·		-						_					
SOLICITATION, OF	FER AND AWA	RD 1.	THIS CON	ITRACT IS INDER DPA			350)		RATING	DO-C9	ľ	PAGE 1 OF 52	
2. CONTRACT NO.	3. SOLICITATION	NO.		E OF SOL	_		5. DAT	EIS	SUED		6. REQU	SITIONPURC	_
NNC08BA05B				EALED BID		-						420021521	2
. ISSUED BY	<u></u>		CODE	CHB/TLM			RESS C	OFFE	ER TO (if other than	Item 7)		_
ASA Glenn Resear			. –										
esearch and Space													
TTN: Teresa Mona		5											-
1000 Brookpark Ro													
leveland, OH 4413 OTE: In sealed bid solid				Makelli and I	اعلطا	-10-47							
40 2; In 592180 bid 5010	citations "Orier" 21	ia One	oror mean	SOLIC	_				_		···		
Sealed offers in original	end		for furnish		_		ices in t	he S	chedule	will be rec	elved at the	place specifie	d in Item 8
if handcarried, in the dep						_ นกฝั่			cal time			_ _	
							(Hour)			(Date)		,	
AUTION - LATE Submissi Inditions contained in this	ions, Modifications,	and Wil	thdrawals: S	ee Section	L, P	rovision	No. 52.	214-	-7 or 52.	215-1. All (offers are s	subject to all ten	ms and
D. FOR A. NAM			T R T	EI EDHONE	: NC	/NO	OUE	TC	ALLSI	C. EMAIL A	DDBESS		
FORMATION	-			CODE		NUMBE			EXT.	O. 4111711.7			
ILL: D													
			1	PAGE(S)					_	D=000I			T = 4 = 10
<u>ulsecl</u>	DESCRIPTION ART I_ THE SCHE			IPAGES	X	LSEC			PARTIL	DESCRIE CONTRA		SES	PAGEIS
	WCONTRACT FOR				X					ISFS ·			
B SUPPLIES OF	SERVICES AND	RICES	VCOSTS	 -	X				E DOCL		XHIBITS A	ND OTHER AT	TACH.
	WSPECS WORKS	JAJEM	ENU	+	ᅜ						NS AND IN	ISTRUCTIONS	
E INSPECTION	AND ACCEPTANC					K	REPR	ESE	NTATIO	NS. CERT	FICATION	S.AND	
	OR PERFORMANC			 	_	<u> </u>				NTS OF O			
	<u>OMINISTRATION (</u> ITRACT REQUIRE)	•		 	╟═╢	M				TORS FOR		OFFERORS	
N. H. ISELANAL MAN	di Nacia Nelsini Na	WILITED		ust be full	y co								-
OTE: item 12 does not ap	ply if the solicitation	include	es the provis	ions at 52.2	14-	16, Mini	mum Bl	d Ac	ceptano	e Period.			
2. In compliance with the period is inserted by the	offeror) from the d	ate for a	receipt of off	ers specifie	d ab	ove, to	furnish a		or all ite	dar days (6) ms upon wi	<i>calendar</i> nich prices	days unless a d are offered at t	different he price
 set opposite each item, DISCOUNT FOR PROI 	DEINORED AT THE DE	SIGNATE:	CALENDAF				IDAR D			ALENDAR	DAVE	CALENDA	DAVE
(See Section I, clause I		> ''		6	~	Orter!	10AR 0/	~10		7 () () () () () () () ()			%
4. ACKNOWLEDGMENT	OF AMENDMENTS	7The C	Offeror A	MENDMEN	TN	о Т	D/	ATE		AMEND	MENT NO	DA [*]	TE
knowledges receipt of an				_									
or Offerors and related do	cuments numbered												
	ODE 1F731		FACILITY								ERSON AL	JTHORIZED TO	SIGN
	ersities Spac 1 Wincopin C				:10	n				or print)	~	1.	Λ <i>i</i>
	mbia MD 210		- Suice	: 500			1 1	76	:dey	ick A	t. al	antino	17eses
5B. TELEPHONE NO.	150	C. CHE	CK IF REMI	TANCE A	DDR	ESS	17. SIGI	TAV	URE			18. OFFER	DATE
(Include area code)			ENT FROM				_	Z	-	<i>/</i>	_	Colu	Ind
	\ st	JCH AD	DRESS IN	CHEDULE	<u> </u>			<u> </u>		<u> </u>	<u> </u>	4/4/	100
			AWARD /	o be comp									
ACCEPTED AS TO ITE	MS NUMBERED		10UNT E \$14,0	000.00		. ACCO se sche		AN	ID APPR	ROPRIATIO	N		
. AUTHORITY FOR USIN	IG OTHER THAN F				_			NVC	DICES T	O ADDRES	SS SHOW	N IN: NITEN	
10 U.S.C. 2304(c) (253(c) ()		•					wise specii		···· > ··-·	-
. ADMINISTERED BY (H			CODE		Ξ	25. P.	AYMEN	TW	ILL BE N	NADE BY	CC	DDE	
NAME OF SALVAS	NO OFFICE			11775 AF	-		Innia:				Tee are	4500.	
NAME OF CONTRACTI	NG OFFICER <i>(Typ</i> a Monaco	e or prir	™ 27.U	NITED STA		- 1	\sim				1	ARD DATE	
1 01 63	a Michiald					(li) ture of (Contract		Sticer)	7	6	16/200	} ₽
			Standard Fo										

AUTHORIZED FOR LOCAL REPRODUCTION Previous addition is unusable

STANDARD FORM 33 (REV. 9-97) (GRC Overprint 09/01) Prescribed by GSA - FAR (46 CFR) 53.214(c)

SCIENCE AND SPACE EXPLORATION TECHNOLOGY SUPPORT (SSETS) **TABLE OF CONTENTS**

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS	7
B.1 1852.216-74 ESTIMATED COST AND FIXED FEE (DECEMBER 1991)	
B.2 1852.216-75 PAYMENT OF FIXED FEE (DECEMBER 1998)	
B.3 CONTRACT MINIMUM AND MAXIMUM VALUES	
B.4 CONTRACT TYPE	7
B.5 SUPPLIES AND/OR SERVICES TO BE PROVIDED	7
SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK	9
C.1 STATEMENT OF WORK	9
C.1 STATEMENT OF WORK	3
SECTION D - PACKAGING AND MARKING10	6
D.1 1852.211-70 PACKAGING, HANDLING, AND TRANSPORTATION.(SEP 2005).10	6
SECTION E - INSPECTION AND ACCEPTANCE1	7
E.1 52.246-8 INSPECTION OF RESEARCH AND DEVELOPMENT - COST-	
REIMBURSEMENT. (MAY 2001)17	
E.2 1852.246-72 MATERIAL INSPECTION AND RECEIVING REPORT. (AUG 2003)17	
E.3 INSPECTION AND ACCEPTANCE (GRC 52.246-92) (JAN 1987)	
SECTION F - DELIVERIES OR PERFORMANCE18	3
F.1 PERIOD OF PERFORMANCE18	3
F.2 52.242-15 STOP-WORK ORDER. (AUG 1989) - ALTERNATE I (APR 1984)18	
F.3 PLACE OF PERFORMANCE18	3
SECTION G - CONTRACT ADMINISTRATION DATA19	
G.1 1852.227-11 PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SHORT	
FORM)	
G.2 1852.227-70 NEW TECHNOLOGY. (MAY 2002)19)
G.3 1852.242-73 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING.	•
(NOV 2004) (AS MODIFIED BY GRC JUN 2008)19 G.5 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND	
PATENT REPRESENTATIVE. (JUL 1997)20	
G.6 1852.245-70 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED	•
PROPERTY (DEVIATION) (SEPTEMBER 2007)(ALTERNATE	
I)(DEVIATION)(SEPTEMBER 2007)20)
G.7 1852.245-71 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY	
(DEVIATION) (SEPTEMBER 2007)(ALTERNATE I)(DEVIATION)(SEPTEMBER 2007)	
21	ı
G.8 1852.245-82 OCCUPANCY MANAGEMENT REQUIREMENTS (DEVIATION)	
(SEPTEMBER 2007)23	
SECTION H - SPECIAL CONTRACT REQUIREMENTS24	
H.1 1852.208-81 RESTRICTIONS ON PRINTING AND DUPLICATING. (NOV 2004).24	
H.2 CONTRACTORS' DUTIES AND RESPONSIBILITIES ON-SITE (GRC 52.209-90)	

(AUG 2006)	.24
H.3 PERSONAL IDENTITY VERIFICATION (PIV) CARD ISSUANCE PROCEDURES	S
(GRC 52.204-96) (AUG 2006)	27
H.4 1852.223-70 SAFETY AND HEALTH. (APR 2002)	27
H.5 1852.225-70 EXPORT LICENSES. (FEB 2000)	27
H.6 1852.244-70 GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM	A.
	27
H.7 1852.216-80 TASK ORDERING PROCEDURE. (OCT 1996)	27
H.8 1852.235-74 ADDITIONAL REPORTS OF WORK - RESEARCH AND	
	28
H.9 OBSERVANCE OF LEGAL HOLIDAYS (NFS 1852.242-72) (AUG 1992)	
· · · - · · · · · · · · · · · · · · · ·	29
H.10 1852.235-73 FINAL SCIENTIFIC AND TECHNICAL REPORTS. (AS MODIFIED	
	30
SECTION I - CONTRACT CLAUSES	
I.1 52.203-3 GRATUITIES. (APR 1984)	31
1.2 52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR	.
·=== · · · / · · · · · · · · · · · · · ·	31
I.3 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY. (JAN 1997)	21
1.4 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL	J I
	31
I.5 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER. (AUG	
2000)	
I.6 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR	
PERSONNEL. (SEP 2007)3	31
1.7 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN	
SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR	
PROPOSED FOR DEBARMENT. (SEP 2006)3	
I.8 52.215-2 AUDIT AND RECORDS - NEGOTIATION. (JUN 1999)3	
I.9 52.215-2 AUDIT AND RECORDS - NEGOTIATION. (JUN 1999) - ALTERNATE II	
(APR 1998)3 I.10 52.215-8 ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT. (OCT	31
I.10 52.215-8 ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT. (OCT	
· · · · /·····························	31
1.11 52.215-10 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA.	31
(OCT 1997)3 I.12 52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA -	, 1
MODIFICATIONS. (OCT 1997)	1 1
1.13 52.215-12 SUBCONTRACTOR COST OR PRICING DATA. (OCT 1997)	
1.14 52.215-12 SUBCONTRACTOR COST OR PRICING DATA: (OCT 1997)	, ,
OCT 1997)	11
.15 52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS. (OCT 2004)3	•
.16 52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT	
· · · · · · · · · · · · · · · · · · ·	

BENEFITS (PRB) OTHER THAN PENSIONS. (JUL 2005)	31
1.17 52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATIO	NC
OTHER THAN COST OR PRICING DATA - MODIFICATIONS. (OCT 1997)	.31
I.18 52.216-7 ALLOWABLE COST AND PAYMENT. (DEC 2002)	31
I.19 52.216-8 FIXED FEE (MAR 1997)	.32
I.20 52.216-18 ORDERING. (OCT 1995)	
I.21 52.216-19 ORDER LIMITATIONS. (OCT 1995)	
1.22 52.216-22 INDEFINITE QUANTITY. (OCT 1995)	
1.23 52.217-8 OPTION TO EXTEND SERVICES. (NOV 1999)	
1.24 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)	
1.25 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS. (MAY 2004)	
1.26 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN. (APRIL 2008)	
I.27 52.222-3 CONVICT LABOR. (JUN 2003)	
1.28 52.222-21 PROHIBITION OF SEGREGATED FACILITIES. (FEB 1999)	
I.29 52.222-26 EQUAL OPPORTUNITY. (MAR 2007)	
1.30 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES. (JUN	
1998)	.33
I.31 52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS,	
VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS. (SEP	
2006)	
I.32 52.222-50 COMBATING TRAFFICKING IN PERSONS. (AUG 2007)	
1.33 52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFET	
	.33
1.34 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION.	
(AUG 2003) ALTERNATE II (AUG 2003)	
1.35 52.223-6 DRUG-FREE WORKPLACE. (MAY 2001)	
1.36 52.223-10 WASTE REDUCTION PROGRAM (AUG 2000)	
I.37 GRC SUPPLEMENTAL REQUIREMENT WASTE REDUCTION PROGRAM (MA	
2008)	
	34
i.39 52.227-1 AUTHORIZATION AND CONSENT. (JUL 1995) - ALTERNATE I (APR 1984)	
1984) I.40 52.227-11 PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SHORT	34
FORM). (AS MODIFIED BY NFS 1852.227-11) (JUN 1997)	34
.41 52.227-14 RIGHTS IN DATA - GENERAL. (JUN 1987)	
.42 52.228-7 INSURANCE - LIABILITY TO THIRD PERSONS. (MAR 1996)	
.43 52.232-12 ADVANCE PAYMENTS – ADVANCE PAYMENTS WITHOUT SPECIA	
ACCOUNT (MAY 2001) (ALTERNATE II AND V)	3/L
.44 52.232-17 INTEREST. (JUN 1996)	
.45 52.232-22 LIMITATION OF FUNDS. (APR 1984)	
.46 52.232-23 ASSIGNMENT OF CLAIMS. (JAN 1986)	
.46 52.232-25 ASSIGNMENT OF CLAIMS. (JAN 1986)	
.4/ DZ.ZDZ=ZD FRUNIF1 FAINICNI, (UGI ZUUS)	.586

I.48 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AN VEGETATION. (APR 1984)	ID 31
1.49 52.242-3 PENALTIES FOR UNALLOWABLE COSTS. (MAY 2001)	
1.50 52.242-13 BANKRUPTCY. (JUL 1995)	
I.51 52.243-7 NOTIFICATION OF CHANGES. (APR 1984)	
1.52 52.244-2 SUBCONTRACTS. (JUN 2007) - ALTERNATE I (JUN 2007)	
1.53 52.244-5 COMPETITION IN SUBCONTRACTING. (DEC 1996)	39
I.54 52.245-1 GOVERNMENT PROPERTY (JUN 2007) (AS MODIFIED BY GRC 2007)	JUN 39
I.55 52.245-1 GOVERNMENT PROPERTY. (JUN 2007) ALTERNATE II (JUN	
1.95 92.249-1 GOVERNMENT PROPERTY. (30N 2007) ALTERNATE II (30N	-
I.56 52.245-9 USE AND CHARGES (JUNE 2007)	
I.57 52.246-23 LIMITATION OF LIABILITY. (FEB 1997)	39
1.58 52.246-25 LIMITATION OF LIABILITY - SERVICES. (FEB 1997)	39
1.59 52.249-5 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT	
(EDUCATIONAL AND OTHER NONPROFIT INSTITUTIONS). (SEP 1996)	39
I.60 52.249-6 TERMINATION (COST-REIMBURSEMENT). (MAY 2004)	39
I.61 52.249-14 EXCUSABLE DELAYS. (APR 1984)	39
I.62 52.253-1 COMPUTER GENERATED FORMS. (JAN 1991)	39
I.63 1852.209-72 COMPOSITION OF THE CONTRACTOR. (DEC 1988)	39
I.64 1852.216-89 ASSIGNMENT AND RELEASE FORMS. (JUL 1997)	39
I.65 1852.219-74 USE OF RURAL AREA SMALL BUSINESSES. (SEP 1990)	39
I.66 1852.219-75 SMALL BUSINESS SUBCONTRACTING REPORTING. (MAY	1999)
	39
I.67 1852.219-77 NASA MENTOR PROTÉGÉ PROGRAM (MAY 1999)	39
I.68 1852.227-14 RIGHTS IN DATA - GENERAL	40
I.69 1852.228-75 MINIMUM INSURANCE COVERAGE. (OCT 1988)	40
I.70 1852.232-70 NASA MODIFICATION OF FAR 52.232-12 (MARCH 1998)	40
I.69 1852.237-70 EMERGENCY EVACUATION PROCEDURES. (DEC 1988)	40
1.70 52.208-8 REQUIRED SOURCES FOR HELIUM AND HELIUM USAGE DATA	
(APR 2002)	
I.71 52.215-19 NOTIFICATION OF OWNERSHIP CHANGES. (OCT 1997)	
1.72 52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYME	:NT
OF UNION DUES OR FEES. (DEC 2004)	42
1.74 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMA	
TECHNOLOGY RESOURCES. (MAY 2008) (DEVIATION)	
I.75 1852.215-84 OMBUDSMAN. (OCT 2003) ALTERNATE I (JUN 2000)	
I.76 1852.237-73 RELEASE OF SENSITIVE INFORMATION. (JUN 2005)	
I.77 52.202-1 DEFINITIONS. (JUL 2004)	
I.78 52.203-5 COVENANT AGAINST CONTINGENT FEES. (APR 1984)	
I 79 52 203-7 ANTI-KICKBACK PROCEDURES (JUL 1995)	50

I.80 52.204-7 CENTRAL CONTRACTOR REGISTRATION. (JUL 2006)	50
I.81 52.233-1 DISPUTES. (JUL 2002) - ALTERNATE I (DEC 1991)	50
1.36 7692.2 ?JPROIFST AFTER AWARD. (AUG 1996) - ALTERNATE I (JUN	l 1985).51
1.87 1852.235-70 CENTER FOR AEROSPACE INFORMATION: (UEC-2004)	ነር.ፕ?በበፊ\
SECTION J - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHME	NTS52
J.1 LIST OF ATTACHMENTS	52

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 1852.216-74 ESTIMATED COST AND FIXED FEE (DECEMBER 1991)

Base Period (two years): The estimated cost of this contract Base Period is \$ (b)(4) exclusive of the fixed fee of \$ (b)(4). The total estimated cost and fixed fee is \$14,000,000.
Option Year One (if exercised): The estimated cost of this contract Option Year One is (b)(4) exclusive of the fixed fee of (b)(4). The total estimated cost and fixed fee is \$7,000,000.
Option Year Two (if exercised): The estimated cost of this contract Option Year Two is (b)(4) exclusive of the fixed fee of (b)(4). The total estimated cost and fixed fee is \$7,000,000.
Option Year Three (if exercised): The estimated cost of this contract Option Year Three is (b)(4) exclusive of the fixed fee of (b)(4) The total estimated cost and fixed fee is \$7,000,000.
Total Contract: The estimated cost of this contract, including option years if exercised, is (b)(4) exclusive of the fixed fee of (b)(4) The total estimated cost and fixed fee is \$35,000,000.

(End of clause)

B.2 1852.216-75 PAYMENT OF FIXED FEE (DECEMBER 1998)

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)

B.3 CONTRACT MINIMUM AND MAXIMUM VALUES

The contract minimum, including option years if exercised, is \$25,000. The contract maximum, including option years if exercised, is \$35,000,000.

(End of clause)

B.4 CONTRACT TYPE

The contract type is cost plus fixed fee (CPFF) indefinite-delivery indefinite-quantity (IDIQ).

(End of clause)

B.5 SUPPLIES AND/OR SERVICES TO BE PROVIDED

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to deliver and/or perform the items below in

accordance with the Description/Specifications/Statement of Work incorporated in Section C of this contract, "Science and Space Exploration Technology Support, Statement of Work" dated December 18, 2007.

(End of clause)

SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C.1 STATEMENT OF WORK

The Contractor shall provide the item or services specified in Section B in accordance with the following:

December 18, 2007

Science and Space Exploration Technology Support Statement of Work

1. Scope

This contract will enable the Glenn Research Center (GRC) to secure and sustain specialized research and development capabilities essential to its role in NASA's Vision for Space Exploration (VSE). The contract will provide for the necessary advances in the understanding of the effects of the environment of space on the functioning of planned and evolving Exploration Systems and the knowledge and design principles necessary to mitigate the negative impacts of that environment on system performance. Thus, the contractor will provide research avenues that, by filling gaps in knowledge, will create the foundation upon which broadly applicable new technologies can be developed. Those technologies will be used in systems which will be developed by various NASA Enterprises. The contract will focus on the following technical areas:

- 2.1 Exploration Technology Development
- 2.2 In-Space Experiment Development
- 2.3 Physical and Biological Systems Research, Modeling, Analysis and Development
- 2.4 Space and Earth Science Research
- 2.5 Program Development

2. Technical Areas

The Contractor shall perform Task Orders under the Technical Areas listed below. Task Orders shall be issued by the Contracting Officer. For each Task the Contractor will be responsible for estimating costs, establishing budgets, developing a major milestone schedule, monitoring actual progress against the plan, identifying problems, and taking appropriate corrective action. These responsibilities are in addition to the actual execution of the technical requirements.

2.1 Exploration Technology Development – Perform research, analysis, and testing to support technology/system development required to fill any identified technology gaps necessary to ensure mission success for NASA's VSE.

Scientists shall support NASA in monitoring the performance of NASA research grants and/or contracts to Principal Investigators at universities and contracts with industry. This support shall include scientific and technical consultation and information about NASA-specific policies and procedures that guide the development of space flight experiments at NASA.

The contractor shall perform research and support technology development in the areas of the physical and biological sciences relevant to NASA's VSE. In particular the work will focus on advanced systems and capabilities that will meet the unprecedented challenges associated with sustaining human life in the harsh environment of space.

Power, environmental control and life support systems, resource utilization, fire, and risks associated with the spacecraft environment and crew health all present significant challenges. Addressing these challenges will require a concerted effort across many science and engineering disciplines and will necessarily involve answering fundamental questions regarding the behavior of physical and biological processes in harsh environments. The required operating environment may include combinations of wide temperature ranges, direct exposure to hard vacuum and planetary dust, radiation, and reduced or low gravity (e.g. the surfaces of the moon or Mars or spacecraft in near-surface planetary orbits or interplanetary transits, respectively). The research and support will include tasks such as:

- a. Developing and applying theoretical and mathematical analyses of processes and components in space exploration systems, human health and performance, and space power and propulsion.
- b. Developing and performing analytical and experimental investigations of reduced gravity behavior of component and system technologies for space exploration systems.
- c. Creating conceptual designs of advanced space exploration technologies and systems, and performing mission analysis studies. Preparing and conducting tests and acquiring data. Interpreting and analyzing test data.
- d. Developing, updating and utilizing computer programs to model and analyze space systems. Developing computer programs and adapting commercial software packages by developing or modifying user supplied functions and subroutines to analyze processes and components in space exploration systems, human health and performance and space power and propulsion. Adapting computer programs to parallel processing hardware and workstation networking. Comparing test data with calculated results from models.
- e. Working with project teams to assist in the transfer of newly developed technology concepts to higher technology readiness levels or resolving complex design problems related toe the space environment. Conducting necessary analysis or modeling to produce design rules from breadboard or laboratory designs.
- f. Preparing technical reports summarizing the above activities.

2.2 In-Space Experiment Development

The contractor shall provide technical support for the design and development of aeronautical and space systems in all developmental phases. Work associated with the development of inspace research will include tasks typified by the following:

a. Conducting analyses and/or developing and applying models to characterize the effects of the space environment on the performance of Exploration Systems and the technologies needed for power, propulsion, water / food supplies, and astronaut health.

Particular emphasis will be placed on the impacts of reduced gravity environments on systems involving multiphase processes / technologies.

- b. Conducting experiments on the effects of the space environment on selected processes and phenomena to validate models and provide insights for model refinement. These experiments shall emphasize the use of specialized facilities (e.g., GRC Reduced Gravity Facilities) to simulate the space environment to the highest fidelity possible without actual exposure to space. If space flight experiments are justified, concepts for such experiments shall also be developed.
- c. Provide qualified personnel to serve as Project Scientists (or equivalent duties) and assist NASA selected Principal Investigators (PIs) in the definition, development, and operations of their space flight experiments/investigations. The Project Scientists will be required to work effectively with the project team at NASA GRC. They also will work closely with the PIs by assisting and guiding them through the complex space flight hardware development process and serving as the PI's representative in day-to-day interactions with the NASA project team as well as through NASA mandated reviews such as Non-Advocate Peer Reviews, Systems Requirements Reviews, Systems Definition Reviews, Preliminary Design Reviews, Critical Design Reviews, Pre-ship Reviews, etc. as required.
- d. Developing and testing concepts of technologies/systems or countermeasures that can mitigate the negative effects of the space environment on system performance.
- e. Conducting and supporting non-exploration related space experiments. These experiments are selected by NASA to meet NASA's overall fundamental research goals. Personnel may support outside investigations in a Project Scientist role or as a Principal Investigator.

2.3 Physical and Biological Systems Research, Modeling, Analysis and Development

The work on physical and biological systems will include tasks typified by the following:

- a. Developing and/or modifying existing analytical and numerical models that characterize the effects of reduced gravity on multiphase fluids and combustion processes. Models will be designed to enable systematic refinement and expansion of capabilities as new knowledge is acquired. Fluids processes of particular interest are those critical to the performance of space based power, propulsion, and life support systems as well as those associated with crew health and safety. Combustion processes of particular interest are those critical to spacecraft fire safety practices and systems, life support systems, and in-situ resource production. However this work can also include non-exploration related fundamental research based on priorities established by NASA and work funded through NASA research solicitations.
- b. Developing computer simulation models to characterize multiphase flow and phase change in components/subsystems/systems while they operate in a reduced gravity environment. Determining the impact on system performance when flows and/or phase change are altered by reduced gravity. Particular attention and effort shall be applied to systems employing cryogenic fluids.
- c. Developing simulations of human physiology that predict acute and chronic adaptation

to spaceflight conditions. The complexity of the simulation should be commensurate with the level of detail required to elucidate spaceflight effects. Computational complexity will range from systems of differential equations known as lumped models to 1, 2 and 3 dimensional finite element simulations. Where appropriate, fluid/structure interactions within the body will be modeled and the personnel must be familiar with one or more of the following computer codes: ADINA, ANSYS, COMSOL.

- d. Conducting research in biological systems using quantitative tools and measuring/sensing technologies from physical/engineering systems to develop novel interdisciplinary models and methodologies to provide new insights into the functioning of biological systems. Promote collaboration with North East Ohio's world class biological research institutions to enhance NASA's exploration capabilities.
- e. Utilizing computer simulation models to define design changes to improve spacecraft system performance under reduced gravity conditions.

2.4 Space and Earth Science Research

The following is typical of the tasks involved with Space and Earth Science.

The contractor shall define areas for future research in Space and Earth Sciences. This activity will result in white papers that identify specific research that could benefit from an interdisciplinary team approach. Based on these recommendations, the contractor will initiate pilot research projects subject to approval to proceed by NASA. Small teams of scientists will then be formed to address specific scientific problems. These scientists will be recruited from research laboratories, private industry and universities from across the United States considered experts in their particular fields. Throughout these efforts, the contractor will engage the university research community in problems of significance to GRC and NASA through a flexible post-doctoral and graduate student research program. They will also develop a visiting scientist program that will facilitate long or short term visits to enhance ongoing research activities at GRC.

2.5 Program Development

The contractor shall enable collaborative relationships with multiple educational/research institutions to facilitate the tasks in this Statement of Work. Such collaborations are intended to enhance NASA GRC's core capabilities while also enhancing the nation's science and engineering talent pool through educational/training opportunities for faculty, post-docs, and graduate students and undergraduate studies. Additional work in this area may include:

- a. Research for non-NASA Entities. The contractor shall support the Government in developing non-NASA research programs or proposals for research efforts consistent with NASA GRC's mission. Such support shall be fully funded by the requesting entity and performed without interfering with NASA's own commitments.
- **b. Operations and Conference Support.** The contractor shall organize and conduct conferences, workshops and seminars on Aeronautics, Space, Science and Technology as needed and requested by NASA. Reports and findings of these activities will be adequately documented to meet their expressed objectives.

c. Additional Research and Technology Support. Upon request from NASA, the contractor shall provide additional services in the areas of research, technology development/transfer, educational outreach and others as determined by NASA to support evolving GRC mission.

2.6 Deliverables

Task Orders will specify any Technical Reports and/or products to be delivered to the government.

(End of text)

C.2 CONTRACT DATA REQUIREMENTS LIST

	Description	Belivery Bate	Policy Regulate	in Ivacibiaus
		Whenever STI is published, released, or presented externel to NASA or presented at internel meetings or conferences at which foreign	,	
	Scientific and Technical	nationals may be present. (NASA Form 1676, NASA Scientific and Technical Information (STI)	NPD 2200 1	j
_	Information Report	Decument Availability Authorization (DAA))	NPR 2200.2	As prescribed by f
	1	1 Within 2 months of identification of reportable item. (NASA Form 1679, Disclosure of Invention		ł
	<u> </u>	(and New Technology (including Software),		1
	}	http://invention.neea.gov)	j	}
	,	A listing every 12 months from the date of the contract, of all subject inventions required to be	' }	1
	{	disclosed during the period.	ſ	j
	}	3. A final report prior to closeout of the contract listing all subject inventions or certifying that	j	1
2_	New Technology Report	there were none.	NFS 1852,227-70	As prescribed by f
		The copy of the letter shall be submitted to CAS		CASI
	Copy of transmittel letter to contracting	at the address listed at http://www.sti.ness.gov	1	Center/STI
_	officer for final report	under the 'Get Help' link.	NFS 1852 236-73	Publication Manag
	ļ	One month after final review. Information regarding appropriate electronic formate for final	}	1
	}	reports is available at	{	
	{	http://www.sti.nasa.gov.under*Publish STI Electronic File Formete.* Leyout assistence is	NFS 1862,236-73	Contracting Officer
	Final Report for contract (upon	evailable at the GRC Technical Publications	NPR 2200.2	Technology Transfe
	expiration of pendd of performance, base and option years)	Center at no charge to the contractor.	NASA-SP-2005- 7602	Partnership Office
_	And Shirth Leads)	<u> </u>		
		1		As prescribed by N Contracting Officer
				COTR
	NF 533M, Monthly Contractor Financial Management Report	10 Government working days after close of contractor's accounting period (menthly)	NPR 9601 2 NFS 1862 242-73	Administrative Office Project Control Spe
	Management Report	Contractors accounting period (monthly)	N# 5 1002 242-73	7
				As prescribed by N Contracting Officer
	1	Į.		COTR
	Initial 533Q, Quarterly Contractor	30 Government working days after contract	NPR 9501.2	Administrative Offic
4	Financial Management Report	sward	NFS 1852.242-73	Project Control Spe
1		}		As prescribed by N
-		ì		Contracting Officer
	NF 533Q, Questerly Contractor	15 Government working days preceding the	NPR 9601.2	Administrative Offic
_	Financial Management Report	querter reported	NFS 1852.242-73	Project Control Spe
Į]		Contracting Officer
}	Travel (employee name, start date, and	10 Government working days after close of		COTR Administrative Office
_}	date, destination, purpose, amount)	contractor's accounting period (monthly)	NFS 1852 245-71	Project Control Spe
7	·			Contracting Officer
1				GRC Information
{	Information Technology Disc	20 days above analysis arrived	NEC 1987 774 78	Technology
1	Information Technology Plan	30 days after contract award	NFS 1852 204.76	Contracting Officer
İ		}		COTR GRC Emronmental
1	Environmental Plan	60 days after contract ewerd	FAR 52.223-10	representative
7	Actual hours incurred by NASA project			
	(NASA shall provide the NASA project number whenever funds ere obligeted on		GRC warkforce reporting	Contracting Officer
	the contract)		requirements	Budget Analyst
ſ		j		Contracting Officer COTR
1		<u> </u>		GRC Logistics and
1	Contractor Assumed Deseats		NFS 1852 245-71 (Alternate I)	Technology Informet Division
ť	Contractor Acquired Property		FAR 52 216-19	DIFFERENT
1	Dali:		NFS 1852 216-80	
┦	Deliverables		SOW Section 2.6 Glenn	As apacified in task Contracting Officer
1		[Supplemental	COTR
1	Waste Reduction Reporting		Requirement to FAR 52,223-10	GRC Environmental representative
1	Employee and major subcontractor(s)	,	WPR 9601 2	Contracting Officer
	employee labor rates by cost element	Whenever revised	WFS 1852.242-73	COTR Contracting Officer
	Defense Contract Audit Agency review of billing retes	Whenever revised	AR 52 216-15(e)	COTR
Ŧ	Fasik order coats for each teak order			Captractics Off
	sagregated by employee and major			Contracting Officer COTR
١,	subcontractor employee, by cost	10 Government working days after close of		Administrative Office
+	element	contractor's accounting period (monthly)	IFS 1852 216-80	Project Control Spec
	lask order costs for each task order	}		}
		10 Government working days after close of	unco a memo da a me	Contracting Officer
1	ubcontractor employee, fully burdened	contractor's accounting period (monthly)	IFS 1852 216-80	COTR Contracting Officer
	donthly sechnical reports for each	1D Government working days after close of		COTR
10	ctive teak arder	contractor's accounting period (monthly)	FS 1952 236-74	Task Requester Contracting Officer
				CONTRACTING CMCSf
F	inal technical report for each task	10 Government working days after close of task		COTR

All reports shall be submitted electronically, unless otherwise noted or required by regulation, in Microsoft Word or Excel (as appropriate). All-terms above are subject to NASA acceptance and approval.

NPS: and NPRs may be accessed electronically at http://node3.gefc.nasa.gov/

SECTION D - PACKAGING AND MARKING

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

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.246-8 INSPECTION OF RESEARCH AND DEVELOPMENT - COST-REIMBURSEMENT. (MAY 2001)

E.2 1852.246-72 MATERIAL INSPECTION AND RECEIVING REPORT. (AUG 2003)

- (a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in original.
- (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.3 INSPECTION AND ACCEPTANCE (GRC 52.246-92) (JAN 1987)

Final inspection and acceptance of all work performed under this contract, including all deliverable items, will be performed at destination.

(End of clause)

SECTION F - DELIVERIES OR PERFORMANCE

F.1 PERIOD OF PERFORMANCE

- (a) Base Period: Contract award date to June 30, 2010
- (b) Option Year One: July 1, 2010 to June 30, 2011 (if exercised)
- (c) Option Year Two: July 1, 2011 to June 30, 2012 (if exercised)
- (d) Option Year Three: July 1, 2012 to June 30, 2013 (if exercised)

(End of clause)

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

F.3 PLACE OF PERFORMANCE

The contractor will perform the services required under the contract at NASA Glenn Research Center in Cleveland, Ohio.

(End of clause)

SECTION G - CONTRACT ADMINISTRATION DATA

- G.1 1852.227-11 PATENT RIGHTS RETENTION BY THE CONTRACTOR (SHORT FORM).
- **G.2 1852.227-70 NEW TECHNOLOGY. (MAY 2002)**
- G.3 1852.242-73 NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING. (NOV 2004) (AS MODIFIED BY GRC JUN 2008)

The following requirements are in addition to those stated in the NASA Contractor Financial Management Reporting clause (1852.242-73) of this contract.

a) The reporting categories for the NASA Form (NF) 533 reports are:

No.	Reporting Category
1	Direct Labor Dollars
2	Direct Labor Hours
3	Fringe benefit dollars
4	Local Overhead
5	Travel Dollars
6	Consultants
7	Subcontract Rate
8	Subcontract Costs
9_	G&A Dollars
10	Other Direct Costs
11_	Materials/Supplies Dollars
12	Total Cost
13	Fee
14	Total Price

- b) The Contractor shall provide an explanation of any variance that exceeds ±5% for each Task Order. This variance is calculated on the percentage difference between actual cost incurred/hours worked during month (Item 7a of NF 533M) and planned cost incurred/hours worked during month (Item 7b of NF 533M). If in any reporting period, the actual costs of the individual task exceed planned costs by more than ±10%, the contractor shall provide a revised estimate at completion for the individual task.
- c) The Contractor is required to submit a NF 533 summary of the entire contract at the Task Order Level (reporting all tasks separately, whether active or inactive) and individual NF 533 reports for each active Task Order by reporting category identified in paragraph (a) above.

The contractor shall report the costs of each capitalized Property, Plant, and Equipment (PP&E) purchased or fabricated as separate items on the NF 533, when the total anticipated acquisition cost is equal to or greater than \$100,000 and an estimated useful life of 2 years or more. . NASA will assign a unique Work Breakdown Structure (WBS) element for each capitalized PP&E. The contractor will track and report its costs using the assigned NASA WBS element.

(End of clause)

G 5 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE. (JUL 1997)

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

Current listing of New Technology and Patent Representatives is available in the NASA Procurement Library at the following url: http://ec.msfc.nasa.gov/hg/library/newtechpocs.html#newtech

(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 - Retention by the Contractor (Short Form) clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

G.6 1852.245-70 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED PROPERTY (DEVIATION) (SEPTEMBER 2007)(ALTERNATE I)(DEVIATION)(SEPTEMBER 2007)

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

 (b)(1) In the event the Contractor is unable to provide the property necessary for performance.
- and the Contractor requests provision of property by the Government, the Contractor's request shall--
 - (i) Justify the need for the property; -
 - (ii) Provide the reasons why contractor-owned property cannot be used;
- (iii) Describe the property in sufficient detail to enable the Government to screen its inventories for available property or to otherwise acquire property, including applicable manufacturer, model, part, catalog, National Stock Number or other pertinent identifiers;
- (iv) Combine requests for quantities of items with identical descriptions and estimated values when the estimated values do not exceed \$100,000 per unit; and
- (v) Include only a single unit when the acquisition or construction value equals or exceeds \$100,000.
- (2) Contracting Officer authorization is required for items the Contractor intends to manufacture as well as those it intends to purchase.
- (3) The Contractor shall submit requests to the Contracting Officer no less than 30 days in advance of the date the Contractor would, should it receive authorization, acquire or begin fabrication of the item.

- (c) The Contractor shall maintain copies of Contracting Officer authorizations, appropriately cross-referenced to the individual property record, within its property management system.
- (d) Property furnished from Government excess sources is provided as-is, where-is. The Government makes no warranty regarding its applicability for performance of the contract or its ability to operate. Failure of property obtained from Government excess sources under this clause is insufficient reason for submission of requests for equitable adjustments discussed in the clause at 52.245-1, Government Property.

ALTERNATE I (DEVIATION) (SEPTEMBER 2007)

As prescribed in 1845.107-70(a) (2) add the following paragraph (e).

- (e) In the event the Contracting Officer issues written authorization to provide property, the Contractor shall screen Government sources to determine the availability of property from Government inventory or excess property.
- (1) The Contractor shall review NASA inventories and other authorized Federal excess sources for availability of items that meet the performance requirements of the requested property.
- (i) If the Contractor determines that a suitable item is available from NASA supply inventory, it shall request the item using applicable Center procedures.
- (ii) If the Contractor determines that an item within NASA or Federal excess is suitable, it shall contact the Center Industrial Property Officer to arrange for transfer of the item from the identified source to the Contractor.
- (2) If the Contractor determines that the required property is not available from inventory or excess sources, the Contractor shall note the acquisition file with a list of sources reviewed and the findings regarding the lack of availability. If the required property is available, but unsuitable for use, the contractor shall document the rationale for rejection of available property. The Contractor shall retain appropriate cross-referenced documentary evidence of the outcome of those screening efforts as part of its property records system.

(End of clause)

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

(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:

See NASA Procedural Requirements (NPR) 4200.1, "NASA Equipment Management Manual", NPR 4200.2, "NASA Equipment Management User's Guide for Property Custodians", NPR 4300.1, "NASA Personal Property Disposal", and NPR 4310.4, "Identification and Disposition of NASA Artifacts", for applicable user responsibilities.

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

The Contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and compliance with these user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or

destruction of Government property.

- (I) (1) The official accountable recordkeeping, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished within NASA management information systems prescribed by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the Contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:
- (i) The Contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area.
- (ii) The Contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area.
- (iii) The Contractor shall establish a record of the property as required by FAR 52.245-1, Government Property, and furnish to the Industrial Property Officer a DD Form 1149, Requisition and Invoice/Shipping Document, (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the Contractor. The Contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.
- (iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the Contracting Officer and notification of the Industrial Property Officer. The property shall be considered Government furnished and the Contractor shall assume accountability and financial reporting responsibility. The Contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR 52.245-1, Government Property, until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by contractors.
- (2) After transfer of accountability to the Government, the Contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) of this clause and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the Contracting Officer.
- any other authorized representatives of the Contracting Officer.

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

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

 (2) Office furniture.

 (3) Property assigned to contractor personnel in NASA's N-PROP system.
- (ii) 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.
- (iii) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

 (4) Supplies from stores stock.

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

(6) Safety and fire protection for Contractor personnel and facilities.
 (7) Installation service facilities checked below at NASA Glenn Research Center.
 ∠ Library
 ☐ Equipment calibration
 ∠ Gov't-owned motor pool vehicles
 ∠ Airport shuttle
 ☐ Vehicle maintenance and fuel

	☑ Child care (Under similar terms and conditions applied to GRC civil servants)
	☑ Fitness center (Under similar terms and conditions applied to GRC civil servants)
D	☑ Bldg. 215

- (8) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.
- (9) Cafeteria privileges for Contractor employees during normal operating hours.
- (10) Building maintenance for facilities occupied by Contractor personnel.
- (11) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

ALTERNATE I (DEVIATION) (SEPTEMBER 2007)

As prescribed in 1845.107-70(b) (4), substitute the following for paragraph (b)(1)(i) of the basic clause:

(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.

(End of clause)

G.8 1852.245-82 OCCUPANCY MANAGEMENT REQUIREMENTS (DEVIATION) (SEPTEMBER 2007)

- (a) In addition to the requirements of the clause at FAR 52.245-1, Government Property, the Contractor shall comply with the following in performance of work in and around Government real property:
 - (1) NPD 8800.14, Policy for Real Property Management.
 - (2) NPR 8831.2, 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)

SECTION H - SPECIAL CONTRACT REQUIREMENTS

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

H.2 CONTRACTORS' DUTIES AND RESPONSIBILITIES ON-SITE (GRC 52.209-90) (AUG 2006)

- (a) BADGES. All Contractor personnel having a need to enter areas of the Glenn Research Center or Plum Brook Station shall have an identification badge or pass. This badge or pass shall be obtained at the entrance of the Glenn Research Center or Plum Brook Station. In addition to the requirements contained herein, the Contractor shall comply with Glenn Procedures and Guidelines GLPG 3730.1, Managing Conduct and Other Employee Issues, incorporated herein by reference and made a part hereof.
- (1) Resident Contractors (employees with picture badges)--
- (i) The on-site company supervisor will notify the Main Gate Badge Clerk at PABX 3-2206 when a new employee is reporting to work. The Badge Clerk will give the company supervisor specific instructions as to how the new employee will be badged, photographed, fingerprinted, etc.
- (ii) When an employee terminates and/or resigns employment, the company shall issue to the employee NASA Form C-10087, Non-NASA Separation Clearance Record. The company shall be responsible for making an inquiry of all offices listed on the form to see if the employee has any outstanding Government items. The employee shall then take this form to all offices that list he/she as having outstanding items. The employee's last stop is for the return of their Government issued I.D. badge.
- (iii) The Contractor shall ensure that the terminated and/or resigned employee has returned his/her badge to the Main Gate Badge Clerk. Final clearance of a Contractor upon completion of a contract will depend in part upon accounting for all badges issued to employees during the performance of the contract. It should be recognized that security badges are Government property and any alteration or misuse of these badges may be prosecuted as a violation of Section 499, Title 18, U.S. Code.
- (2) Non-Resident Contractors (employees with non-picture badges). The Contractor's on-site manager shall comply with the Badge and Property Regulations (NASA Form C-421) a copy of which will be given the Contractor's supervisors at the time of the Construction Site Showing. The Badge and Property Regulations are quoted below:
- (i) Ensure that each company employee is in possession of NASA Form C-9975 prior to reporting to work for badging purposes. Employees not in possession of the above mentioned for will be delayed at the gate until such time as the company supervisor/foreman or his representative reports to the Main Gate with the appropriate paperwork for badging.
- (ii) Report lost badges immediately.
- (iii) Upon termination of duties, each employee's badge will be collected and returned to the Main Gate by the Contractor. Final clearance of a Contractor upon completion of a contract will depend in part upon the accounting for all badges issued to employees during the performance of the contract. It should be recognized that security badges and

Government property and any alteration or misuse of these badges may be prosecuted as a violation of Section 499, Title 18, U.S. Code.

- (b) NASA-OWNED PROPERTY
- (1) The term "NASA-Owned Property" refers to all controlled (tagged) and non-tagged equipment, library property, security badges, computer passwords and other property furnished by the Government during the course of the contract.
- (2) The Contractor shall ensure that all NASA-Owned property issued to its employees is returned and in satisfactory condition upon termination of an employee's duties. In cases where accountability for the property is transferred from one employee to another, the Logistics and Technical Information Division must be notified. At the completion of the Government contract, all property will be returned, and the contract value will be adjusted for any property not accounted for.
- (3) When access to Federal computer systems has been granted, the Contractor shall ensure that its employees comply with the clause of the contract entitled "SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION RESOURCES (NFS 1852.204-76)".
- (c) EMERGENCIES
- (1) The Contractor shall ensure that its employees are informed that Emergency, Fire, Medical, Safety, and Security assistance can be summoned by Dialing "911" on the Center's PABX telephone system. Emergencies are defined as incidents involving serious personal injury or damage that causes a possible hazardous condition, or any incidents that require immediate attention of the Plant Protection Department or Security. All other medical treatment is the responsibility of the Contractor.
- (2) For incidents not classified as an emergency, contractor personnel shall be instructed to immediately notify the Contracting Officer's Technical Representative (COTR)(rather than dialing "911") in the event of an accident involving either personal injury or damage to property whether public or private, including damage to motor vehicles. They shall cooperate fully with the Government Accident Investigator and the Center Accident Investigation Board. This cooperation shall include interviews at the accident site and/or at a Board meeting.
- (3) The Chairman of the appropriate Accident Investigation Board will notify the Contractor through the COTR as to the date and time and location of the Board meeting. The Board meetings will be held between the hours of 8:15 a.m. and 4:45 p.m. regular work days Monday through Friday.
- (4) For Contractor duties where continuous manning of posts is mandatory during a work shift, the Contractor shall provide substitute personnel as required for manning these posts during the meeting of the Accident Investigation Boards.
- (d) TRAFFIC
- (1) The Contractor agrees to comply, and agrees to require that all of its personnel will comply with all posted traffic signs, signals and instructions of personnel assigned for traffic
- control and parking purposes and with the provisions of NPD 1600.2 and NHB 1620.1 incorporated herein by reference and made a part hereof.
- (2) The Government reserves the right to bar from the Glenn Research Center any Contractor employee who has failed to comply with such signs, signals, instructions and the provisions of NPD 1600.2 and NHB 1620.1. The period of the bar shall be as

determined appropriate by the Contracting Officer subject to the provisions of NPD 1600.2 and NHB 1620.1. The Contracting Officer will notify the Contractor in writing, setting forth the name(s) of the affected employees(s) and the time period(s) of the bar(s). No action by the Government in barring any Contractor employee from the Glenn Research Center shall be the basis for any claim whatever by the Contractor under this contract, nor shall it excuse the Contractor from complying with any provision of this contract.

- (e) ON-SITE STANDARDS OF CONDUCT
- (1) The Contractor's entry onto the Center shall be pursuant to fulfilling its contractual obligations, and any related activities thereto. Contractor personnel gaining access to Glenn facilities are required to certify that they meet the minimum ethical standards for entry onto a Government facility. Falsification of this certification could lead to criminal prosecution.
- (2) The Contractor agrees to comply, and agrees to require that all of its personnel will comply with all applicable Federal and State statutes and regulations, NASA policy and guidance documents, Glenn policy and guidance documents, and other regulations pertaining to personal conduct while on-site. Any conduct prejudicial to the efficient operation of the Center shall be cause for removal from the Center.
- (f) PROHIBITION OF FIREARMS. Firearms or weapons of any kind are strictly prohibited at the Glenn Research Center.
- (g) SECURITY INCIDENTS. Theft of Property, Bomb threats, malicious damage and any other threat or violent situations shall be immediately reported to the Security Office.
- (h) PROPERTY PASSES. A Contractor Property Pass (NASA Form C-702) is required for the removal of all Contractor owned property and equipment and must be presented to the gate guard upon exit. This form can be obtained from the COTR (or designee) or the Glenn employee responsible for the Contractor's presence at the Center. This form must contain a complete description of the material/equipment being removed and should be signed by the authorized Government employee. Material relating to a specific contract or purchase order must be identified by insertion of the appropriate contract/purchase order number on the pass by the COTR or designee.
- (i) CONTRACTOR IDENTIFICATION. To avoid situations whereby the actions of onsite contractor employees can be construed as that of Government officials, the onsite contractor shall take the following actions:
- (1) Insure that employees properly display their badge at all times.
- (2) Institute a policy whereby employees who, in their normal course of duties, answer telephone inquiries, participate in meetings with Government and other contractor personnel or deal with the general public appropriately identify themselves so their actions cannot be construed as that of Government officials.
- (3) Institute a policy whereby business correspondence, including emails and memoranda, includes the name of the company in the signature line. Use company letterhead for internal company matters and letters/memos signed by company personnel.
- (4) For onsite office space primarily occupied by company personnel, clearly indicate on the exterior of the office space the company name.

(End of clause)

H.3 PERSONAL IDENTITY VERIFICATION (PIV) CARD ISSUANCE PROCEDURES (GRC 52.204-96) (AUG 2006)

"PIV Card Issuance Procedures", posted on the World Wide Web at http://www.grc.nasa.gov/WWW/Procure/PIVCardIssuanceProcedures.doc, are incorporated herein by reference and made a part hereof.

These PIV Card Issuance Procedures are in accordance with FAR clause 52.204-9, "Personal Identity Verification of Contractor Personnel" and NASA Procurement Information Circular (PIC) 06-01 entitled "Personal Identity Verification of Contractors", dated January 18, 2006.

(End of clause)

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

H.5 1852.225-70 EXPORT LICENSES. (FEB 2000)

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

H.6 1852.244-70 GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM. (APR 1985)

H.7 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 <u>fourteen (14)</u> 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 three (3) calendar days after receipt of the task order.
- (f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.
- (g) The Contracting Officer may amend tasks in the same manner in which they were issued.
- (h) In the event of a conflict between the requirements of the task order and the Contractor's approved task plan, the task order shall prevail.

(End of clause)

H.8 1852.235-74 ADDITIONAL REPORTS OF WORK - RESEARCH AND DEVELOPMENT. (FEB 2003)

In addition to the final report required under this contract, the Contractor shall submit the following report(s) to the Contracting Officer:

- (a) Monthly progress reports. The Contractor shall submit separate monthly reports of all work accomplished during each month of contract performance. Reports shall be in narrative form, brief, and informal. They shall include a quantitative description of progress, an indication of any current problems that may impede performance, proposed corrective action, and a discussion of the work to be performed during the next monthly reporting period
- (b) Quarterly progress reports. The Contractor shall submit separate quarterly reports of all work accomplished during each three-month period of contract performance. In addition to factual data, these reports should include a separate analysis section interpreting the results

obtained, recommending further action, and relating occurrences to the ultimate objectives of the contract. Sufficient diagrams, sketches, curves, photographs, and drawings should be included to convey the intended meaning.

(c) Submission dates. Monthly and quarterly reports shall be submitted by the 15th day of the month following the month or quarter being reported. If the contract is awarded beyond the middle of a month, the first monthly report shall cover the period from award until the end of the following month. No monthly report need be submitted for the third month of contract effort for which a quarterly report is required. No quarterly report need be submitted for the final three months of contract effort since that period will be covered in the final report. The final report shall be submitted within sixty (60) days after the completion of the effort under the contract.

(End of clause)

H.9 OBSERVANCE OF LEGAL HOLIDAYS (NFS 1852.242-72) (AUG 1992) (ALTERNATE II) (OCT 2000)

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

New Year's Day

Labor Day

Martin Luther King, Jr.'s Birthday

Columbus Day

President's Day

Veterans Day

Memorial Day

Thanksgiving Day

Independence Day

Christmas Day

Any other day designated by Federal Statute, Executive Order, or the President's proclamation.

- (b) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance, or entitlement of compensation except as set forth within the contract.
- (c) When the Center grants administrative leave to its Government employees (e.g. as a result of inclement weather, potentially hazardous conditions, or other special circumstances), Contractor personnel working on-site should also be dismissed. However, the Contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.
- (d) Whenever administrative leave is granted to Contractor personnel pursuant to paragraph (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.10 1852.235-73 FINAL SCIENTIFIC AND TECHNICAL REPORTS. (AS MODIFIED BY GRUDOT 2007) (DEC 2006)

The following requirements are in addition to those stated in the Final Scientific and Technical Reports clause (1852.235-73) of this contract.

- (1) In addition to the requirements of NASA Procedural Requirements (NPR) 2200.2, "Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information," the format and content of the Final Report shall also follow NASA-SP-205-7602 "NASA Publications Guide for Authors." This document is available at http://www.sti.nasa.gov [Click on "Publish STI" and scroll down to "NASA/SP-2005-7602", where you can link to the document.].
- (2) The Final Report shall include a section entitled "New Technology". This section shall identify all non-patentable discoveries such as improvements, innovations, and computer codes; and all patentable inventions, whether developed or discovered during the performance of the contract. Possible secondary applications of reported new technology shall also be included in this section.
- (3) If a final report is required for the individual Task Order, the Contractor shall comply with this Final Report requirement at the time of Task Order completion.

(End of clause)

SECTION I - CONTRACT CLAUSES

- I.1 52.203-3 GRATUITIES. (APR 1984)
- I.2 52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY. (JAN 1997)
- I.3 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY. (JAN 1997)
- 1.4 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS. (SEP 2007)
- 1.5 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER. (AUG 2000)
- I.6 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL. (SEP 2007)
- I.7 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT. (SEP 2006)
- 1.8 52.215-2 AUDIT AND RECORDS NEGOTIATION. (JUN 1999)
- I.9 52.215-2 AUDIT AND RECORDS NEGOTIATION. (JUN 1999) ALTERNATE II (APR 1998)
- I.10 52.215-8 ORDER OF PRECEDENCE UNIFORM CONTRACT FORMAT. (OCT 1997)
- I.11 52.215-10 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA. (OCT 1997)
- I.12 52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA MODIFICATIONS. (OCT 1997)
- 1.13 52.215-12 SUBCONTRACTOR COST OR PRICING DATA. (OCT 1997)
- I.14 52.215-13 SUBCONTRACTOR COST OR PRICING DATA MODIFICATIONS. (OCT 1997)
- 1.15 52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS. (OCT 2004)
- ! 16 52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS. (JUL 2005)
- I.17 52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA MODIFICATIONS. (OCT 1997)
- I.18 52.216-7 ALLOWABLE COST AND PAYMENT. (DEC 2002)
- (a) ... Federal Acquisition Regulation (FAR) Subpart 31.7...

(3) The designated payment office will make interim payments for contract financing on the thirtieth (30th) day after the designated billing office receives a proper payment request.

I.19 52.216-8 FIXED FEE (MAR 1997)

- (a) The Government shall pay the Contractor for performing this contract the fixed fee specified in the Schedule.
- (D) Payment of the fixed fee shall be made as specified in the Schedule; provided that after payment of 85 percent of the fixed fee, the Contracting Officer may withhold further payment of fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total fixed fee or \$100,000, whichever is less. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(End of clause)

1.20 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 from contract start date through contract end date.

1.21 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 \$25,000, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.
- (1) Any order for a single item in excess of \$1,000,000;
- (2) Any order for a combination of items in excess of \$1,000,000; or
- (3) A series of orders from the same ordering office within thirty (30) days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) 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 thirty (30) 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.

1.22 52.216-22 INDEFINITE QUANTITY. (OCT 1995)

(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 sixty (60) days after contract end date.

1.23 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 sixty (60) days before the contract expires.

1.24 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

- (a) The Government may extend the term of this contract by written notice to the Contractor within thirty (30) days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least sixty (60) days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option clause.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed <u>five (5)</u> years.

(End of clause)

1.25 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS. (MAY 2004)

1.26 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN. (APRIL 2008)

1.27 52.222-3 CONVICT LABOR. (JUN 2003)

I.28 52.222-21 PROHIBITION OF SEGREGATED FACILITIES. (FEB 1999)

1.29 52.222-26 EQUAL OPPORTUNITY. (MAR 2007)

1.30 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES. (JUN 1998)

I.31 52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS. (SEP 2006)

1.32 52.222-50 COMBATING TRAFFICKING IN PERSONS. (AUG 2007)

1.33 52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA. (JAN 1997) - ALTERNATE I (JUL 1995)

I.34 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION. (AUG 2003) -- ALTERNATE II (AUG 2003)

I.35 52.223-6 DRUG-FREE WORKPLACE. (MAY 2001)

1.36 52.223-10 WASTE REDUCTION PROGRAM (AUG 2000)

1.37 GRC Supplemental Requirement WASTE REDUCTION PROGRAM (MAY 2008)

Waste Reduction Reporting -The Contractor shall submit a report for all operations and facilities . Sizered by this contract about its program to promote and implement cost effective waste reduction and affirmative procurement programs required by 42 U.S.C. 6962 and 7 USC 8102 for all products designated in the Environmental Protection Agency's (EPA) Comprehensive Procurement Guideline (40 CFR Part 247) and United States Department of Agriculture (USDA) BioPreferred Procurement Guideline (7 CFR part 2902, subpart B). The 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 December 15 at the address listed at http://netsdata.grc.nasa.gov. The report will be provided to the Contracting Officer, Contracting Officer's Technical Representative, and the GRC Environmental Management Branch. The Contractor's programs shall comply with applicable Federal, State, and local requirements, NASA Environmental policy, and the NASA Glenn Research Center Environmental Program Manual. A complete listing of all categories and products designated in EPA's Comprehensive Procurement Guideline can be found at http://www.epa.gov/cpg/products.htm. A complete listing of all categories and products designated in USDA's BioPreferred Procurement Guideline can be found at http://www.usda.gov/biopreferred.

1.38 52.223-14 TOXIC CHEMICAL RELEASE REPORTING. (AUG 2003)

1.39 52.227-1 AUTHORIZATION AND CONSENT. (JUL 1995) - ALTERNATE I (APR 1984)

I.40 52.227-11 PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SHORT FORM). (AS MODIFIED BY NFS 1852.227-11) (JUN 1997)

I.41 52.227-14 RIGHTS IN DATA - GENERAL. (JUN 1987)

1.42 52.228-7 INSURANCE - LIABILITY TO THIRD PERSONS. (MAR 1996)

I.43 52.232-12 ADVANCE PAYMENTS - ADVANCE PAYMENTS WITHOUT SPECIAL ACCOUNT (MAY 2001) (ALTERNATE II AND V)

- (a) Requirements for payment. Advance payments will be made under this contract (1) upon submission of properly certified invoices or vouchers by the contractor, and approval by the administering office, NASA Glenn Research Center, or (2) under a letter of credit. The amount up the invoice or voucher submitted plus all advance payments previously approved shall not exceed \$35,000,000. If a letter of credit is used, the Contractor shall withdraw cash only when needed for disbursements acceptable under this contract and report cash disbursements and balances as required by the administering office. The Contractor shall apply terms similar to this clause to any advance payments to subcontractors.
- (b) Use of funds. The Contractor may use advance payment funds only to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor, and indirect costs. Determinations of whether costs are properly allocable, allowable, and reasonable shall be in accordance with generally accepted accounting principles, subject to any applicable subparts of Part 31 of the Federal Acquisition Regulation.
- (c) Repayment to the Government. At any time, the Contractor may repay all or any part of the funds advanced by the Government. Whenever requested in writing to do so by the administering office, the Contractor shall repay to the Government any part of unliquidated advance payments considered by the administering office to exceed the Contractor's current requirements or the amount specified in paragraph (a) of this clause.
- (d) Maximum payment. When the sum of all unliquidated advance payments, unpaid interest

charges, and other payments equal the total estimated cost of \$\frac{(b)(4)}{\text{(b)(4)}}\$ (not including fixed-fee, if any) for the work under this contract, the Government shall withhold further payments to the Contractor. Upon completion or termination of the contract, the Government shall deduct from the amount due to the Contractor all unliquidated advance payments and interest charges payable. The Contractor shall pay any deficiency to the Government upon demand. For purposes of this paragraph, the estimated cost shall be considered to be the stated estimated cost, less any subsequent reductions of the estimated cost, plus any increases in the estimated costs that do not, in the aggregate, exceed \$35,000,000. The estimated cost shall include, without limitation, any reimbursable cost (as estimated by the Contracting Officer) incident to a termination for the convenience of the Government. Any payments withheld under this paragraph shall be applied to reduce the unliquidated advance payments. If full liquidation has been made, payments under the contract shall resume.

- (e) Interest. (1) The Contractor shall pay interest to the Government on the daily unliquidated advance payments at the daily rate specified in paragraph (e)(3) of this clause. Interest shall be computed at the end of each calendar month for the actual number of days involved. For the purpose of computing the interest charge, the following shall be observed:
- (i) Advance payments shall be considered as increasing the unliquidated balance as of the date of the advance payment check.
- (ii) Repayments by Contractor check shall be considered as decreasing the unliquidated palance as of the date on which the check is received by the Government authority designated by the Contracting Officer.
- (iii) Liquidations by deductions from payments to the Contractor shall be considered as decreasing the unliquidated balance as of the dates on which the Contractor presents to the Contracting Officer full and accurate data for the preparation of each voucher. Credits resulting from these deductions shall be made upon the approval of the reimbursement vouchers by the Disbursing Officer, based upon the Contracting Officer's certification of the applicable dates.

 (2) Interest charges resulting from the monthly computation shall be deducted from any payments on account of the fixed-fee due to the Contractor. If the accrued interest exceeds the payment due, any excess interest shall be carried forward and deducted from subsequent payments of the contract price or fixed-fee. Interest carried forward shall not be compounded. Interest on advance payments shall cease to accrue upon (i) satisfactory completion or (ii) termination of the contract for the convenience of the Government. The Contractor shall charge interest on advance payments to subcontractors in the manner described above and credit the interest to the Government. Interest need not be charged on advance payments to nonprofit educational or research subcontractors for experimental, developmental, or research work.
- (f) Lien on property under contract. (1) All advance payments under this contract, together with interest charges, shall be secured, when made, by a lien in favor of the Government, paramount to all other liens, on the supplies or other things covered by this contract and on all material and other property acquired for or allocated to the performance of this contract, except to the extent that the Government by virtue of any other terms of this contract, or otherwise, shall have valid title to the supplies, materials, or other property as against other creditors of the Contractor.

 (2) The Contractor shall identify, by marking or segregation, all property that is subject to a lien in favor of the Government by virtue of any terms of this contract in such a way as to indicate that it is subject to a lien and that it has been acquired for or allocated to performing this contract. If, for any reason, the supplies, materials, or other property are not identified by marking or segregation, the Government shall be considered to have a lien to the extent of the Government's interest under this contract on any mass of property with which the supplies, materials, or other property are commingled. The Contractor shall maintain adequate accounting control over the property on its books and records.
- (3) If, at any time during the progress of the work on the contract, it becomes necessary to

deliver to a third person any items or materials on which the Government has a lien, the Contractor shall notify the third person of the lien and shall obtain from the third person a receipt in duplicate acknowledging the existence of the lien. The Contractor shall provide a copy of each receipt to the Contracting Officer.

(4) If, under the termination clause, the Contracting Officer authorizes the contractor to sell or retain termination inventory, the approval shall constitute a release of the Government's lien to

the extent that---

(i) The termination inventory is sold or retained; and

- (ii) The sale proceeds or retention credits are applied to reduce any outstanding advance payments.
- (g) Insurance. (1) The Contractor shall maintain with responsible insurance carriers—
- (i) Insurance on plant and equipment against fire and other hazards, to the extent that similar properties are usually insured by others operating plants and properties of similar character in the same general locality;
- (ii) Adequate insurance against liability on account of damage to persons or property; and

(iii) Adequate insurance under all applicable workers' compensation laws.

(2) Until work under this contract has been completed and all advance payments made under the contract have been liquidated, the Contractor shall—

(i) Maintain this insurance;

- (ii) Maintain adequate insurance on any materials, parts, assemblies, subassemblies, supplies, equipment, and other property acquired for or allocable to this contract and subject to the Government lien under paragraph (f) of this clause; and
- (iii) Furnish any evidence with respect to its insurance that the administering office may require.
- (h) Default. (1) If any of the following events occur, the Government may, by written notice to the Contractor, withhold further payments on this contract:
- (i) Termination of this contract for a fault of the Contractor.
- (ii) A finding by the administering office that the Contractor has failed to—
- (A) Observe any of the conditions of the advance payment terms:
- (B) Comply with any material term of this contract;
- (C) Make progress or maintain a financial condition adequate for performance of this contract;
- (D) Limit inventory allocated to this contract to reasonable requirements; or
- (E) Avoid delinquency in payment of taxes or of the costs of performing this contract in the ordinary course of business.
- (iii) The appointment of a trustee, receiver, or liquidator for all or a substantial part of the Contractor's property, or the institution of proceedings by or against the Contractor for bankruptcy, reorganization, arrangement, or liquidation.
- (iv) The commission of an act of bankruptcy.
- (2) If any of the events described in paragraph (h)(1) of this clause continue for 30 days after the written notice to the Contractor, the Government may take any of the following additional actions:
- (i) Charge interest, in the manner prescribed in paragraph (e) of this clause, on outstanding advance payments during the period of any event described in paragraph (h)(1) of this clause.
- (ii) Demand immediate repayment by the Contractor of the unliquidated balance of advance payments.
- (iii) Take possession of and, with or without advertisement, sell at public or private sale all or any part of the property on which the Government has a lien under this contract and, after deducting any expenses incident to the sale, apply the net proceeds of the sale to reduce the unliquidated balance of advance payments or other Government claims against the Contractor.
- (3) The Government may take any of the actions described in paragraphs (h)(1) and (h)(2) of this clause it considers appropriate at its discretion and without limiting any other rights of the Government.

- (i) *Prohibition against assignment*. Notwithstanding any other terms of this contract, the Contractor shall not assign this contract, any interest therein, or any claim under the contract to any party.
- (j) Information and access to records. The Contractor shall furnish to the administering office
- (1) monthly or at other intervals as required, signed or certified balance sheets and profit and loss statements, and, (2) if requested, other information concerning the operation of the contractor's business. The Contractor shall provide the authorized Government representatives proper facilities for inspection of the Contractor's books, records, and accounts.
- (k) Other security. The terms of this contract are considered to provide adequate security to the Government for advance payments; however, if the administering office considers the security inadequate, the Contractor shall furnish additional security satisfactory to the administering office, to the extent that the security is available.
- (I) Representations. The Contractor represents the following:
- (1) The balance sheet, the profit and loss statement, and any other supporting financial statements furnished to the administering office fairly reflect the financial condition of the Contractor at the date shown or the period covered, and there has been no subsequent materially adverse change in the financial condition of the Contractor.
- (2) No litigation or proceedings are presently pending or threatened against the Contractor, except as shown in the financial statements.
- (3) The Contractor has disclosed all contingent liabilities, except for liability resulting from the renegotiation of defense production contracts, in the financial statements furnished to the administering office.
- (4) None of the terms in this clause conflict with the authority under which the Contractor is doing business or with the provision of any existing indenture or agreement of the Contractor.
- (5) The Contractor has the power to enter into this contract and accept advance payments, and has taken all necessary action to authorize the acceptance under the terms of this contract.
- (6) The assets of the Contractor are not subject to any lien or encumbrance of any character except for current taxes not delinquent, and except as shown in the financial statements furnished by the Contractor. There is no current assignment of claims under any contract affected by these advance payment provisions.
- (7) All information furnished by the Contractor to the administering office in connection with each request for advance payments is true and correct.
- (8) These representations shall be continuing and shall be considered to have been repeated by the submission of each invoice for advance payments.
- (m) Covenants. To the extent the Government considers it necessary while any advance payments made under this contract remain outstanding, the Contractor, without the prior written consent of the administering office, shall not—
- (1) Mortgage, pledge, or otherwise encumber or allow to be encumbered, any of the assets of the Contractor now owned or subsequently acquired, or permit any preexisting mortgages, liens, or other encumbrances to remain on or attach to any assets of the Contractor which are allocated to performing this contract and with respect to which the Government has a lien under this contract;
- (2) Sell, assign, transfer, or otherwise dispose of accounts receivable, notes, or claims for money due or to become due;
- (3) Declare or pay any dividends, except dividends payable in stock of the corporation, or make any other distribution on account of any shares of its capital stock, or purchase, redeem, or otherwise acquire for value any of its stock, except as required by sinking fund or redemption arrangements reported to the administering office incident to the establishment of these advance payment provisions;
- (4) Sell, convey, or lease all or a substantial part of its assets;
- (5) Acquire for value the stock or other securities of any corporation, municipality, or

Governmental authority, except direct obligations of the United States;

- (6) Make any advance or loan or incur any liability as guarantor, surety, or accommodation endorser for any party;
- (7) Permit a writ of attachment or any similar process to be issued against its property without getting a release or bonding the property within 30 days after the entry of the writ of attachment or other process;
- (b) Pay any remuneration in any form to its directors, officers, or key employees higher than rates provided in existing agreements of which notice has been given to the administering office, accrue excess remuneration without first obtaining an agreement subordinating it to all claims of the Government, or employ any person at a rate of compensation over \$N/A a year;
- (9) Change substantially the management, ownership, or control of the corporation;
- (10) Merge or consolidate with any other firm or corporation, change the type of business, or engage in any transaction outside the ordinary course of the Contractor's business as presently conducted;
- (11) Deposit any of its funds except in a bank or trust company insured by the Federal Deposit Insurance Corporation or a credit union insured by the National Credit Union Administration;
- (12) Create or incur indebtedness for advances, other than advances to be made under the terms of this contract, or for borrowings;
- (13) Make or covenant for capital expenditures exceeding \$N/A in total;
- (14) Permit its net current assets, computed in accordance with generally accepted accounting principles, to become less than \$N/A; or
- (15) Make any payments on account of the obligations listed below, except in the manner and to the extent provided in this contract:

 [List the pertinent obligations]

(End of clause)

I.44 52.232-17 INTEREST. (JUN 1996)

1.45 52.232-22 LIMITATION OF FUNDS. (APR 1984)

"Task Order" shall be substituted for "Schedule" wherever that word appears in the clause.

1.46 52.232-23 ASSIGNMENT OF CLAIMS. (JAN 1986)

1.47 52.232-25 PROMPT PAYMENT. (OCT 2003)

I.48 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION. (APR 1984)

1.49 52.242-3 PENALTIES FOR UNALLOWABLE COSTS. (MAY 2001)

1.50 52.242-13 BANKRUPTCY. (JUL 1995)

1.51 52.243-7 NOTIFICATION OF CHANGES. (APR 1984)

(b) *Notice*. The primary purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing promptly, within ten (10) (to be negotiated) calendar days from the date that the Contractor identifies any Government conduct (including

actions, inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state -

(d) Government response. The Contracting Officer shall promptly, within thirty (30) (to be negotiated) calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either -

1.52 52.244-2 SUBCONTRACTS. (JUN 2007) - ALTERNATE I (JUN 2007)

- (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:
- (j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations: ______
- 1.53 52.244-5 COMPETITION IN SUBCONTRACTING. (DEC 1996)

I.54 52.245-1 GOVERNMENT PROPERTY (JUN 2007) (AS MODIFIED BY GRC JUN 2007)

The contractor shall obtain approval from the Contracting Officer prior to purchasing or beginning fabrication of any Property, Plant, and Equipment (PP&E) with an anticipated total acquisition cost equal to or greater than \$100,000 that is not specifically identified in the contract.

1.55 52.245-1 GOVERNMENT PROPERTY. (JUN 2007) -- ALTERNATE II (JUN 2007)

I.56 52.245-9 USE AND CHARGES (JUNE 2007)

1.57 52.246-23 LIMITATION OF LIABILITY. (FEB 1997)

1.58 52.246-25 LIMITATION OF LIABILITY - SERVICES. (FEB 1997)

I.59 52.249-5 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (EDUCATIONAL AND OTHER NONPROFIT INSTITUTIONS). (SEP 1996)

I.60 52.249-6 TERMINATION (COST-REIMBURSEMENT). (MAY 2004)

I.61 52.249-14 EXCUSABLE DELAYS. (APR 1984)

I.62 52.253-1 COMPUTER GENERATED FORMS. (JAN 1991)

I.63 1852.209-72 COMPOSITION OF THE CONTRACTOR. (DEC 1988)

1.64 1852.216-89 ASSIGNMENT AND RELEASE FORMS. (JUL 1997)

1.65 1852.219-74 USE OF RURAL AREA SMALL BUSINESSES. (SEP 1990)

I.66 1852.219-75 SMALL BUSINESS SUBCONTRACTING REPORTING. (MAY 1999)

I.67 1852.219-77 NASA MENTOR PROTÉGÉ PROGRAM (MAY 1999)

1.68 1852.227-14 RIGHTS IN DATA - GENERAL.

1.69 1852.228-75 MINIMUM INSURANCE COVERAGE. (OCT 1988)

1.70 1852.232-70 NASA MODIFICATION OF FAR 52.232-12 (MARCH 1998)

- (a) Basic Clause. (1) In paragraph (e), Maximum Payment, in the sentence that begins "When the sum of," change the word "When" to lower case and insert before it: "Unliquidated advance payments shall not exceed \$..... at any time outstanding. In addition...."
- (2) In paragraph (m)(1), delete "in the form prescribed by the administering office" and substitute "and Standard Form 272, Federal Cash Transactions Report, and, if appropriate, Standard Form 272-A, Federal Cash Transactions Report Continuation."
- (b) Alternate II (if incorporated in the contract). In paragraph (e), Maximum Payment, in the sentence that begins "When the sum of," change the word "When" to lower case and insert before it: "Unliquidated advance payments shall not exceed \$..... at any time outstanding. In addition...."
- (c) Alternate V (if incorporated in the contract). (1) Substitute the following for paragraph (b): "(b) Use of funds. The Contractor may use advance payment funds only to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor, indirect costs, or such other costs approved in writing by the administering contracting office. Payments are subject to any restrictions in other clauses of this contract. Determinations of whether costs are properly allocable, allowable, and reasonable shall be in accordance with generally accepted accounting principles, subject to any applicable subparts of Part 31 of the Federal Acquisition Regulation, other applicable regulations referenced in Part 31, or Subpart 1831.2."

 (2) In paragraph (d), Maximum Payment, in the sentence that begins "When the sum of," change the word "When" to lower case and insert before it: "Unliquidated advance payments shall not exceed \$..... at any time outstanding. In addition...."
- (3) In paragraph (j)(1), insert between "statements," and "and" "together with Standard Form 272, Federal Cash Transactions Report, and, if appropriate, Standard Form 272-A, Federal Cash Transactions Report Continuation"
- (4) If this is a Phase I contract awarded under the SBIR or STTR programs, delete paragraph (a) and substitute the following: "(a) Requirements for payment. Advance payments will be made under this contract upon receipt of invoices from the Contractor. Invoices should be clearly marked "Small Business Innovation Research Contract" or "Small Business Technology Transfer Contract," as appropriate, to expedite payment processing. One-third of the total contract price will be available to be advanced to the contractor immediately after award, another one-third will be advanced three months after award, and the final one-third will be paid upon acceptance by NASA of the Contractor's final report. By law, full payment must be made no later than 12 months after the date that contract requirements are completed. The Contractor shall flow down the terms of this clause to any subcontractor requiring advance payments."

(End of clause)

I.69 1852.237-70 EMERGENCY EVACUATION PROCEDURES. (DEC 1988)

1.70 52.208-8 REQUIRED SOURCES FOR HELIUM AND HELIUM USAGE DATA. (APR 2002)

(a) Definitions.

Bureau of Land Management, as used in this clause, means the Department of the Interior, Bureau of Land Management, Amarillo Field Office, Helium Operations, located at 801 South

Fillmore Street, Suite 500, Amarillo, TX 79101-3545.

Federal helium supplier means a private helium vendor that has an in-kind crude helium sales contract with the Bureau of Land Management (BLM) and that is on the BLM Amarillo Field Office's Authorized List of Federal Helium Suppliers available via the Internet at http://www.nm.blm.gov/www/amfo/amfo_home.html.

Major helium requirement means an estimated refined helium requirement greater than 200,000 standard cubic feet (scf) (measured at 14.7 pounds per square inch absolute pressure and 70 degrees Fahrenheit temperature) of gaseous helium or 7510 liters of liquid helium delivered to a helium use location per year.

- (b) Requirements--(1) Contractors must purchase major helium requirements from Federal helium suppliers, to the extent that supplies are available.
- (2) The Contractor shall provide to the Contracting Officer the following data within 10 days after the Contractor or subcontractor receives a delivery of helium from a Federal helium supplier--
- (i) The name of the supplier;
- (ii) The amount of helium purchased;
- (iii) The delivery date(s); and
- (iv) The location where the helium was used.
- (c) Subcontracts. The Contractor shall insert this clause, including this paragraph (c), in any subcontract or order that involves a major helium requirement.

(End of clause)

1.71 52.215-19 NOTIFICATION OF OWNERSHIP CHANGES. (OCT 1997)

- (a) The Contractor shall make the following notifications in writing:
- (1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.
- (2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.
- (b) The Contractor shall -
- (1) Maintain current, accurate, and complete inventory records of assets and their costs;
- (2) Provide the ACO or designated representative ready access to the records upon request;
- (3) Ensure that all individual and grouped assets, their capitalized values, accumulated

depreciation or amortization, and remaining useful lives are identified accurately before and effer each of the Contractor's ownership changes; and

- (4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.
- (c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

1.72 52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES. (DEC 2004)

(a) Definition. As used in this clause--

United States means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

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

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs.

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

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

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

National Labor Relations Board

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

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

- (c) The Contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR part 470, and orders of the Secretary of Labor.
- (d) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this contract be cancelled, terminated, or suspended in whole or in part, and declare the Contractor ineligible for further Government contracts in accordance with procedures at 29 CFR part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR part 470, which implements Executive Order 13201, or as are otherwise provided by law.
- (e) The requirement to post the employee notice in paragraph (b) does not apply to--
- (1) Contractors and subcontractors that employ fewer than 15 persons;
- (2) Contractor establishments or construction work sites where no union has been formally recognized by the Contractor or certified as the exclusive bargaining representative of the Contractor's employees;
- (3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;
- (4) Contractor facilities where upon the written request of the Contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the Contractor's facilities if the Deputy Assistant Secretary finds that the Contractor has demonstrated that--
- (i) The facility is in all respects separate and distinct from activities of the Contractor related to the performance of a contract; and
- (ii) Such a waiver will not interfere with or impede the effectuation of the Executive order; or
- (5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.
- (f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors. The Contractor shall--
- (1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution

Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department's Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;

- (2) Download a copy of the poster from the Office of Labor-Management Standards website at http://www.olms.dol.gov; or
- (3) Reproduce and use exact duplicate copies of the Department of Labor's official poster.
- (g) The Contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of 29 CFR 470.3(c). For indefinite quantity subcontracts, the Contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

(End of clause)

1.73 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

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

http://www.acqnet.gov/far/

NASA FAR Supplement (NFS) clauses:

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

(End of clause)

I.74 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES. (MAY 2008) (DEVIATION)

- (a) The Contractor shall be responsible for information and information technology (IT) security when--
- (1) The Contractor or its subcontractors must obtain physical or electronic (i.e., authentication level 2 and above as defined in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-63, Electronic Authentication Guideline) access to NASA's computer systems, networks, or IT infrastructure; or

- (2) Information categorized as low, moderate, or high by the Federal Information Processing Standards (FIPS) 199, Standards for Security Categorization of Federal Information and Information Systems is stored, generated, processed, or exchanged by NASA or on behalf of NASA by a contractor or subcontractor, regardless of whether the information resides on a NASA or a contractor/subcontractor's information system.
- (b) IT Security Requirements.
- (1) Within 30 days after contract award, a Contractor shall submit to the Contracting Officer for NASA approval an IT Security Plan, Risk Assessment, and FIPS 199, Standards for Security Categorization of Federal Information and Information Systems, Assessment. These plans and assessments, including annual updates shall be incorporated into the contract as compliance documents.
- (i) The IT system security plan shall be prepared consistent, in form and content, with NIST SP 800-18, Guide for Developing Security Plans for Federal Information Systems, and any additions/augmentations described in NASA Procedural Requirements (NPR) 2810, Security of Information Technology. The security plan shall identify and document appropriate IT security controls consistent with the sensitivity of the information and the requirements of Federal Information Processing Standards (FIPS) 200, Recommended Security Controls for Federal Information Systems. The plan shall be reviewed and updated in accordance with NIST SP 800-26, Security Self-Assessment Guide for Information Technology Systems, and FIPS 200, on a yearly basis.
- (ii) The risk assessment shall be prepared consistent, in form and content, with NIST SP 800-30, Risk Management Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The risk assessment shall be updated on a yearly basis.
- (iii) The FIPS 199 assessment shall identify all information types as well as the "high water mark," as defined in FIPS 199, of the processed, stored, or transmitted information necessary to fulfill the contractual requirements.
- (2) The Contractor shall produce contingency plans consistent, in form and content, with NIST SP 800-34, Contingency Planning Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The Contractor shall perform yearly "Classroom Exercises." "Functional Exercises," shall be coordinated with the Center ClOs and be conducted once every three years, with the first conducted within the first two years of contract award. These exercises are defined and described in NIST SP 800-34.
- (3) The Contractor shall ensure coordination of its incident response team with the NASA Incident Response Center (NASIRC) and the NASA Security Operations Center, ensuring that incidents are reported consistent with NIST SP 800-61, Computer Security Incident Reporting Guide, and the United States Computer Emergency Readiness Team's (US-CERT) Concept of Operations for reporting security incidents. Specifically, any confirmed incident of a system containing NASA data or controlling NASA assets shall be reported to NASIRC within one hour that results in unauthorized access, loss or modification of NASA data, or denial of service affecting the availability of NASA data.
- (4) The Contractor shall ensure that its employees, in performance of the contract, receive

annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPR 2810 requirements. The Contractor may use web-based training available from NASA to meet this requirement.

- (5) The Contractor shall provide NASA, including the NASA Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in performance of the contract. Access shall be provided to the extent required to carry out IT security inspection, investigation, and/or audits to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA information or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime. To facilitate mandatory reviews, the Contractor shall ensure appropriate compartmentalization of NASA information, stored and/or processed, either by information systems in direct support of the contract or that are incidental to the contract.
- (6) The Contractor shall ensure that system administrators who perform tasks that have a material impact on IT security and operations demonstrate knowledge appropriate to those tasks. A system administrator is one who provides IT services (including network services, file storage, and/or web services) to someone other than themselves and takes or assumes the responsibility for the security and administrative controls of that service.
- (7) The Contractor shall ensure that NASA's Sensitive But Unclassified (SBU) information as defined in NPR 1600.1, NASA Security Program Procedural Requirements, which includes privacy information, is encrypted in storage and transmission.
- (8) When the Contractor is located at a NASA Center or installation or is using NASA IP address space, the Contractor shall--
- (i) Submit requests for non-NASA provided external Internet connections to the Contracting Officer for approval by the Network Security Configuration Control Board (NSCCB);
- (ii) Comply with the NASA CIO metrics including patch management, operating systems and application configuration guidelines, vulnerability scanning, incident reporting, system administrator certification, and security training; and
- (iii) Utilize the NASA Public Key Infrastructure (PKI) for all encrypted communication or non-repudiation requirements within NASA when secure email capability is required.
- (c) Physical and Logical Access Requirements.
- (1) Contractor personnel requiring access to IT systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPR 2810 and Chapter 4, NPR 1600.1, NASA Security Program Procedural Requirements. NASA shall provide screening, appropriate to the highest risk level, of the IT systems and information accessed, using, as a minimum, National Agency Check with Inquiries (NACI). The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of NASA, interim access may be granted pending completion of the required investigation and final access determination. For Contractors who will reside on a NASA Center or installation, the security screening required for all required access (e.g., installation, facility, IT, information, etc.) is consolidated to ensure only one investigation is conducted based on the highest risk level. Contractors not

residing on a NASA installation will be screened based on their IT access risk level determination only. See NPR 1600.1, Chapter 4.

- (2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk).
- (i) IT-1--Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.
- (ii) IT-2--Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" information whose cost to replace exceeds one million dollars.
- (iii) IT-3--Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the Contractor for NASA whose function or information has substantial cost to replace, even if these systems are not interconnected with a NASA network.
- (3) Screening for individuals shall employ forms appropriate for the level of risk as established in Chapter 4, NPR 1600.1.
- (4) The Contractor may conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate to the Contracting Officer that the procedures used by the Contractor are equivalent to NASA's personnel screening procedures for the risk level assigned for the IT position.
- (5) Subject to approval of the Contracting Officer, the Contractor may forgo screening of Contractor personnel for those individuals who have proof of a--
- (i) Current or recent national security clearances (within last three years);
- (ii) Screening conducted by NASA within the last three years that meets or exceeds the screening requirements of the IT position; or
- (iii) Screening conducted by the Contractor, within the last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer and concurred on by the CCS.
- (d) The Contracting Officer may waive the requirements of paragraphs (b) and (c)(1) through (c)(3) upon request of the Contractor. The Contractor shall provide all relevant information requested by the Contracting Officer to support the waiver request.
- (e) The Contractor shall contact the Contracting Officer for any documents, information, or forms necessary to comply with the requirements of this clause.

- (f) At the completion of the contract, the contractor shall return all NASA information and IT resources provided to the contractor during the performance of the contract and certify that all NASA information has been purged from contractor-owned systems used in the performance of the contract.
- (g) The Contractor shall insert this clause, including this paragraph (g), in all subcontracts:
- (1) Have physical or electronic access to NASA's computer systems, networks, or IT infrastructure; or
- (2) Use information systems to generate, store, process, or exchange data with NASA or on behalf of NASA, regardless of whether the data resides on a NASA or a contractor's information system.

(End of clause)

I.75 1852.215-84 OMBUDSMAN. (OCT 2003) ALTERNATE I (JUN 2000)

- (a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.
- (b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman. The current list of Center Ombudsmen is available at http://ec.msfc.nasa.gov/hq/library/Omb.html. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail james.a.balinskas@nasa.gov. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.
- (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)

1.76 1852.237-73 RELEASE OF SENSITIVE INFORMATION. (JUN 2005)

- (a) As used in this clause, "sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.
- (b) In accomplishing management activities and administrative functions, NASA relies heavily

on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

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

Mark the title page with the following legend:

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

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

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

- (2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.
- (d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:
- (1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.
- (2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.

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

(End of clause)

1.77 52.202-1 DEFINITIONS. (JUL 2004)

1.78 52.203-5 COVENANT AGAINST CONTINGENT FEES. (APR 1984)

1.79 52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

1.80 52.204-7 CENTRAL CONTRACTOR REGISTRATION. (JUL 2006)

1.81 52.233-1 DISPUTES. (JUL 2002) - ALTERNATE I (DEC 1991)

I.82 52.233-3 PROTEST AFTER AWARD. (AUG 1996) - ALTERNATE I (JUN 1985)

I.83 52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM. (OCT 2004)

I.84 52.242-1 NOTICE OF INTENT TO DISALLOW COSTS. (APR 1984)

I.85 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS. (MAR 2007)

I.86 1852.219-76 NASA 8 PERCENT GOAL. (JUL 1997)

I.87 1852.235-70 CENTER FOR AEROSPACE INFORMATION. (DEC 2006)

(End of Section)

SECTION J - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

J.1 LIST OF ATTACHMENTS

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

	Attachment	Description	Date of Attachment	No. of Pages	
i	Α	NASA C-338, Small Business Subcontracting Plan	February 14, 2008	15	(b)(
	В	Safety and Health Plan	April 29, 2008	22	(b)

(End of Clause)

(End of Section)

(End of Contract)