



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

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

September 25, 2015

Exemption No. 13012  
Regulatory Docket No. FAA-2015-2260

Ms. Evida Suntoyo  
ROOFCORP OF CA, Inc.  
2130 South Dupont Drive  
Anaheim, CA 92806

Dear Ms. Suntoyo:

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 posted to the public docket on June 15, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of ROOFCORP OF CA, Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct roof inspections.

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

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

#### **Airworthiness Certification**

The UAS proposed by the petitioner is a DJI Inspire 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 that relief from 14 CFR part 21, *Certification 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<sup>1</sup>. 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, ROOFCORP OF CA, Inc. 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, ROOFCORP OF CA, Inc. is hereafter referred to as the operator.

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<sup>1</sup> Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

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 DJI Inspire 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 Columbia, 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.nts.gov](http://www.nts.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 October 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Enclosures

U.S. Department of Transportation  
Docket Management System  
1200 New Jersey Ave., SE  
Washington, D.C. 20590

**RE: Petition for exemption according to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA)**

Dear Sir or Madam,

ROOFCORP OF CA, Inc. hereby petitions for an exemption from the Federal Aviation Regulation (FAR) and any other rules necessary to allow the operation of a small unmanned aircraft system (UAS) for the purpose of conducting roof inspections to safely produce a photo documentation damage assessment for the perusal of the homeowners to decide on any necessary repairs on their roofs. The operation under the requested exemption will adhere to strict safety protocols which we will list in the following. The reason behind using an unmanned aircraft system to perform the roofing inspections is to provide a much safer mechanism to all involved parties while posing no safety or privacy threat to the general public, or any other individuals be it participating parties or non-participating parties.

**1. Name and mailing address:**

ROOFCORP OF CA, Inc.  
2130 S Dupont Drive  
Anaheim, CA 92806  
Phone: (714) 210 5993  
Fax: (714) 940 9917  
Email: [info@roofcorp.com](mailto:info@roofcorp.com)

**2.The specific section or sections of 14 CFR from which you seek an exemption:**

Exemption Request Pursuant to Section 333 of the FMRA and Part 11 of the Federal Aviation Regulations, Seeking Exemption from

- 14 C.F.R. §§ 61.113(a) and (b) Private pilot privileges and limitations: Pilot in command
- 14 C.F.R. § 61.133(a): Commercial pilot privileges and limitations
- 14 C.F.R. § 91.119(c) Minimum safe altitudes: General
- 14 C.F.R. § 91.121 Altimeter settings
- 14 C.F.R. § 91.151(a) Fuel requirements for flight in VFR conditions
- 14 C.F.R. § 91.405(a) Maintenance required
- 14 C.F.R. § 91.407(a)(1) Operation after maintenance, preventive maintenance, rebuilding, or alteration
- 14 C.F.R. §§ 91.409(a)(1) and (2) Inspections
- 14 C.F.R. §§ 91.417(a) and (b) Maintenance records
- 14 C.F.R. § 91.7(a): Civil aircraft airworthiness

**3. The extent of relief you seek and the reason you seek the relief:**



**a. 14 C.F.R. §§ 61.113(a) and (b): Private pilot privileges and limitations; 14 C.F.R. § 61.133(a): Commercial pilot privileges and limitations**

ROOFCORP OF CA, Inc. is seeking relief and exemption from the above listed Federal Aviation Regulation and any other applicable rules to allow the use of a Small Unmanned Aircraft System to conduct roof inspections on structures approximately 25' to 100' from the surface of the ground. The UAS that ROOFCORP OF CA will use to conduct the inspection is a DJI Inspire 1, an Unmanned Aircraft System widely flown by recreational flyers is a personal UAS weighing less than 6lbs, whereas per definition by US Congress as stipulated in Section 331, PL 112-95, 2014: "6) SMALL UNMANNED AIRCRAFT. – The term "Small Unmanned Aircraft" means an unmanned aircraft weighing less than 55 pounds."

The DJI Inspire 1 is transcendently small and light weight capable to operate both autonomously and manually, with "Return Home" and "Position Stabilization" features. In an event connection with the remote controller is lost, the Inspire 1 uses its positioning system and smart flight technology to return back to the pilot.

ROOFCORP respectfully petitions that given the characteristics afore mentioned in the paragraph above, to exempt the operations of the UAS by pilot holding a private pilot's certificate or commercial pilot certificate. The risks associated with the operation of these small UAS are lower than the level of risks associated with commercial operations contemplated by Part 61; allowing operation of the UAS as requested therefore exceeds the level of safety achieved by 14 C.F.R. §§ 61.113(a) and (b).

**b. 14 C.F.R. § 91.7(a): Civil aircraft airworthiness**

Section 91.7(a) requires that no person may operate a civil aircraft unless it is in airworthy condition. Given the characteristics of the UAS such as small size, light weight, low operating altitude, short flight time, and the stringent operating restrictions and conditions proposed in this petition, an equivalent level of safety will be achieved by compliance with the Standard operating Procedure. ROOFCORP OF CA, Inc. therefore requests FAA to grant an exemption from Section 91.7(a) and find that the operator may ensure that the UAS are in an airworthy condition by complying with the Standard Operating Procedure the proposed operating restrictions and conditions. FAA has granted similar exemptions in Exemption Nos. 11136 and 11138.

**c. 4 C.F.R. § 91.119(b) and (c): Minimum safe altitudes**

Section 91.119(b) and (c) establish certain minimum altitudes for operation of civil aircraft. Section 91.119 provides, in pertinent part, that: "except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes: ... (b) Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. (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."

ROOFCORP OF CA, Inc. request to be exempted from this section since the said UAS will not operate on altitudes higher than 100' above ground level. Putting into account its small size, light weight, low speed and its limited range, also that it carries no passengers or flammable materials, the UAS may safely fly on a lower altitude than conventional aircrafts. The residential buildings that ROOFCORP OF CA, Inc. intend to inspect does not rise more than 100'. Relief from this rule is

warranted because the operations will be conducted with the safeguards and under the operating conditions outlined herein and in the Standard Operating Procedure. The FAA issued an exemption from Section 91.119(c) in Exemption Nos. 11136 and 11138.

**d. 14 C.F.R. § 91.121: Altimeter settings**

It is regulated that 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. “(b) The lowest usable flight level is determined by the atmospheric pressure in the area of operation as shown in the following table:

Current altimeter setting	Lowest usable flight level
29.92 (or higher)	180
29.91 through 29.42	185
29.41 through 28.92	190
28.91 through 28.42	195
28.41 through 27.92	200
27.91 through 27.42	205
27.41 through 26.92	210

Due to the nature of use of the small UAS to perform roof inspections, the UAS will not fly above the altitude of 100’. ROOFCORP OF CA, Inc. respectfully submits to be exempted from the section.

**e. 14 C.F.R. § 91.151(a): Fuel requirements for flight in VFR conditions**

ROOFCORP OF CA, Inc. submits to exempt this section putting into consideration the limited battery life that in turns limits flight duration of the UAS DJI Inspire 1 and also the characteristics of the UAS being light weight, low speed, limited range, ability to land very quickly, operation within visual line of sight, restricted operating area, and the fact that they do not carry passengers or any flammable materials. In addition to those characteristics described in the previous, the DJI Inspire 1 has a safety return feature that enables it to return home in an event that the battery is running low. The FAA issued an exemption to this regulation for UAS operations in Exemption Nos. 11062, 10673, 11136 and 11138.

**f. 14 C.F.R. § 91.405(a): Maintenance required**

**14 C.F.R. § 91.407(a)(I): Operation after maintenance, preventive maintenance, rebuilding or alteration**

**14 C.F.R. §§ 91.409(a)(I) and (2): Inspections**

**14 C.F.R. §§ 91.417(a) and (b): Maintenance records**

Because these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to ROOFCORP OF CA, Inc. Maintenance will be accomplished by the operator pursuant to the manufacturer’s manual and the Standard Operating Procedure. An equivalent level of safety will be achieved because the UAS are very small in size and weight, will carry a tiny payload and operate only in restricted areas for short periods of time. If mechanical issues arise, the UAS can land immediately and will be operating from no higher than 100’ above

ground level. As provided in the Standard Operating Procedure, the operator will ensure that the UAS is in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide an equivalent level of safety. The FAA issued an exemption to these regulations in Exemption Nos. 11062, 11136 and 11138.

**g. Such other relief as the FAA deems appropriate to enable the requested operations**

ROOFCORP OF CA, Inc. also requests exemption from such other FARs as the FAA deems appropriate to enable the requested operations. If, during the effective dates of the exemption issued pursuant to this petition, the FAA issues interim or final rules for small UAS, ROOFCORP OF CA, Inc. requests that it be relieved of the requirements of any conditions and limitations of the exemption and allowed to comply with any less burdensome applicable regulations that may have become effective.

**4. How your request would benefit the public as a whole**

The exemption will benefit the general public for the following reasons:

1. By using the UAS to perform roof inspections, this will not require an Inspector to physically climb the roof, therefore ensuring the Inspector's safety by minimizing the possibility of accidents happening due to falling.
2. Clay tiles are brittle, by inspecting the roof with the UAS, it will avoid stepping on the clay tiles and causing them to crack.
3. The cost of inspection will be reduced drastically to the general public due to the minimum time spent on the roof by taking high resolution photos and having a qualified roofer analyzing the pictures at the office.
4. With the UAS as the main tool to perform inspections, no ladder will be required, thus removing any safety concerns related to the placement of a ladder.
5. Most residential roofs have a very high pitch, therefore it is not walkable. Due to this reason, the homeowners seldom perform roof inspection for preventive measures until a problem occurs.
6. By inspecting roof conditions, this will ensure the condition and soundness of the roof, therefore preventing leaks that cause damages to the property, which eventually can lead to structural damage to the building, and much later can cause safety liability to the tenants and the general public.
7. Roof inspections can identify leak areas and water intrusion to prevent moisture build up inside the building. Moisture build up can stimulate the growth of mildew and bacteria that can lead to health hazard.

**5. Reasons why the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to the existing rule;**

The exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to the existing rule for the following reasons:

1. The UAS will be operated under a strict Standard Operating Procedure produced by ROOFCORP. ROOFCORP has spent more than a quarter of a century providing the highest quality roofing services, establishing a reputation for excellence working on tough demanding jobs for clients large and small. Founded in 1985, we are a leading provider of roofing and solar installation for commercial, industrial and multifamily clients throughout Washington, Oregon and California.
2. A geo-fence will be enabled on the UAS that will limit the aircraft from leaving the airspace above the property to be inspected. A signage barrier will also be constructed around the property in order to alert the public of the UAS inspection.
3. A flight ceiling limit of 100' altitude from the adjacent ground level or the height of foliage or trees adjacent to the property (lesser of the two) shall be strictly adhered to by the geo-fence and the operator for all inspections. This ensures that no contact with aircraft in the NAS will occur with our UAS because manned aircraft cannot fly below the tree line or highest nearby obstacle.
4. The property owner shall sign a consent prior to the UAS roof inspection and all non-participating persons shall be moved to at least 50' beyond the perimeter of the geo-fence and signage barrier prior to the flight.
5. The UAS will not fly near a manned aircraft.
6. The UAS flight and operator will abide by all pre-flight checks and manufacturer suggested flight protocols. The manufacturer operation manual will be readily available upon request and the operation manual will be strictly adhered to by the operator.
7. A log of each flight including the duration and location shall be kept with the operator and available for audit upon request.
8. A take-off and landing zone shall be designated prior to the flight.
9. The radio frequency used for operation and control of the UAS will comply with the FCC or other appropriate government agency requirements.
10. The UAS flights will be conducted only during daylight hours under visual meteorological conditions.
11. The UAS flights will not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud. The UAS flights will not occur when visibility is less than 3 miles from the operator and visual observer.
12. ROOFCORP OF CA, Inc. will maintain a \$1,000,000.00 liability insurance policy while operating the UAS.
13. In accordance with the manufacturer's operating manual, the UAS operator will perform extensive pre-flight checks prior to each flight to ensure the UAS is functioning properly. In the event that ANY pre-flight inspection item does not pass the check, the UAS will be permanently grounded until the manufacturer issues a full compliance certificate stating that the UAS has been repaired, properly maintained, and/or inspected and deemed safe to fly in accordance with their operating manual.
14. The UAS will have a flight termination option to prevent a "fly away" and the pilot-in-command can safely abort or terminate the flight.

**6. A summary we can publish in the Federal Register stating —**

- a) A brief description of the exemption you seek; a. The rule from which you seek the exemption; and**  
**b) A brief description of the exemption you seek**

a) Exemption Request Pursuant to Section 333 of the FMRA and Part 11 of the Federal Aviation Regulations, ROOFCORP OF CA, Inc. seeks to be exempted from 14 C.F.R. §§ 61.113(a) and (b); 14 C.F.R. § 61.133(a); 14 C.F.R. § 91.119(c); 14 C.F.R. § 91.121; 14 C.F.R. § 91.151(a); 14 C.F.R. § 91.405(a); 14 C.F.R. § 91.407(a)(1); 14 C.F.R. §§ 91.409(a)(1); 14 C.F.R. §§ 91.417(a) and (b); 14 C.F.R. § 91.7(a).

b) ROOFCORP OF CA, Inc. is seeking exemption for:

Most of the rules stipulated in the sections listed above does not apply to the small Unmanned Aircraft System because it does not carry any passengers, explosive or flammable materials that may cause concern to public safety. In addition to that, the UAS is light weight, low speed, limited range, ability to land very quickly, operation within visual line of sight, restricted operating area.

The use of the UAS to perform roof inspection will greatly decrease public safety hazard, as it eliminates the possibility of falling that may lead to severe injury or death by not requiring the inspector to climb on to the roof or use a ladder.

ROOFCORP OF CA, Inc. will put in place a strict Standard Operating Procedure to be followed by the operator to ensure that the use of this small popular and with hobbyist unmanned aircraft system will not affect public safety.

With the described use of signage, designated take-off and landing zones, owner consent, operator maintaining line of site, and all other safety protocols listed above, a safe and limited operating area can and will be established thereby creating a restricted sterile environment within which the UAS will operate.

**7. Any additional information, views, or arguments available to support your request**

A description and specs of the UAS to be used by ROOFCORP OF CA, Inc. can be found in the attached manufacturer user manual.

**8. If you want to exercise the privileges of your exemption outside the U.S., you must state the reason.**

ROOFCORP OF CA, Inc. does not wish to exercise the privileges of my exemption outside the U.S.

Respectfully,

ROOFCORP OF CA  
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Anaheim, CA 92806  
Phone: (714) 210 5993  
Fax: (714) 940 9917  
Email: [info@roofcorp.com](mailto:info@roofcorp.com)