U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

February 2, 2015

Exemption No. 11160
Regulatory Docket No. FAA-2014-0785

Mr. Alan D. Purwin
Director
Helinet Aviation Services, LLC
16303 Waterman Drive
Van Nuys, California 91406

Dear Mr. Purwin:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated September 29, 2014, which referenced supplemental proprietary information submitted to the Federal Aviation Administration (FAA) under separate cover, you petitioned the FAA on behalf of Helinet Aviation Services, LLC (Helinet) for an exemption from §§ 61.113(a) and (b), 91.103, 91.119(c), 91.121, 91.151(a), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR). The exemption would allow Helinet to commercially operate its Gryphon Dynamics X8 with an eight rotor, eight motor quadcopter and a DJI S1000 eight rotor, eight motor octocopter, unmanned aircraft systems (UAS) for aerial photography in the motion picture and television industry.

Discussion of Public Comments:

A summary of the petition was published in the Federal Register on October 28, 2014 (79 FR 64243). The FAA received three comments on the petition for exemption; one commenter supported the exemption request and two opposed it.

In support of the petition, the Small UAV Coalition (Coalition) states the petitioner has proposed to abide by stronger safety measures than hobby and modeler groups operating similar aircraft. The Coalition states that it does not believe that heightened safety measures should be required

for the petitioner simply because of the commercial nature of its operations. The Coalition urged the FAA to adopt an evaluation framework for UAS operations under section 333 of Pub. L. 112–95 that weighs the relative safety issues and risks of UAS by class and operational circumstances, rather than adopting artificial distinctions among unmanned aerial vehicles based on commercial and noncommercial operations. The Coalition suggested FAA safety regulations be proportionate to the risks posed by the particular proposed UAS operations by distinguishing between UAS. The petitioner's UAS pose considerably less safety risk than larger UAS used for defense and aerospace purposes. The Coalition asserted that because UAS operations like the petitioner's pose minimal risk to safety, they should be subject to minimal and appropriate regulations.

The Coalition noted the FAA is to consider the seven factors[1] in section 333 as a minimum. The Coalition stated the petition shows the FAA should consider factors other than those specified in section 333, such as location, altitude of its UAS, and pilot training and experience. The Coalition maintained that the petitioner's proposed operations satisfy the seven factors in section 333 and include several additional mitigating factors to ensure the safety and security of the proposed UAS operations. The Coalition emphasized the FAA must evaluate each factor within the context of the petitioner's proposed UAS operations.

The Coalition also commented that the FAA should grant relief from the requirement to hold an airman's certificate, but stated that at a minimum the FAA should provide an exception from part 61 and approve training and testing regiments that pertain to UAS commercial operations pertinent to the aircraft and operation proposed. The Coalition also asserted that Congress intended the section 333 national security criterion to focus on the operation rather than on the pilot and that shifting that focus imposes an unnecessary burden.

In response, as discussed in the grant of exemption to Trimble Navigation Ltd. (No. 11110), neither section 333 nor the FAA's authority to exempt from its regulations found in 49 USC 44701(f), authorizes the FAA to provide exemption to the statutory requirement to hold an airman certificate as prescribed in 49 USC § 44711. The FAA notes that under this exemption the petitioner proposed to use pilots holding private certificates and it will be able to use the training program it proposed. Finally, the FAA does not agree that relying on the pilot certificate for a national security finding poses an unnecessary burden because pilots under this exemption, and the exemptions granted previously to section 333 requests, are already required to hold a pilot certificate to satisfy 29 USC 44711.

The Coalition commented that a visual observer (VO) should not be required for all small UAS operation. The Coalition further asserted that the presence of one or more VOs may allow the UAS to be operated beyond visual line of sight (VLOS) of the pilot in command (PIC) and that the petitioner's proposal to operate the unmanned aircraft (UA) within VLOS of the PIC *and/or*

[1] Section 333(b) of P.L. 112-95 states, in part: "In making the determination under subsection (a), the Secretary shall determine, at a minimum-- (1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; …"

VO should be permitted. The FAA notes that one of the determinations for operations under section 333 is operation within visual line of sight. As the PIC is determined to be in command of the UA, he must maintain VLOS while operating the UA. The FAA also notes that a visual observer complements the PICs capability to see and avoid other aircraft, including when the PIC may be momentarily attending to other flying tasks (e.g., maneuvering the aircraft close to actors and actresses and other objects on a film set). The VO provides an additional level of operational safety.

The FAA received comments opposing the petition from the Air Line Pilots Association, International (ALPA), and the National Agricultural Aviation Association (NAAA).

ALPA expresses concern regarding several aspects of the petition. ALPA notes the petitioner's reference to operations conducted within "limited or predetermined" sterile areas is not defined, nor does the petitioner detail procedures for controlling the airspace or area of operation. Specifically, ALPA states "there must be means both to ensure that the sUAS remains within the defined airspace and to ensure that the hazard of other aircraft intruding on the operation is mitigated." The FAA believes the limitations under which the petitioner will operate (i.e. VLOS and at or below 400 feet above ground level (AGL)) are sufficient mitigations to this risk so that the operations will not adversely affect safety.

Regarding the petitioner's statement that the PIC and observer will be able to communicate by voice or text, ALPA notes that text messaging could have an unknown latency extending to several minutes. ALPA also states that the pilot and observer should be able to maintain a visual observation of the aircraft and area of operation when using voice communication. NAAA states UAS observers must be present and able to communicate with the operator from the most minimal distance possible. The FAA has inserted a condition regarding PIC and visual observer communications.

ALPA asserts the UAS's lithium polymer batteries have numerous associated fire and explosion hazards as outlined in DOT/FAA/AR-09/55, "Flammability Assessment of Lithium-Ion and Lithium-Ion Polymer Battery Cell Designed for Aircraft Power Usage (January 2010)," and that the safe carriage of the batteries and the mitigations in place for known risks should be addressed. The referenced study was primarily conducted to determine how certain battery cells react in a fire situation aboard manned airplanes. Given the size of the battery and the operating conditions of the UAS, the FAA concludes that the use of a lithium polymer battery will not pose an undue safety risk for the proposed operations.

ALPA comments that command and control (C2) link failures are one of the most common failures on a UAS, and that lost link mitigations should require safe modes to prevent fly-aways or other scenarios. The FAA agrees and carefully examined the proposed operation to ensure that the vehicle design and the petitioner's operating documents addressed potential hazards related to C2 failure. The FAA finds that the UAS to be operated by the petitioner has sufficient design features to address these hazards. The FAA also finds that the operating documents have incorporated safety procedures to be followed by all operational participants should a C2 failure occur. Further detail is contained in the analysis of the UAS below.

ALPA also notes that the petitioner's proposed operations are for "compensation or hire," and argues the pilot must hold at least a current FAA commercial pilot certificate with an appropriate category and class rating for the type of aircraft being flown, as well as specific and adequate training on the UAS make and model intended to be used. Similarly, ALPA asserts a current second-class airman medical certificate should be required. NAAA also commented on pilot qualification, stating—

> Just as manned aircraft pilots are required to undergo a rigorous training curriculum and show that they are fit to operate a commercial aircraft, so too must UAS operators. Holding a commercial certificate holds UAS operators to similar high standards as commercial aircraft operators and ensures they are aware of their responsibilities as commercial operators within the NAS. Medical requirements ensure they have the necessary visual and mental acuity to operate a commercial aircraft repeatedly over a sustained period of time.

The FAA has reviewed the knowledge and training required by holders of both private and commercial certificates. Additional details are available in the ensuing analysis of this issue with regards to 14 CFR § 61.113.

ALPA stated that although petitioner asked for an exemption from § 91.109 *Flight instruction*, they failed to provide any information regarding the qualifications of the persons providing instruction per 14 CFR § 61.195 which defines the requirements for flight instructors. A certificated flight instructor is authorized to provide the instruction required for the certificates or ratings or currency listed in 14 CFR § 61.193. A person instructing on how to operate the UAS under the petitioner's training program would not need to be a certificated flight instructor because the instruction is not being provided for a certificate or rating listed in § 61.193. We note that none of the UAS operations proposed by the petitioner require such flight instruction because § 61.31(*l*) allows for operation of the UAS by an airman who is current per 14 CFR § 61.56 without a category and class rating. Of course, any instruction provided toward obtaining the pilot certificate required by this exemption would need to be provided by a certificated flight instructor.

ALPA opposes an exemption from the pre-flight action requirements of § 91.103. In addition, although the petitioner did not request an exemption from § 91.113, ALPA notes the petitioner must specify a means to meet see and avoid requirements in § 91.113 given the absence of an onboard pilot. This comment is addressed in detail in the FAA analysis below.

ALPA mentioned the aircraft will not have a barometric altimeter as required by 14 CFR § 91.121, stating the ability to accurately maintain altitude must be addressed, and processes or mitigations, such as redundant control capability, fail-safe systems, backups and

specific, validated procedures for system and equipment failures must be in place. The FAA agrees with ALPA and addresses this concern in its analysis of the exemption from 14 CFR § 91.121, finding that the alternative means of compliance proposed by the petitioner does not adversely affect safety.

Regarding the fuel requirements of § 91.151, ALPA argues that using batteries as the only source of an aircraft's power is a substantial shift from traditional methods of propulsion, and requires further research to determine best safety practices. This comment is addressed in detail below.

Regarding §§ 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b), ALPA opposes the petitioner's attempt to avoid compliance with established aircraft maintenance and recordkeeping requirements. ALPA states the UAS should comply with the same level of safety as other aircraft operated commercially in the NAS. This comment is addressed in detail below.

ALPA also expresses concern that the petitioner's waiver request is not for a single specific operation or location, but for all operations of the same general type. ALPA states this results in a considerable increase in the FAA's oversight tasks. The FAA notes ALPAs concern and in order to minimize potential impact to the NAS, the FAA requires each operator secure a Certificate of Waiver or Authorization (COA) which covers specific details of the petitioners operation. The FAA recognizes that UAS integration will generate new NAS access demand and will review and adjust accordingly.

NAAA states it represents the interests of small business owners and pilots licensed as commercial applicators. NAAA explains that its members operate in low-level airspace, and clear low-level airspace is vital to the safety of these operators.

NAAA states that seeing and avoiding other aircraft and hazardous obstructions is the backbone for agricultural safety, and agricultural pilots depend on pilots of other aircraft to perform their see-and-avoid functions needed to prevent collisions. NAAA believes UA operations at low altitudes will increase the potential of collision hazards with agricultural aircraft. NAAA argues that until adequate see-and-avoid technology is developed, the FAA should require UAS operators to post a Notice to Airmen (NOTAM) 48 to 72 hours before operations. NAAA proposes UAS aircraft be painted a highly visible color, be equipped with strobe lights, and use Automatic Dependent Surveillance–Broadcast (ADS–B) or other similar location reporting technology. To address these concerns the FAA has incorporated associated conditions and limitations into this exemption, including: a) NOTAMs issued for all operations, b) operations conducted within VLOS of the PIC and the VO, and c) the UAS PIC must always yield right-of-way to manned aircraft.

NAAA also proposes a number of operating limitations and requirements for UAS operators. NAAA states UAS operators should have procedures to immediately ground the UAS if another low-flying aircraft is within 2 miles; be attentive and free from distractions; comply with all applicable regulations, policies, and procedures; be equipped with aviation radios set to a locally defined frequency; have a separate VO with a second-class medical certificate and perform duties for only one UAS at a time; maintain line-of-sight operations; and be well-versed in the

UAS operator document. NAAA further states UAS should be properly maintained, have a registered N-Number on an indestructible and unmovable plate, and be required to have an airworthiness certificate and liability insurance. These comments are addressed in the FAA's analysis and conditions and limitations.

The FAA's Analysis is as follows:

Although the petitioner did not seek relief from 14 CFR § 91.7(a) *Civil aircraft airworthiness,* the FAA finds that relief from § 91.7(a) is necessary. While the petitioner's UAS will not require an airworthiness certificate in accordance with 14 CFR part 21, Subpart H, the FAA considers the petitioner's compliance with its operating documents to be a sufficient means for determining an airworthy condition. The petitioner is still required to ensure that its aircraft is in an airworthy condition – based on compliance with the operating documents prior to every flight, and as stated in the conditions and limitations below.

The Basis for Our Decision

The FAA has issued a grant of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption No. 11062 and 11158, the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest. The FAA also found that UAS provide an additional tool for the filmmaking industry, adding a greater degree of flexibility, which supplements the current capabilities offered by manned aircraft.

Having reviewed your reasons for requesting an exemption, I find that—

- they are similar in all material respects to relief previously requested in the Grants of Exemption No. 11062 and 11158;
- the reasons stated by the FAA for Exemption Nos. 11062 and 11158 also apply to the situation you present; and
- a grant of exemption is in the public interest.

In accordance with the statutory criteria provided in Section 333 of PL 112-95 in reference to 49 USC 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that these aircraft meet the conditions of Section 333.

The table below summarizes the FAA's determinations regarding the relief sought by the petitioner:

Relief considered (14 CFR)	FAA determination (14 CFR)
61.113(a) and (b)	Relief granted with conditions and limitations
91.7(a)	Relief granted from 91.7(a), with conditions and limitations
91.103	Relief not necessary
91.119	Relief granted for Paragraph (c) with conditions and limitations
91.121	Relief granted with conditions and limitations
91.151(a)	Relief granted for 91.151(a)(1), day, with conditions and limitations
91.405(a)	Relief granted with conditions and limitations
91.407(a)(1)	Relief granted with conditions and limitations
91.409(a)(2)	Relief granted with conditions and limitations; relief from 91.409(a)(1) also granted with conditions and limitations
91.417(a) and (b)	Relief granted with conditions and limitations

The FAA's Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 106(f), 40113, and 44701, delegated to me by the Administrator, Helinet Aviation Services, LLC is granted an exemption from 14 CFR 61.113(a) and (b); 91.7(a); 91.119(c); 91.121; 91.151(a); 91.405(a); 91.407(a)(1); 91.409(a)(1) and (a)(2); and 91.417(a) and (b) to the extent necessary to allow Helinet to operate UAS for the purpose of aerial photography in the motion picture and television industry. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

Relative to this grant of exemption, Helinet is hereafter referred to as the operator.

The petition and the following supporting documentation are hereinafter referred to as the operating documents.

1) Helinet Aviation Flight Operations and Procedures Manual (FOPM)
2) Helinet Aviation Motion Picture and Television Operations Manual (MPTOM)

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the following unmanned aircraft (UA): 1) Gryphon Dynamics X8 SN#001, quadcopter with eight rotors and motors, and, 2) the DJI S1000, octocopter with eight rotors and motors. Each weighs less than 55 pounds. Proposed operations of any other UAS will require a new petition or a petition to amend this grant.

2. UAS operations under this exemption are limited to conducting operations for the purpose of aerial filming in the motion picture and television industry.

3. The Gryphon Dynamics X8 may not be flown at a ground speed in excess of 50 knots. The DJI Phantom may not be flown at a ground speed in excess of 50 knots.

4. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued medical certificate.

5. All operations must utilize a visual observer (VO). The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times. Electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the functions prescribed in the operating documents.

6. The VO must not perform any other duties beyond assisting the PIC with seeing and avoiding other air traffic and other ground based obstacles/obstructions and is not permitted to operate the camera or other instruments.

7. The operating documents and this grant of exemption must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for

amendment to its grant of exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Prior to each flight the PIC must inspect the UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight. The Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

9. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g. replacement of a flight critical component, must undergo a functional test flight. The PIC who conducts the functional test flight must make an entry in the aircraft records.

10. The pre-flight inspection must account for all discrepancies, e.g. inoperable components, items, or equipment, not already covered in the relevant sections of the operating documents.

11. The operator must follow the UAS manufacturer's aircraft/component, maintenance, overhaul; replacement, inspection, and life limit requirements.

12. The operator must carry out its maintenance, inspections, and record keeping requirements, in accordance with the operating documents. Maintenance, inspection, and alterations must be noted in the aircraft records, including total time in service, description of work accomplished, and the signature of the authorized person returning the UAS to service.

13. Each UAS operated under this exemption must comply with all manufacturer Safety Bulletins.

14. The authorized person must make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.

15. The PIC must possess at least a private pilot certificate and at least a third-class airman medical certificate. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

16. The operator may not permit any PIC to operate unless the PIC meets the operator's qualification criteria, completes the operator's UAS training, and demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. The UAS may not be operated by any other person who does not meet the requirements above. The VO is also required to complete the operator's training requirements. A record of training must

be documented and made available upon request by the Administrator. Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building), are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions.

17. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

18. The UA may not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

19. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

20. If the UAS loses communications or loses its GPS signal, it must return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operating documents.

21. The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.

22. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions), there is enough power to fly at normal cruising speed to the intended landing point and land the UA with 25% battery power remaining.

23. The operator must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption. This COA will also require the operator to request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation. All operations shall be conducted in accordance with airspace requirements in the ATO issued COA including class of airspace, altitude level and potential transponder requirements.

24. The UA may not be operated from an elevated platform.

25. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

26. Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

27. The documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the UAS is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

28. At least three days before scheduled filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local FSDO with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:

    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS filming production conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N-number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the filming production event;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption-holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

29. The UA must remain clear and yield the right of way to manned aviation operations and activities at all times.

30. The UAS may not be operated by the PIC from any moving device or vehicle.

31. The UA may not be operated over congested or densely populated areas.

32. Regarding the distance from participating persons, the operating documents have safety procedures for UA operations to be conducted closer than 500 feet to authorized and consenting production personnel. At all times, operations must not present an undue hazard to those participating persons per § 91.119(a).

33. Regarding distance from nonparticipating persons, the operator must ensure no persons are allowed within the perimeter of 500 feet from the area of primary filming except those consenting to be involved and necessary for the filming production. This provision

may be reduced to no less than 200 feet if it would not adversely affect safety and the Administrator has approved it. For example, an equivalent level of safety may be determined by an aviation safety inspector's evaluation of the filming production area to note terrain features, obstructions, buildings, safety barriers, etc. Such barriers may protect nonparticipating persons (observers, the public, news media, etc.) from debris in the event of an accident. This is also consistent with the same FAA Order 8900.1, V3, C8, S1.

34. All operations shall be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

35. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on February 28, 2017, unless sooner superseded or rescinded.

Issued in Washington, DC, on February 2, 2015.

/s/

John Barbagallo
Acting Deputy Director, Flight Standards Service