The Name and Address of the Applicant is:

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

RE: Exemption Request under Section 333 of the FAA Modernization and Reform Act of 2012 and 14 C.F.R. Part 11

Dear Sir or Madam:

LowCountryRC, Corporation (LoCoRC) located at 3101 River Drive Thunderbolt, GA 31404 and Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("FAA Reform Act") and 14 C.F.R. Part 11, respectfully requests exemptions from several provisions of the Federal Aviation Regulations ("FAR"), specifically Section 333 which authorizes the FAA to determine:

1. If certain 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; and

2. Whether a certificate of waiver, certificate of authorization, or airworthiness certification under section 44704 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).

We are writing to request that LOCORC, LLC, an owner and operator of small unmanned aircraft, be exempted from the Federal Aviation Regulations ("FARs") listed below so that LOCORC, may operate its small unmanned aircraft systems ("UAS") commercially in airspace regulated by the Federal Aviation Administration

("FAA"); as long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333.

LOCORC has been actively involved in the technical development of UAS/ UAV service applications to provide high definition aerial photography with small, unmanned aircraft and lightweight UAS's.

**The substance of this request is essentially the same as that granted to ASTRAEUS AERIAL Regulatory Docket No. FAA-2014-0352** in that LOCORC is engaged in aerial photograph of structures using similar lightweight, remote controlled UAS's in remote areas to minimize the need to climb such structures.

LOCORC has fully equipped each of its small unmanned aircraft for aerial photography, primarily for use in the inspection of towers and structures that would otherwise require climbing at great risk to the personnel involved, though given the stability and maneuverability, they may be used by law enforcement personnel, search and rescue and by other first responders for other photography including video.

LOCORC exemption request would permit its operation of lightweight, unmanned (remotely controlled in line of sight) UAS's in tightly controlled and limited airspace. Predetermined, specifically marked areas of operation, sectioned off locations will allow LOCORC to operate within current safety parameters and new ones being implemented. As identified, similar lightweight, remote controlled UAS's are legally operated by amateurs with no flight experience, safety plan or controls in place to prevent catastrophe.

Granting LOCORC's request comports with the Secretary of Transportation's (FAA Administrator's) responsibilities to not only integrate UAS's into the national airspace system, but to " ... establish requirements for the safe operation of such aircraft systems [UAS's] in the national airspace system" under Section 333 of the Reform Act. Further, LOCORC will conduct its operations in compliance with the protocols described herein or as otherwise established by the FAA.

The Extent of Relief LOCORC Seeks and the Reason It Seeks Such Relief:

LOCORC submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FAR's operating to prevent LOCORC contemplated commercial inspections, research and other flight operations within the national airspace system. The Reform Act in Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. LOCORC lightweight UAS's meet the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of LOCORC lightweight UAS's are expressly contemplated by the Reform Act. LOCORC would like to operate its lightweight UAS's prior to the time period by which the Reform Act requires the FAA to promulgate rules governing

such craft. The Reform Act guides the Secretary in determining the types of UAS's that may operate safely in our national airspace system. Considerations include:

The weight, size, speed and overall capabilities of the UAS; Whether the UAS will be operated near airports or populated areas; and, Whether the UAS will be operated by line of sight.

112 P.L. 95 § 333 (a). Each of these items mitigates in favor of an exemption for LOCORC.

LOCORC UAS's uses multi counter-rotating propellers for extreme balance, control and stability. They each typically weigh less than 55 pounds, including camera or other equipment. Each of LOCORC's small unmanned aircraft is designed to primarily hover in place and operate at less than a 50 knot maximum speed. They are capable of vertical and horizontal operations but operate only within the line of sight of the remote control pilot. In addition to the remote control pilot, LOCORC uses a camera operator, such that, at minimum, two LOCORC personnel govern the safe flight of an LOCORC aircraft at all times.

Utilizing battery power and not combustible fuels, flights generally last between five and twenty minutes. LOCORC does not operate its UAS's with less than twenty five percent battery capacity. Safety systems in place include a GPS mode that allows LOCORC UAS's to hover in place if communication with the radio control pilot is lost and then slowly descend the UAS at twenty five percent battery capacity. Further, LOCORC fleet is programmed, in some instances, to slowly follow a predetermined set of waypoints to return to a safety point if communications are lost.

LOCORC does not operate its UAS's near airports and generally does not operate them near populated areas.

LOCORC operation of its fleet of small unmanned aircraft will not "create a hazard to users of the national airspace system or the public." 112 P.L. 95 § 3 3 3 (b). Given the small size and weight of LOCORC UAS's, combined with their operation in cordoned off and well-controlled areas, LOCORC fleet falls within Congress's contemplated safety zone when it promulgated the Reform Act and the corresponding directive to integrate UAS's into the national airspace system. Indeed, LOCORC UAS's have a demonstrable safety record and do not pose any threat to the general public or national security. The FAA has the authority to issue the exemption to LOCORC pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

Commercial and Public Benefits Granting LOCORC exemption request furthers the public interest. First, Congress has already pronounced that it is in the public's interest to integrate commercially flown UAS's into the national airspace system, hence the passing of the Reform Act. Second, LOCORC conducts research into safe UAS operations every time it flies one of its UAS's. Flight data, visual inspections, recorded observations and flight analyses are compiled to further enhance current safety protocols. Allowing LOCORC to log more flight time directly relates to its research and its ability to further enhance current safety measures. Third, the public

has an interest in reducing the danger associated with current aerial inspection methods, namely, resorting to physically climbing high or compromised structures to inspect.

Granting LOCORC exemption request substantially furthers the public's interest in ways known and currently unknown. Permitting LOCORC to immediately fly within the United States furthers advancements in publicly usable technologies or advancements in equipment available to law enforcement personnel and first responders with state of the art equipment that does not cost millions of dollars.

Reasons Why LOCORC Exemption Will Not Adversely Affect Safety Or How The Exemption Will Provide a Level of Safety At Least Equal To Existing Rule:

LOCORC exemption will not adversely affect safety. Quite the contrary, for the various reasons stated, permitting LOCORC to log more flight time will allow LOCORC to innovate and implement new and as of yet undiscovered safety protocols.

LOCORC UAS's weigh less than 55 pounds complete with cameras.

LOCORC only operates its UAS's below 400 feet;

LOCORC UAS's only operate for 5-45 minutes per flight;

LOCORC lands its UAS's when they reach 25% battery power;

LOCORC remote control pilots operate LOCORC UAS's by Visual Line of Sight (VSOL)

LOCORC remote control pilots have video backup should they somehow lose sight of the UAS;
LOCORC staffs each flight with a remote control pilot and camera operator;

LOCORC UAS's have GPS flight modes whereby they hover and then slowly land if communication with the remote control pilot is lost or battery power is below25%;

LOCORC actively analyses electronic flight data and other sources of information to constantly update and enhance safety protocols;

LOCORC only operates in secured areas that are strictly controlled, are away from airports and populated areas;

LOCORC conducts extensive briefings prior to flight, during which safety carries primary importance;

LOCORC always obtains all necessary permissions and permits prior to operation;

LOCORC provides a level of safety at least equal to existing rules, and in nearly every instance, greater than existing rules. It is important to note that absent the integration of commercial UAS's into our national airspace system, helicopters are the primary means of aerial photography. While the safety record of such helicopters is remarkably astounding, it is far safer to operate a battery powered lightweight UAS.

First, the potential loss of life is diminished because UAS's carry no people on board and LOCORC only operates in specific areas away from mass populations. Second, there is no fuel on board a UAS and thus the potential for fire or explosions is greatly diminished. Third, the small size and extreme maneuverability of LOCORC UAS's allow our remote control pilots to avoid hazards. Lastly, given their small size and weight, even when close enough to capture required images, LOCORC UAS's need not be so close to the objects they are focused on. Accordingly, LOCORC UAS's have operated and will continue to operate at and above current safety levels.

## Summary the FAA may publish in the Federal Register:

14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and the Like. 14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR § 91.203(a)(l). The size, weight and enclosed operational area of LOCORC UAS's permits exemption from Part 21 because LOCORC UAS's meet an equivalent level of safety pursuant to Section 3 3 3 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and

A. Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. LOCORC UAS's meet or exceed each of the elements.
14 C.F.R. 91.7 (a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual at the flight operations center. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. § 91.121 regarding altimeter settings is inapplicable insofar as LOCORC UAS's utilize electronic global positioning systems and internal gyroscopes to provide spatial coordination.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining such certifications and registrations at the LOCORC flight operations center.

B. 14 C.F.R. § 45.23: Marking of the Aircraft.
Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. LOCORC UAS's are, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

C. 14 C.F.R. § 61.113: Private Pilot Privileges and Limitations. PIC
Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. LOCORC can achieve an equivalent level of safety as achieved by current Regulations because LOCORC UAS's do not carry any pilots or passengers. Further, while helpful, a pilot license will not ensure remote control piloting skills, though LOCORC pilot vetting and training programs (based upon completion of an FAA Approved Ground School and a self-administered UAS flight training program and internal procedures) will. All Further, the risks attendant to the operation of LOCORC UAS's is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq.

D. 14 C.F.R. 91.119: Minimum Safe Altitudes.
14 C.F.R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows Helicopters to be operated at lower altitudes in certain conditions. LOCORC UAS's will never operate at an altitude greater than 400 AGL. LOCORC will, however, operate its UAS's in sectioned off areas with security perimeters, providing a level of safety at least equivalent to those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of LOCORC UAS's, an equivalent level of safety will be achieved.

E. 14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections.
The above-cited Regulations require, amongst other things, aircraft owners and operators to "have [the] 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."

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to LOCORC should its requested exemption be granted. LOCORC conducts an extensive maintenance program that involves regular software updates and constant inspection for assessment of any damaged hardware. Therefore, an equivalent level of safety will be achieved. LOCORC has researched and developed its own designs.

F. Summary

LOCORC seeks an exemption from the following Regulations: 14 C.F.R. 21, subpart H; 14 C.P.R. 45.23(b); 14 C.F.R. §§ 61.113 (a) & (b); 14 C.F.R. § 91.7 (a); 14 C.F.R. § 91.9 (b)(2); 14 C.F.R. § 91.103(b); 14 C.F.R. § 91.109; 14 C.F.R. § 91.119; 14 C.F.R. § 91.121; 14 C.F.R. § 91.151(a); 14 C.F.R. §§ 91.203(a) and (b); 14 C.F.R. § 91.405 (a); 14 C.F.R. § 91.407 (a)(1); 14 C.P.R. § 91.409 (a)(2); 14 C.P.R. § 91.409 (a)(2); and, 14 C.P.R. §§ 91.417 (a) & (b) to commercially operate its fleet of small unmanned vehicles and lightweight unmanned aircraft vehicles and to conduct its own research and to develop economic platforms for aerial survey, law enforcement , first responders, search and rescue. Granting LOCORC request for exemption will reduce current risk levels and thereby enhance safety.

Further, LOCORC operates at lower altitudes and in controlled airspace. LOCORC has been analyzing flight data and other information in compiling novel safety protocols and the implementation of a flight operations manual that exceeds currently accepted means and methods of safe flight. There are no people on board LOCORC UAS's and therefore the likelihood of death or serious bodily injury is significantly limited. LOCORC operation of its UAS's, weighting less than 55 pounds and traveling at speeds lower than 50 knots in cordoned off areas will provide at least an equivalent level of safety as that achieved under current FARs.

LOCORC respectfully requests that the FAA grant its exemption request without delay. The FAA has the authority to issue the exemption sought by LOCORC pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

By _____

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