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Michael P. Huerta, Administrator
Office of the Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington, D.C. 20591

October 2, 2014

Reference: USAA Petition for Section 333 Exemption: Re: Research & Development of Methods to Use Small Unmanned Aircraft Systems in Property and Casualty Insurance

Dear Administrator Huerta,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), United Services Automobile Association (USAA) is petitioning for an exemption from the Federal Aviation Regulations and other rules/statutes pertaining to unmanned aircraft systems. Section 333 of the FMRA addresses special rules for certain unmanned aircraft systems and grants the FAA authority to allow for the safe operation of certain unmanned aircraft systems (UAS) within the national airspace.

Since 1922, United Services Automobile Association has served the military community and their families providing a full range of highly competitive financial products and services to our membership. We have world class employees that are personally committed to delivering excellent service and guidance regarding insurance, banking and investments. USAA focuses its innovation on developing products and new technology to assist its membership from policy inception to fulfilling our service commitment during a claims event. USAA has over ten million members that look to USAA to help them restore and rebuild after a wide range of natural and other disasters, and USAA is always seeking ways to improve the timing and quality of its responses to members' needs. Property and casualty insurers play a major role in funding the restoration of businesses and communities after major incidents, and the integration of unmanned aircraft into USAA's operations will have immediate, positive effects on the lives of Americans and the business community.

We have identified the unmanned aircraft system as a technology which can alleviate safety concerns associated with manned inspections in the air and on the ground, and provide enhanced service and experience to our membership in a safe and efficient environment. At USAA's Innovation Lab in San Antonio, Texas, since 2010, we have been thoroughly researching new small unmanned aircraft systems technology to improve our existing processes, invent new ones to benefit our membership, and improve efficiency and safety. Over the last four years, we have conducted significant research and developed business plans for utilization of unmanned aircraft systems within our organization, including, but not limited to:

- Identifying operational areas where unmanned aircraft systems will improve safety relative to manned operations;

- Research regarding privacy best practices and existing laws;
- Research and development of small unmanned aircraft systems in partnership with the manufacturers to develop excellent safety protocols and procedures; and
- Development of an internal research and development team at USAA with a wide expertise in aeronautics, flight instruction, mechanical and software engineering and business applications, along with external partnerships with public entities that further our knowledge in robotics, aerospace, and engineering.

USAA shares Congress's vision of integrating small unmanned aircraft systems for civil use into our national airspace and providing economic benefits and growth from this rapidly developing technology. Current law does not provide adequate authority to extend these research and development activities, and this application seeks interim authority from the FAA to allow USAA to continue the activities it began in 2010.

USAA has also partnered with other public entities, such as the FAA UAS Test Sites and selected universities, to further our research and development as well as seeking to obtain a Special Airworthiness Certification in the Experimental Category with the collaboration of the Test Sites and our UAS manufacturer. Obtaining a Section 333 exemption would allow USAA the authority to do further research and development in a safe and efficient manner without burdening the FAA with additional requests for each of our UAS platforms and operations. Currently, the FAA does not allow civil operations (meaning operations other than public aircraft operations or model aircraft / "hobbyist" activities which include research and development); therefore USAA has not been able to fully develop its UAS flight research.

Through this petition, USAA seeks an exemption to operate small unmanned aircraft systems to further develop its research and development of this emerging technology.

USAA's small unmanned aircraft systems are aircraft weighing significantly less than 55 lbs (details are provided within). They operate at slow speeds (under 45kts) and within line of sight within the areas described in this petition. Such operations will ensure that the small unmanned aircraft systems operated by USAA will not create a hazard to other aircraft operating in the national airspace, to the general public or pose a threat to national security as dictated by the Federal Aviation Regulations.

One of USAA's business partners and UAS platforms is PrecisionHawk, and its Lancaster HawkEye. PrecisionHawk is a leader in the small UAS community and through their impressive research and development have successfully obtained several FAA Certificates of Authorization for their platform through various FAA UAS test sites and public entities. This demonstrates the confidence in operation and safety that the FAA already has for this UAS manufacturer and its platform. PrecisionHawk continues its advancement in safety and UAS integration into the national airspace by researching and developing sense and avoid technology to benefit the UAS community, the FAA and other users of the national airspace.

14 CFR 11.81 (a) – Name and address of the Petitioner:

United Services Automobile Association
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San Antonio, Texas 78288

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E-mail: gcirillo@wileyrein.com

14 CFR 11.81 (b) – Exemptions Requested:

The FAA considers unmanned aircraft as “aircraft” flown by a “pilot” regardless of the location of the pilot. All aircraft and pilots must comply with applicable sections of Title 14 of the Code of Federal Regulations (14 CFR) to operate within the National Airspace. Unmanned aircraft are unable to comply with certain sections of 14 CFR as the regulations were written prior to the consideration of small UAS operating within the national airspace. Therefore USAA is requesting an exemption from certain parts of 14 CFR cited below in addition to such further exemptions and relief as the FAA may determine is necessary to permit the operations described herein.

- 14 CFR Part 21.191 (a) – Experimental Certificates
- 14 CFR Part 45.23 (b) – Display of marks; general
- 14 CFR Part 61.113 (a) and (b) – Private pilot privileges and limitations: Pilot in command
- 14 CFR Part 91.7 – Civil Aircraft Airworthiness
- 14 CFR Part 91.9 (b) – Civil aircraft flight manual, marking and placard requirements
- 14 CFR Part 91.109 – Flight Instruction
- 14 CFR Part 91.119 – Minimum safe altitudes
- 14 CFR Part 91.121 – Altimeter settings
- 14 CFR Part 91.151 – Fuel requirements for flight in VFR conditions
- 14 CFR Part 91.203 (a) and (b) – Civil Aircraft; Certifications Required
- 14 CFR Part 91.405 – Maintenance required
- 14 CFR Part 91.407 – Operation after maintenance, preventive maintenance, rebuilding or alteration
- 14 CFR Part 91.409 – Inspections
- 14 CFR Part 91.417 – Maintenance Records

14 CFR Part 11.81 (c) – The extent of relief USAA seeks, and the reason USAA seeks the relief:

USAA seeks relief pursuant to this exemption from applicable parts of the Federal Aviation Regulations to the extent necessary to permit civil flight operations within the national airspace and USAA seeks authorization to conduct small UAS flight operations within the perimeters of this exemption request.

14 CFR Part 11.81 (d) – The reasons why granting USAA’s request would be in the public interest; that is, how it would benefit the public as a whole:

Granting the exemption for USAA would allow the organization to safely and efficiently conduct small UAS flight operations to gain valuable information and experience with USAA’s research and development in this technology. Gaining this information and experience would enable USAA, in the future, to utilize UAS technology to conduct safe and efficient operations both before and after claim events to assist its membership in preparing for natural disasters and post-disaster recovery and relief operations, and reduce the time it takes communities to rebuild after natural disasters. Without this exemption, USAA would be unable to conduct the proper research and development to build a successful small UAS operation which would assist its over ten million members and their communities. USAA believes such UAS research can lead to safer, quicker, and more economical and effective claims service for its policy holders and their communities.

14 CFR Part 11.81 (e) – The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which USAA seeks the exemption:

USAA requests that the exemption be granted with the following limitations and operational conditions. These limitations and conditions will provide an enhanced level of safety and will be the guiding principles when USAA is conducting R&D operations under this exemption:

- A. The small unmanned aircraft systems maximum take-off weight will be less than 55 lbs. Detailed specifications are included in the attachments. USAA is willing to have its authorization restricted below the 55 lb. threshold to the operating weight of the unmanned aircraft identified. One of the fixed winged UAS platforms that USAA is seeking to utilize through this exemption is currently operating safely within the national airspace pursuant to several Certificates of Authorization (COA) granted by the FAA to Texas A&M College Station and other public entities. One of the COAs was for the PrecisionHawk Lancaster HawkEye to provide aerial imagery and mapping for authorities at the recent Washington state mudslides in Oso, WA. Other COAs have been approved for this particular platform through other public entities demonstrating the confidence that the FAA has for this manufacturer’s operational and safety protocol. USAA has attached and will be operating in accordance with PrecisionHawk Lancaster’s Flight Manual, Maintenance Schedule, and training documents for review within this exemption application. Although this platform is one that USAA is utilizing within its current research and development, USAA asks that the exemption be granted with respect to this aircraft and other aircraft of like size, weight and capabilities; however, we want to demonstrate our commitment to safety and the continuance of strong UAS partnerships.
- B. All pilot in command (PIC) and ground observers (also known as the air crew) will receive FAA certified private pilot ground school and have taken and passed the FAA Private Pilot Written Exam. This ensures that all air crew members (PIC and ground

observers) have the knowledge regarding the Federal Aviation Regulations, Airspace, and other pertinent knowledge to conduct safe operations of small unmanned aircraft systems. A USAA employee with a FAA commercial pilot certificate and flight instructor certificate that has been trained on UAS operations will oversee all training and ensure all air crew receive proper training and abide by all pertinent regulations. All pilot in command and ground observers will be trained in detail to each of the unmanned aircraft system platform's operations, systems and emergency procedures. Every air crew member will obtain an FAA Class 2 medical certificate.

- C. All flight operations will be operated at an altitude of no more than 400 ft above the ground (AGL) and within Class G (uncontrolled airspace) and some Class E (with prior approval). No flight operations will be operated within Class A, B, C, or D airspace or special use airspace. All flight operations are to be conducted during daylight hours, under 30 mph winds and within line of sight. Areas of operation will be on USAA's secured campus in San Antonio, Texas and other designated remote, unpopulated areas around the San Antonio, Texas area within Class G airspace. These areas are located a sufficient distance from any airport, heliport, military base/airspace or other location with aviation activity. All flights will be communicated to FAA Flight Service with posted NOTAMS prior to the flight(s).
- D. All flight operations will be conducted within line of sight of the pilot in command and ground observer(s). Maximum total flight time for each flight will be 90 minutes or less in duration. All flight operations will be terminated when the aircraft has less than 20% battery life remaining.
- E. Flight operations and safety briefings will be conducted prior to all planned small unmanned aircraft system flights and will be mandatory for all air crew. Briefings will include weather reviews, take off, landing and aircraft performance data for those real time conditions, and full pre- and post-flight inspections/checklists and briefings for each specific unmanned aircraft system being operated.
- F. In the event of a communication lost link, the UAS will return to a specific predetermined location and once the UAS is safely recovered, all flight operations will cease until any communication/data link issues are properly resolved.
- G. Regarding privacy concerns, USAA will have land use agreements in place for all areas of operations. The land utilized is USAA-owned or privately owned remote/unpopulated land with owner agreements in place for UAS operations.

14 CFR Part 11.81 (f) A summary the FAA can publish in the *Federal Register*, stating:

(1) The rule from which you seek the exemption

Petitioner: United Services Automobile Association
Sections of 14 CFR that USAA seeks an exemption:

14 CFR Part 21.191 (a)
14 CFR Part 45.23 (b)
14 CFR Part 61.113 (a) and (b)
14 CFR Part 91.7
14 CFR Part 91.9 (b)
14 CFR Part 91.109
14 CFR Part 91.119
14 CFR Part 91.121
14 CFR Part 91.151
14 CFR Part 91.203 (a) and (b)
14 CFR Part 91.405
14 CFR Part 91.407
14 CFR Part 91.409
14 CFR Part 91.417

(2) A brief description of the nature of the exemption you seek:

USAA seeks relief from the applicable parts of 14 CFR 21, 45, 61 and 91 as requested within this petition to allow USAA to safely and efficiently conduct commercial UAS flight operations on its secure campus and other remote private land within Class G and Class E (with prior approval) airspaces for R&D purposes.

14 CFR Part 11.81 (g) – Any additional information, views or arguments available to support USAA’s request:

Allowing USAA this exemption would give USAA the ability to continue our UAS research and development beyond the limits imposed today. Additional testing would benefit not only USAA and its membership, but would serve as a partnership with the FAA and others within the UAS community to advance this new and emerging technology in a safe and controlled environment.

Recently, USAA employees in partnership with Texas A&M Roboticists Without Borders were invited to the Oso, Washington mudslide area to assist Snohomish County and other public entities with aerial surveys and mapping. Under the approval of an FAA COA (Certificate of Authorization), USAA and Roboticists Without Borders were able to fly their platforms successfully and provided valuable data to government entities. This demonstrates the value of our request to continue our UAS research and development to help communities rebuild after disasters and maintain the safety of our employees, business partners and the general public.

14 CFR Part 11.81 (h) – Request to exercise the privileges of the exemption outside the United States, the reason why the petitioner needs to do so:

USAA does not seek to exercise the privileges of this exemption, should it be granted, outside the United States. Our request is strictly to be granted authority for civil UAS R&D operations at specified locations within the national airspace system.

Sincerely,



Greg Cirillo
Wiley Rein LLP
Counsel for USAA



Michael Burns
Assistant Vice President
USAA

Attachments: PrecisionHawk Flight Manual, Maintenance Schedule and training documents.