

Certificate of Authorization (COA) Process

USGS National UAS Project Office
<http://uas.usgs.gov>



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Mark A Bauer
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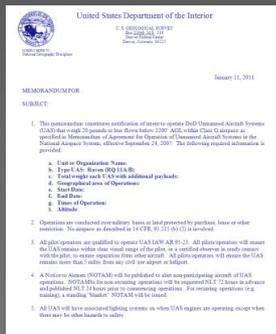
DO I NEED A COA?

Restricted Airspace



MOU

- 1.) Airspace Controlling Tower
- 2.) Range Control Approval
- 3.) Spectrum Approval
- 4.) AMD – As per OPM Guidelines



National Airspace



COA

- 1.) Airspace FAA - COA
- 2.) Controlling Agency Approval
- 3.) Spectrum Approval (NTIA)
- 4.) AMD – As per OPM Guidelines



***A Certificate of Authorization is not needed for flights in Restricted Airspace ***



OPM Procedures and Guidelines - COA Application:

- a.) The DOI UAS Coordinator for FAA COA applications, is AMD Special Services Division Thomas A. Ricks, thomas_ricks@nbc.gov, 208-433-5097.
- b.) The alternate UAS Coordinator for FAA COA applications is AMD Alaska Regional Director, Harry Kieling, harry_kieling@nbc.gov, 907-271-5626, 907-271-6569 (Fax).
- c.) Only a U.S. (Federal/State/Local) government agency or university may apply for a COA.
- d.) The COA includes, but is not limited to the operational plan, risk management, airworthiness, airspace, pilot qualifications, frequencies and communication plan, and should be developed and submitted using the COA online system (<https://oeaaa.faa.gov/oeaaa/Welcome.jsp>). This web site is password protected.
- e.) Initial feasibility discussions will be conducted between bureau unit, local bureau and National Aviation Manager and, if necessary, DOI UAS Coordinator.
- f.) The local unit will prepare and submit a formal request to initiate a UAS COA. (memo signed by Line Officer). This proposal shall include the general purpose, objectives and justification for utilizing UAS.
- g.) The request shall be routed through the bureau state/regional office to the bureau National Aviation Manager for review and approval/disapproval.
- h.) If approved, the proposal will be forwarded to AMD and a request will be made for an on line COA account for the project.
- i.) Following the establishment of the on line COA account, the bureau proponent will complete the detailed COA application. When the proponent feels the application is ready for review and submittal, it should be forwarded through bureau channels to the Bureau National Aviation Manager for approval and then to the AMD COA coordinator for **committal** to the FAA.
- j.) Collaboration and agreement will occur prior to official commitment of the application. Status of the COA can be followed on the On Line web site. The COA, once issued, shall serve as the UAS Operations Plan.



Certificate of Authorization (COA)

Who?

- Universities and government entities may apply for a COA in **NAS**

What?

- COA is an authorization issued by the Air Traffic Organization to a public operator for a specific UAS activity. After a complete application is submitted, FAA conducts a comprehensive operational and technical review. If necessary, provisions or limitations may be imposed as part of the approval to ensure the UAS can operate safely with other airspace users.

When?

- FAA will conduct a feasibility and safety review. Once these checks are passed, the application is validated. FAA will provide a formal response within **60** business days from the validation date.

DEPARTMENT OF TRANSPORTATION
FAA
CERTIFICATE OF WAIVER OR AUTHORIZATION

Holder:
Mayer County, Texas Emergency Service Office
111 E. San Antonio
Suite 300
San Marcos, TX 78665

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation prohibited by the authority of this certificate except in accordance with the conditions and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations, no specifically imposed by this certificate.

Operation of the Spectra UAS in within a three nautical mile radius of N29° 58' 35.29" W98° 05' 43.67" in Class G airspace. See Special Provisions.

SPECIAL PROVISIONS

1. A copy of the application filed for this certificate shall be attached and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or political official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is non-transferable.
5. This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS ARE SET FORTH AND ATTACHED.

This certificate (2007-AHQ-25) is effective from January 23, 2008, through January 22, 2009 and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.

BY DIRECTION OF THE ADMINISTRATOR
[Signature]

FAA Headquarters, AHS-30
JANUARY 23, 2009
Air Traffic Manager, Unmanned Aircraft Systems



DOI COA Process Outline

What are the steps for DOI applicant?

- 1.) Applicant completes the online form. Request COA account through your bureau aviation manager.
- 2.) Applicant sends the COA draft to his/her bureau aviation manager for review.
- 3.) Bureau Aviation Manager sends the draft to AMD for review and to commit the case.
- 4.) FAA completes an admin review to insure completeness and conducts a feasibility check.
- 5.) FAA validates COA and the 60 business day clock begins.
- 6.) After 60 business days the FAA will provide a formal review or notice.
- 7.) If approved, the final COA is granted and sent to the Proponent.
- 8.) If not approved, the COA is released and sent back to Applicant to make changes.



Certificate of Authorization (COA) Online System - FAA

<https://ioeaaa.faa.gov/oeaaa/>

Federal Aviation Administration

« OE/AAA

COA Cases COA Reports Tools Data Reports Options Help Log Out

Click the button below to enter a New UAS COA Case.
Note: A draft UAS COA case will be created and saved upon clicking the "Enter UAS COA Case" button.

ENTER NEW UAS COA CASE

OR

Click the button below to renew Existing UAS COA Case.

RENEW UAS COA CASE

OR

Select a UAS COA Draft to edit.

COA Cases - Draft

9 Records found, displaying all Records.
Page: 1 of 1

ASN	Created By	Division	City	State	Date Entered	Status
Draft # 2347	susan goplen	COA-DOI	ANCHORAGE	AK	04/08/2011	DRAFT
Draft # 2345	mark bauer	COA-DOI	ANCHORAGE	AK	04/07/2011	DRAFT
Draft # 2282	kathy neitzer	COA-DOI	ANCHORAGE	AK	03/08/2011	DRAFT
Draft # 1955	mark bauer	COA-DOI	ANCHORAGE	AK	08/12/2010	DRAFT
Draft # 1819	mark bauer	COA-DOI	ANCHORAGE	AK	05/19/2010	DRAFT
Draft # 1551	Harry Kieling	COA-DOI	ANCHORAGE	AK	11/30/2009	DRAFT
Draft # 1548	Harry Kieling	COA-DOI			11/30/2009	DRAFT
Draft # 1511	Matt Knudson	COA-DOI	ANCHORAGE	AK	11/01/2009	DRAFT
Draft # 1510	Matt Knudson	COA-DOI	ANCHORAGE	AK	11/01/2009	DRAFT

9 Records found, displaying all Records.
Page: 1 of 1

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Readers & Viewers: PDF Reader | MS Word Viewer | MS PowerPoint Viewer | MS Excel Viewer | WinZip



The COA Table of Contents Outlines the Required Fields Needed for COA Submittal.

UAS COA Case	
ASN #:	2010-CSA-20-COA
Case Status:	RELEASED
Submitted:	04/21/2010
Proponent Information	
Point of Contact Information	
Operational Description	
System Description	
Performance Characteristics	
Airworthiness	
Procedures	
Avionics/Equipment	
Lights	
Spectrum Analysis Approval	
ATC Communications	
Electronic Surveillance/ Detection Capability	
Visual Surveillance/ Detection Capability	
Aircraft Performance Recording	
Flight Operations Area/Plan	
Flight Aircrew Qualifications	
Special Circumstances	
Preview Case	
COA Status History	
Status Notes History	

Many of these items are site specific:

Project Description

Project Flight Operations

Class of Airspace

Dates of Operation

Spectrum Analysis Approval (*Must have spectrum approval document*)

ATC Communications

NOTAMs

Flight Operations Plan – Maps, COA Extents, Launch Site, Airspace, Floor ,
Ceiling, Speed

Special Circumstances – Airspace Restrictions and Advisories , Weather, etc...



Required COA Attachments

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Flight Operations Area/Plan	
Flight Aircrew Qualifications	
Special Circumstances	
Preview Case	
COA Status History	
Status Notes History	

System Descriptions – system specific

- Control Station
- Communication Systems
- Certified TSO Components

Performance Characteristics

- Launch/Recovery

Airworthiness – Specific if payload is changed

- User must schedule inspections

Procedures – *Mission specific*

- Lost Link /Mission Procedures
- Lost Communications Procedures
- Emergency Procedures

Spectrum Analysis Approval – mission specific

Flight Operations/Plan – mission area/map

Flight Aircrew Qualifications – Medicals

- Operator Training
- Operator Currency
- Observers

Special Circumstances – special use permits, range approval document



FAA COA Status and Terms

DRAFT - Applicant fills out COA and formulates the request.

PENDING

Committed - COA is sent to the FAA. Awaiting admin review, COA is locked no edits can be made.

Validated - COA is reviewed in detail, 60 business day clock begins, COA is locked.

Released - COA is sent back to applicant and is unlocked for edits.

ACTIVE - Approved COAs are active within it's operational use dates.

RENEWED - Approved COAs that have expired but are renewed to new operational use dates.

ARCHIVED

Canceled Draft - COA Draft which was never granted approval and canceled by the applicant.

Expired - COA is expired and is no longer valid.



Spectrum Approval Process – Raven A

USGS Frequency Manager – Jerry Godbey

RFA (Radio Frequency Authorization)



DOI Frequency Manager – Rick Gladden

National Radio Spectrum
Management



US Army Frequency Manager – Louis Sanchez
(Ravens operate on military frequency)



NTIA Spectrum Steering Committee
General Master File Analysis



Approval Document



COA

Add as Attachment



Spectrum Approval Request Form – Raven

Spectrum Request Form 10 questions

RQ-11 RAVEN (A) UAS Spectrum Frequency DOI Request Form

1.) Who will be using?

DOI trained Raven(A) operators. The projects coordinated between USGS and FWS. DOI trained operators are graduates of DOI training course using DOI course standards. The course included 22 classes and totaled 80 hours. Graduates are required to maintain currency and to pass an annual proficiency check.

Due to currency requirements and logistics, possible operators for the Sandhill Crane flights have yet to be determined.

Point of contact for the system project regarding any possible shut down or cancellation:

Mark A. Bauer
UAS Coordinator
Durable Incorporated
Rocky Mountain Geographic Science Center
U.S. Geological Survey
Phone: 303.236.2910
Cell: 303.640.9159
Email: mbauer@nps.gov

Jeff Sloan
Project Manager
Rocky Mountain Geographic Science Center
U.S. Geological Survey
Phone: 303.236.2197
Cell: 303.651.8278
Email: jsloan@nps.gov

2.) How many will be used?

One Raven(A) system. (There are 3 planes per system, only one will be flown at any given time)

3.) What is it being used for?

Project Name: UAS Raven flight operations in Monte Vista National Wildlife Refuge, San Luis Valley, CO to assess abundance and distribution of sandhill cranes.

Operational Summary:
Approximately 20 thousand cranes comprise the Rocky Mountain Population, which stage in the San Luis Valley during the spring and fall of each year. Currently, population abundance is estimated during a fall pre-migration survey, however, at that time the birds are scattered across 5 states, which results in a costly and lengthy survey effort. If means are found to estimate abundance in the San Luis Valley where the cranes are more concentrated, the survey would be more cost-effective elsewhere and may result in more precise estimates of abundance.

The birds nest at night on sandbars along the river and are relatively easy to spot and count via a UAS. The Raven is small and agile, enough to not pose harm to the nesting cranes, and emits much less noise than a typical manned aircraft. This is important because the FWS places high priority on not disturbing the nesting cranes to the point where they take flight. The FWS and the USGS view the UAS Raven as an emerging technology that may result in improved and safer methods to conduct surveys of wildlife, and potentially provide a cost-effective tool for monitoring sandhill cranes and perhaps other bird species with similar behavior.

This COA allows the USGS to operate the Raven UAS in the Monte Vista National Wildlife Refuge, San Luis



Approval Document

 **DEPARTMENT OF THE ARMY**
ARMY FREQUENCY MANAGEMENT OFFICE
CONTINENTAL UNITED STATES
124 STANLEY ROAD, SUITE 35
FORT SAM HOUSTON, TEXAS 78234-5032

***** UNCLASSIFIED *****

20101026

This Temporary Authorization is granted by the Department of Defense US ARMY FREQUENCY MANAGEMENT OFFICE. This authorization will expire on the date listed in item 141. For continued use of this authorization past the expiration date, YOU MUST SUBMIT a request to your Frequency manager 30 days prior to the date in item 141.

Serial Number (102(SER))
1 ART 100847
2 ART 100848

List Serial Number (105(LSR))
1 AR 056293
2 AR 106730

Frequency (110(FRQ))
1 M395.05
2 M1810

Station Class (113(STC))	Emission Designator (114(EMS))	Power (115(PWR))	TX Equipment (340(*EQT))
1 FAD	1 15K60F1D	1 W2	1 CAJNPN55025G:ANFQM-151A
2 MA	2 14M80F9W	2 W1.5	2 G:AERO DATA LINK

TX Antenna Location (301(XAL),300(NSC))
CO, CO

Transmit Coordinates (303)

TX Radius (306)

RX Antenna Location (401(RAL),400(RSC))
CO, CO

Receive Coordinates (403)

Required Date (140)
20101025

Expiration Date (141(EXD))
20110321

Add as Attachment



COA

Your COA start and end date should be the same as the spectrum dates

Must include county name and map of mission area

Allow a minimum of 45 days for approval



Airworthiness

- Conducted by a certified Airworthiness Inspector (AMD)
- Airworthiness is good for one year.
- Six month extensions are possible.
- Packet includes formal Airworthiness statement, AMD data maintenance cards, and public aircraft statement.
- Please review the maintenance section of the OPM for annual and conditional inspections




United States Department of the Interior
 National Business Center
 Aviation Management
 4405 Lear Court
 Anchorage, Alaska 99502-1032

In reply refer to:

Memorandum
 To: Mark Bauer
 From: Rod Russell
 Subject: Raven RQ-11 Airworthiness Statement

Statement of Raven RQ-11A airworthiness

3/15/10, I have inspected this aircraft system (KR # 04) consisting of the GCU, System Controllers, and three Aircraft, (Serial # 1401, 1709, 2745) in accordance with the Raven RQ-11A Operators Manual Version 2.7, dated July 2005 section 6.3.2 thru section 6.3.2.6 and section 4.1.3 and have found this aircraft to be in condition for safe operation. Next conditional inspection due 9/31/11. Next operational inspection due as listed next flight.

Rod Russell
 Rod Russell
 Aviation Safety Compliance Specialist
 US Department of the Interior
 Aviation Management
 (807) 271-5004

Aircraft Characteristics

Wingspan 55 in.
 Length 36 in.
 Structure modular, Kester™ composite
 Weight (with payload) 4.2 lb.
 Payload Nose Weight 8.5 oz
 Operating Altitude 150 to 1,000 ft. AGL
 Nominal Low Altitude 100 ft
 Cruise Speed 30 mph (13.5 mi/h)
 Range 10 mi (LC3)
 Climb Rate 800 f/min at 2,000 ft AGL
 Turn Rate 360° in 24 seconds
 Motor Direct drive electric
 Aircraft Batteries LiSC2 (single-use) Li-Ion (rechargeable)
 Flight Duration 60-90 min rechargeable, 80-110 min single use
 Launch Hand launch
 Landing Commanded outland deep stall
 Navigation Poly-coax GPS (WGS84) and electronic compass
 Flight Control Manual or autonomous

1 | Page

AMD-36 UAS Beta 2


INTERAGENCY DATA CARD
 Unmanned Aircraft System (UAS)

AMD-36 CONTROL NO. A4-7511
RENTAL NO. N/A
USGS UAS CONTRACT NO. ITEM NO.
DESIGNATED BASE Denver, CO
OPERATOR USGS Denver Federal Center **MAKE AND MODEL** Raven RQ-11A
ADDRESS P.O. Box 25046, MS-516 Bldg 810 **TYPE** Fixed wing **CLASS** I **POWER** Electric
Denver, CO **80225** **KIT** **KR #3**
PHONE NO. (303) 292-4296 **S/Ns** 1417 1737 1772
HOBBS / TACH READING

Authorized Users: **EXPRESSES:** 02/25/12
 USGS UAS 02/25/12

RR AIRCRAFT RANGE	Line of sight	RR LAUNCH/RETRIEVAL	Hand Launch
RR ALTITUDE	Up to 1100 AGL	RR WEATHER LIMITS	Winds < 28
RR FLIGHT ENVIRONMENT	Unpopulated	RR PAYLOAD STYLE	Field swappable
RR AIRCRAFT TYPE	Fixed wing	RR PAYLOAD TYPE	Electric Optical
		RR PAYLOAD TYPE	Infrared

APPROVED BY (Signature): *Rod Russell* DATE: 02/24/11
 (Print Name): Rod Russell REGIONAL AREA: AK/RO/AM
 Telephone Number: 807.271.5004

UAS Project Manager: Mike Huff		I. MANDATORY EQUIPMENT:		SATISFACTORY	
AIRCRAFT INFORMATION:				YES	NO
TOTAL APPROXIMATE TIME	Electric / N/A	LAUNCH & RETRIEVAL SYS	Hand launch	RR	
ENG. MAKE & MODEL	Electric / N/A	MISSION PLANNING SYSTEM	Falcon View	RR	
ENGINE HOURS:		GROUND CONTROL SYSTEM		RR	
#1 - TOR:	N/A TSO N/A HIS: N/A	COMMUNICATIONS SYSTEM		RR	
#2 - TOR:	N/A TSO N/A HIS: N/A	GPS HANDHELD RECEIVER	#	N/A	
LRN PROP TSO	N/A ON DATE: N/A	HANDHELD WALK TALKIE	#	N/A	
DATE OF LAST CONDITION RSP	29/09/11	AIRCRAFT HANDHELD RADIO	#	N/A	
TIME OF LAST CONDITION RSP		WEATHER REPORTING SYSTEM		RR	
AIRWORTHINESS CERTIFICATION	000	LIGHTING - NIGHT OPERATIONS		RR	
WEIGHING CONFIGURATION	Manufacture	LIGHTING - INFRARED		RR	
DATE OF LAST ACTUAL WEIGHING	Manufacture	CURRENT MAP SOURCE	Self Designed	RR	
MAXIMUM GROSS WEIGHT	4.2	HAND HELD WIND METER		N/A	
EQUIPPED WEIGHT	4.2	HAND HELD COMPASS		N/A	
USEFUL LOAD		REMOTE POWER SYSTEM		N/A	
FLIGHT MANUAL / SUPPLEMENTS	2.7 7/12/05 N/A	SYSTEM BATTERY CONDITION		RR	
TIME CHANGE & S.B LIST	N/A	VIDEO RECORDING SYSTEM		RR	
MAINTENANCE RECORDS	Conditional Inspection	FIRST AID KIT		N/A	



Range Controlling Agency Approval

- A range approval document **MAY** be required for low altitude flights and to operate on the land.
- Most federal Lands will need a permit to conduct operations.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

San Luis Valley National Wildlife Refuge (NWR) Complex

Alamosa, Monte Vista, and Baca NWRs

9383 El Rancho Lane
Alamosa, CO 81101
(719) 589-4021



To: Federal Aviation Administration
Cc: Mark Bauer- U.S. Geological Survey

From: Floyd A. Truetken- Refuge Manager at Monte Vista NWR

Subject: March 2011 Raven Un-manned Aerial Flight

Date: November 17, 2010

I have received a request by Mark Bauer, Geospatial Analyst with the U.S. Geological Survey Office in Denver, Colorado regarding a project to use a Raven unmanned aerial vehicle & infrared imaging system to survey sandhill cranes at Monte Vista NWR during a period of time between March 14-25, 2011.

The project proposal indicates a necessity to fly the Raven at very low altitudes (100-400') which is contrary to the 2000' standard flight advisory above national wildlife refuges that FAA requires.

I am granting permission to Mark Bauer and U.S.G.S. for the low level flights. Mark has agreed to do a pre-survey site visit, sometime this winter to meet with my staff and I to discuss and work out any on-the-ground concerns and logistics. After that visit, if we are all in agreement on the flight & survey protocols, I will issue a refuge special use permit for the above mentioned activity. Based on Mark's proposal, I believe that this project will provide significant knowledge and information, not only to my refuge but also to the wildlife scientific community as a whole.

During the March surveys, I plan to monitor the flights to ensure minimal disturbance to the sandhill cranes and other refuge wildlife as well as to ensure the safety of refuge visitors in the area. If at any time the Raven flights compromise either group, I will cancel the activity if mitigation efforts cannot be reached.

Please feel free to contact me at any time at the address and phone number below. Thank you.

Floyd A. Truetken- U.S. Fish & Wildlife Service
Alamosa/Monte Vista NWR
9383 El Rancho Lane
Alamosa, CO 81101
Cell (719) 588-3473

UNITED STATES DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE	PERMIT NUMBER: 65511-R6-2011-01
SAN LUIS VALLEY NATIONAL WILDLIFE REFUGE COMPLEX 9383 El Rancho Lane Alamosa, CO 81144 (719) 588-4021	DATE: March 7, 2011
*****SPECIAL USE PERMIT*****	STATION NUMBER TO BE CREDITED: 65511
	PERIOD OF USE: (INCLUSIVE) FROM: March 18, 2011 TO: March 27, 2011
PERMITTEE NAME AND ADDRESS: USGS- Fort Collins Science Center 2150 Centre Avenue, Bld. C Fort Collins, CO 80526	
PURPOSE: (SPECIFY IN DETAIL PRIVILEGE REQUESTED OR UNITS OF PRODUCTS INVOLVED) <small>Contact "Proof of Coverage" missions with a RC-119 Raven (A) Unmanned Aerial System to determine suitability for use with sandhill crane population surveys on Monte Vista NWR, Rio Grande County, Colorado.</small>	
DESCRIPTION: (SPECIFY UNIT NUMBERS, METES AND BOUNDS, OR OTHER RECOGNIZABLE DESIGNATIONS) <small>Using the Raven, USGS flight teams will conduct line-of-sight flights over crane roosting and feeding areas at an altitude of 100-400' above ground level per FAA protocols. Flights will occur during daylight hours and will only be done in pre-approved areas after consultation with Refuge Manager and Biologist. Disturbance to cranes will be minimal and safety of flight operations will be of utmost importance. If other components to compressed and appropriate mitigation cannot be attained, flights will be terminated for that flight period. The Refuge Manager or his designee must be on-site during every flight operation. Following conclusion of flight, within 90 days, USGS will provide survey data and other pertinent information collected in the Refuge Manager and USFWS- Region 6 Office of Migratory Bird Management for analysis. Operations team is allowed access to closed portions of the refuge to set up transect points or relevant components for the success of the survey flights as long as Refuge Manager is provided 24 hour notice.</small>	
AMOUNT OF FEE: \$0.00, IF NOT A FIXED PAYMENT, SPECIFY RATE AND UNIT OF CHARGE: XX. PAYMENT EXEMPT: ____. FULL PAYMENT ____. PARTIAL PAYMENT-BALANCE OF PAYMENTS TO BE MADE AS FOLLOWS:	
RECORD OF PAYMENTS: \$0	
SPECIAL CONDITIONS: (1) See general conditions. (2) This permit is for only the period specified. Work to be conducted during daylight hours only. (3) Refuge Manager Floyd Truetken: 719-588-3473 is the POC for all aspects of the operation as it pertains to the refuge.	
THIS PERMIT IS ISSUED BY THE U.S. FISH AND WILDLIFE SERVICE AND ACCEPTED BY THE UNDERIGNED SUBJECTS TO THE TERMS, COVENANTS, OBLIGATIONS AND RESERVATIONS, EXPRESSED OR IMPLIED HEREIN, AND TO THE CONDITIONS AND REQUIREMENTS APPEARING ON THE ATTACHED SHEETS.	
PERMITTEE SIGNATURE  Mark Bauer- USGS Representative	ISSUING OFFICER SIGNATURE AND TITLE: By: Floyd A. Truetken Floyd A. Truetken- Refuge Manager
FORM 3-43B	



Example Range permit for Monte Vista Wildlife Refuge, CO. Permitting operations for Sandhill Crane Surveys using the Raven UAS. DOI's 1st UAS operations in the National Airspace System utilizing the COA process.

Final COA highlights these provisions.

Issued To:
Activity
Purpose
Dates of Use
General Provisions
Safety Provisions
Pilot / Observer Provisions
Observer Qualifications
Pilot-in- Command (PIC) – VFR and or IFR
Pilot Proficiency
PIC Responsibilities
Pilot / Observer Task Limitations
Standard Provisions
Special Provisions
NOTAM
Incident / Accident and Normal Reporting Provisions

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION	
CERTIFICATE OF WAIVER OR AUTHORIZATION	
ISSUED TO	Hayes County, Texas Emergency Service Office
ADDRESS	111 E. San Antonio Suite 300 San Marcos, TX 78665
This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.	
OPERATIONS AUTHORIZED	Operation of the Spectra UAS in within a three nautical mile radius of N29° 58' 35.25" W98° 06' 43.67" in Class G airspace. See Special Provisions.
LIST OF WAIVED REGULATIONS BY SECTION AND TITLE	N/A
STANDARD PROVISIONS	
1. A copy of the application made for this certificate shall be attached and become a part hereof.	
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.	
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained hereof.	
4. This certificate is nontransferable.	
Note-This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.	
SPECIAL PROVISIONS	
Special Provisions are set forth and attached.	
This certificate (2007-AHQ-25) is effective from January 23, 2008, through January 22, 2009 and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.	
BY DIRECTION OF THE ADMINISTRATOR	
	
FAA Headquarters, AJR-36 <small>(Signature)</small>	Ardyth Williams <small>(Signature)</small>
January 23, 2008 <small>(Date)</small>	Air Traffic Manager, Unmanned Aircraft Systems <small>(Title)</small>
FAA Form 7711-1 (7-74)	

Be sure to carefully read all provisions in final COA!



Questions and Points of Contact

<http://uas.usgs.gov>



Jeff Sloan
(303) 236-2897
jlsloan@usgs.gov

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(303) 236-2910
mabauer@usgs.gov

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(303) 202-4293
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