

		ASN	2010-CSA-48-COA
		Case Status	DISAPPROVED
		Date Created	08/30/2010
		Date Submitted	10/02/2010
Proponent Organization		Sponsor	NMSU-PSL
		Attn Of	Stephen B. Hottman
		Address	21st Century Aerospace
		Address2	Mail Stop 3548 NMSU
		City	Las Cruces
		State	NM
		Postal Code	88003
		Telephone	(575) 646-9202
		Email	shottman@psl.nmsu.edu
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	Glen Witt
		Address	NMSU/PSL 21 Century Aerospace
		Address2	Mail Stop 3548 NMSU
		City	Las Cruces
		State	NM
		Postal Code	88003
		Telephone	(505) 975-2793
		Email	glenwitt@earthlink.net
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	No
		VFR operation	Yes
		IFR operation	No
		Day operation	Yes
		Night operation	No
		Program Executive Summary	<p>Justification for micro/small UAS activities at 2010 UAS TAAC Conference</p> <p>New Mexico State University (NMSU), as part of a technical and educational interchange with UAS constituents and the only operator of a UAS Flight Test Center, has planned a UAS demonstration of small UAS at the 2010 UAS TAAC Conference. In the past NMSU has found that many individuals working in the UAS field have had little to no actual UAS experience, even from observing a UAS operating. These same individuals may be in positions of responsibility and authority to make decisions about the utilization of this technology. Since NMSU is an educational institution we believe this educational opportunity should be taken advantage of with this audience. Although small UAS do not represent all of the technology challenges or air traffic management issues they do provide some awareness of this technology in this benign operating environment that we have selected. This information will allow more informed decisions and discussions at several policy, R&D, and operational levels. Attendees will include ExCom members as well as DOD, DHS, FAA, other Federal agencies (especially Department of Interior functions), industry, and academia. NMSU thinks that opinions and decisions based upon minimally small UAS observations have a better potential outcome for the community than a phenomenological approach.</p>
		Operational Summary	NMSU UAS TAAC proposes to conduct flight operation of six micro/small UAS (Aeryon Scout, AirRobot 100B, Draganflyer X6, T-Hawk, Raven B, and Wasp III) during the 2010 UAS TAAC Conference. Flight operations will be conducted by direct visual observation of the micro/small UAS by the PIC and a visual observer. All flights will be contained within 1/4 mile of the PIC and no higher than 400' AGL, all within Class G airspace. A safety line will be established that ensures safety of those individuals who are observing the UAS flights from the patio area associated with the meeting rooms at the Tamaya Resort. All of the flights will be performed during a single time period on one of the dates of the Conference (December 7, 8, and 9). Approval to fly on any one of the three dates of the 2010 UAS TAAC Conference provides maximum flexibility of conducting the UAS flight operations in the event of adverse weather on the planned date.
	Location	State	NM
		County	Sandoval
		Nearest Airport	PRICE'S DAIRY
		AOR	New Mexico
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	
		Class-G	Yes
System Description		Aircraft Type	
		Aircraft Type And Model Description Attachment	3
		Control Station Attachment	1
		Communications System Attachment	1
		List Certified Components (TSO) Attachment	1
		Other Attachment	0
Performance Characteristics		Climb Rate (feet/Minute)	400
		Descent Rate (feet/Minute)	400
		Turn Rate (Degrees/Second)	90
	Cruise Speed	Maximum	19

		Minimum	0
		Approach Speed	0
	Operating Attributes	Maximum MSL	6700
		Minimum MSL	5150
		Gross Takeoff Wt	2.5
		Launch/Recovery Attachment	1
Airworthiness		FAA Type Certificate	
		If No FAA Certificate (Public Aircraft Only) Attachment	2
Procedures		Lost Link/Mission Procedures Attachment	1
		Lost Communications Procedures Attachment	1
		Emergency Procedures Attachment	1
Avionics/Equipment		Equipment Suffix Type	X
		GPS	Yes
		Moving map indicator (Command Station)	No
		Tracking capability	Yes
		TCA/MCAS	No
		ELT	No
	Transponder	Transponder	No
		On	
		Off	
		Standby	
		Ident	
		Mode S	
		Mode C	
		Transponder Retuneable in Flight	
Lights		Landing	No
		Position/Navigation	No
		Anti-collision	No
		Infrared (IR)	No
Spectrum Analysis Approval		Data Link	No
		Data Link Attachment	0
		Control Link(s)	No
		Control Link Attachment	0
		Operations utilizing Radio Control (R/C) frequencies as described in Title 47 CFR 95	No
		NTIA/FCC Authorization Attachment	1
ATC Communications	Transmitter VHF Band	VHF Band	No
		Quantity	
		In-Flight Retunable	No
	Transmitter UHF Band	UHF Band	No
		Quantity	
		In-Flight Retunable	No
	Transmitter HF band	HF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver VHF Band	VHF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver UHF Band	UHF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver HF band	HF Band	No
		Quantity	
		In-Flight Retunable	No
	Guard (Emergency) Frequencies VHF Band	VHF Band	No
		Quantity	
	Guard (Emergency) Frequencies UHF Band	UHF Band	No

		Quantity	
	Instantaneous Two-Way Voice	Direct to pilot	No
		SATCOM	No
		Relay via aircraft	No
Electronic Surveillance/ Detection Capability		EO/IR	No
		Terrain detection	No
		Weather/icing detection	No
		Radar	No
		Other Attachment	0
		Electronic detection systems	No
		Electronic detection systems attachment	0
	Radar observation	No	
	NAS Operational Capability Attachment	0	
Visual Surveillance/ Detection Capability	Maximum Distance from UA	Vertical	400 Feet
		Horizontal	0.25 Nautical Miles
		Airborne based (Chase Aircraft)	No
		Ground based	Yes
		Visual observation from one or more ground sites	Yes
		Forward or side looking cameras	No
		Attachment for All	0
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	No
		Voice Recording	No
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	No
		Unique Trained Pilot Description	Each pilot of the UAS that will be flown during the 2010 TAAC Conference, as a minimum, have successfully completed the FAA private pilot ground instruction and passed the written examination
		DOD certified/trained	No
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	UAS pilots that fly the various UASs at the 2010 TAAC Conference are all qualified to fly one of the UAS and are current on the flight operations of the appropriate UAS
		Duty Time Restrictions	No UAS pilot will perform UAS flight operations in excess of one-half hour.
		Single UAS Control	Yes
		UAS Description	
		Total Numbers of UAS Controlled	1
		Observers	Private (Written)
Private (Certified)	No		
Instrument	No		
Commercial	No		
Air Transport	No		
Unique Trained Pilot	No		
Unique Trained Pilot Description	Each visual observer has successfully completed a Visual Observer Training Course, designed to enhance knowledge of aircraft detection and applicable visual flight rules.		
DOD certified/trained	No		
Other Certified Training	No		
Trained on FAR Part 91 Requirement	No		
DOD Certified Training Attachment	0		
Medical Certification Class (FAA or DOD equivalent)	2		
Currency Status	All visual observers have received specialized visual observation training and have performed visual observation service within the past 90 day or received visual observer refresher training during that period.		
Duty Time Restrictions	Visual observers shall have a minimum of 15 minutes of off duty time between flight operations.		
Single UAS Control	Yes		
UAS Description			
Total Numbers of UAS Controlled	1		

Special Circumstances		Special Circumstances	<p>This COA Application is for a one-time flight of micro/small UAS during the 2010 TAAC Conference. The flight operations is limited to 1/4 quarter mile from the PIC and no higher than 400' AGL. Safety of non-participating individuals who will view the flight operations will be paramount and safety procedures will be enforced during each UAS flight. The flight operations will only occur on one day, for a period not to exceed 90 minutes. The COA Application identifies the three days of the Conference in order to provide a backup day in the event of adverse weather on the planned date.</p> <p>Approval to use the land surface area of the Tamaya Resort, that is owned by the Santa Ana Pueblo Tribe, for the UAS launches and recovery has been obtained from the Santa Ana Tribal Authority and the Tamaya Resort Management.</p>
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Flight Operations Area/Plan

Type	User Defin Point	Loc ID	Degree	Distance	Latitude	Longitude	MSL Ceilin	MSL Floor
USER DEFINED AREA	Tamaya		1					

Total Map Attachment 5

Maximum	Minimum	Radius	SUA Description		
	35-21-00.00N		106-32-34.00W	5500	5100

52

0

0.5