		ASN	2006-AHQ-1-COA
		Case Status	EXPIRED
		Date Created	11/06/2006
		Date Submitted	11/27/2006
Proponent Organization		Sponsor	NMSU-PSL
		Attn Of	(b)
		Address	Box 30002, Stewart & Espina Sts
		Address2	
		City	Las Cruces
		State	NM
		Postal Code	88003-8002
		Telephone	(b) (6)
		Email	(b) (6)
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b)
		Address	Box 30002 Stewart & Espina Sts
		Address2	
		City	Las Cruces
		State	NM
		Postal Code	88003-8002
		Telephone	(b) (6)
		Email	(b) (6)
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	No
		VFR operation	Yes
		IFR operation	Yes
		Day operation	Yes
		Night operation	Yes
		Program Executive Summary	
		Operational Summary	Normally; 1. Flight operations will be performed weekly, 2. Approximately 10 flights per month. 3. Generally, the flight duration for each flight operation will be between 2 and 6 hours.
	Location	State	
		County	
		Nearest Airport	
		AOR	
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	
		Class-G	
System Description		Aircraft Type	
		Aircraft Type And Model Description Attachment	1
		Control Station Attachment	1
		Communications System Attachment	1
		List Certified Components (TSO) Attachment	1
		Other Attachment	1
Performance Characteristics		Climb Rate (feet/Minute)	(b)
		Descent Rate (feet/Minute)	(b)
		Turn Rate (Degrees/Second)	
	Cruise Speed	Maximum	80
		Minimum	55
		Approach Speed	60
	Operating Attributes	Maximum MSL	18000
		Minimum MSL	5700
		Gross Takeoff Wt	440.0
		Launch/Recovery Attachment	1
Airworthiness		FAA Type Certificate	
		If No FAA Certificate (Public Aircraft Only) Attachment	12
Procedures		Lost Link/Mission Procedures Attachment	1
		Lost Communications Procedures Attachment	1

		Emergency Procedures Attachment	1
Avionics/Equipment		Equipment Suffix Type	U
		GPS	Yes
		Moving map indicator (Command Station)	Yes
		Tracking capability	Yes
		TCA/MCAS	No
		ELT	No
	Transponder	Transponder	Yes
		On	Yes
		Off	Yes
		Standby	Yes
		Ident	Yes
		Mode S	Yes
		Mode C	Yes
		Transponder Retuneable in Flight	No
Lights		Landing	No
		Position/Navigation	Yes
		Anti-collision	Yes
		Infrared (IR)	
Spectrum Analysis Approval		Data Link	Yes
		Data Link Attachment	0
		Control Link(s)	Yes
		Control Link Attachment	0
		Operations utilizing Radio Control (R/C) frequencies as described in Title 47 CFR 95	No
		NTIA/FCC Authorization Attachment	2
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/ R	Yes
		Terrain detection	No
		Weather/icing detection	No
		Radar	No
		Other Attachment	1
		Electronic detection systems	No
		Electronic detection systems attachment	1

		Radar observation	Yes
		NAS Operational Capability Attachment	1
Visual Surveillance/ Detection Capability	Maximum Distance from UA	Vertical	3000 Feet
		Horizontal	1.0 Nautical Miles
		Airborne based (Chase Aircraft)	Yes
		Ground based	Yes
		Visual observation from one or more ground sites	Yes
		Forward or side looking cameras	No
		Attachment for All	1
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	Yes
		Voice Recording	Yes
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	Yes
		Instrument	Yes
		Commercial	Yes
		Air Transport	No
		Unique Trained Pilot	No
		Unique Trained Pilot Description	The Aerostar UA external plot (EP) has completed the Private Pilot Knowledge Report. The Aerostar UA internal pilot (IP) possess as a minimum a Private Pilot Rating Some Aerostar UA Ps possess an Instrument Pilot Rating One Aerostar UA IP possesses a Commercial Rating
		DOD certified/trained	Yes
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	1. External Pilot (EP) - The Aerostar EP is current. In order to maintain currency the Aerostar UA EP must perform a minimum of three qualified proficiency events within the past 90 days with the Aerostar UA or a compatible simulator. A proficiency event will include a takeoff and landing and at least 1 hours of flight operation. 2. Internal Pilot (P) - The Aerostar P is current. In order to maintain currency the Aerostar UA EP must perform a minimum of three qualified proficiency events within the past 90 days with the Aerostar UA or a compatible simulator. A proficiency event will include a takeoff and landing and at least 1 hour of flight operation.
		Duty Time Restrictions	Duty Time Restrictions: Crew rest: Adequate crew rest is necessary for safe and effective operation of the Aerostar UAS. Crewmembers that are fatigued are more likely to make mistakes and jeopardize safety and the mission. Crewmembers should monitor their schedules and raise awareness if they cannot achieve adequate crew rest. Crew rest time is 8 hours of uninterrupted time where the crewmember does not have tasking to accomplish and is allowed to rest. Should a crewmember change shift from one cycle (day or night or defined shift) to another, 12 hours of rest shall be used instead of 8. Duty Day: The duty day is the period of time where the crewmember is present and engaged in system setup, planning, pre-flight briefing, mission flight, post-flight debriefing, and cleanup. Excessive time on duty leads to fatigue and decreased effectiveness. Periodic breaks including extended breaks for meals should be afforded the crewmembers to allow them to refresh their efforts and not become task-saturated. A duty day less than 10 hours with periodic breaks should not overly fatigue the crew. Such a schedule should allow sufficient time to recover and be sustainable for a 6 day work week. A duty day between 10 and 16 hours with periodic breaks should be sustainable so long as 8 hours of crew rest is provided each day. Crewmembers should evaluate their tasking and rest schedule to determine their ability to perform their duties. Crewmembers should work a reduced week if continually tasked at this level. A duty day greater than 16 hours will be fatiguing to the crewmember and will also disrupt their sleep cycle, contributing to greater fatigue. Should a duty day greater than 16 hours be necessary, care should be exercised that the crewmember be adequately rested before the day, be afforded periodic breaks and recovery time during the day, and have a minimum of 12 hours of crew rest after the duty day to recover.
		Single UAS Control	Yes
		UAS Description	n/a
		Total Numbers of UAS Controlled	1
	Observers	Private (Written)	No
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	No

		Unique Trained Pilot Description	None
		DOD certified/trained	No
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	Yes
		DOD Certified Training Attachment	1
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	1. Visual observers (VO) - All VO are current. In order to maintain currency a VO must have been a VO for an Aerostar UA flight operation or participated in VO refresher training within the past 90 days.
		Duty Time Restrictions	Duty Time Restrictions: Visual Observers Rest: Adequate visual observer rest is necessary for the Visual observer to adequately provide visual observer see and avoid responsibilities. Visual observers that are fatigued are more likely to make mistakes and adversely affect flight operation safety. Visual observers should monitor their schedules and raise awareness if they cannot achieve adequate visual observer rest. Visual observer rest time is 8 hours of uninterrupted time where the visual observer does not have tasking to accomplish and is allowed to rest. Should a visual observer change shift from one cycle (day or night or defined shift) to another, 12 hours of rest shall be used instead of 8. Duty Day: The duty day is the period of time where the visual observer is present and engaged in system setup, planning, preflight briefing, mission flight, post-flight debriefing, and cleanup. Excessive time on duty leads to fatigue and decreased effectiveness. Periodic breaks including extended breaks for meals should be afforded the visual observers to allow them to refresh their efforts and not become task-saturated. A duty day less than 10 hours with periodic breaks should not overly fatigue the visual observer. Such a schedule should allow sufficient time to recover and be sustainable for a 6 day work week. A duty day between 10 and 16 hours with periodic breaks should be sustainable so long as 8 hours of crew rest is provided each day. Crewmembers should evaluate their tasking and rest schedule to determine their ability to perform their duties. Visual observers should work a reduced week if continually tasked at this level. A duty day greater than 16 hours will be fatiguing to the visual observer and will also disrupt their sleep cycle, contributing to greater fatigue. Should a duty day greater than 16 hours be necessary, care should be exercised that the visual observer be adequately rested before the day, be afforded periodic breaks and recovery time during the day, and have a minimum of 12 hours of visual observer rest after the duty day to recover.
		Single UAS Control	Yes
		UAS Description	n/a
		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	The following are some general comments on areas where I encountered some problems when trying to complete the COA Online process: 1. After completing each of the sections in the manner I thought was appropriate, I performed a preview of the data and detected two red X's. The first was in the Aircraft System section (Aircraft type). Because the Aerostar UA is not listed in the "Select Aircraft Type and Model" I type that in the window to tghe right. In order to get rid of the red X in this area I clicked on the "Hunter" and was successful in eliminating this red X. 2. The second red X was in the Flight Operations Area/Plan. I had entered data for 8 areas, 5 polygon and 3 radius areas (Delta, broken down into Delta 1, 2, and 3 - see the PPT file at the paperclip in the Aircraft System section). I thought I had been successful as the system appeared to accept the data because it placed each of the areas in a list each time I clicked on add after filling in the blanks and inserting the latitudes and longitudes. After getting the red X for the Flight Operations Area/Plan section I went back and reentered one polygon and one radius. Again, the system indicated I had entered them correctly as once again they were both displayed in a list. Yet, when I tried to submit the Application, it once again reflect on data in this section and would not accept the submission of the Application. 3. Throughout the document wherever altitudes are requested they are all in MSL. This may be an acceptable for maximum altitudes but in most cases for smaller UA it would be preferable to identify the minimum altitude as AGL. 4. In the Avionics Equipment section the term "TCA/MCAS," I believe is meant to reflect TCAS equipment. Also, in the Transponder Capabilities list the term "Alt" is redundant as this information would be reflect by the marking in the Mode S and C circles. Also, in this section when one checks either yes or no in the Mode S circle the system automatically checks the same response in the Mode C circle below.