

NONREIMBURSABLE MEMORANDUM OF UNDERSTANDING BETWEEN
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION AGENCY
(FAA)
OFFICE OF COMMERCIAL SPACE TRANSPORTATION
AND
NASA
FOR
A PARTNERSHIP TO ACHIEVE GOALS FOR THE COMMERCIAL RESUPPLY
SERVICES (CRS) CONTRACT MANAGEMENT ACTIVITIES

ARTICLE 1. AUTHORITY AND PARTIES

In accordance with The National Aeronautics and Space Act of 1958, as amended (42 U.S.C. 2473 (c)), this Memorandum of Understanding ("Agreement") is entered into by the NASA Lyndon B. Johnson Space Center located at 2101 NASA Parkway, Houston, Texas 77058 (hereinafter referred to as "NASA JSC," "JSC," or "NASA") and U.S. Department of Transportation Federal Aviation Administration, Office of Commercial Space Transportation (AST) located at 800 Independence Avenue, SW, Washington, DC 20591, (hereinafter referred to as "FAA", "AST" or "Partner"). NASA and Partner may be individually referred to as a "Party" and collectively referred to as the "Parties."

ARTICLE 2. PURPOSE

This Agreement establishes and memorializes a collaborative partnership between the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA) to achieve complementary goals in the management of activities associated with a Commercial Resupply Services (CRS) Contract.

The International Space Station (ISS) Transportation Integration Office of NASA JSC is responsible for the management and engineering integration activities associated with a Commercial Resupply Services Contract. The FAA is responsible for the launch vehicle and spacecraft licensing activities required for a commercial vendor, necessitating review of engineering systems, component data, and safety processes relevant to these systems. The primary goal of this collaboration is to facilitate the coordination of reviews of vehicle systems and the exchange of technical data common to both agencies to accomplish the above requirements subject to the constraints of Article 9. Fundamental to this agreement is the understanding that the FAA and NASA will define and execute their own focused programs incorporating, as appropriate, common technical information and insight data. This Agreement describes the objectives and responsibilities of each party to accomplish the objectives of the management of activities associated with the CRS contract. Joint Program Management Plan (JPMP) between the FAA and NASA, to be added to this agreement as Appendix A, will define the day-to-day organizational interfaces and milestone activities required to facilitate efficient technical data exchanges that avoid duplicative requests of the launch operators under contract to NASA. The Parties agree to abide by the defined roles and responsibilities of each office with respect

to integrated CRS activities and organizational interfaces at the Johnson Space Center as defined in the JPMP.

ARTICLE 3. RESPONSIBILITIES

A. FAA will use reasonable efforts to:

- (1) Work with NASA to draft a Joint Program Management Plan (JPMP) to define the day to day organizational interfaces and milestone activities required to facilitate efficient technical data exchanges that avoid duplicative requests of NASA's contractor. This JPMP will be included as Appendix A to this Agreement.
- (2) Detail two (2) FAA employees at JSC to support activities under this Agreement.
- (3) Participate in CRS technical milestone reviews and Safety reviews conducted by NASA to obtain pertinent data for Launch vehicle licensing and Spacecraft re-entry licensing.
- (4) Support the NASA ISS Transportation Integration Office with Range Safety status and issue resolution relevant to CRS missions.
- (5) Have the two detailed FAA employees serve as the on-site interface with the Commercial Crew and Cargo Program Office (C3PO) and the NASA ISS Transportation Integration Office (Code ON).
- (6) Support all Commercial Orbital Transportation System (COTS) demonstration mission activities and CRS mission activities, such as Design and Operations Reviews, Mission Readiness Reviews, Mission Support, Post Mission Debriefings & Lessons Learned Meetings.
- (7) Participate in the COTS and CRS ISS real time missions as they occur at the NASA JSC Mission Control Center (MCC) for both of the COTS Partners/CRS contractors (Space Exploration Technologies ("SpaceX") and Orbital Sciences Corporation ("Orbital Sciences")) as defined in the Joint Program Management Plan.

B. NASA/will use reasonable efforts to:

- (1) Work with the FAA to draft a Joint Program Management Plan (JPMP) that defines the day to day organizational interfaces and milestone activities required to facilitate efficient technical data exchanges so as to avoid duplicative requests of the CRS contractors. This JPMP will become Appendix A to this Agreement.
- (2) Provide office space and administrative support (i.e., computers, network access, telephone) to the FAA personnel detailed at JSC to support activities under this Agreement.

ARTICLE 4. SCHEDULE AND MILESTONES

The planned major milestones for the activities defined in the "Responsibilities" clause are as follows:

Completion of the Joint Program Management Plan	April 2011
Office space and administrative support available	December 2010
FAA personnel locate to JSC	December 2010

ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds or other obligations between NASA and Partner in connection with this Agreement. Each Party will fund its own participation under this Agreement. All activities under or pursuant to this Agreement are subject to the availability of appropriated funds and the Parties' respective funding procedures.

ARTICLE 6. PRIORITY OF USE

Any schedule or milestone in this Agreement is estimated based upon the Parties' current understanding of the projected availability of their personnel, facilities and equipment. In the event that either party's projected availability changes, the other party shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that their own usage of any facilities, equipment, and personnel shall have priority over the usage planned in this Agreement. Should a conflict arise, the responsible Federal Entity, in its sole discretion, shall determine whether to exercise that priority.

ARTICLE 7. LIABILITY AND RISK OF LOSS

Each Party agrees to assume liability for its own risks arising from or related to activities conducted under this Agreement.

ARTICLE 8. INTELLECTUAL PROPERTY RIGHTS - INVENTION AND PATENT RIGHTS

Unless otherwise agreed by NASA and Partner, custody and administration of inventions made (conceived or first actually reduced to practice) as a consequence of, or in direct relation to, the performance of activities under this Agreement will remain with the respective inventing Party. In the event an invention is made jointly by employees of the Parties (including by employees of a Party's contractors or subcontractors for which the U.S. Government has ownership), NASA and Partner will consult and agree as to future actions toward establishment of patent protection for the invention.

ARTICLE 9. INTELLECTUAL PROPERTY RIGHTS - HANDLING OF DATA

1. In the performance of this Agreement, NASA or Partner (as the Disclosing Party) may provide the other Party (as the Receiving Party) with:

- (a) data of third parties that the Disclosing Party has agreed to handle under protective arrangements or is required to protect under the Trade Secrets Act (18 U.S.C. 1905), or
- (b) Government data, the use and dissemination of which, the Disclosing Party intends to control.

2. Data provided by Disclosing Party under the Agreement

- (a) At the time of execution of this Agreement, the Parties agree that the following data of third parties will be provided by the Disclosing Party to the Receiving Party with the express understanding that the Receiving Party will use and protect such data in accordance with paragraph 3 of this article:

Proprietary engineering data of a CRS contractor

- (b) At the time of execution of this Agreement, NASA and Partner agree that the following U.S. Government data will be provided to Partner with the express understanding that Partner will use and protect such U.S. Government data in accordance with this clause:

"Not applicable"

- (c) At the time of execution of this Agreement, the Parties agree that the following software and related data will be provided by the Disclosing Party to the Receiving Party under a separate Software Usage Agreement with the express understanding that the Receiving Party will use and protect such related data in accordance with this clause:

"Not Applicable"

3. Proprietary engineering data of a CRS contractor: With respect to data specifically identified in this clause or specifically marked with a restrictive notice, the Receiving Party agrees to:

- (a) Use, disclose, or reproduce such data only to the extent necessary to perform the work required under this Agreement;
- (b) Safeguard such data from unauthorized use or disclosure, including safeguarding any data provided by SpaceX from being disclosed to Orbital Sciences or vice versa. SpaceX and Orbital Sciences may be individually referred to herein as a "competing contractor" and collectively referred to as "competing contractors."
- (c) Allow access to such data only to its employees, contractors (but not to a competing contractor), or subcontractors that require access for their performance under this Agreement;
- (d) Except as otherwise indicated in 3(c) above, preclude access and disclosure of such data outside the Receiving Party's organization;
- (e) Notify its employees who may require access to such data about the obligations under this clause and ensure that such employees comply with such obligations, including the obligation that the data of one competing contractor not be provided to the other competing contractor, and notify its contractors or subcontractors that may require access to such data about their obligations under this clause; and

(f) Return or dispose of such data, as the Disclosing Party may direct, when the data is no longer needed for performance under this Agreement.

4. In the event that data exchanged between the Parties include a legend that NASA or Partner deems to be ambiguous or unauthorized, NASA or Partner may inform the other Party of such condition. Notwithstanding such a legend, as long as such legend provides an indication that a restriction on use or disclosure was intended, the Receiving Party shall treat such data pursuant to the requirements of this clause unless otherwise directed, in writing, by the Providing Party.

5. Notwithstanding any restrictions on use, disclosure, or reproduction of data provided in this clause, the Parties will not be restricted in the use, disclosure, and reproduction of any data that: (a) is publicly available at the time of disclosure or becomes publicly available without breach of this Agreement; (b) is known to, in the possession of, or developed by the receiving Party independent of carrying out the receiving Party's responsibilities under this Agreement and independent of any disclosure of, or without reference to, proprietary data or otherwise protectable data hereunder; (c) is received from a third Party having the right to disclose such information without restriction; or (d) is required to be produced by the receiving Party pursuant to a court order or other legal requirement. If either NASA or Partner believes that any of the events or conditions that remove restriction on the use, disclosure, and reproduction of the data apply, NASA or Partner will promptly notify the other Party of such belief prior to acting on such belief, and, in any event, will notify the other Party prior to an unrestricted use, disclosure, or reproduction of such data.

ARTICLE 10. INTELLECTUAL PROPERTY RIGHTS - RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or Partner may, consistent with Federal law and this Agreement, release general information regarding its own participation in this Agreement as desired. Insofar as participation of the other Party is involved, NASA and Partner will seek to consult with each other prior to any releases, consistent with the Parties' respective policies.

ARTICLE 11. COMPLIANCE WITH LAWS AND REGULATIONS

The Parties shall comply with all applicable laws and regulations including, but not limited to, safety, security, export control, and environmental laws and regulations. Access by Partner to NASA facilities or property, or to a NASA Information Technology (IT) system or application, is contingent upon compliance with NASA security and safety policies and guidelines including, but not limited to, standards on badging, credentials, and facility and IT system/application access.

With respect to any export control requirements:

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

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

(c) The Partner will be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions or exceptions.

(d) The Partner will be responsible for ensuring that the provisions of this Article apply to its Related Entities.

ARTICLE 12. TERM OF AGREEMENT

This Agreement becomes effective upon the date of the last signature below (herein referred to as the "Effective Date") and shall remain in effect for three (3) years from the Effective Date.

ARTICLE 13. RIGHT TO TERMINATE

This Agreement becomes effective upon the date of the last signature below (herein referred to as the "Effective Date") and shall remain in effect for three (3) years from the Effective Date.

ARTICLE 14. CONTINUING OBLIGATIONS

The rights and obligations of the Parties that, by their nature, would continue beyond the expiration or termination of this Agreement, e.g., "Liability and Risk of Loss" and "Intellectual Property Rights - Handling of Data" shall survive such expiration or termination of this Agreement.

ARTICLE 15. MANAGEMENT POINTS OF CONTACTS

The following personnel are designated as the principal points of contact between the Parties in the performance of this Agreement.

Technical Points of Contact

NASA Lyndon B. Johnson Space Center

Kimberly K. Ulrich
Technical Integration Manager
Mail Stop: ON11
2101 NASA Parkway
Houston, Texas 77058
Phone: 281-244-8069
Fax: 281-244-8193
kimberly.k.ulrich@nasa.gov

U.S. Department of Transportation

Federal Aviation Agency
Office of Commercial Space
Transportation
Ken Gidlow
Deputy Manager, Space Systems
Development Division
800 Independence Avenue, SW
Washington, DC 20591
Phone: 202-359-9397
ken.gidlow@faa.gov

Business/Administrative Points of Contact

NASA Lyndon B. Johnson Space Center

William Joiner
Program Specialist
Mail Stop: OX
2101 NASA Parkway
Houston, Texas 77058
Phone: 281-244-5067
Fax: 281-244-8512
william.joiner-1@nasa.gov

U.S. Department of Transportation

Federal Aviation Agency
Office of Commercial Space
Transportation
800 Independence Avenue, SW
Washington, DC 20591

ARTICLE 16. DISPUTE RESOLUTION

Except as otherwise provided in the article entitled "Priority of Use", the article entitled "Intellectual Property Rights – Invention and Patent Rights" (for those activities governed by 37 C.F.R. Part 404), and those situations where a pre-existing statutory or regulatory system exists (e.g. under the Freedom of Information Act, 5 U.S.C. § 552), all disputes concerning questions of fact or law arising under this Agreement shall be referred by the claimant in writing to the appropriate person identified in this Agreement as the "Management Points of Contact." The persons identified as the "Management Points of Contact" for NASA and the Partner will consult and attempt to resolve all issues arising from the implementation of this Agreement. If they are unable to come to agreement on any issue, the dispute will be referred to the signing officials, or their designees, for joint resolution after the Parties have separately documented in writing clear reasons for the dispute. As applicable, disputes will be resolved pursuant to the provisions of the Business Rules for Intragovernmental Transactions delineated in the Treasury Financial Manual, Vol. 1, Bulletin 2007-03, Section VII (Resolving Intragovernmental Disputes and Differences).

ARTICLE 17. MODIFICATIONS

Any modification to this Agreement shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Any modification that creates an additional commitment of NASA resources must be signed by the original NASA signatory authority, or successor, or a NASA official possessing original or delegated authority to make such a commitment.

ARTICLE 18. INDEPENDENT RELATIONSHIP

This Agreement is not intended to constitute, create, give effect or otherwise recognize a joint venture, partnership, or formal business organization, or agency agreement of any kind, and the rights and obligations of the Parties shall be only those expressly set forth herein.

ARTICLE 19. LOAN OF GOVERNMENT PROPERTY

1. In order to further activities set forth in this Agreement, the Parties acknowledge that NASA shall lend the following Government property to the FAA:

ODIN Workstations, Internet access and phones

2. Furthermore, such Property is not excess to NASA's requirements and its use is anticipated upon its return to NASA.

3. In support of this loan the FAA shall:

- (a) Install, operate, and maintain the Property at the FAA's expense;
- (b) Furnish all utilities (e.g., water, electricity) and operating materials required for the operation of the Property;
- (c) Bear all costs associated with the use and enjoyment of the Property under the terms of this Agreement, including but not limited to such costs as packing, crating, shipping, installing, maintaining, licensing, and operating the Property;
- (d) Transport the Property in accordance with good commercial practice;
- (e) Acknowledge that the privilege of using and enjoying the said Property exists solely by virtue of this Agreement with NASA, the owner of said Property, and not as of right;
- (f) Identify, mark, and record all of the Property promptly upon receipt, and maintain such identity so long as it remains in the custody, possession, or control of Partner.
- (g) Maintain suitable records for each item of Property. As a minimum, such records shall show description, identification number, unit cost, quantity, dates of receipt, condition upon receipt, and location. Partner shall perform an inventory of the Property one (1) year from the Effective Date of this Agreement, and every year thereafter, if the Agreement is still in effect, and send such inventory report to NASA. The report shall include a statement validating any requirement to continue the loan. Further, the FAA shall provide to NASA, upon reasonable request, records sufficient to disclose the date of inspections, the deficiencies discovered as a result of inspections, and the maintenance actions performed. This annual report shall be submitted to the following NASA point of contact (POC):

NASA Johnson Space Center
ATTN: Supply Equipment Management Officer (SEMO)
Mail Code JB / Logistics Division
2101 NASA Parkway
Houston, Texas 77058

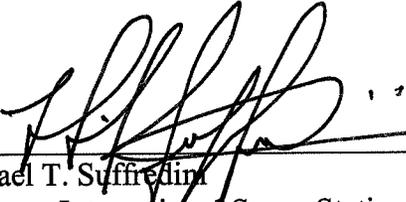
(h) Report any loss, damage, or destruction of Property to the POC identified above within ten (10) working days from the date of the discovery thereof.

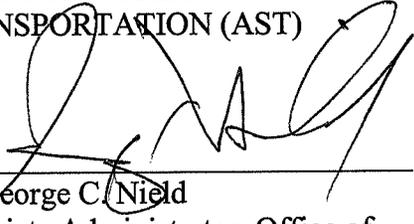
ARTICLE 20. SIGNATORY AUTHORITY

The signatories to this Agreement covenant and warrant that they have authority to execute this Agreement. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE
CENTER

U.S. DEPARTMENT OF
TRANSPORTATION FEDERAL
AVIATION ADMINISTRATION
OFFICE OF COMMERCIAL SPACE
TRANSPORTATION (AST)

BY: 
Michael T. Suffredini
Manager, International Space Station
Program

BY: 
Dr. George C. Nield
Associate Administrator, Office of
Commercial Space Transportation
800 Independence Avenue, SW
Washington, DC 20591

DATE: 04/10/2011

DATE: 03-31-2011