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

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

April 2, 2015

Exemption No. 11272
Regulatory Docket No. FAA−2014−0905

Mr. Jon Marek
President
Marek Management, LLC
122 Euclid Street
Pensacola, FL 32503

Dear Mr. Marek:

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.

The Basis for Our Decision

By letter dated October 24, 2014, you petitioned the Federal Aviation Administration (FAA) on behalf of Marek Management, LLC (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct mapping services and sensor deployment for the mining, agriculture, and mineral exploration industries.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

Discussion of Public Comments:

A summary of the petition was published in the Federal Register on February 11, 2015, (80 FR 7674). The petition received one comment. The Air Line Pilots Association, International (ALPA) opposed the petition.

ALPA expressed concern regarding several aspects of the petition. ALPA stated the petitioner does not publically detail procedures for controlling the airspace or area of operation. Specifically, ALPA stated "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 AGL) are sufficient mitigations to this risk so that the operations will not adversely affect safety.

ALPA stated the petition does not clearly state how the pilot and required observer will communicate. ALPA claimed the pilot and observer should be able to maintain a visual observation of the aircraft and area of operation when using voice communication. The FAA has inserted a condition regarding PIC and visual observer communications.

ALPA asserted 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 commented 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 has inserted conditions and limitations in this exemption to mitigate the risk associated with such failures.

ALPA also noted that the petitioner's proposed operations are for "compensation or hire," and therefore contends 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 asserted a current second class airman medical certificate should be required.

The FAA has reviewed the knowledge and training requirements of sport, recreational, private and commercial certificates and concluded that a UAS PIC holding a minimum of a sport pilot certificate, and operating under this exemption, would not adversely affect operations in the NAS or present a hazard to persons or property on the ground.

ALPA noted the petitioner must specify a means to meet see and avoid requirements in § 91.113 given the absence of an onboard pilot. The FAA notes that all flights must be operated within VLOS of the PIC and VO.

ALPA commented that while the petitioner's aircraft has a barometric sensor, the platform does not have a barometric altimeter as required by 14 CFR § 91.121. ALPA stated that processes or mitigations must be in place to ensure the UA can accurately maintain altitude including engineering processes, software development and control, electronic hardware development and control, configuration management, and design assurance to ensure the aircraft and its control system(s) operate to the same level of safety as other aircraft operated commercially in the National Airspace System (NAS).

Regarding the fuel requirements of § 91.151, ALPA argued 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.

Regarding §§ 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b), ALPA opposed 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. The FAA finds that adherence to the petitioner's operating documents, as required by the conditions and limitations below, is sufficient to ensure that safety is not adversely affected.

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

Airworthiness Certification

The UAS proposed by the petitioner is a SkyWard 1.

In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 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 this aircraft meets the conditions of Section 333. Therefore, the FAA finds relief from 14 CFR part 21, C*ertification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352),

11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), 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.

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

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our 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, Marek Management, LLC is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Marek Management, LLC is hereafter referred to as the operator.

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 SkyWard 1 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at

airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. 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 airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. 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 duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents 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 or any law enforcement official 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 an 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. 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 prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g. inoperable components, items, or equipment. 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.

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

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Colombia, Puerto Rico, a territory, a possession, or the Federal government. 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.

14. The operator may not permit any PIC to operate unless the PIC 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. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. 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.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. 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.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. 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.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any 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 aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

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

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:

a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

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

28. 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.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (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 aerial filming 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 aerial filming;

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.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

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 April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

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October 24, 2014

U.S. Department of Transportation, Docket Operations, M-30
1200 New Jersey Avenue, SE.
Room W12-140, West Building Ground Floor
Washington DC 20590-0001

RE: Marek Management, LLC Petition for Exemption under Section 333 of the FAA Modernization and Reform Act of 2012

To Whom It May Concern,

Marek Management, LLC seeks exemption as guided by the Secretary of Transportation authority under Section 333, *Special Rules for Certain Unmanned Aircraft Systems,* of the FAA Modernization and Reform Act of 2012, Public Law 112-95, February 14, 2012. Marek Management seeks to operate small Unmanned Aircraft Systems (sUAS)s for commercial purposes to provide services to production industries. As outlined by Enclosures A (Marek Management General Operations Manual) and B (Marek Management Skyward 1 Operations Manual), Marek Management sUAS operations pose no threat or hazard to the U.S. National Airspace System (NAS).

With the approval of a Section 333 exemption and adhering to the guidelines set forth in Enclosures A and B, Marek Management seeks to conduct sUAS mapping services and sensor deployment for the mining, agriculture, and mineral exploration industries. Enclosures A and B are Marek Management proprietary documents outlining sUAS procedural detail.

In reference to Title 14 CFR, Part 91, the following sections are sought for exemption: 61.113 (a) and (b), 91.113 (b), 91.119 (c), 91.121 (a), 91.151 (a) (1), 91.405 (a), 91.407 (a) (1), 91.409 (a), 91.417 (a) and (a):

SECTION 61.113 (A) AND (B) PRIVATE PILOT PRIVILEGES AND LIMITATIONS: PILOT IN COMMAND.

(a) Except as provided in paragraphs (b) through (h) of this section, no person who holds a private pilot certificate may act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as pilot in command of an aircraft.

(b) A private pilot may, for compensation or hire, act as pilot in command of an aircraft in connection with any business or employment if:

(1) The flight is only incidental to that business or employment; and

(2) The aircraft does not carry passengers or property for compensation or hire.

Marek Management seeks exemption from this section due to a commercial pilot license inability to advance the sUAS's Pilot in Command (PIC) to perform their duties safer. The PIC qualification process set forth in Enclosure A, Chapter 2 provides the adequate training and FAA prerequisites required for a sUAS PIC to operate safely in the NAS.

To seek exemption under section 61.113 (a) and (b), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.2, 3.6, 3.13, 3.15, 3.16, 4.2, 4.3, and 4.4, Marek Management seeks exemption by adhering to the following: a mandated Certificate of Authorization (COA), FAR/AIM and NOTAM requirement, minimum crew composition of PIC and Visual Observer (VO), PIC and VO qualification requirements, operations limited to Class G Airspace below 400 feet AGL, PIC Visual Line of Sight (VLOS), minimum separation requirements with manned objects, separation procedures, NOTAM issuance, local Flight Standards District Office (FSDO) approval, and required documentations during operations. Specific operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

SECTION 91.113 (B) RIGHT-OF-WAY RULES: EXCEPT WATER OPERATIONS.

(b) General. When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.

Marek Management seeks exemption from this section due to the inability for an Unmanned Aircraft (UA) to accommodate a person inside the aircraft to see and avoid. To seek exemption under section 91.113 (b), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 2.1, 3.2, 3.15, and 3.16, Marek Management seeks exemption by adhering to the following: minimum crew composition of PIC and VO, PIC and VO qualification requirements, VLOS, minimum separation requirements with manned objects, and separation procedures. Specific operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

SECTION 91.119 (C) MINIMUM SAFE ALTITUDES: GENERAL.

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

Marek Management seeks exemption from this section due to UAs operating below 400 feet AGL. To seek exemption under section 91.119 (c), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. As outlined in Enclosure A sections 2.6, 3.1, 3.6 and 3.15, Marek Management seeks exemption by adhering to the following: PIC qualification requirements, altitude restrictions, operations limited to Class G Airspace below 400 feet AGL, minimum separation requirements with manned objects, and separation procedures. Specific operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

SECTION 91.121 (A) ALTIMETER SETTINGS.

(a) Each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating--

(1) Below 18,000 feet MSL, to--

(i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
(ii) If there is no station within the area prescribed in paragraph (a)(1)(i) of this section, the current reported altimeter setting of an appropriate available station; or
(iii) In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure[.]

Marek Management seeks exemption from this section due to the inability to carry a barometric altimeter onboard the UA. To seek exemption under section 91.121 (a), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A section 3.7, Marek Management seeks exemption by adhering to the GPS altitude requirements set forth in Enclosure A. Specific operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

SECTION 91.151 (A) (1) FUEL REQUIREMENTS FOR FLIGHT IN VFR CONDITIONS.

(a) No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) During the day, to fly after that for at least 30 minutes[.]

Marek Management seeks exemption from this section due to the UA's use of battery power vice fuel; therefore, the fuel requirement set forth in this section is not attainable. To seek exemption under section 91.151 (a) (1), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 3.1, 3.3, 3.4, 3.5, 3.6, 3.13, 3.14, and 3.15, Marek Management seeks exemption by adhering to the following: UA weight, UA speed limitation, altitude restrictions, weather minimum requirements, prohibited night operations, reviewing NOTAMs, operations limited to Class G Airspace below 400 feet AGL, PIC VLOS, battery health monitoring, and minimum separation requirements with manned objects. Specific normal operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

SECTION 91.405 (A) MAINTENANCE REQUIRED.

Each owner or operator of an aircraft—

(a) Shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter[.]

Marek Management seeks exemption from this section due to sUAS maintenance not defined in the Code. To seek exemption under section 91.405 (a) (1), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 6.1, 6.2, 6.3, and 6.4, Marek Management seeks exemption by adhering to the following: a maintenance program, technician qualifications, maintenance records, and utilizing functional check flights. Specific maintenance operations are set forth in Enclosure B Chapter 4, Service and Handling.

SECTION 91.407 (A) (1) OPERATION AFTER MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, OR ALTERATION.

(a) No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless—

(1) It has been approved for return to service by a person authorized under Sec. 43.7 of this chapter[.]

Marek Management seeks exemption from this section due to sUAS maintenance not defined in the Code. To seek exemption under section 91.407 (a) (1), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 6.1, 6.2, and 6.4, Marek Management seeks exemption by adhering to the following: a maintenance program, technician qualifications, and utilizing functional check flights. Specific maintenance operations are set forth in Enclosure B Chapter 4, Service and Handling.

SECTION 91.409 (A) INSPECTIONS.

(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had--

(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by Sec. 43.7 of this chapter; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter. No inspection performed under paragraph (b) of this section may be substituted for any inspection required by this paragraph unless it is performed by a person authorized to perform annual inspections and is entered as an "annual" inspection in the required maintenance records.

Marek Management seeks exemption from this section due to sUAS maintenance not defined in the Code. To seek exemption under section 91.409 (a), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A sections 6.1, 6.2, and 6.4, Marek Management seeks exemption by adhering to the following: a maintenance program, technician qualifications, and utilizing functional check flights. Specific maintenance operations are set forth in Enclosure B Chapter 4, Service and Handling.

SECTION 91.417 (A) AND (B) MAINTENANCE RECORDS.

(a) Except for work performed in accordance with Sec. 91.411 and Sec. 91.413, each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—

(i) A description (or reference to data acceptable to the Administrator) of the work performed; and
(ii) The date of completion of the work performed; and
(iii) The signature, and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information:

(i) The total time in service of the airframe, each engine, each propeller, and each rotor.
(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.
(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
(v) The current status of applicable airworthiness directives (AD) and safety directives including, for each, the method of compliance, the AD or safety directive number and revision date. If the AD or safety directive involves recurring action, the time and date when the next action is required.
(vi) Copies of the forms prescribed by Sec. 43.9(d) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

(b) The owner or operator shall retain the following records for the periods prescribed:

(1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(3) A list of defects furnished to a registered owner or operator under § 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

Marek Management seeks exemption from this section due to sUAS maintenance not defined in the Code. To seek exemption under section 91.417 (a) and (b), Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. Outlined in Enclosure A section 6.3, Marek Management seeks exemption by adhering to the maintenance record requirement. Specific maintenance record requirements are set forth in Enclosure B Chapter 4, Service and Handling.

In reference to Title 14 CFR, Part 21, subpart H, Airworthiness Certificates, Marek Management seeks an exemption. Marek Management seeks exemption from this subpart due to the UA's weight, speed, and operating area limitations. To seek exemption under subpart H, Marek Management seeks to conduct operations under guidelines set forth in Enclosure A. As outlined in Enclosure A sections 1.4, 3.1, 3.6, 3.8, 3.9, and 3.10, Marek Management seeks exemption by adhering to the following: COA requirement, weight limitations, speed limitations, operating area limitations, and flight computer capabilities. Specific operating procedures and emergency procedures are set forth in Enclosure B Chapters 2 and 3, respectively.

The operation of Marek Management sUAS seeks to provide production services to miners, farmers, and geologist that currently collect production data by manned aircraft or ground vehicles. Marek Management sUAS near real-time aerial surveillance in the mining, agriculture, and mineral exploration industries seeks to provide complete production information, improved decision making, leading to reduced production costs. By utilizing Marek Management sUAS services, manned flights are reduced or eliminated, freeing up controlled airspace and manned aircraft operating at low altitudes to collect similar data. When compared to ground collections, the sUAS collects data more quickly and efficiently than ground vehicles. Marek Management UAs can penetrate areas without disturbing the environment, while ground vehicles would either

be unable to reach these areas or dramatically alter the environment in order to collect similar data.

By utilizing Marek Management sUAS services, the cost to obtain aerial data in remote settings is dramatically reduced when compared to the current manned services providing similar data collections. A successful grant of exemption from sections 61.113 (a) and (b), 91.113 (b), 91.119 (c), 91.121 (a), 91.151 (a) (1), 91.405 (a), 91.407 (a) (1), 91.409 (a), 91.417 (a) and (a) from Title 14 CFR, Part 91 and subpart H of Part 21 would allow the utilization of Marek Management sUAS services to safely operate in the mining, agriculture, and mineral exploration industries.

The sUAS procedures outlined in Enclosures A and B demonstrate Marek Management's level of safety to be at least equal to or better than manned aircraft conducting similar operations. Marek Management is committed to a culture of safety in all phases of sUAS operations. Safety is the highest priority and is addressed and emphasized throughout Marek Management operating manuals (Enclosures A and B) and training. Chapter 5 of Enclosure A provides the safety protocols utilized by Marek Management. Enclosure B integrates safety procedures as a critical component of normal operating procedures, emergency procedures, and servicing.

Marek Management sincerely thanks the FAA for consideration of this request for exemption as outlined by Section 333 of the FAA Modernization and Reform Act of 2012. Should you need to contact me, I can be reached by e-mail at marekmanagement@gmail.com or by phone at (904) 705-2698.

Sincerely,

Jon Marek
President, Marek Management, LLC

Enclosures:
(A) Marek Management General Operations Manual
(B) Marek Management Skyward 1 Operations Manual