

Memorandum of Understanding
Between the
U.S. Department of the Interior, Office of Aviation Services
and the
National Aeronautical and Space Administration, Ames Research Center (NASA)
for
Small Unmanned Aerial Systems (UAS) Airworthiness Evaluation

I. PROJECT TITLE: Small UAS Airworthiness Evaluation

II. PROJECT DESCRIPTION:

This memorandum is pursuant to the interagency agreement signed by the United States National Search and Rescue Committee, dated 1 January 2012, section 6 (f) (Attached). The U.S. Department of the Interior, Office of Aviation Services (OAS) provides aviation management and oversight to the fleet of aircraft utilized by the Department and its Bureaus (DOI). As part of its responsibility, OAS inspects DOI's fleet of aircraft for airworthiness to ensure the safety of DOI personnel. For DOI manned aircraft fleet, OAS uses the requirements for 14 CFR Part 135 as the benchmark for airworthiness. This standard, however, does not apply to unmanned aircraft systems (UAS). Up to this point, DOI has been using excess Department of Defense's (DOD) UAS to accomplish its missions. There is work demand to add commercially available UAS's to DOI's fleet. As a result, DOI is seeking to develop a process to determine airworthiness for small UAS systems (less than 55lbs). The FAA requires that OAS sign airworthiness statements for each of the aircraft it operates no matter how small. OAS is not staffed nor equipped to develop and test airworthiness standards for small UAS. This agreement will allow OAS to partner with NASA to evaluate airworthiness of small UAS that may be utilized by DOI. This evaluation will be based upon the criteria in the NASA Unmanned Aerial Systems (UAS), Airworthiness & Flights Safety Review Board (AFSRB) and Flight Readiness Review Board (FRRB) Handbook (Attached and as hereafter may be finalized, updated or amended). NASA will provide

recommendations for approval or disapproval for a given system and will recommend operating restrictions, if any.

III. OBJECTIVE

The objective of this project is for NASA to evaluate small UAS for airworthiness, and provide OAS with recommendations for approval/disapproval of a system and any recommended operating restrictions. OAS will use these recommendations as the basis for signing and approving or disapproving airworthiness statements for commercially available small UAS for DOI.

IV. STATEMENT OF WORK and RESPONSIBILITIES:

A. OAS Agrees to:

1. Facilitate delivery of proposed UAS to NASA.
2. Make arrangements for a trained operator to be on-site, when needed, for the evaluation.
3. Fund airworthiness evaluation activities performed on its behalf through an IAA.
4. Provide NASA the necessary information needed to prepare for the evaluation.
5. Provide a technical point of contact to coordinate evaluation activities.
6. Conduct an ongoing needs assessment to ensure that any challenges related to airworthiness determinations, or this agreement, are addressed early.

B. NASA Agrees to:

1. Evaluate Small UAS for airworthiness utilizing personnel associated with the NASA-Ames Research Center, Airworthiness and Flight Safety Review Board.
2. Utilize the criteria outlined in the most current version of the Airworthiness Flight Safety Review Board (AFSRB) and the Flight Readiness Review Board (FRRB) Handbook as the basis for the evaluation.
3. Utilize its access to airspace to test small UAS.
4. Make written recommendations to DOI for the approval/disapproval of small UAS.

5. Provide in writing any recommended operating restrictions for a given system.
6. Provide the necessary time and personnel to evaluate small UAS.
7. Provide DOI in advance with an estimate of its costs necessary for OAS to fund a particular test.

C. OAS and NASA agree to:

1. Designate agency points of contact (POC) to represent their respective agencies.
2. Review work and progress, and make any corrections/changes, as necessary and appropriate, and as agreed upon.

V. AVAILABILITY OF APPROPRIATED FUNDS:

The parties enter into this agreement under the authority of the Economy Act (31 U.S.C. §1535), the National Aeronautics and Space Act (51 U.S.C. §10101 *et seq.*)(as applicable to NASA), and the Omnibus Appropriation Act 2009 (Pub. L. 111-8) and subsequent years, and/or as other authorities and appropriations as provided by the U.S. Congress through Continuing Resolution(s).

The ability of the parties to carry out their responsibilities under this MOU is subject to their respective funding procedures and the availability of appropriated funds. Should either party encounter budgetary problems in the course of its respective internal procedures which may affect the activities to be carried out under this MOU, that party will provide timely written notification to the other party.

VI. SETTLEMENT OF DISPUTES:

Should disagreement arise on the interpretation of the provisions of this MOU, or modifications thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each party and presented to the other party for consideration. If agreement on interpretation is not reached within thirty (30) days, the parties shall forward the written presentation of the disagreement to the respective higher officials for appropriate resolution.

Nothing herein is intended to conflict with current DOI/OAS or NASA directives. If the terms of this Agreement are inconsistent with existing directives of either of the agencies entering into this Agreement, then those portions of the Agreement that are determined to be inconsistent shall be invalid but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. At the first opportunity for review of the Agreement, all necessary changes will be accomplished either by an amendment to this Agreement or by entering into a new agreement, whichever is deemed expedient to the interest of both Parties.

Should disagreement arise on the interpretation of the provisions of this agreement, the dispute shall be resolved pursuant to the Business Rules for Intra-governmental Transactions delineated in the Treasury Financial Manual, Vol. 1, Bulletin 2007-03, Section VII (Resolving Intra-governmental Disputes and Major Differences).

VII. FINANCIAL ARRANGEMENTS (PAYMENTS):

Reimbursable agreement(s) will be executed between DOI and NASA for the transfer of the necessary funding.

NASA/OAS shall not be obligated to pay for, nor will NASA/OAS be obligated to perform any effort that will require the expenditure of Federal funds above the amount obligated.

NASA will submit billings through the Intra-governmental Payment and Collection (IPAC) system. The bill(s) will reference:

- NASA's Dun & Bradstreet Number;
- NASA's Agency Location Code (ALC);
- NASA's Treasury Account Symbol;
- NASA's Accounting Classification Reference Code(s);
- NASA's Obligating Document Number;
- Brief description of the service performed; and
- NASA' Accounts Payable Point of Contact (POC) name and phone number.

OAS/NASA agree to bill prior to the 25th day of the billing month.

A courtesy copy of the IPAC billing may be forwarded to the OAS initiating office POC when the bill is prepared. Billing support documentation will be provided

upon the request of the OAS. Billings and payments will be made no less than quarterly. Final billing shall be received no later than 90 days after project completion.

The OAS shall not be obligated to pay for, nor will the NASA be obligated to perform any effort that will require the expenditure of Federal funds above the amount obligated.

Payments under this agreement shall not exceed the amount specified in the IAA and as modified. Nothing herein shall be considered as obligating the NASA/OAS to expend or as involving the United States in a contract or other obligations for the future payment of money in excess of funding approved and made available for payment under this instrument and modifications thereto.

VIII. TERM OF AGREEMENT:

The effective date of this MOU will commence upon the date of the final signature and shall remain in effect until otherwise modified or terminated. The Agreement shall be reviewed by both participants annually to determine its suitability for renewal, revision, or termination in accordance with paragraph IX.

IX. TERMINATION:

Either party may, in writing, initiate a modification to terminate this instrument in whole or in part, at any time before the date of expiration upon thirty (30) days written notice of such termination. Neither party shall incur any new obligations for the terminated portion of the instrument after the effective date and shall cancel as many obligations as possible. Full credit shall be allowed for each party's expense and all non-cancelable obligations properly incurred up to the effective date of termination.

X. MODIFYING THE AGREEMENT:

Either party may initiate a modification of this MOU to incorporate any changes that are mutually agreed to by the participants. Such modifications shall be in writing and shall identify the specific activities, the total amount of funds applicable to the modification, as appropriate, and any other pertinent details of the modification. OAS is designated as the agency responsible for all administrative oversight and preparation of modifications to this MOU. The

modification(s) shall not take effect until documented and signed by authorized signatories for the agencies.

XI. POINTS OF CONTACT:

Changes to the Points of Contact identified below may be made by written notification to each of the parties under this MOU.

Brad Koeckeritz
DOI-Office of Aviation Services
Unmanned Aircraft Specialist
300 East Mallard, Ste.200
Boise, ID 83706
208-433-5091
Bradley_Koeckeritz@ios.doi.gov

Michel Liu
Director of Safety and Mission
Assurance
M/S: 237-13
Moffett Field, CA 94035
Phone: (650) 604-1132
mike.liu@nasa.gov

XII. SIGNATORY AUTHORITY

Approved and Authorized on Behalf of Each Party by:

**U.S. DEPARTMENT OF THE
INTERIOR, OFFICE OF
AVIATION SERVICES**

**NATIONAL AERONAUTICS
AND SPACE ADMINISTRATION
AMES RESEARCH CENTER**

X Mark Bathrick
Mark Bathrick, Director
Office of Aviation Services

X Michel Liu
Michel Liu
Director of Safety and Mission Assurance

DATE: 12-22-14

DATE: 12/22/14

United States National Search and Rescue Committee Interagency Agreement

PURPOSE

1. This Agreement provides for a federal-level Committee to coordinate civil search and rescue (SAR) matters of interagency interest within the United States. This Agreement supersedes the United States Search and Rescue Committee Agreement of 1999.

BACKGROUND

2. The National Search and Rescue Conference of 1973, when considering the need to establish a continuing interagency group to oversee the United States *National Search and Rescue Plan* (NSP), established a standing interagency committee to oversee the NSP and to act as a coordinating forum for national SAR matters.
 - a. Originally called the Interagency Committee on Search and Rescue, the name was changed by the 1999 Agreement referred to in the paragraph above to the National Search and Rescue Committee (NSARC).
 - b. This Agreement replaces the 1999 Agreement and its adoption coincides with adoption of a new NSP.

SPONSORSHIP

3. The Commandant of the Coast Guard is the sponsor of NSARC. The Commandant shall:
 - a. Designate an executive-level person to Chair the Committee, who shall report to the Secretary of Homeland Security via the Commandant; and
 - b. Appoint a Committee Secretary to ensure that the Committee operates according to policies and procedures contained in current directives.

MEMBERSHIP, OBSERVERS AND ADVISORS

4. The Member Agencies of the Committee are as follows:
 - Department of Homeland Security;
 - Department of Defense;
 - Department of Transportation;
 - Department of Commerce;
 - Department of Interior;
 - National Aeronautics and Space Administration; and
 - Federal Communications Commission.
 - a. Each of these Member Agencies shall designate one representative by name or position to serve as its primary Committee Member, and another to serve as its Alternate Committee Member.

- b. Each Committee Member may call upon officials from his or her agency to serve as Advisors and to participate in meetings of the Committee, or of subsidiary groups of the Committee.
- c. Others may be invited with the approval of the Chair or the Committee to participate as government or non-government Observers on an ad hoc basis.

NATIONAL SEARCH AND RESCUE PLAN PARTICIPATION

5. Member Agencies of NSARC are, by virtue of their membership, also Participants to the *National Search and Rescue Plan of the United States*.

OBJECTIVES

6. The objectives of the Committee are to:
 - a. Recommend implementation strategies and actions that ensure that the United States meets domestic needs and international commitments to provide effective civil SAR services;
 - b. Hold sole responsibility for the provisions of the NSP;
 - c. Serve as the primary coordinating forum within the federal government for the conduct and support of civil SAR operations covered by the NSP, and for matters relating to national civil SAR policies and positions;
 - d. Administer the *National Search and Rescue Supplement* to the *International Aeronautical and Maritime Search and Rescue Manual* for interagency guidance on implementing the NSP;
 - e. Seek to ensure compatibility between the NSP and the National Response Plan (NRP) so that the NSP can be implemented independently or concurrently with the NRP during an incident of national significance;
 - f. Promote application of research and development, improved standards and procedures, new technologies, regulations, and education to improve the effectiveness and efficiency of distress alerting and other civil SAR services, and to reduce the associated risks;
 - g. Help coordinate the civil SAR efforts of the NSARC Member Agencies with other national and international government, private, and volunteer organizations;
 - h. Promote the effective use of all available resources to support civil SAR;
 - i. Foster appropriate use of SAR agreements and other arrangements and plans to improve cooperation and mutual support among the various national and international civil SAR communities;
 - j. Promote close cooperation among civilian and military authorities and organizations for provision of effective civil SAR services;
 - k. Promote analysis and initiatives to help citizens avoid or cope with distress situations; and
 - l. Consider, as appropriate, contingency plans for use of SAR resources in emergencies other than civil SAR.

PROCEDURES

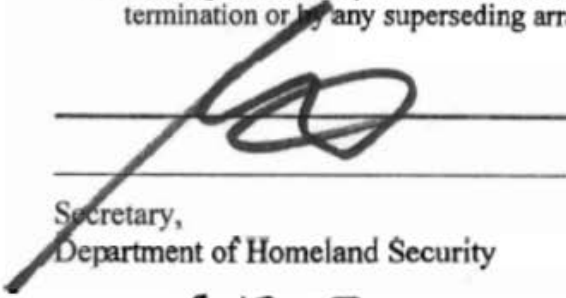
7. The following procedures shall be followed in conducting the business of the Committee:
 - a. The Committee shall schedule regular meetings on at least a quarterly basis.
 - b. The Chair or any Member Agency via its respective Committee Member may call a special meeting when deemed necessary.

- c. Meetings will be properly documented by the Secretary. Decisions will normally be made by consensus. Where consensus cannot be reached, decisions will be submitted to the Committee for majority vote at a regular or executive meeting of the Committee, or by an informal poll of the Committee Members by the Secretary with the results properly documented.
- d. The Chair is authorized to represent directly the views, actions, recommendations and decisions of the Committee, or otherwise act on behalf of the Committee, by correspondence or other means, except that where such correspondence is directed to the Secretary of Homeland Security, it shall be via the Commandant of the Coast Guard.
- e. The normal procedure for addition of a federal Agency as an NSARC Member Agency and NSP Participant shall be as follows:
 - 1) Based on a unanimous vote of the Committee, the Chair will extend a written invitation to the prospective Member Agency, and the Agency will respond to the Chair in writing of the Agency's acceptance; and
 - 2) The Chair will then notify each Member Agency, via the Member Agency's Executive Secretary or an individual designated to receive such notification, of the acceptance. If no Member Agency objects within 60 days, the invited Agency will from that time become a NSARC Member Agency and a NSP Participant. Such notifications, designations, and objections must be in writing.
- f. Alternatively, an additional federal Agency may become a Member Agency and NSP Participant by mutual written agreement of all current Member Agencies and the prospective Member Agency.
- g. Termination of an Agency's Committee Membership shall automatically terminate its status as an NSP Participant; such termination shall be accomplished by the Agency's written notification to the other Member Agencies at least six months in advance.
- h. Policy issues or plans that require the attention or approval of the Signatories, e.g., adoption of the NSP, will be submitted by the Chair with recommendations for action. In such cases the views of all of the Committee Members shall be included.
- i. Nothing in this Agreement shall be viewed to obligate the Member Agencies to comply with decisions of the Committee.

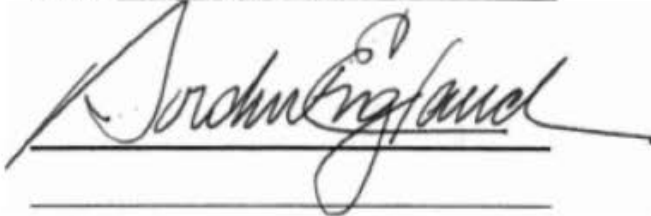
ENTRY INTO FORCE, AMENDMENT, RENEWAL, AND TERMINATION

- 8. This Agreement shall enter into force on the date of the first Committee meeting following the completion of the signatures by the Secretaries (or equivalent level authority) of all of the Member Agencies.
- 9. Based on a unanimous vote of the Committee, any proposed amendment(s) to this Agreement or to the NSP must be adopted by one of the following means:
 - a. The Chair will notify each Member Agency, via the Member Agency's Executive Secretary or an individual designated to receive such notification, of the proposed amendment(s). If no Member Agency objects within 60 days, the amendment(s) will be considered adopted. Such notifications, designations, and objections must be in writing.
 - b. The amendment(s) shall be adopted by mutual written agreement of all Member Agencies.
- 10. This Agreement, as amended, shall be automatically renewed on 1 January 2012 and every five years thereafter unless superseded by a new arrangement or terminated.

11. This Agreement may be terminated with the written consent of the Member Agencies at the time of termination or by any superseding arrangement.

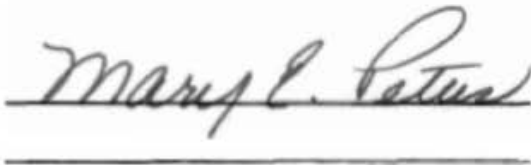

Secretary,
Department of Homeland Security

Date: 4-18-07



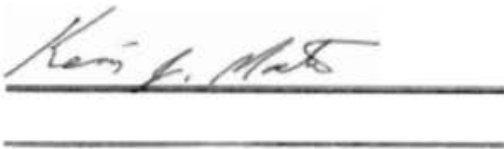
Deputy Secretary of Defense,
Department of Defense

Date: JUL 18 2007



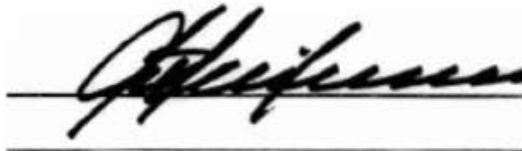
Secretary,
Department of Transportation

Date: 6/15/07



Chairman,
Federal Communications Commission

Date: 5-19-07



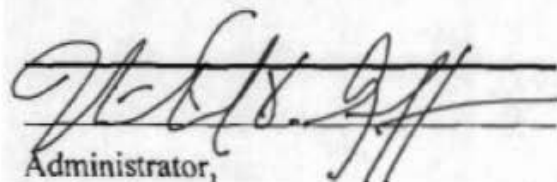
Secretary,
Department of Commerce

Date: _____



Secretary,
Department of the Interior

Date: JUN 08 2007



Administrator,
National Aeronautics and Space Administration

Date: AUG 02 2007