAL REQUIREMENTS (GSFC 52,223-91) (JUN 2014)

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 Wallops Flight Facility Safety Office, Code 803, Telephone 757-824-2559 and to the Contracting Officer (CO). This verbal notification should be confirmed in writing via E-Mail to the CO and Robert L. Nock@mass.gov and entered into the NASA Mishap Information System (NMIS) 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 NMIS. Specify incidents (mishaps and close calls) and

man-hours worked/month. Access to NMIS must be requested through the NASA Access Management System (NAMS) within 30 days of the contract effective date at https://idmax.nasa.gov. Until access is approved, use the Contractor Monthly Statistics Report Template available at https://safety1st.gsfc.nasa.gov under Contractor Safety and e-mail the completed form to Robert L. Nock@masa.gov.

(End of clause)

H.12 SMALL BUSINESS SUBCONTRACTING PLAN AND REPORTS (GSFC 52.219-90) (DEC 2013)

a. Subcontracting Plan (Contractor)

FAR clause 52.219-9, "Small Business Subcontracting Plan" is included in this contract. The agreed to Subcontracting Plan required by the clause is included as an attachment to the contract.

b. Subcontracting Plan (Subcontractors)

In accordance with FAR clause 52.219-9, the Contractor must require that certain subcontractors adopt a plan similar to the Plan agreed to between the Contractor and the Government.

c. Individual Subcontract Reports (ISRs)

The Contractor shall prepare and submit their Individual Subcontract Reports (ISRs) (formerly known as the Standard Form 294), in accordance with the instructions listed in the Electronic Subcontract Reporting System (eSRS), available at http://esrs.gov.

ISRs must be submitted electronically in eSRS on a semi-annual basis. This report must be received no later than April 30 and October 30 each year for the reporting periods ending March 31 and September 30, respectively. Reports are required when due, regardless of whether there has been any subcontracting activity since the inception of the contract or since the last reporting period.

A final Individual Subcontract Report (ISR) must be submitted after contract completion. The final ISR submittal must be received no later than the due date for what would have been the next semi-annual report.

d. Summary Subcontract Reports (SSRs)

The Contractor shall prepare and submit Summary Subcontract Reports (SSRs)(formerly known as the Standard Form 295), in accordance with the instructions listed in the Electronic Subcontract Reporting System (eSRS), available at http://esrs.gov and in accordance with NASA FAR Supplement clause 1852.219-75, "Small Business Subcontracting Reporting" of this contract.

The SSRs must be submitted electronically in eSRS on an annual basis. This report must be submitted no later than October 30 each year for the twelve month period ending September 30.

e. Subcontractor Reporting

FAR clause 52.219-9 and NASA FAR Supplement clause 1852.219-75 require that the Contractor ensure that ISR and SSR reports are submitted by those subcontractors that have been required to adopt a Subcontracting Plan under the terms of the clause. These subcontractor reports must be submitted as required by paragraphs (c) and (d) above. The reports may be submitted through the Contractor or submitted directly. Regardless, the Contractor is responsible for ensuring proper and timely submittal of the required reports.

(End of clause)

H.13 APPLICABILITY OF RIGHTS IN DATA – SPECIAL WORKS (GSFC 52.227-93) (MAR 2008)

The "Rights in Data - Special Works" clause of this contract applies to the following aspects (or items):

Any data requested by the Government for any legitimate government use.

(End of clause)

H.14 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.15 LIMITATION OF FUTURE CONTRACTING (1852.209-71) (DEC 1988)

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

(End of clause)

H.16 EXPORT LICENSES (1852,225-70) (FEBRUARY 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 GSFC/Wallops Flight Facility or Columbia Scientific Balloon Facility, 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.

(End of clause)

H.17 REPORT OF NASA-GSFC VEHICLES (GSFC 52.251-90) (JUL 2006)

The Contractor shall prepare a monthly report using GSFC Form 26-5 "Report of NASA/GSFC Vehicles" for each general purpose motor vehicle that is assigned and provided to the Contractor under the terms of this contract. "Assigned" means provided to the Contractor for a period of 30 or more consecutive days.

The report shall be submitted to the Logistics and Transportation Management Branch, Code 274, with a copy to the Contracting Officer. The report(s) are due no later than the 15th day of the month following the reporting month.

(End of clause)

H.18 CONSTRUCTION OF FACILITIES

In performance of this contract effort, the Contractor may be required to manage construction activities, in accordance with J.1, Attachment A Statement of Work, Section 3.1.12. Such effort shall be directed by NASA through issuance of Task Orders in accordance with Clause L152, Task Ordering Procedure. The Contractor shall ensure adherence to the Federal Acquisition Regulation (FAR) Part 28 and NASA FAR Supplement (NFS) Part 1828 relative to payment of bid guarantees, bonds (performance and/or payment), sureties, or insurance, as applicable.

(End of text)

H.19 CROSS-WAIVER OF LIABILITY CONCERNING INTERNATIONAL AGREEMENTS

- (a) The objective of this clause is to provide for a cross-waiver of liability in the interest of encouraging participation in the area of scientific ballooning.
- (b) For purposes of this clause:
- (1) The term "the Contractor" means the person or entity who is a party to this contract, other than the United States Government and NASA.
- (2) The term "Partner State" means the Government of any foreign state or country which signs an agreement with the United States Government or NASA for participation in scientific ballooning activities. It includes any cooperating agency of a Partner State.
- (3) The term "Scientific Ballooning Operations" means all launch vehicle activities and payload activities on Earth, in the atmosphere, in near space, or in transit between Earth, the atmosphere and/or near space related to scientific ballooning, it includes, but is not limited to (i) research, design, development, test; manufacture, assembly, integration, operation, or use of launch: or transfer vehicles or a payload, 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.
- (4) The term "launch vehicle" means an object (or any part thereof) intended for launch.
- (5) The term "Payload" means all property to be flown on the balloon platform.

- (6) The term "related entity" means (i) a Contractor or Subcontractor of a Partner State, of the United States Government or of the Contractor, at any tier, (ii) a user, customer, or other associate of a Partner State or of the United States Government, at any tier. The terms Contractors and Subcontractors include suppliers of any kind.
- (7) The term "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 profit; (iv) other direct, indirect or consequential damage-
- (c) The Contractor recognizes that the United States Government or NASA may enter into international agreements, contracts or otherwise, with a Partner State for Scientific Ballooning Operations. As a condition of such agreements, NASA may agree that neither the United States or its related entities or certain of its related entities, nor the Partner State or its related entities or certain of its related entities will make any claims against the others. Accordingly, if such an international agreement, contract or otherwise, is entered into by the United States Government or NASA, the Contractor agrees that they shall not make any claims, based on damage arising from: Scientific Ballooning Operations, against any of the following parties that are covered by a cross-waiver in any such international agreement: (1) a Partner State; (2) a related entity of a Partner State; (3) except as provided for in paragraph (f) (1) below, a related entity of the United States:) Government; and (4) except as provided for in paragraph (f) (1) below, employees of any of the entities identified in paragraphs (c) (1) through (3) above.
- (d) In addition, the Contractor agrees, as necessary, to extend the cross-waiver of liability as set forth in paragraph (c) above to its own related entities by requiring them, by contract or otherwise, to agree to waive all claims, based on damage arising out of Scientific Ballooning Operations, against the entities or persons identified in paragraphs (c)(1) through (c)(4) above, except as provided for in paragraph (f)(1).
- (e) This cross-waiver in paragraphs (c) and (d) above shall apply only if the person, entity, or property causing the damage is involved in Scientific Ballooning Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Scientific Ballooning Operations. The cross-waiver in paragraphs (c) and (d) above applies to any claims for damage, whatever the legal basis for such claims, including negligence.
- (f) Not withstanding the other provisions of this clause, the cross-waiver of liability shall not be applicable to (1) claims between (i) the United States Government and the Contractor or between the United States Government and the Contractor's contractors or subcontractors at any tier; (ii) the Contractor and its related entities; or (iii) the Contractor's related entities; (2) claims made by a natural person, his/her estate, survivors, or subrogees for injury or death of such natural person; (3) claims for damage caused by willful misconduct; and (4) intellectual property claims.
- (g) Nothing in this clause shall be construed to create the basis for a claim or suit where none would otherwise exist.
- (h) This clause, including this paragraph (h), shall be included in all subcontracts hereunder, appropriately modified to reflect the relationship of the parties, where work is to be performed in support of Scientific Ballooning Operations.

(End of text)

H.20 1852,243-72 EQUITABLE ADJUSTMENTS (APR 1998)

(a) The provisions of all other clauses contained in this contract which provide for an equitable adjustment, including those clauses incorporated by reference with the exception of the "Suspension of Work" clause (FAR 52.242-14), are supplemented as follows:

Upon written request, the Contractor shall submit a proposal for review by the Government. The proposal shall be submitted to the contracting officer within the time limit indicated in the request or any extension

SECTION H OF NNG15WA53C SPECIAL CONTRACT REQUIREMENTS

thereto subsequently granted. The proposal shall provide an itemized breakdown of all increases and decreases in the contract for the Contractor and each subcontractor in at least the following detail: material quantities and costs; direct labor hours and rates for each trade; the associated FICA, FUTA, SUTA, and Workmen's Compensation Insurance; and equipment hours and rates.

(b) The overhead percentage cited below shall be considered to include all indirect costs including, but not limited to, field and office supervisors and assistants, incidental job burdens, small tools, and general overhead allocations. "Commission" is defined as profit on work performed by others. The percentages for overhead, profit, and commission are negotiable according to the nature, extent, and complexity of the work involved, but in no case shall they exceed the following ceilings:

	Overhead (Percent)	Profit (Percent)	Commission
To Contractor on work performed by other than its own forces	******	Non-spinore	10%
To first tier subcontractor on work performed by its subcontractors	Albertraking	Regression	10%
To Contractor and/or subcontractors on work performed with their own forces	10% 10%	and the same	

- (c) Not more than four percentages for overhead, profit, and commission shall be allowed regardless of the member of subcontractor tiers.
- (d) The Contractor or subcontractor shall not be allowed overhead or commission on the overhead, profit, and/or commission received by its subcontractors.
- (e) Equitable adjustments for deleted work shall include credits, limited to the same percentages for overhead, profit, and commission in paragraph (b) of this clause.
- (f) On proposals covering both increases and decreases in the amount of the contract, the application of the overhead, profit, and commission shall be on the net change in direct costs for the Contractor or the subcontractor performing the work.
- (g) After receipt of the Contractor's proposal, the contracting officer shall act within a reasonable period, provided that when the necessity to proceed with a change does not permit time to properly check the proposal, or in the event of a failure to reach an agreement on a proposal, the contracting officer may order the Contractor to proceed on the basis of the price being determined at the earliest practicable date. In such a case, the price shall not be more than the increase or less than the decrease proposed.

(End of clause)

H.21 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 (FTE's), average 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 casure 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.

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(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 M, CONTRACT HISTORICAL DATA, of this contract.

(End of clause)

H.22 GOVERNMENT PROPERTY—COMPLIANCE WITH SAFETY STANDARDS (GSFC 52,223-92) (NOV 2009)

This contract involves the use of Government-furnished property or installation provided property. If any of the property does not conform to applicable Federal, state, or local safety standards, the Contractor shall promptly notify the Contracting Officer in writing (with a copy to the GSFC Safety Officer, Code 350).

(End of clause)

H.23 CLAUSES INCORPORATED BY REFERENCE - SECTION H

Clause(s) H.1 through H.5 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 address contained in clause \$2.252-2, Clauses Incorporated by Reference, of this contract.

(End of text)

- L1 52.202-1 DEFINITIONS (JAN 2012)
- L2 52.203-3 GRATUITIES (APR 1984)
- L3 52.203-5 COVENANT AGAINST CONTINGENT FEES (MAY 2014)
- L4 52,203-6 RESTRICTION ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)
- L5 52.203-7 ANTI-KICKBACK PROCEDURES (MAY 2014)
- L6 52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (MAY 2014)
- L7 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (MAY 2014)
- 1.8 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (OCT 2010)
- L9 52.203-13 CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (APR 2010)
- I.10 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON POSTCONSUMER FIBER CONTENT PAPER (MAY 2011)
- I.11 52.203-17 CONTRACTOR EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIREMENTS TO INFORM EMOLOYEES WHISTLEBLOWER RIGHTS (APR 2014)
- I.12 52.204-15 SERVICE REPORTING REQUIREMENTS FOR INDEFINITE-DELIVERY CONTACTS (JAN 2014)
- L13 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011)
- L14 52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (JUL 2013)
- L15 52.204-13 SYSTEM FOR AWARD MANAGEMENT MAINTENANCE (JUL 2013)
- L16 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (AUG 2013)
- L17 52.211-5 MATERIALS REQUIREMENTS (AUG 2000)
- L18 52.215-2 AUDIT AND RECORDS NEGOTIATION (OCT 2010)
- L19 52.215-8 ORDER OF FRECEDENCE UNIFORM CONTRACT FORMAT (OCT 1997)
- L20 52.215-11 PRICE REDUCTION FOR DEFECTIVE CERTIFIED COST OR PRICING DATA-MODIFICATIONS (AUG 2011)
- L21 52.215-13 SUBCONTRACTOR CERTIFIED COST OR PRICING DATA MODIFICATIONS (OCT 2010)
- L22 52.215-14 INTEGRITY OF UNIT PRICES (OCT 2010)

L23 52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JULY 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---

L24 52.222-17 NONDISPLACEMENT OF QUALIFIED WORKERS (JAN 2013)

L25 52.215-21 REQUIREMENTS FOR CERTIFIED COST OR PRICING DATA AND DATA OTHER THAN CERTIFIED COST OR PRICING DATA - MODIFICATIONS (OCT 2010)

L26 52.215-23 LIMITATIONS ON PASS-THROUGH CHARGES (OCT 2009)

L27 52,216-8 FIXED FEE (JUN 2011)

L28 52.216-7 ALLOWABLE COST AND PAYMENT (JUN 2013) [Paragraph (a)(3) on the "30th"

L29 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2014)

L30 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JUL 2013) (DEVIATION)-ALTERNATE II (OCT 2001)

L31 52.219-16 LIQUIDATED DAMAGES - SUBCONTRACTING PLAN (JAN 1999)

1.32 52.204-14 SERVICE CONTRACT REPORTING REQUIREMENTS (JAN 2014)

L33 52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

L34 52,222-3 CONVICT LABOR (JUN 2003)

1.35 52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION (MAY 2014)

I.36 52.222-19 CHILD LABOR—COOPERATION WITH AUTHORITIES AND REMEDIES (MAY 2014)

L37 52,222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

1.38 52.222-26 EQUAL OPPORTUNITY (MAR 2007)

1.39 52.222-29 NOTIFICATION OF VISA DENIAL (JUN 2003)

L40 52.222-35 EQUAL OPPORTUNITY FOR VETERANS (JUL 2014)

1.41 52.222-36 EAUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES (JUL 2014)

L42 52.222-37 EMPLOYMENT REPORTS ON VETERANS (JUL 2014)

L43 52.222-41 SERVICE CONTRACT LABOR STANDARDS (MAY 2014)

I.44 52.223-2 AFFIRMATIVE PROCUREMENT OF BIOBASED PRODUCTS UNDER SERVICE AND CONSTRUCTION CONTRACTS (SEPT 2013) FILL-IN (d)

L45 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (MAY 2011) – ALTERNATE I (MAY 2013) AND ALTERNATE II (MAY 2013)

1.46 52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

- L47 52.223-10 WASTE REDUCTION PROGRAM (MAY 2011)
- L48 52.223-12 REFRIGERATION EQUIPMENT AND AIR CONDITIONERS (MAY 1995)
- L49 52.223-17 AFFIRMATIVE PROCUREMENT OF EPA-DESIGNATED ITEMS IN SERVICE AND CONSTRUCTION CONTRACTS (MAY 2008)
- L50 52.223-15 ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS (DEC 2007)
- L51 52.223-18 ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING (AUG 2011)
- L52 52.225-1 BUY AMERICAN SUPPLIES (MAY 2014)
- L53 52,225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)
- L54 52,225-14 INCONSISTENCY BETWEEN ENGLISH VERSION AND TRANSLATION OF CONTRACT (FEB 2000)
- L55 52,227-1 AUTHORIZATION AND CONSENT (DEC 2007)
- 1.56 \$2,227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)
- L57 52.227-11 PATENT RIGHTS—OWNERSHIP BY CONTRACTOR (MAY 2014) AS MODIFIED BY NASA FAR SUPPLEMENT 1852.227-11
- L58 52.227-14 RIGHTS IN DATA—GENERAL (MAY 2014) ALT II (DEC 2007) and ALT V (DEC 2007) AS MODIFIED BY NASA FAR SUPPLEMENT 1852.227-14; ALT II modified as follows:
 - (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) Any Government purpose.
- 1.59 52.228-7 INSURANCE LIABILITY TO THIRD PERSONS (MAR 1996)
- I.60 52.229-10 STATE OF NEW MEXICO GROSS RECEIPTS AND COMPENSATING TAX (APR 2003)
- L61 52.230-2 COST ACCOUNTING STANDARDS (MAY 2014)
- L62 52.230-6 ADMINISTRATION OF COST ACCOUNTING STANDARDS (JUN 2010)
- L63 52.232-9 LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)
- L64 52.232-17 INTEREST (MAY 2014)
- L65 52,232-22 LIMITATION OF FUNDS (APR 1984)
- 1.66 52.232-23 ASSIGNMENT OF CLAIMS (MAY 2014)

L67 52.232-25 PROMPT PAYMENT (JUL 2013) - ALTERNATE I (FEB 2002)

L68 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER – SYSTEM FOR AWARD MANAGEMENT (JUL 2013)

L69 52.233-1 DISPUTES (MAY 2914) - ALTERNATE I (DEC 1991)

L70 52.233-3 PROTEST AFTER AWARD (AUG 1996) - ALTERNATE I (JUN 1985)

L71 52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)

L72 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)

L73 52.237-3 CONTINUITY OF SERVICES (JAN 1991)

L74 52.242-1 NOTICE OF INTENT TO DISALLOW COSTS (APR 1984) (DEVIATION)

1.75 52.242-3 PENALTIES FOR UNALLOWABLE COSTS (MAY2814)

L76 52.242-4 CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)

L77 52:242-13 BANKRUPTCY (JUL 1995)

L78 52.243-2 CHANGES - COST-REIMBURSEMENT (AUG 1987) - ALTERNATE V (APR 1984)

L79 52.244-2 SUBCONTRACTS (OCT 2010)

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

L80 52,244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)

L81 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (JUL 2014)

L82 52.245-1 GOVERNMENT PROPERTY (APR 2012)

L83 52.203-16 PREVENTING PERSONAL CONFLICTS OF INTEREST (DEC 2011)

L84 52.246-25 LIMITATION OF LIABILITY - SERVICES (FEB 1997)

I.85 52.247-1 COMMERCIAL BILL OF LADING NOTATIONS (FEB 2006)

L86 52.247-63 PREFERENCE FOR U.S.-FLAG AIR CARRIERS (JUN 2003)

L87 52-247-64 PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS (FEB 2006)

1.88 52.245-9 USE AND CHARGES (APR 2012)

L89 52,248-1 VALUE ENGINEERING (OCT 2010)

L90 52.249-6 TERMINATION (COST-REIMBURSEMENT) (MAY 2004)

L91 52.249-14 EXCUSABLE DELAYS (APR 1984)

L92 52.251-1 GOVERNMENT SUPPLY SOURCES (APR 2012)

L93 52.251-2 INTERAGENCY FLEET MANAGEMENT SYSTEM (IFMS) VEHICLES AND RELATED SERVICES (JAN 1991)

1.94 1852.203-70 DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS (JUN 2001)

L95 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (JAN 2011)

L96 1852 203-71 REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS (AUG 2014)

L97 1852.216-89 ASSIGNMENT AND RELEASE FORMS (JUL. 1997)

L98 1852.219-76 NASA 8 PERCENT GOAL (JUL 1997)

L99 1852.219-77 NASA MENTOR-PROTEGE PROGRAM (MAY 2009)

L100 1852.219-79 MENTOR REQUIREMENTS AND EVALUATION (MAY 2009)

L101 1852.223-74 DRUG-AND ALCOHOL-FREE WORKFORCE (MAR 2009)

L102 1852.235-70 CENTER FOR AEROSPACE INFORMATION (DEC 2006)

L103 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 hc/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

SECTION I OF NINGISWASSC CONTRACT CLAUSES

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)

L104 1852,242-78 EMERGENCY MEDICAL SERVICES AND EVACUATION (APR 2001)

L105 1852.243-71 SHARED SAVINGS (MAR 1997)

L106 52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

L107 52,211-12 LIQUIDATED DAMAGES - CONSTRUCTION (SEPT 2000).

L108 52,222-6 DAVIS BACON ACT (JUL 2005)

I.109 52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

L110 52.222-8 PAYROLLS AND BASIC RECORDS (JUNE 2010)

I.111 52.222-9 APPRENTICES AND TRAINERS (JUL 2005)

L112 52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

L113 52.222-11 SUBCONTRACTS (LABOR STANDARDS) (JUL 2005)

L114 52,222-12 CONTRACT TERMINATION - DEBARMENT (FER 1988)

L115 52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

L116 52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

L117 52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

L118 RESERVED

L119 52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

L120 52.227-4 PATENT INDEMNITY-CONSTRUCTION CONTRACTS (DEC 2007)

L121 RESERVED

L122 52,228-2 ADDITIONAL BOND SECURITY (OCT 1997)

L123 52.228-5 INSURANCE-WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

L124 52,229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2603)

I.122 52.232-5 PAYMENTS UNDER FIXED PRICE CONSTRUCTION CONTRACTS (SEPT 2002)

I.125 52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2008)
(b) (2), second sentence, shall have 30 day period for any financing payments

1.126 52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

L127 52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

I.128 52.236-4 PHYSICAL DATA (APR 1984) (FILL-in below)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by ______ [insert a description of investigational methods used, such as surveys, auger borings, core borings, test pits, probings, test tunnels].
(b) Weather conditions ______ [insert a summary of weather records and warnings].
(c) Transportation facilities ______ [insert a summary of transportation facilities providing access from the site, including information about their availability and limitations].
(d) _______ [insert other pertinent information].

(End of clause)

I.129 52.236-5 MATERIALS AND WORKMANSHIP (APR 1984)

L130 52,236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

L131 52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

L1132 52.236-8 OTHER CONTRACTS (APR 1984)

L133 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

L134 52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

L135 52,236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

L136 52.236-12 CLEANING UP (APR 1984)

L137 52.236-13 ACCIDENT PREVENTION (NOV 1991) - ALT 1 (NOV 1991)

I.138 52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

I.139 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

L140 52.236-17 LAYOUT OF WORK (APR 1984)

L141 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997 – ALTERNATE I (APR 1984)

1.142 52.242-14 SUSPENSION OF WORK (APR 1984)

1.143 52.243-4 CHANGES (JUNE 2007)

I.144 52.243-5 CHANGES AND CHANGED CONDITIONS (APR 1984)

L145 52.248-3 VALUE ENGINEERING-CONSTRUCTION (FEB 2000)

L146 1852.209-72 COMPOSITION OF THE CONTRACTOR (DEC 1988)

L147 RESERVED

L148 1852.232-79 PAYMENT FOR ON-SITE PREPARATORY COSTS (SEPT 1987)

I.149 1852,236-73 HURRICANE PLAN (DEC 1988)

L150 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(cs):

For Federal Acquisition Regulation (FAR) clauses, see

https://www.acquisition.gov/far/index.html

For NASA FAR Supplement (NFS) clauses, see

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

(End of clause)

L151 APPROVAL OF CONTRACT (52,204-1) (DEC 1989)

This contract is subject to the written approval of the GSFC Procurement Officer shall not be binding until so approved.

(End of clause)

L152 1852.216-80 TASK ORDERING PROCEDURE (OCT 1996)

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

appropriate cost information, and any other information required to determine the reasonableness of the Contractor's proposal.

- (c) Within 15 calendar days after receipt of the Contracting Officer's request, the Contractor shall submit a task plan conforming to the request.
- (d) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as a minimum, the following:
- (1) Date of the order.
- (2) Contract number and order number.
- (3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.
- (4) Performance standards, and where appropriate, quality assurance standards.
- (5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.
- (6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.
- (7) Delivery/performance schedule including start and end dates.
- (8) If contract funding is by individual task order, accounting and appropriation data.
- (e) The Contractor shall provide acknowledgment of receipt to the Contracting Officer within 3 calendar days after receipt of the task order.
- (f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.
- (g) The Contracting Officer may amend tasks in the same manner in which they were issued.
- (h) In the event of a conflict between the requirements of the task order and the Contractor's approved task plan, the task order shall prevail.

(End of clause)

L153 52.216-18 ORDERING (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 during the effective ordering period established in Clause F.3 of this contract.
- (b) All delivery orders or task order are subject to the terms and conditions of this contract. In the event of a 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. Order may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

(End of clause)

L154 52.216-19 ORDER LIMITATIONS (OCT 1995)

- (a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than \$1,000.00, 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 \$10,000,000;
- (2) Any order for a combination of items in excess of \$20,000,000; or
- (3) A series of orders from the same ordering office within 3 days that together call for quantities exceeding the limitation in paragraph (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 6 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)

L155 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.
- (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 year after end of the effective ordering period.

(End of clause)

I.156 OMBUDSMAN (1852.215-84) (NOVEMBER 2011) - ALTERNATE I (JUNE 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 embudsman 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. 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)

L157 52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days prior to contract expiration.

(End of clause)

L158 OPTION TO EXTEND THE TERM OF THE CONTRACT (52.217-9) (MAR 2000)

- (a) The Government may extend the term of this contract by written notice to the Contractor prior to contract expiration, provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option clause
- (e) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years.

(End of clause)

1.159 52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

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

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

Employee Class	Monetary Wage	Fringe Benefits
Accountant	GS-11 \$47,240	10
Personnel Clark	GS-04 \$27,990	+
Personnel Clerk	GS-05 \$31,315	
Payroll Clerk	GS-06 \$34,907	*
Purchasing Agent	GS-05 \$31,315	+
Procurement Clerk	GS-06 \$34,904	· P
Facility Management Specialist	GS-07 \$38,790	+
General Equipment Mechanic	WG-10 \$18.52/hr	*
Guard	GS-04 \$27,990	
Guard	GS-05 \$31,315	
Machinist	WG-10 \$20.61/hr	•
Secretary	GS-05 \$31,315	4
Secretary	GS-06 \$34,907	*
Engineering Technician	GS-05 \$31,315	*
Engineering Technician	GS-07 \$38,790	•
Engineering Technician	GS-09 \$47 448	it.
Engineering Technician	GS-11 \$57,408	•
Computer Specialist	GS-11 \$57,408	•
Custodians	WG-2 \$13.72/hr	•
Laborer/Grounds	WG-2 \$13.72/hr	•
Auto Mechanics	WG-2 \$18.73/hr	

* Fringes are as follows:

- 1. Holidays: New Year's Day, Martin Luther King's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day, and Inauguration Day (when applicable).
- 2. Annual Leave: Two hours of annual leave each week for an employee with less than three years of service; three hours of annual leave each week for an employee with three but less than fifteen years of service; and four hours of annual leave each week for an employee with fifteen or more years of service.
- 3. Sick Leave: Two hours of sick leave each week for all employees.
- 4. Life insurance, health insurance, workers' compensation, and Federal Insurance Compensation Act at 7 percent of basic hourly rate (for temporary employees).
- 5. Retirement: 7.0 percent of basic hourly rates for employees hired through December 31, 1983. Retirement at 1.3 percent for employees hired between 12/31/1983 and 01/01/1987 or have at least a one year break from retirement coverage starting pre-1984. Retirement at 0.8 percent for employees hired on January 1, 1987, through 12/31/2012. Retirement at 3.1 percent for employees hired after 12/31/2012.
- 5a. Matching contributions up to 5% for employees hired after 01/01/1987 into a 401K style plan.
- 6. Medicare: 1.45 percent of basic hourly rates for all employees.
- Social Security: 6.2 percent of basic hourly rates for employees hired on or after January 1, 1986, up to a
 maximum gross sumual salary of \$113,700.

(End of clause)

L160 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (52.223-3) (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).

c

(b) The offeror must list any hazardous material, as defined by 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 (To Be Proposed) (If none, insert NONE)
[444]44 41 41 41 41 41 41 41 41 41 41 41 41 4
Identification No.
214 191 21 41 A.v. rhudyygdd 214a 66444 8536 y 14gyygdymbhali y 14gyd 2004 2334
104514-21617FF 51005-0-05 Appl 5004 1-9027 1104738 FEBRUARI 1.0.2.0-0-0-0-0
Q2016barrrigs25[014

- (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 (h) 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 non-responsible 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 subparagraph (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 material 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 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 comminer, the MSDS must be placed in a weather resistant envelope.

(End of Clause)

L161 OZONE-DEPLETING SUBSTANCES (52.223-11) (MAY 2001)

- (a) Definition. "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--
- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
 - (2) Class II, including, but not limited to, hydro chlorofluorocarbons
- (b) The Contractor shall label products which contain or are manufactured with ezone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

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

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

(End of clause)

I.162 BUY AMERICAN - CONSTRUCTION MATERIALS (52,225-9) (MAY 2014)

- (a) Definitions. As used in this clause-
- "Commercially available off-the-shelf (COTS) item"-
- (1) Means any item of supply (including construction material) that is-

- (i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);
- (ii) Sold in substantial quantities in the commercial marketplace; and
- (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
- (2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 (46 U.S.C. App. 1702), such as agricultural products and petroleum products.

"Component" means an article, material, or supply incorporated directly into a construction material.

"Construction material" means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

"Cost of components" means-

- (3) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (4) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

"Domestic construction material" means—

- (1) An unmanufactured construction material mined or produced in the United States;
- (2) A construction material manufactured in the United States, if-
- (i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonevailability determinations have been made are treated as domestic; or
- (ii) The construction material is a COTS item.

"Foreign construction material" means a construction material other than a domestic construction material. "United States" means the 50 States, the District of Columbia, and outlying areas.

- (b) Domestic preference.
- (1) This clause implements the Buy American Act (41 U.S.C. 10a 10d) by providing a preference for domestic construction material. In accordance with 41 U.S.C. 431, the component test of the Buy American Act is waived for construction material that is a COTS item (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

None

- (3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that—
- (i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;
- (ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or
- (iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.
- (c) Request for determination of inapplicability of the Buy American Act.
- (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including—
 - (A) A description of the foreign and domestic construction materials;
 - (B) Unit of measure;
 - (C) Quantity;
 - (D) Price:
 - (E) Time of delivery or availability;
 - (F) Location of the construction project;
 - (G) Name and address of the proposed supplier; and
- (H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.
- (ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.
- (iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).
- (iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.
- (2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.
- (3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.
- (d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON

Construction Material Description	Unit of Measure	Quantity	Price (Dollars)
Item 1:			- ,
Foreign construction material			
Domestic construction material	- The State of the	e observat, a bligge organia	stan cilina ana cana
Item 2:			
Foreign construction material			
Domestic construction material			
[List name, address, telephone number, and coral, attach summary.] [Include other applicable supporting informat * Include all delivery costs to the construction entry certificate is issued).]	ion.]		
	(Find of clours)		

1.163 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (52.226-1) (JUNE 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribs for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

- (b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.
- (1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer shall refer the matter to the-

U.S. Department of the Interior Bureau of Indian Affairs (BIA) Attn: Chief, Division of Contracting and Grants Administration 1849 C Street, NW

MS-2626-MIB Washington, DC 20240-4000

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

- (2) The Contractor may request an adjustment under the Indian Incentive Program to the
 - (i) The estimated cost of a cost-type contract.

following:

- (ii) The target cost of a cost-plus-incentive-fee prime contract.
- (iii) The target cost and calling price of a fixed-price incentive prime contract.
- (iv) The price of a firm-fixed-price prime contract.
- (3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.
- (4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.
- (c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures

(End of clause)

L164 RIGHTS TO PROPOSAL DATA (52,227-23) (TECHNICAL) (JUN 1987)

Except for data contained on pages All Pages, 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 September 10, 2014, upon which this contract is based.

(End of clause)

L165 TAXES—FOREIGN COST-REIMBURSEMENT CONTRACT (52.229-8) (MAR 1990)

- (a) Any tax or duty from which the United States Government is exempt by agreement with the Government of ______[insert name of the foreign government], or from which the Contractor or any subcontractor under this contract is exempt under the laws of ______[insert name of country], shall not constitute an allowable cost under this contract.
- (b) If the Contractor or subcontractor under this contract obtains a foreign tax credit that reduces its Federal income tax liability under the United States Internal Revenue Code (Title 26, U.S. Code) because of the payment of any tax or duty that was reimbursed under this contract, the amount of the reduction shall be paid or credited at the time of such offset to the Government of the United States as the Contracting Officer directs.

(End of clause)

I.166 PROVIDING ACCELERATED PAYMENT TO SMALL BUSINESS SUBCONTRACTORS (52.232-40) (DEC 2013)

(a) Upon receipt of accelerated payments from the Government, the Contractor shall make accelerated payments to its small business subcontractors under this contract, to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract, after receipt of a proper invoice and all other

required documentation from the small business subcontractor.

- (b) The acceleration of payments under this clause does not provide any new rights under the Prompt Payment Act.
- (c) Include the substance of this clause, including this paragraph (c), in all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial items.

(End of clause)

L167 RESERVED

L168 52,247-67 SUBMISSION OF TRANSPORTATION DOCUMENTS FOR AUDIT (FEB 2006)

- (a) The Contractor shall submit to the address identified below, for prepayment audit, transportation documents on which the United States will assume freight charges that were paid—
 - (1) By the Contractor under a cost-reimbursement contract; and
 - (2) By a first-tier subcontractor under a cost-reimbursement subcontract thereunder.
- (b) Cost-reimbursement Contractors shall only submit for audit those bills of lading with freight shipment charges exceeding \$100. Bills under \$100 shall be retained on-site by the Compactor and made available for on-site audits. This exception only applies to freight shipment bills and is not intended to apply to bills and invoices for any other transportation services.
 - (c) Contractors shall submit the above referenced transportation documents to—
 NASA/Goddard Space Flight Center
 Wallops Flight Facility
 Code 210.W/Attn: Mickey Merritt
 Wallops Island, VA 23337

(End of clause)

L169 COMPUTER GENERATED FORMS (52.253-1) (JAN 1991)

- (a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form earnies the Standard or Optional Form number and edition date.
- (b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.
- (c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

L170 USE OF RURAL AREA SMALL BUSINESSES (1852.219-74) (SEP 1990)

(a) Definitions.

"Rural area" means any county with a population of fewer than twenty thousand individuals.

"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 under this contract, and qualified as a small business under the criteria and size standards in 13 CFR 121.

- (b) NASA prime and subcontractors are encouraged to use their best efforts to award subcontracts to small business concerns located in rural areas.
- (c) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as small business concerns located in rural areas.
- (d) The Contractor agrees to insert the provisions of this clause, including this paragraph (d), in all subcontracts hereunder that offer subcontracting possibilities.

(End of clause)

L171 SMALL BUSINESS SUBCONTRACTING REPORTING (1852.219-75) (MAY 1999)

- (a) The Contractor shall submit the Summary Subcontract Report (Standard Form (SF) 295) semiannually for the reporting periods specified in block 4 of the form. All other instructions for SF 295 remain in effect.
- (b) The Contractor shall include this clause in all subcontracts that include the clause at FAR 52.219-9.

(End of clause)

L172 MINIMUM INSURANCE COVERAGE (1852.228-75) (OCT 1988)

The Contractor shall obtain and maintain insurance coverage as follows for the performance of this contract:

- (a) Worker's compensation and employer's liability insurance as required by applicable Federal and state workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when contract operations are so commingled with the Contractor's commercial operations that it would not be practical. The employer's liability coverage shall be at least \$100,000, except in States with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.
- (b) Comprehensive general (bodily injury) liability insurance of at least \$500,000 per occurrence.
- (c) Motor vehicle liability insurance written on the comprehensive form of policy which provides for bodily injury and property damage liability covering the operation of all motor vehicles used in connection with performing the contract. Policies covering motor vehicles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury liability and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.
- (d) Comprehensive general and motor vehicle liability policies shall contain a provision worded as follows:

"The insurance company waives any right of subrogation against the United States of America which may arise by reason of any payment under the policy."

(e) When aircraft are used in connection with performing the contract, aircraft public and passenger liability insurance of at least \$200,000 per person and \$500,000 per occurrence for bodily injury, other than passenger liability, and \$200,000 per occurrence for property damage. Coverage for passenger liability bodily injury shall be at least \$200,000 multiplied by the number of seats or passengers, whichever is greater.

(End of clause)

L173 EMERGENCY EVACUATION PROCEDURES (1852.237-70) (DEC 1988)

The Contractor shall assure that its personnel at Government facilities are familiar with the functions of the Government's emergency evacuation procedures. If requested by the Contracting Officer, the Contractor shall designate an individual or individuals as contact points to provide for efficient and rapid evacuation of the facility if and when required.

(End of clause)

L174 RESTRICTION ON FUNDING ACTIVITY WITH CHINA (1852.225-71) (FEB 2012) (DEVIATION)

- (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.
- (e) This contract may use restricted funding that was appropriated on or after April 25, 2011. The contractor shall not contract with Chinz 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)

L.175 1852.237-72 ACCESS TO SENSITIVE INFORMATION (JUNE 2005)

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

- (5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.
- (6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.
- (7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.
- (d) The Contractor will comply with all procedures and obligations specified in its Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.
- (e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of government contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a government contractor.
- (f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information

(End of clause)

L176 NOTIFICATION PRIOR TO ACQUIRING INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED BY THE PEOPLE'S REPUBLIC OF CHINA 18.52.225-74 (JUNE 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 deak 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 Chins (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.

- (e) 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 list referenced in paragraph (b) 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)

L177 ADDITIONAL DATA REQUIREMENTS 52.227-16 (JUNE 1987)

L178 TECHNICAL DATA DECLARATION, REVISION, AND WITHHOLDING OF PAYMENT — MAJOR SYSTEMS 52.227-21 (DEC 2007)

L179 ESTABLISHING A MINIMUM WAGE FOR CONTRACTORS 52.222-99 (JUN 2014) (DEVIATION)

This clause implements Executive Order 13658, Establishing a Minimum Wage for Contractors, dated February 12, 2014, and OMB Policy Memorandum M-14-09, dated June 12, 2014.

- (a) Each service employee, laborer, or mechanic employed in the United States (the 50 States and the District of Columbia) in the performance of this contract by the prime Contractor or any subcontractor, regardless of any contractual relationship which may be alleged to exist between the Contractor and service employee, laborer, or mechanic, shall be paid not less than the applicable minimum wage under Executive Order 13658. The minimum wage required to be paid to each service employee, laborer, or mechanic performing work on this contract between January 1, 2015, and December 31, 2015, shall be \$10.10 per hour.
- (b) The Contractor shall adjust the minimum wage paid under this contract each time the Secretary of Labor's annual determination of the applicable minimum wage under section 2(a) (ii) of Executive Order 13658 results in a higher minimum wage. Adjustments to the Executive Order minimum wage under section 2(a) (ii) of Executive Order 13658 will be effective for all service employees, laborers, or mechanics subject to the Executive Order beginning January 1 of the following year. The Secretary of Labor will publish annual determinations in the Federal Register no later than 90 days before such new wage is to take effect. The Secretary will also publish the applicable minimum wage on www.wdol.gov (or any successor website). The applicable published minimum wage is incorporated by reference into this contract.
- (c) The Contracting Officer will adjust the contract price or contract unit prices under this clause only for the increase in labor costs resulting from the annual inflation increases in the Executive Order 13658 minimum wage beginning on January 1, 2016. The Contracting Officer shall consider documentation as to the specific costs and workers impacted in determining the amount of the adjustment.

- (d) The Contractor Officer will not adjust the contract price under this clause for any costs other than those identified in paragraph (c) of this clause, and will not provide price adjustments under this clause that result in duplicate price adjustments with the respective clause of this contract implementing the Service Contract Labor Standards statute (formerly known as the Service Contract Act) or the Wage Rate Requirements (Construction) statute (formerly known as the Davis Bacon Act).
- (e) The Contractor shall include the substance of this clause, including this paragraph (e) in all subcontracts.

(End of clause)

I.180 RIGHTS IN DATA – SPECIAL WORKS 52.227-17 (DEC 2007) AS MODIFIED BY NASA FAR SUPPLEMENT 1852.227-17

L181 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)

L182 CLAUSES INCORPORATED BY REFERENCE - SECTION I

Clause(a) I.1 through I.102, I.104 through I.128, I.129 through I.149, and I.177 through I.180 in 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 address contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of text)

SECTION J OF NNG14436908R LISTS OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

J.1 LIST OF ATTACHMENTS

The following documents are attached hereto and made a part of this contract:

Attachment	Attachment Title	Date	Number of Page
A	Statement of Work	12/11/2013	20
В	List of Government -Furnished Property (GFP)	· N/A	N/A
B-Part 1	List of NASA's Property	3/15/13	69
B-Part 2	List of NASA's Property	3/15/13	8
B-Part 3	List of NASA's Balloon Inventory	3/18/13	4
B-Part 4	List of Flight Hardware	3/15/13	1
C	Wage Determinations (a) 05-22361 New Mexico (b) 05-2523 Texas	6/25/13 6/25/13	10 10
D	Safety and Health Plan	9/10/14	97
E	Financial Management Reporting Requirements	12/2013	3
F	Direct Labor Rates, Indirect Rates, Fixed Fee/Profit, & Position Qualifications Matrices	9/10/14	40
G	Organizational Conflicts of Interest (OCI) Avoidance Plan	Submitted 30 DACED	ТВР
H	IT Security Management Plan	Submitted 30. DACED	TBP
I	Small Business Subcontracting Plan	9/10/14	6
J	Reliability and Quality Assurance Plan	Submitted 30 DACED	ТВР
K	Work Breakdown Structure (WBS and WBS Dictionary)	6/22/13	3
L	New Technology Reporting Plan in accordance with 1852,227-70	9/10/14	4
M	Contract Historical Data	Within 30 days of CO's written request	TBD
N	Personal Identity Verification Issuance Procedures	6/22/12	4
0	Applicable Standards and Policy Documents	6/24/13	1
P	Information Technology (IT) Security Applicable Documents List	8/13/14	
Q	Clause Applicability Matrix	7/1/13	13
R	Real Property Manual	7/2013	95

TBP= To Be Proposed
DACED= Days After Contract Effective Date

(End of text)

STATEMENT OF WORK

FOR

NASA BALLOON OPERATIONS CONTRACT

FEBRUARY 1, 2015

Statement of Work

1.0 Background

The NASA Balloon Program Office (BPO) provides management of NASA's high altitude scientific balloon activities funded by the Astrophysics Division within the National Aeronautics and Space Administration (NASA) Science Mission Directorate (SMD). The BPO provides this support in accordance with the Program Commitment Agreement (PCA) for the Research Carriers Program. BPO is managed within Goddard Space Flight Center's (GSFC) Sub-Orbital and Special Orbital Project Directorate (SSOPD), Code 800, located at Wallops Flight Facility (WFF). The BPO oversees management of the contract for operation of the Columbia Scientific Balloon Facility (CSBF), located in Palestine, Texas. BPO's annual flight manifest, identified in Table 1, is launched annually from Fort Sumner, New Mexico and McMurdo, Antarctica. Launches from Palestine, Texas and other remote locations are conducted depending upon SMD requirements. The Baseline Mission Model in Table 1 of Section 2 of this Statement of Work provides the annual manifest, by Government Fiscal Year (FY), for each campaign site. The majority of NASA's balloon flights are in support of new or recurring science. Flights are also conducted in support of technology development and student outreach. NASA balloons flights are categorized as Conventional, LDB, or ULDB.

Conventional flights last from a few hours up to two days depending upon the winds aloft. Conventional flights utilize Zero Pressure Balloons (ZPB) that remain within line-of-sight (LOS) of the launch site ground station or that of a downrange ground station.

LDB flights last from a few days up to several weeks. LDB flights also utilize ZPB but are allowed to go beyond LOS of the launch ground station, thus requiring use of over-the-horizon (OTH) telemetry, command, and control systems via earth orbiting satellites. LDB flights utilize LOS during the initial and final phases of the flight and incorporate robust regenerative power systems. Normally, LDB flights are conducted closer to polar latitudes during the local summer in order to leverage longer periods of daylight, which is conducive to achieving extended flight durations using ZPB. LDB flights can be as short as four days and over fifty days when flown at extreme south polar latitudes.

ULDB flights are those that incorporate Super Pressure Balloons (SPB) that are able to sustain longer flight durations and minimal diurnal altitude excursions caused by expansion and contraction of the balloon as affected by daily heating and cooling of the lifting medium (helium). ULDB flights are designed to sustain flight durations upwards of 60 to 100 days and are better suited for operation at middle latitudes that are otherwise not conducive for achieving extended flight durations using ZPB. ULDB flights operate at polar latitudes as well. ULDB flights incorporate similar support systems as LDB flights.

2.0 Scope

This Statement of Work (SOW) is for the NASA Balloon Operations Contract (NBOC) and requires the Contractor to operate and maintain the CSBF, a government-owned facility located in Palestine, Texas. In addition, it includes the operation and maintenance of NASA owned and leased facilities located at Fort Sumner, New Mexico; NASA owned facilities located at McMurdo, Antarctica and Alice Springs, Australia; and for operations conducted from other remote locations. NASA balloon remote launch

locations include Swedish Space Corporation's Esrange facility located near Kiruna, Sweden and as yet to be established site in New Zealand. The Contractor shall provide the labor, material, and equipment to support the management, operations, engineering, launch services and technical support services for the NASA Balloon Program at the CSBF and its remote sites.

The NASA BPO has overall management responsibility of the contract, all programmatic elements such as mission selection, funding, interagency and international agreements, administration of grants, government-owned facilities and properties, and the approval and oversight of all ground and flight safety processes. NASA provides management oversight of the NBOC through the NASA Contracting Officer's Representative (COR). The Contracting Officer (CO) will assign the COR who is nominated by the Chief of the Balloon Program. The COR will be assigned following the award and prior to the start of the contract. Authorizations and approvals will be provided through the COR and CO as required. Direction of work will be given by NASA to the Contractor only with cognizance and approval of the COR.

The Contractor shall be responsible for providing management, engineering and technical services, balloon flight operations, and administrative support that is necessary to execute the NBOC. The Contractor shall operate in compliance with applicable federal and state laws and within all applicable government and NASA agency regulations, requirements, standards, policies, and procedures to include the documents specified in Applicable Standards and Policies Documents - Attachment O.

The Contractor shall be responsible for the performance and delivery of launch hardware and launch concepts, ground support equipment, and balloon flight support equipment. The Contractor shall be responsible for balloon manufacturing quality assurance and working with the balloon manufacturer to insure delivery of balloon vehicles within schedule and cost in compliance with NASA requirements. The Contractor shall be responsible for maintenance and required modifications for all flight and ground support systems to achieve NASA cost, schedule, technical, and programmatic requirements. The Contractor shall be responsible to provide engineering, analysis, and reports in support of thermal, mechanical and electronic systems to include Failure Mode and Effects Analysis (FMEA), project plans, test reports, and reviews as required. The Contractor shall be responsible for administrative support of its personnel, procurements, and facilities maintenance to include timely and accurate financial and status reports in accordance with the contract.

This SOW contains Core Requirements required on the effective date of the contract through the period of performance, including the new end date with exercise of an option. The contract also contains an Indefinite Delivery Indefinite Quantity (IDIQ) mechanism where specific requirements are issued under Task Orders (TOs). IDIQ task orders include but are not limited to: design and analysis, fabrication, integration, testing, operations field support, and the acquisition and provision of hardware or services. Complex tasks, long lead time development or procurement efforts, or long-term support functions may be required. In such instances, the respective project team may be comprised of civil servant and contractor personnel. This work is highly variable and covers a wide spectrum of requirements. Requirements and standards of performance for IDIQ task orders will be determined on an individual basis and included in each TO.

The Contractor shall provide operational flight support as a Core Requirement to implement the Balloon Program Baseline Mission Model. Table 1 presents the projected Baseline Mission Model and the

projected IDIQ Mission Model. Table 2 presents the projected baseline balloon procurement model. The Baseline assumptions are as follows:

- a. 15-18 Missions including Conventional, LDB, and ULDB;
- b. 1 to 2 Domestic and 2 Foreign Campaigns;
- c. 2 Independent Launch Teams; and
- d. 3 Simultaneous flights.

The following timeframes are estimated campaign deployment durations:

- a. Antarctica: October 15 February 1
- b. New Zealand: February 1 April 1
- c. Australia: March 1 May 1
- d. Spring Fort Sumner: April 1 June 5
- e. Sweden: May 1 July 15
- f. Palestine: June 1 July 1
- g. Fall Fort Sumner: Aug 1 October 15

Table 1. Baseline Mission Model

Campaign	FY	_		FY				FY				FY18			FY19				FY20	
	Q2	Q3	Q4	Q1	Q2	O3	04	01	Q2	03	04	01	02	Q3	Q4	Q1	02	03	04	01
Conventional	10 5	0	The second																	SE SET
Fort Sumner			9				9				9			3	9				9	
Australia																	3			
Palestine ²						2														
LDB/ULDB					118															15.78
New Zealand ³	1				1								2							
Sweden ⁴										4										
Antarctica				3				3				4				4				3
IDIQ MISSIC	ARI '	MO	TAE	Y					1						34			À		
	JIN .			بالد			_													
Special IDIQ ⁵		3																		
FY Total	13						15				16	=:			18			-	16	3

The following specifics apply to the Baseline Mission Model:

- 1. Fall Fort Summer flights planned for a given Fiscal Year (FY) may actually be flown in the following FY schedule as a carryover flight. Carryover flights are those launched on October 1 or later.
- Palestine flights currently include "hand-launch" or small scale missions due to safety restrictions.
- 3. New Zealand missions are ULDB global circumnavigation with recovery in South America or New Zealand/Australia:
- Sweden missions are from Sweden to Canada and have flight durations of four to six days;
- 5. Special IDIQ campaigns or missions are projections and will require supplemental funding

and a specific TO.

Table 2. Baseline Balloon Procurement Model

Std. Size	FY15	FY16	FY17	FY18	FY19	FY20		
Zero Pressure								
0.3	0	3	0	0	0	0		
4	3	2	2	3	2	0		
11.82	2	3	3	4	3	0		
11.82-H	1	1	1	0	1	0		
29.47	2	3	4	4	3	1		
34.43-H	4	3	2	2	3	1		
39.57	3	5	5	5	5	1		
Super Pressure								
18.8	1	1	1	1	1	0		
FY Total	16	21	18	19	18	3		

The following specifics apply to the Baseline Balloon Procurement Model:

- 1. Pathfinder and meteorological balloons not included.
- For Super Pressure Balloon missions, no back-up (spare) balloon allocated.
- 3. The Zero Pressure Balloons above are approved Qualified NASA Standard Balloons.
- 4. Science requirements may require a new design to be formulated and qualified.

3.0 Core Requirements

3.1 Technical and Business Management and Facilities Support

The Contractor shall provide all technical and business management functions necessary to plan, organize, implement, and deliver all requirements within the scope of the NBOC as described in this SOW.

3.1.1 Contract Transition Phase Out Plan - The Contractor shall provide a phase-out plan in accordance with the contract schedule. The plan shall address: requirements for transition of personnel and equipment, completion or transition of engineering projects, accommodations for incoming personnel, completion or handover of campaign or flight operations, and other ongoing functions or tasks in order to insure seamless transition of the contract. The Contractor shall make available to the successor all written and electronic operating and maintenance instructions, documentation, vendor information, hardware/software utilities and all other policies and procedures developed in the performance of this contract.

3.1.2 Quality Assurance – The Contractor shall develop, implement, and maintain a Quality Management System compliant to International Organization for Standardization (ISO) 9001. The system shall be in accordance with NASA Policy Directive (NPD) 8730.5. The Balloon Program operations include critical but not complex systems. Should support of a specific project be designated as critical and complex, the Contractor shall be compliant to Aerospace Standard (AS) 9100 for that project. The Government may choose to audit, or have a third-party audit at the government's convenience, the Contractor's quality management system to ensure compliance with the applicable standard. The Quality Management System (QMS) shall be compatible and consistent with the risk posture defined by NASA Procedural Requirements (NPR) 7120.8, NASA Research and Technology Program and Project Management Requirements, and the Research and Technology Program Commitment Agreement for Research Programs. The QMS shall not create unnecessary requirements that fail to produce benefits commensurate with the resources required for their implementation.

The Quality Management System shall include the development and maintenance of a Quality Manual which shall be submitted by the Contractor and approved by the NASA in accordance with the contract schedule. The Contractor shall review the Quality Manual annually and any updates or affirmation as to "no change" shall be submitted to NASA. The manual shall include how the Contractor will implement a process to maintain written fabrication, inspection, maintenance, refurbishment, assembly, test, and operating procedures for all critical systems and processes. The Contractor shall identify safety and mission critical systems and processes for concurrence by NASA. The manual shall address how the Contractor will implement the requirement to maintain a monitoring, inspection, test, and quality control program that documents compliance of fabricated and procured items with design drawings and specifications. The manual shall also include a risk management plan that identifies, controls, and monitors critical processes, products, and performance characteristics.

- 3.1.3 Reliability and Quality Management The Contractor shall develop, implement and maintain a Reliability and Quality Assurance (R&QA) Program in accordance with the Quality Manual. The Contractor shall develop, submit to NASA, and implement the R&QA Plan. The Contractor shall annually review the R&QA Plan and any updates or affirmation as to "no change" shall be submitted to NASA. The R&QA Plan shall define how the Contractor will track and record quality performance, maintain results, implement changes, and provide continuous improvement. The R&QA Plan shall cover, at a minimum, the following:
 - a. Balloon film monitoring, inspection, testing, and quality control;
 - b. Balloon fabrication monitoring, inspection, testing, and quality control;
 - c. Mission/Safety critical flight and ground support hardware and software;
 - d. Mission/Safety critical hardware and software qualification requirements;
 - e. Mission/Safety critical operational procedures; and
 - f. Mission/Safety critical system fabrication and test procedures.

The Contractor shall be responsible for identification and notification of balloon systems' parts and materials subject to Government-Industry Data Exchange Program (GIDEP) and NASA

advisories (NPR 8735.1). The Contractor shall identify inspection points with concurrence by NASA in the fabrication and refurbishment processes of flight systems and track quality progress.

3.1.4 Configuration Management – The Contractor shall provide a Configuration Management process for the preparation, approval, and control of hardware, software, and documentation under the purview of the Contractor. This process shall be documented in a Configuration Management Control Plan, and shall be approved by NASA. The plan shall include how documents (engineering drawings, schematics, wiring diagrams, procedures, specifications, etc.) are identified as controlled documents, the associated level of control, and maintenance and revision process. The plan shall define the process for identification, control, verification, reconfiguration, and refurbishment of all mission and safety critical systems and processes.

The Contractor shall establish and maintain an internal repository to accumulate and document reporting requirements and documentation as required by this Statement of Work. The NASA CO, COR, BPO Chief, and any others designated by NASA shall be permitted access to the system.

- 3.1.5 Risk Management Risks regarding safety, cost, schedule, support systems, and technical aspects associated with the mission or campaign shall be identified and tracked by the Contractor in accordance with NPR 8000.4. The Contractor shall define how risks will be elevated and tracked in the R&QA Plan. The Contractor shall notify the COR and BPO Chief of safety and mission critical risks as soon as they are known. The Contractor shall present risks to the Balloon Program during CSBF Quarterly Reviews and other mission or campaign reviews as applicable or at the request of NASA.
- 3.1.6 Safety and Health Management A comprehensive and proactive safety and health program is required. The Contractor shall perform the requirements of this contract using the safety and health guidelines provided within the Occupational Safety and Health Act, NPR 1800.1, NASA Safety Manual, NPR 8715.3, the GSFC Environmental Policy and Program Management, Goddard Policy Directive (GPD) 8500.1, and any other NASA or federal regulations that may apply to US government contractors during the terms of this contract. The Contractor shall ensure that employees are aware of and trained regarding safety and health requirements, policies, and procedures associated with their jobs and positions. The Contractor shall submit the Safety and Health Plan to NASA. The Contractor shall annually review the Safety and Health Plan and any updates or affirmation as to "no change" shall be submitted to NASA.
- 3.1.7 Training and Certification The Contractor shall establish and implement a training and certification program that conforms to all NASA requirements for training, licensing, and certification for the work being performed under the NBOC. This shall be documented in the Training and Certification Plan. The plan shall be maintained by the Contractor and updated as required. The plan shall address how the Contractor will identify, maintain, schedule, conduct, and document training, licensing, and certification.

- a) Personnel Training and Certification The personnel training program shall keep employees current with all aspects of their responsibilities to the Balloon Program. The Contractor shall provide access to adequate training, licensing, and certification of its personnel to fulfill their responsibilities in support of the Balloon Program and in compliance with applicable NASA or federal regulations. Training to be provided shall include but will not be limited to: personnel safety and health, in-house job training, technical applications, Information Technology (IT) security, workmanship and inspection, heavy equipment and crane operation, Operations Safety Supervisor (OSS), high pressure operations, and ordnance handling. The Contractor shall obtain licenses or permits to conduct in-house training as required by NASA or at the request of NASA.
- b) Equipment Certification The Contractor shall establish a certification program and procedures to ensure all flight and ground support systems meet NASA requirements. The program shall include equipment under NASA recertification processes to include but not limited to: igniter testers, non-flight pressure vessels, hoses, and all lifting devices and equipment (LDE). The certification program shall also include certification and/or refurbishment of support hardware that does not fall under NASA required recertification processes but that is in accordance with manufacturer specifications and best practices.

The Contractor shall define the configuration and certification processes for flight and ground systems including but not limited to: launch equipment, ground support equipment, flight hardware, flight support equipment, science provided items to include but not limited to pressure vessels, high voltages, non-ionizing radiation, mechanical integrity, radiological sources, cryogens, and hazardous gasses. The Contractor shall define the process by which all hazardous or potentially hazardous items are identified and can be evaluated.

- 3.1.8 Information Technology The Contractor shall develop and maintain an IT Security Plan, which will include the Information Technology Security Management Plan (ITSMP) and the System Security Plan (SSP). The IT security plan shall be in accordance with NPD 2810.1, NASA Information Security Policy, and NPR 2810.1, Security of Information Technology, and shall include as a minimum the security measures and program safeguards planned to ensure that the information technology resources acquired and used by the Contractor and subcontractor personnel:
 - a) Are protected from unauthorized access, alteration, disclosure, or misuse of information processed, stored, or transmitted;
 - b) Can maintain the continuity of automated information support for NASA missions, program and functions;
 - Incorporate management, general and application controls sufficient to provide costeffective assurance of the systems' integrity and accuracy;
 - d) Have appropriate technical, personnel, administrative, environmental, and access safeguards:
 - Document and follow a virus protection program for all IT resources under its control;
 and

f) Document and follow network intrusion detection and prevention program for all IT resources under its control.

For non-Government furnished information technology resources, the Contractor shall meet the requirements of the NASA Minimum Interoperability Software Suite (NASA Standard (STD)-2804) and the Minimum Hardware Configurations (NASA STD-2805) Standards. Office Automation generated products communicated electronically to and from Contractor owned or operated information systems shall conform to minimum standards as required by the NASA Chief Information Officer and defined in the executive notices issued by that office within 3 months of the issuance of such notices. In addition, the daily operation of the Contractor's information technology resources shall, under no circumstances, impact the operation of NASA network resources beyond that which is caused by the transmission or receipt of (deliverable products) or administrative communications (email) which are compliant with the NASA Minimum Interoperability Software Suite Standard. NASA network resources are the NASA Corporate Network and interconnected NASA data networks, including Wide Area Network (WAN), remote access and guest services, as well as those systems utilizing or connected to the data networks.

In order to comply with the Section 508 Standards for Electronic and Information Technology, the Contractor shall perform all software application efforts in compliance with the technical standards delineated in 36 Code of Federal Regulations (CFR) Part 1194.21 Software Applications and Operating Systems unless approved otherwise by NASA.

- 3.1.9 Contract Management The Contractor shall be responsible for managing the day-to-day activities required to support the NBOC. This includes providing the supervision necessary for the operation of the contractor-operated facilities in Palestine, Texas, Fort Sumner, New Mexico, and remote locations such as McMurdo, Antarctica, Esrange, Sweden, and Alice Springs, Australia. Unless otherwise designated by the COR, the Contractor shall be the principal interface and point of contact for all NASA approved users of CSBF balloon flight services. Financial arrangements and waivers of established technical or procedural criteria with approved users shall be administered by NASA. The Contractor shall administer waivers of liability and hold harmless for all users of CSBF flight services. The Contractor shall perform contracting and purchasing activities as necessary to meet all the requirements in this SOW.
- 3.1.10 Reviews The Contractor shall participate in, and provide technical support for all BPO meetings such as the Balloon Working Group, Quarterly Contractor Reviews, and Monthly Status Reviews. These meetings and reviews include presentations and discussions on the Contractor's implementation status, impacts on the Program due to proposed requirement changes or budget and funding conditions, or any other aspect of the program for which the Contractor is responsible. The Contractor will be required to travel to WFF at least twice annually to provide the Quarterly Report. The Government will travel to CSBF at least twice annually for the Quarterly Report and other meetings as necessary. The Contractor may be required to travel to meeting locations such as the Balloon Working Group and Antarctic Planning Meetings. The

Contractor shall provide a written weekly status report and participate in informal weekly teleconferences with the BPO.

The Contractor shall participate in and provide panel membership for all technical reviews in support of the Balloon Program at the direction of NASA. The Contractor shall be responsible for formally presenting and critically reviewing all elements of support and readiness including requirements, status, schedule, etc. Reviews shall contain presentations by each discipline associated with the campaign or mission. Contractor participation shall include individual discipline leads, or their designees, as participants and/or panel members, as required by NASA. The Contractor is responsible for closing all action items assigned to them prior to implementation and readiness. Technical reviews shall include but are not limited to:

- Project Initiation Conferences (PIC) Conducted for all LDB, ULDB, and major campaigns;
- b. Mission Readiness Reviews (MRR) Conducted for all campaigns;
- c. Flight Readiness Reviews (FRR) Conducted for all missions; and
- d. System Design Reviews Conducted for all new or re-designed flight and ground support systems.
- 3.1.11 Facilities The Contractor shall provide all services necessary for the operation, maintenance, and repair of the balloon facilities described in the Real Property Manual in Palestine, Texas and Fort Sumner, New Mexico. The Contractor shall establish and maintain the property lease with the City of Palestine, TX and the hangar facility lease with the Village of Fort Sumner. The Contractor shall establish and maintain leases or agreements, as required, to meet mission requirements for temporary/remote downrange stations and at remote launch sites in support of the NASA Balloon Program. Facilities services shall include, but not be limited to the following:
 - a. Establish and maintain leases of property, facilities, and equipment
 - i. Property and facilities in Palestine and Fort Sumner;
 - ii. General Service Administration vehicles;
 - iii. Lifting devices to support ground operations in Palestine, Fort Sumner, and remote sites as needed to include science integrations, annual and semi-annual certifications, maintenance of facilities, etc.;
 - b. Operation and maintenance of buildings, facilities, and grounds to ensure working conditions with no safety or health hazards. The following shall be met at a minimum:
 - i. Utilities including water, electricity, gas, telephone, and Internet;
 - ii. Heating and Air Conditioning Ongoing preventative maintenance. Repair of failed system within five business days;
 - iii. Fire Suppression System Quarterly maintenance of water, chemical, and alarm systems. Response to system alerts or issues shall be within 24 hours;
 - iv. Kitchen Facilities Maintain sanitary conditions;
 - v. Water Tower Complete check of system every two years:
 - vi. Fire Hydrants Quarterly system flushing;

- vii. Electrical Systems Ongoing preventative maintenance. Repair of failed system within five business days;
- viii. Telecommunication Systems Provide and maintain telephone systems and landline and remote connectivity of NASA and Commercial Internet;
- ix. Plumbing Ongoing preventative maintenance and repair;
- x. Lifting devices Ongoing preventative maintenance and repair;
- xi. Uninterruptible Power Supplies Ongoing preventative maintenance, repair, and replacement;
- xii. Diesel Power Generators Ongoing preventative maintenance and repair.

 Quarterly system service;
- xiii. Elevator Quarterly maintenance and repair;
- xiv. Fences Ongoing repair as needed to maintain perimeter;
- xv. Electronic Gates Ongoing Preventative Maintenance and repair;
- xvi. Electronic and Posted Signs Repair as required;
- xvii. Public Address System Repair as required;
- xviii. Sprinkler System Ongoing Preventative Maintenance. Operate seasonally three times per week on timed system;
- xix. Grounds Maintain grass and hayfields without overgrowth;
- xx. Outdoor Leisure Areas Maintain landscaping and sanitation:
- xxi. Roofing Repair when leaks identified;
- xxii. Fuel Storage Facilities Maintain or replace pumps as required. Maintain overflow vent;
- xxiii. Water Piping System at CSBF Inlet Ongoing preventative maintenance and repair;
- xxiv. Pest Control Spray pesticides inside and outside once monthly; set live traps and employ more aggressive means as necessary;
- Maintain the environmental test chambers and associated equipment at the CSBF's
 Building 25 (Bemco) and Building 28 (Weber) Ongoing preventative maintenance
 and repair;
- d. Provide repair and routine servicing of Government-owned and leased vehicles;
- e. Provide janitorial and custodial services;
 - Cleaning services of office entryways, halls, restrooms, and water fountains shall be provided twice per week at the CSBF to maintain sanitary and acceptable working conditions;
 - Cleaning services of offices, conference rooms, and work areas shall be provided weekly;
 - iii. Cleaning services shall be conducted biannually to include carpet cleaning, floor waxing, and deep cleaning of work areas;
 - iv. Cleaning services including rafters, walls, and floors for integration facilities and laboratory space shall be provided annually or as necessary to support science users:
 - Cleaning services shall be provided at Fort Sumner during campaigns and as necessary;
 - vi. Deep cleaning services of all areas shall be provided as needed;

- vii. Trash collection services shall be provided twice weekly at the CSBF and as necessary at Fort Sumner;
- f. Provide shipping and receiving services normal workdays and evenings/weekends as necessary;
- g. Provide facility security;
 - i. The Contractor shall maintain two electronics gates to be open weekdays and non-holidays from 7AM to 5PM and closed outside of those hours;
 - ii. The Contractor shall provide non-PIV badging for all staff to allow access to CSBF facilities during business and non-business hours;
 - iii. Contractor personnel shall be able to meet the requirements to obtain a NASA/GSFC PIV card if requested;
 - iv. The Contractor shall provide a fire alarm system at the CSBF;
 - v. The Contractor shall provide fire prevention guard onsite at CSBF after business hours and weekends;
 - vi. The Contractor shall provide a fire and intrusion alarm system at Fort Sumner;
- h. Provide visitor control:
 - The Contractor shall require all non-staff to check in at Building 10, Visitor Center;
 - ii. The Contractor shall staff the CSBF Visitor Center during business hours from 8AM to 4:30PM;
 - iii. The Contractor shall provide badging for all visitors;
 - iv. The Contractor shall provide badged access to facilities;
 - v. The Contractor shall provide after-hours access to science users;
 - vi. The Contractor shall provide access to sub-contractors and require liability waivers:
- i. Maintain machine and welding shops at the CSBF and Fort Sumner.
- 3.1.12 Construction of Facilities The Contractor shall annually identify the need for construction of facilities projects at the CSBF or semi-permanent launch sites. The requirements shall be documented in the Construction of Facilities Plan to be submitted annually to NASA. Approved requirements will result in the issuance of IDIQ Task Orders by the CO.

The Contractor shall provide architect-engineering design and construction services as necessary to construct, modify, and/or improve NASA owned facilities at the CSBF or semi-permanent launch sites. The Contractor shall provide personnel, equipment, and materials onsite as necessary for minor or incidental improvements, modernization, and furnishings for NASA owned facilities located at CSBF or semi-permanent launch sites. If NASA funded, any such efforts shall be implemented under a specific IDIQ Task Order issued by the NASA CO. No new construction or permanent modifications or improvements to any NASA facilities shall be implemented by the Contractor without prior NASA approval.

Prior to responding to NASA with the Task Implementation Plan and Cost Estimate for any tasks involving facility improvement, modification, or construction activity for NASA owned facilities, the Contractor (through the CO and the COR) shall contact the Wallops Facilities Office, Wallops

Environmental Office, and Wallops Safety Office and provide details specifying all NASA standards, policies, and procedural requirements (as required in the original IDIQ Task Order issued by NASA to the Contractor) and all state, local, and national standards (National Fire Protection Association (NFPA), American Society for Testing and Materials (ASTM), etc.) that will apply to the activity. The Contractor shall also include a description of any known hazards associated with the activity. The Wallops Environmental, Facilities, and Safety Offices will review the submittal for completeness and identify any additional requirements or applicable NASA standards, policies, procedural requirements, and national standards (NFPA, ASTM, etc.) that should be included as task requirements in the Contractor's Task Implementation Plan. Identification of state and local requirements and their conformances are the responsibility of the Contractor.

The BPO, Wallops Facilities Office, Wallops Environmental Office, and Wallops Safety Office, (unless the Contractor is formally notified otherwise) will participate in the design service process including acceptance of drawings and specifications, and concurrence with calculations and other design data. During the construction process, the Wallops Facilities, Environmental and Safety Offices reserve the right to hire and appoint independent contractor(s) or other Government organization(s) to serve as respective Wallops Office representatives with authority to perform site visits, inspect and monitor progress, and consult on and approve relevant construction matters such as fire safety, explosive safety, hazardous materials, fall protection, certificate of occupancy, etc. This authority does not relieve the Contractor of the responsibility to ensure that all tasks assigned under this provision of the Statement of Work are completed in accordance with all applicable standards, policies, regulations, and procedural requirements as designated in the issued Task Order.

- 3.1.13 Agreements The Contractor shall be responsible for ensuring that all International, Federal, State, and local permits, agreements, licenses, authorizations, Memorandums of Understanding (MOU), or other arrangements (formal or informal) required by the performance of the services and support under this contract are kept in effect. With the exception of those provided by NASA (e.g. financial agreements with scientific user groups, agreements with governmental agencies and foreign governments, etc.), the Contractor shall be responsible for obtaining and maintaining the above mentioned formal or informal arrangements, and providing all coordination and liaison required by those arrangements. The Contractor shall obtain radio frequency authorizations for the United States (US) and US territories through the NASA Wallops Flight Facility Frequency Coordinator. The Contractor shall be responsible for obtaining all international radio frequency authorizations.
- 3.1.14 Investigations The Contractor shall provide immediate notification to the COR and BPO Chief of all incidents involving safety, property damage, personal injury, or interest or coverage by the news media. The Contractor shall support all investigations unless directed by NASA.

Mishaps and Close Calls, as defined by NPR 8621.1, will be investigated by NASA in accordance with applicable NASA requirements. The Contractor shall support all mishaps and close calls,

which shall include but are not limited to: occupational injury to NASA personnel (including contractors); injury to non NASA personnel and/or damage to public or private property caused by NASA operations; or destruction of NASA property. The Contractor shall provide support and membership to the onsite Interim Response Team as established by the Balloon Program.

Incidents that are considered accepted risks will be investigated by NASA under the Suborbital and Special Orbital Projects Directorate Research Carriers Program and NASA Balloon Program policies. The Contractor shall support all incidents and provide membership on the review panel unless directed otherwise by NASA. In accordance with baseline programmatic implementation and in agreement with its stakeholders, Balloon Program accepted risks include but are not limited to: launch abort; failure of the balloon during the launch, ascent, or float phases; failure of support equipment or instrumentation; failure of science equipment or instrumentation; recoverable damage to support or science equipment prior to or during the launch process; unrecoverable damage or destruction to support or science equipment provided minimum requirements have been met.

- 3.1.15 Historical Data The Contractor shall provide, maintain and update pertinent historical data relative to balloons, meteorological data for the CSBF launch sites, and balloon flight operations information including but not limited to: flight designation; launch, flight, and termination statistics; float altitude; user information; balloon size; mission result; etc.
- 3.1.16 Government Property The Contractor shall operate, maintain, and provide sustaining engineering and logistics support for government property furnished and utilized in performance of this contract. The Contractor shall develop and maintain a system to track government property. The Contractor shall provide property custodians to input and manage data in the tracking system. The Contractor shall maintain and update the Real Property Manual.

The Contractor shall implement a maintenance program for government property under this contract. All required maintenance work shall be performed in accordance with the original manufacturer's specifications and in accordance with government safety and property management requirements and standards.

3.1.17 Applicable Standards and Policies Documents – To perform the work as delineated under this contract, Attachment O provides relevant Applicable Standards and Policies for the NBOC. The Contractor shall be responsible in meeting and adhering to all applicable government policies, directives, standards, revisions and updates.

3.2 NASA Flight Program Operations

3.2.1 Annual Flight Candidate Program - The Contractor shall be responsible for the development of the Annual NASA Candidate Flight Plan. The flight plan shall comprise a two-year prospective manifest, at a minimum, and will include NASA sponsored users as well as any non-NASA Science Mission Directorate reimbursable users of CSBF support services. This plan

along with a copy of the completed flight request packages shall be submitted to NASA. In the development of this plan, the Contractor shall:

- a. Develop and distribute a flight request package to the scientific user community;
- b. Collect all completed flight request packages;
- c. For each candidate mission, the following information is required, at a minimum:
 - i. Cost estimates: balloon, helium, campaign costs, batteries and miscellaneous;
 - ii. Flight assessment: user requirements (altitude, duration, etc.);
 - iii. Flight requirements (estimated suspended weight, balloon volume, etc.):
 - iv. Flight Systems requirements (Solar Pointing System, Consolidated Instrumentation Package (CIP), Support Instrumentation Package (SIP), etc.);
 - v. Summary of balloons required (inventory and new fabrications);
 - vi. Potential problem areas (operational, user, or safety related):
 - vii. Areas of future research and engineering improvements;
 - viii. Schedule; and
 - ix. Prospective candidates for out years.
- 3.2.2 Flight Support Equipment The Contractor shall maintain, refurbish, fabricate, or procure the following flight support equipment as required to support the Annual Flight Candidate Plan:
 - a. Flight Hardware Parachutes, ripstitches, flight trains, rigging, mechanical terminate fittings, ballast systems, helium valving systems, mechanical parachute separation device, etc.;
 - b. Flight Electronics Universal Terminate Packages (UTP), Remote Firing Unit (RFU), Semi-Automatic Parachute Release (SAPR), Gondola Automatic Parachute Release (GAPR), Consolidated Instrument Packages (CIP), Support Instrumentation Packages (SIP), Miniature Support Instrumentation Packages (Mini-SIP), Miniature Instrumentation Package (MIP), Solar Pointing System (SPS) and associated software;
 - Ground Support Equipment (GSE) Launch vehicles, launch support vehicles, telemetry
 ground stations, test equipment, licenses for commercial software packages and
 supplemental unique software packages, i.e., Theodolite and flight tracking, etc.;
 - d. Balloons Scientific balloons and meteorological balloons;
 - Helium and other support and user expendables -- to include the purchase, maintenance, storage, and disposal of these items when applicable; and
 - f. Spares The Contractor shall provide spares for all critical systems including flight hardware, flight electronics, ground support equipment, balloons, and Helium excluding Launch Vehicle and Spool.
- 3.2.3 Flight Hardware Mechanical Certification The Contractor shall ensure that all flight hardware to include all instrument attachments, gondola structure, flight rigging, mechanical attachments, parachutes, and flight train, are documented as flight worthy to ensure all components remain attached throughout the entire flight for all balloon flight environment conditions. For all LDB and ULDB missions, a new parachute shall be utilized. For conventional missions, refurbished parachutes can be utilized. The balloon is not required to be

documented under this mechanical certification task as it is covered under a separate set of analyses, testing, and documentation.

- 3.2.4 Flight System Certification The Contractor shall ensure that all flight systems undergo an end-to-end compatibility test to be certified and compatible with user systems and documented as flight ready prior to flight.
- 3.2.5 Ground Support Equipment The Contractor shall ensure that all launch support vehicles are certified and all GSE are documented as flight ready prior to flight to include testing and certification prior to each campaign of the balloon launch vehicle, inflation spools, and any other equipment under load or critical to the inflation and launch process.
- 3.2.6 Handling of Radioactive Sources The Contractor shall meet the requirements of NASA Procedures and Guidelines (NPG) 8715.3 with respect to all balloon flights that carry radioactive materials. The Contractor shall notify the BPO of the requirement for a Nuclear Launch Safety Authorization and provide notification of recovery of the sources following conduct of the mission. The Contractor shall maintain radiation storage licenses for the Palestine and Fort Sumner facilities and remote installations as required in accordance with all applicable government ordinances for licensing, accounting, handling, shipping, and storage.
- 3.2.7 Flight Operations Support - The Contractor shall provide the operations to conduct scientific balloon flights to meet specific scientific, technology development, balloon systems test, or educational outreach requirements. Operations include pre-launch preparations, launch, tracking, command and control of balloon flight systems, data acquisition, aircraft surveillance, termination, balloon and payload recovery, and flight management. The Contractor shall coordinate with appropriate US and foreign agencies as required to arrange for facility and equipment rental/usage including Range Usage Fees. For Antarctica, NASA coordinates and establishes agreements with the National Science Foundation (NSF). The Contractor shall provide launch-site coordination and support services for NASA balloon users. The Contractor shall provide scheduling for flight operations conducted by CSBF personnel. The Contractor shall coordinate with the onsite NASA Mission Manager and NASA Range Safety Officer and other NASA Safety representatives with regard to safety and mission assurance. All operations shall be in compliance with the criteria established in the WFF Range Safety Manual, NASA Ground Safety Risk Analysis Report and other applicable ground and flight safety documents. Operational support shall include but is not limited to:
 - Assemble balloon flight-train systems, ballast systems and gondola/balloon flight-train interface rigging;
 - Provide mechanical structure and/or environmental tests, or otherwise perform analysis to document flight-qualification certifications for flight readiness of all Contractor provided flight system components for operation in the balloon environment, and to provide these same certifications of user-provided systems, as requested;
 - c. Provide shipping of all ground, flight, and, as requested, user hardware to/from the CSBF and remote sites;

- d. Provide onsite pre-integration and testing support at the CSBF for candidates of LDB, ULDB, and foreign campaigns;
- e. Provide welding and mechanical shop services for fabrication of flight and ground support hardware;
- f. Prepare, launch, and track radiosonde or GPS sondes, high altitude sounding balloons, or pilot balloons for data to support meteorological analysis as required for mission planning;
- g. Forecast and actively monitor all meteorological conditions affecting balloon launch, flight, and termination operations;
- h. Conduct pre-flight weather briefings;
- i. Identify launch opportunities and establish launch priorities in concurrence with NASA;
- j. Conduct all scientific balloon operations including inflation, launch, flight control, termination, and recovery in accordance with all ground and flight safety documentation:
- k. Provide uninterrupted flight control and mission operations from Remote and/or Onsite CSBF Mission Control Centers for all LOS and OTH mission operations as required by the mission profile;
- Conduct all operations in accordance with the National Environmental Policy Act Balloon Program Programmatic Environmental Assessment and any governing environmental documentation;
- m. Prior to and during flight operations, coordinate with Federal Aviation Administration (FAA) and/or other air traffic control authorities for clearances to launch and terminate flights, and provide required notifications and updates to the FAA and/or other air traffic control authorities as required;
- n. Provide Iridium phones for ground support, aircraft flight support operations and remote campaigns, as necessary;
- Provide Tracking and Data Relay Satellite System (TDRSS) scheduling and coordination for ground and flight support operations;
- p. Provide data and commanding capabilities for LOS, TDRSS, and Iridium in accordance with mission requirements;
- q. During campaigns, provide NASA with informal reports as to the campaign status and schedule;
- r. Provide formal status and schedule Situation Reports to NASA for all campaigns or as requested by NASA;
- s. Provide video documentation of launch operations including but not limited to flight-line critical flight system integration operations, balloon inflation, spool release, collar release, and payload release;
- t. Provide immediate notification to NASA of each launch;
- u. Provide formal notification to NASA of each launch by issuing an Off-The-Pad Report following launch or entry into float:
- v. Provide formal notification to NASA following conduct of the mission by issuing a Flight Summary Report:
- w. Maintain, certify, and operate specialized launch equipment and vehicles;

- x. Provide and operate aircraft for balloon flight operations support to meet mission, science, and safety requirements in accordance with Section 3.2.8, Aviation / Aircraft Support;
- y. Conduct pre-flight integration, test, and evaluation of mechanical and electronic systems;
- z. Establish and operate downrange ground stations and data recording systems sufficient to cover mission requirements;
- aa. Provide user access to science data networks:
- bb. Monitor and record balloon positional information;
- cc. Select safe impact areas, provide aerial visual surveillance of the selected impact area, coordinate termination and descent trajectory, terminate flight and perform recovery operations; and
- dd. Coordinate recovery operations with local authorities or any affected landowner, obtain permission to enter private property, determine if any property damage occurred on impact or during recovery operations, and initiate damage claim/payment action.
- 3.2.8 Aviation / Aircraft Support The Contractor shall provide and operate two (2) aircraft for tracking of balloons, balloon flight termination operations, recovery operations, and logistics support. Aircraft shall be capable of meeting mission requirements as noted below for all Continental United States (CONUS) missions. One (1) aircraft shall be ready to support each mission; a backup aircraft shall be required to support adjacent missions when the primary aircraft is downrange or unavailable. For Canadian termination/recovery operations, one (1) of the two (2) aircraft shall meet additional requirements provided below. Aircraft contracted for missions conducted outside CONUS and Canada may have fewer capabilities than those listed for CONUS operations as long as it can be shown to meet balloon mission requirements and comply with applicable policies and regulations.

All NBOC aircraft services contracts and agreements shall comply with NASA aircraft management policies established in NPD 7900.4, NASA Aircraft Operations Management, and NPR 7900.3, Aircraft Operations Management. CONUS Aircraft operations shall be conducted under Federal Aviation Regulations, Part 91.

Aircraft operations conducted by or for the NBOC in support of the mission model, or funded by the NBOC shall comply with the designation of "Program Support Aircraft" in "public use" status. One member of the aircrew shall assume the designation and responsibility of "Pilot in Command." All passengers onboard the aircraft who are not pilots shall meet the requirements of a "Qualified Non-Crewmember." The Contractor may conduct administrative passenger flights outside the normal mission model in compliance with applicable FAA regulations for civil use.

NASA has the responsibility for safety and airworthiness oversight of NBOC Program Support Aircraft missions. The Contractor shall comply with applicable requirements for evaluation and approval per 800-PG-1060.2.2, Airworthiness Review Process. The Contractor shall provide completed NASA/GSFC/WFF Code 830 Aircraft Office "Contract Aircraft Questionnaire," "Contract Aircraft Science Investigator Questionnaire," and "Contract Aircraft Experiment Installation Engineering Requirements" as applicable. NBOC aircraft services contracts expected

to provide long-term, continuous support (greater than one year), shall be subject to the Inter-Center Aircraft Operations Panel (IAOP) review process of their aviation program in the same manner as NASA Centers.

The Contractor shall meet the Aviation/Aircraft requirements by initiation of the FY2015 Fall Fort Sumner Campaign.

Both aircraft for normal CONUS operations shall be required to perform missions with the following minimum requirements under no wind conditions, at international standard atmosphere temperatures, at sea level airports:

a. Mission Requirements

- i. Transit 150 nautical miles (nm) to the termination area with full mission aircrew and mission loading:
- ii. Conduct tracking/termination operations for a minimum of 90 minutes, with final 30 minutes at altitudes below 10,000 feet above mean sea level (MSL);
- iii. Transit to an initial destination airfield 100 nm distant, conduct an instrument approach to a missed approach, then to a satisfactory alternate airfield 100 nm distance for mission termination with a minimum of 60 minutes fuel reserve; and
- iv. All aircraft operations shall be capable of being conducted under Instrument Flight Rules (IFR) with fuel reserves in accordance with Federal Aviation Regulations 91.167.

b. Aircraft Requirements

- Both aircraft shall be pressurized, turbine powered, multi-engine land, certified in the Normal or Utility Category in accordance with Federal Aviation Regulations 23.3 for day and night operations in instrument and visual meteorological conditions (IFR / Visual Flight Rules (VFR)), and in known icing conditions;
- ii. Both aircraft shall have functional dual controls and cockpit instrumentation sufficient to perform IFR flight from either the pilot's or copilot's seat(s);
- iii. Both aircraft shall have a service ceiling of 25,000 feet or greater:
- iv. Both aircraft shall have the capability for operating in a minimum mission configuration that includes two pilots (200 lbs each), two mission air crewmen (200 lbs each), miscellaneous items (200 lbs) and a unique Government Furnished Equipment (GFE) portable aircraft telemetry station (seat pack) (220 lbs); and
- v. Both aircraft shall accommodate a minimum of four (4) additional antenna installations to support L-Band & S-Band telemetry from the balloon, Ultra High Frequency (UHF) commanding to the balloon, and Very High Frequency (VHF) for air-to-ground communications in accordance with the configuration of the seat pack.

c. Aircrew Requirements

All termination operations shall employ a minimum operations aircrew of four persons consisting of a Pilot, a Copilot, a Senior Aircraft Observer (SAO), and an Aircraft Electronics Technician (AET). Recovery operations may be conducted with only a Pilot and Copilot. The Pilot and

Copilot shall meet certification, experience, and physical requirements in accordance with NPR 7900.3.

- i. The Pilot and Copilot functions are as defined in applicable NASA policies and the Federal Aviation Regulations;
- The SAO functions as the "mission commander," directing the execution of the mission requirements, including coordination with the ground-based control facilities; and
- iii. The AET operates the seat pack.

d. Avionics Requirements

Aircraft shall accommodate a NASA-approved GFE seat pack capable of being installed and removed as required in accordance with applicable NASA documents and the Federal Aviation Regulations.

For Canadian termination/recovery operations, the aircraft shall have a service ceiling of 31,000 feet or greater. All minimum requirements listed above shall be met with the exception of the following aircraft range profile requirements:

- i. Transit 350 nautical miles (nm) to the termination area with full mission aircrew and mission loading;
- ii. Transit to an initial destination airfield 100 nm distant, conduct an instrument approach to a missed approach, then to a satisfactory alternate airfield 300 nm distance for mission termination with a minimum of 60 minutes fuel reserve.
- 3.2.9 Operational Safety The Contractor shall comply with NPR 8715.5, the WFF Range Safety Manual, Balloon Program Risk Analysis Report, and applicable Ground and Flight Safety plans and procedures. The Contractor shall provide NASA-certified OSS's to oversee all hazardous ground operations including launch operations as required by the WFF Safety Office or directed by the COR.
- 3.2.10 Flight Assessment The Contractor shall perform pre-flight, real time and post-flight assessment of flight performance and environmental conditions, including analyses of wind and other forecast meteorological conditions, trajectory predictions, and descent vector determination for impact of the balloon and flight train components.
- 3.2.11 Balloon Flight Summary Document The Contractor shall deliver a balloon flight summary document to NASA. The balloon flight summary document shall contain the following:
 - a. Flight Data Summary;
 - b. Predicted versus Actual Flight Path;
 - c. Ground Track Plot;
 - d. Altitude Profile;
 - e. Flight Summary;
 - f. Predicted versus Actual Descent Vector;
 - g. Pre-Flight Minimum Success Criteria;
 - h. Post-Flight Minimum Success Assessment;

- i. Final Flight System Weight Sheet;
- j. Balloon As Built Spec Sheet;
- k. Balloon Load/Altitude Curve;
- 1. Final Inflation Computation; and
- m. Gondola Certification.

3.3 Engineering Services

The Contractor shall provide engineering services required to support the operational flight program, maintain and enhance capabilities, monitor and verify balloon and material quality control, support NASA Balloon Research and Development activities, and support IDIQ Task Orders. To meet these requirements, the Contractor shall provide the following:

- 3.3.1 Flight Operations Engineering Support Flight operations engineering support shall be provided at the CSBF and shall include, but not be limited to, the following:
 - a. Administer gondola certification programs for all flights and pressure vessel certification on all flights that include pressure vessels in accordance with CSBF Recommendations for Gondola Design to certify structural flight worthiness of the flight hardware. Provide review of user provided drawings and stress analyses, hardware inspection, testing as deemed necessary, and provide final written certification prior to flight approval. Document and make available to users the structural requirements for balloon gondolas. All data and records generated by the CSBF or provided by the user shall be maintained by the Contractor;
 - b. Provide engineering services to CSBF flight operations and approved users of the facility to implement the flight program. This includes support for conventional, LDB and ULDB flights and includes but is not limited to: mechanical engineering, electrical engineering, environmental testing, network support, software support, documentation, failure and anomaly or mishap reviews, etc.;
 - Perform continuing comprehensive thermal analyses and design of thermal controls for balloon flight subsystems and/or complete scientific test gondolas, including NASA/CSBF flight support systems; and
 - d. Provide thermal analysis of balloon systems and user payloads in support of LDB, ULDB missions. Provide thermal analysis of other balloon flight missions under Core as directed by NASA.
- 3.3.2 Equipment and Enhancement Projects The Contractor shall be responsible for the development of the Annual CSBF Engineering Plan. The plan shall document and define proposed projects with regard to rationale, cost, schedule, and priority. Engineering projects identified in the Engineering Plan and approved by the CO will be implemented under separate IDIO Task Orders.

The Contractor shall provide engineering services for special projects that replace, enhance or improve balloon support equipment and/or capabilities. This support may include, but is not limited to, the following:

- a. Implement engineering projects in support of improvements to CSBF facilities, launch techniques, and balloon flight and ground hardware and software systems;
- b. Provide special diagnostic instrumentation payloads designated by NASA.

- 3.3.3 Reliability and Quality Assurance Engineering Support Engineering support of the R&QA Program shall include monitoring, verifying, certifying, and enforcement of compliance with specifications for balloons, balloon films, mission critical hardware and software, and mission critical procedures. Support also includes recommending and developing new specifications, procedures and criteria for enhanced reliability. Support shall include, but not be limited to, the following:
 - a. Ensure documentation and maintenance of, and compliance with, written fabrication, inspection, maintenance, refurbishment, assembly, test, and operating procedures for all mission critical systems per the Quality Manual;
 - Ensure documentation and maintenance of, and compliance with, mission and safety critical operational procedures;
 - c. Implement the R&QA Program for balloon and balloon film engineering including:
 - i. Verify manufacturer's compliance with design, testing, fabrication, procedures, and specifications for all purchased balloons;
 - ii. Provide in-plant balloon and film quality assurance in accordance with the annual R&QA Plan.
 - d. Maintain and operate a quality assurance laboratory at the CSBF for the purpose of selected testing to verify manufacturer's film and fabrication quality control. The Contractor shall be required to maintain and operate existing laboratory equipment and to perform material testing (e.g., uniaxial tensile testing at room and lower temperatures, cold brittleness testing, and impact testing);
 - e. Maintain at the CSBF, historical data and records of balloon specifications, balloon and balloon film fabrication, quality control, material testing, and flight performance.
- 3.3.4 WFF Balloon Engineering Support The Contractor shall provide continuing engineering staffing located onsite at WFF in support of the NASA Balloon Program. The engineering support includes, but is not limited to, the following:
 - a. Provide recommendations and planning inputs for advanced projects as a part of the NASA Balloon Program Research & Development activity;
 - b. Provide continuing engineering support of new or improved balloon flight vehicle systems, analytical models of conventional balloon flight systems, new and/or improved balloon materials, and characterization and development of procedures and specifications of balloon and balloon film manufacturing processes. This support includes, but is not limited to, the following:
 - i. Advance flight performance and analysis models;
 - ii. Develop engineering project plans, schedules, and cost estimates;
 - iii. As required, formulate specialized tests to be conducted at the WFF balloon materials laboratory including analysis of the results; and
 - iv. Provide engineering field support by monitoring ground and flight tests.

4.0 Indefinite Delivery Indefinite Quantity (IDIQ) Task Orders

The Contractor shall provide support as defined in performance-based task orders. Complex tasks, long lead time development or procurement efforts, or long-term support functions may be required. In such instances, the respective project team may be comprised of civil servant and Contractor personnel. This work is highly variable and covers a wide spectrum of requirements. Requirements and standards of performance for IDIQ task orders will be determined on an individual basis and included in each task as

assigned. IDIQ task orders include but are not limited to: design and analysis, fabrication, integration, testing, operations field support, and the acquisition and provision of hardware or services. Individual IDIQ Task Orders will be approved by the CO.

4.1 Routine IDIQ Summary

Within Sections 3.1, and 3.3 there are specific requirements identified as IDIQ. The following is a summary of those requirements:

- a. Construction of Facilities (Ref. 3.1.12): Any approved facility project; and
- b. Equipment and Enhancement Projects (Ref. 3.3.2): Any approved engineering project.

4.2 Special IDIQ

The Contractor shall provide technical expertise, equipment, and facilities that may be required in support of the special tasks for the NASA Balloon Program, including work for other NASA Centers and the Jet Propulsion Laboratory (JPL). These projects may vary from development of balloon electrical/electronic and mechanical subsystems to payload integration and/or development of complete scientific/test gondola systems. In accordance with any task order issued to support these projects, the Contractor shall, as described in such task orders:

- a. Provide electrical/electronic engineering design, fabrication and acceptance testing for the development of instrumentation subsystems and components required for flights;
- Provide mechanical engineering support for the design and fabrication of balloon structural systems and unique mechanisms or equipment required for engineering test or scientific balloon flights;
- c. Develop and fabricate new gondola systems for flights;
- d. Integrate scientific or engineering test payloads into gondola systems or subsystem;
- e. Provide technical services required to develop drawings, test and operational procedures, documentation, and reviews in support of the above electrical/electronic and mechanical systems;
- f. Provide technical and operational field support for the above systems (or other systems required by NASA) during preparation, checkout, and/or flight at various field sites, including WFF; and
- g. Provide technical and management support for project progress, scheduling, and cost reporting for the above systems.

End of SOW