ADDITIONAL GOVERNMENT CONTRACT PROVISIONS

Where necessary to derive proper meaning in a subcontract situation from these provisions, "Recipient" means "Seller", "Grant Officer" means "Buyer", "Grant" means this Order and "Government" means "Buyer or the Government". However, the words "Government" and "Grant Officer" do not change: (a) when a right, act, authorization or obligation can be granted or performed only by the Government or the NASA Grant Officer or duly authorized representative and (b) when title to property is to be transferred directly to NASA.

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THE PROVISIONS LISTED ABOVE ARE INCORPORATED BY REFERENCE.

(a) Where the term "contract" or "Contractor" is used in the "Patent Rights" clause, the term shall be replaced by the term "grant" or "Recipient," respectively.
(b) In each instance where the term "Federal Agency," "agency," or "funding Federal agency" is used in the "Patent Rights" clause, the term shall be replaced by the term "NASA."
(c) The following item is added to the end of paragraph (f) of the "Patent Rights" clause:
"(5) The Recipient shall include a list of any Subject Inventions required to be disclosed during the preceding year in the performance report, technical report, or renewal proposal. A complete list (or a negative statement) for the entire award period shall be included in the summary of research."
(d) The term "subcontract" in paragraph (g) of the "Patent Rights" clause shall include purchase orders.
(e) The NASA implementing regulation for paragraph (g)(2) of the "Patent Rights" clause is at 48 CFR 1827.304-4(a)(i).
(f) The following requirement constitutes paragraph (I) of the "Patent Rights" clause:
"(I) Communications. A copy of all submissions or requests required by this clause, plus a copy of any reports, manuscripts, publications or similar material bearing on patent matters, shall be sent to the Center Patent Counsel and the NASA Grant Officer in addition to any other submission requirements in the grant provisions. If any reports contain information describing a "subject invention" for which the recipient has elected or may elect to retain title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series until an application filing date has been established, provided that the Recipient identify the information and the "subject invention" to which it relates at the time of submittal. If required by the NASA Grant Officer, the Recipient shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any "subject invention" in any country in which the Recipient has applied for patents."
(g) NASA Inventions. NASA will use reasonable efforts to report inventions made by NASA employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under this agreement and, upon timely request, will use reasonable efforts to grant the Recipient an
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exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-
free right of the Government to practice or have practiced the invention by or on behalf of the Government.

(h) In the event NASA contractors are tasked to perform work in support of specified activities under a
cooperative agreement and inventions are made by Contractor employees, the Recipient will normally
retain title to its employee inventions in accordance with 35 U.S.C. 202, 14 CFR Part 1245, and Executive
Order 12591. In the event the Recipient decides not to pursue rights to title in any such invention and
NASA obtains title to such inventions, NASA will use reasonable efforts to report such inventions and,
upon timely request, will use reasonable efforts to grant the Recipient an exclusive, or partially exclusive,
revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to
practice or have practiced the invention by or on behalf of the Government.

(End of Provision)

20. Restrictions on Funding Activities with China for Awards Subject to 14 CFR § 1260

(a) Pursuant to The Department of Defense and Full-Year Appropriation Act, Public Law 112-10, Section
1340(a); The Consolidated and Further Continuing Appropriation Act of 2012, Public Law 112-55, Section
539; and future-year appropriations (hereinafter, "the Acts"), NASA is restricted from using funds
appropriated in the Acts to enter into or fund any grant or cooperative agreement of any kind to participate,
collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient
level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no-
exchange of funds arrangement.

(b) Definition: "China or Chinese-owned Company" means the People's Republic of China, any company
owned by the People's Republic of China, or any company incorporated under the laws of the People's
Republic of China.

(c) The restrictions in the Acts do not apply to commercial items of supply needed to perform a grant or
cooperative agreement.

(d) Subaward- The recipient shall include the substance of this provision in all subawards made
hereunder.

(End of Provision)

21. Central Contractor Registration and Universal Identifier Requirements

A. Requirement for Central Contractor Registration (CCR)

Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain
the currency of your information in the CCR until you submit the final financial report required under this
award or receive the final payment, whichever is later. This requires that you review and update the
information at least annually after the initial registration, and more frequently if required by changes in
your information or another award term.

B. Requirement for Data Universal Numbering System (DUNS) Numbers

If you are authorized to make subawards under this award, you:

1. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may
receive a subaward from you unless the entity has provided its DUNS number to you.

2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

C. Definitions

For purposes of this award term:

1. Central Contractor Registration (CCR) means the Federal repository into which an entity must provide
information required for the conduct of business as a recipient. Additional information about registration
procedures may be found at the CCR Internet site (currently at http://www.ccr.gov).

2. Data Universal Numbering System (DUNS) number means the nine-digit number established and
assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may
be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at

3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart
C:

a. A Governmental organization, which is a State, local government, or Indian Tribe;

b. A foreign public entity;

c. A domestic or foreign nonprofit organization;

d. A domestic or foreign for-profit organization; and
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e. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. Subaward:
   a. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
   b. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").
   c. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. Subrecipient means an entity that:
   a. Receives a subaward from you under this award; and
   b. Is accountable to you for the use of the Federal funds provided by the subaward.

22. Requirements for Federal Funding Accountability and Transparency Act Implementation

I. Reporting Subawards and Executive Compensation.
   a. Reporting of first-tier subawards.
      1. Applicability. Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates $25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this award term).
      2. Where and when to report.
         i. You must report each obligating action described in paragraph a.1. of this award term to http://www.fsrs.gov.
         ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)
      3. What to report. You must report the information about each obligating action that the submission instructions posted at http://www.fsrs.gov specify.

   b. Reporting Total Compensation of Recipient Executives.
      1. Applicability and what to report. You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if--
         i. the total Federal funding authorized to date under this award is $25,000 or more;
         ii. in the preceding fiscal year, you received--
            (A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
            (B) $25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
      2. Where and when to report. You must report executive total compensation described in paragraph b. 1. of this award term:
         i. As part of your registration profile at http://www.ccr.gov.
         ii. By the end of the month following the month in which this award is made, and annually thereafter.

   c. Reporting of Total Compensation of Subrecipient Executives.
      1. Applicability and what to report. Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient’s five most highly compensated executives for the subrecipient’s preceding completed fiscal year, if--
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i. in the subrecipient's preceding fiscal year, the subrecipient received:
   (A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
   (B) $25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at http://www.sec.gov/answers/execomp.htm.)

2. Where and when to report. You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under $300,000, you are exempt from the requirements to report:

i. Subawards,

and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. Definitions. For purposes of this award term:

1. Entity means all of the following, as defined in 2 CFR part 25:
   i. A Governmental organization, which is a State, local government, or Indian tribe;
   ii. A foreign public entity;
   iii. A domestic or foreign nonprofit organization;
   iv. A domestic or foreign for-profit organization;
   v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. Executive means officers, managing partners, or any other employees in management positions.

3. Subaward:
   i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
   ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. _ .210 of the attachment to OMB Circular A-133, “Audits of States, Local Governments, and Non-Profit Organizations”).
   iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. Subrecipient means an entity that:
   i. Receives a subaward from you (the recipient) under this award; and
   ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
   i. Salary and bonus.
   ii. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
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iii. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

iv. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.

v. Above-market earnings on deferred compensation which is not tax-qualified.

vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds $10,000.

23. Limited Release of Recipient Confidential Business Information

(a) NASA may find it necessary to release information submitted by the Recipient pursuant to the provisions of this grant/cooperative agreement to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by submission of this proposal, or signature on this grant/cooperative agreement, the Recipient hereby consents to a limited release of its confidential business information (CBI).

(b) Possible circumstances where the Agency may release the Recipient's CBI include, but are not limited to, the following:

1. To other Agency contractors and subcontractors, and their employees tasked with assisting the Agency in handling and processing information and documents in the evaluation, the award or the administration of Agency contracts, such as providing both preaward and post award audit support and specialized technical support to NASA's technical evaluation panels;

2. To NASA contractors and subcontractors, and their employees engaged in information systems analysis, development, operation and maintenance, including performing data processing and management functions for the Agency.

(c) Except where otherwise provided by law, NASA will permit the limited release of CBI under subparagraphs (1) or (2) only pursuant to non-disclosure agreements signed by the assisting contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract.

(d) NASA's responsibilities under the Freedom of Information act are not affected by this clause.

(e) The Recipient agrees to include this provision, including this paragraph (e), in all subcontracts/subawards at all levels awarded pursuant to this grant/cooperative agreement that require the furnishing of confidential business information by the subcontractor/sub-recipient.

(End of Provision)

24. Trafficking in Persons

a. Provisions applicable to a recipient that is a private entity.

1. You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not--

i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;

ii. Procure a commercial sex act during the period of time that the award is in effect; or

iii. Use forced labor in the performance of the award or subawards under the award.

2. We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity --

i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or

ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either--

A. Associated with performance under this award; or

B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 CFR part 1880.

b. Provision applicable to a recipient other than a private entity.

We as the Federal awarding agency may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity--
ADDITIONAL GOVERNMENT CONTRACT PROVISIONS

1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or
2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either--
   i. Associated with performance under this award; or
   ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 CFR 1880.

c. Provisions applicable to any recipient.
   1. You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.
   2. Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:
      i. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and
      ii. Is in addition to all other remedies for noncompliance that are available to us under this award.
   3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

d. Definitions. For purposes of this award term:
   1. ``Employee'' means either:
      i. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or
      ii. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.
   2. ``Forced labor'' means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.
   3. ``Private entity'':
      i. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.
      ii. Includes:
         A. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).
         B. A for-profit organization.
   4. ``Severe forms of trafficking in persons," ``commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

(End of Provision)