

		ASN	2011-WSA-126-COA
		Case Status	APPROVED
		Date Created	11/03/2011
		Date Submitted	12/02/2011
Proponent Organization		Sponsor	US Army UAS Project Office
		Attn Of	SFAE-AV-UAS (b) (6)
		Address	Sparkman Center 2rd Floor
		Address2	
		City	Redstone Arsenal
		State	AL
		Postal Code	36898
		Telephone	(256) 313-5327
		Email	(b) (6)
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6)
		Address	SFAE-AV-UAS-AI
		Address2	5300 Sparkman Circle
		City	Redstone Arsenal
		State	AL
		Postal Code	35898
		Telephone	(256) 313-3843
		Email	(b) (6)
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	The U.S. Army desires to support the Boeing Company to continue development of the YMQ-18A (A-160) under Army cognizance in the Class D airspace at the Southern California Logistics Airport (SCLA)(VCV) and the transit corridor Class G and E airspace between VCV and R2515 located in Victorville, California.
		Operational Summary	Operation of the YMQ-18A (A160) UAS in the Class D airspace of SCLA (VCV) and the transit corridor Class G and E airspace between VCV and R2515 at or below 13,000 MSL under the jurisdiction of the VCV Air Traffic Control Tower (ATCT) and High Desert Terminal Radar Approach Control (TRACON). Flight Boundaries: The YMQ-18A (A-160), during regular flight, will remain within a 6 NM radius of VCV below 5,500 feet MSL and will use a ground observer that will stay within 1 Nautical Mile (NM) of the UAS. The YMQ-18A (A-160) will conduct several high altitude flights between VCV and R-2515 at or below 13,000 feet MSL. When these flights occur a chase plane with an observer will remain within 1 NM of UAS. Estimate 1-3 flights per week most flights lasting 1-5 hours with longer duration flights of approximately 12 hours, the longer flights will remain at VCV (Class D airspace). Aircraft will be flown in VFR conditions and will not be flown in any known or predicted icing conditions. Aircraft will not be flown in any adverse weather conditions that may affect the UA operator's ability to safely operate the YMQ-18A.
	Location	State	CA
		County	San Bernardino
		Nearest Airport	SOUTHERN CALIFORNIA LOGISTICS
		AOR	California - Southern
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	Yes
		Class-E	Yes
		Class-G	Yes
System Description		Aircraft Type	102154750 - Hummingbird
		Aircraft Type And Model Description Attachment	1
		Control Station Attachment	1
		Communications System Attachment	1
		List Certified Components (TSO) Attachment	1
		Other Attachment	0
Performance Characteristics		Climb Rate (feet/Minute)	900
		Descent Rate (feet/Minute)	900
		Turn Rate (Degrees/Second)	3.0
	Cruise Speed	Maximum	170
		Minimum	0
		Approach Speed	40

	Operating Attributes	Maximum MSL	20000
		Minimum MSL	0
		Gross Takeoff Wt	6500.0
		Launch/Recovery Attachment	1
Airworthiness		FAA Type Certificate	
		If No FAA Certificate (Public Aircraft Only) Attachment	1
Procedures		Lost Link/Mission Procedures Attachment	1
		Lost Communications Procedures Attachment	2
		Emergency Procedures Attachment	2
Avionics/Equipment		Equipment Suffix Type	U
		GPS	Yes
		Moving map indicator (Command Station)	Yes
		Tracking capability	No
		TCA/MCAS	No
		ELT	No
	Transponder	Transponder	Yes
		On	Yes
		Off	Yes
		Standby	Yes
		Ident	No
		Mode S	No
		Mode C	Yes
		Transponder Retuneable in Flight	No
Lights		Landing	No
		Position/Navigation	Yes
		Anti-collision	Yes
		Infrared (IR)	No
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	6
ATC Communications	Transmitter VHF Band	VHF Band	Yes
		Quantity	2
		In-Flight Retunable	Yes
	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	Yes
		Quantity	2
		In-Flight Retunable	Yes
	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	Yes
		SATCOM	No
		Relay via aircraft	No
Electronic Surveillance/ Detection Capability		EO/ R	Yes
		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	2600 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	Yes
		Attachment for All	0
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	Yes
		Voice Recording	Yes
Flight Aircrew Qualifications	Pilots	Private (Written)	No
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	No
		Unique Trained Pilot Description	One or more of the UAS crew are qualified operators IAW AR 95-23 and AR 95-20-DCMA INST 8210.1.
		DOD certified/trained	Yes
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	IAW AR 95-23
		Duty Time Restrictions	IAW AR 95-23
		Single UAS Control	Yes
		UAS Description	YMQ-18A Hummingbird UAS
		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	One or more of the UAS crew are qualified operators IAW AR 95-23 and AR 95-20-DCMA INST 8210.1.
		DOD certified/trained	Yes
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes

		DOD Certified Training Attachment	0
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	IAW AR 95-23
		Duty Time Restrictions	IAW AR 95-23
		Single UAS Control	Yes
		UAS Description	YMQ-18A Hummingbird UAS
		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	<p>Army Operators and Observers are medically certified IAW DOD Standards. See Airworthiness Release for specific configuration of this aircraft. Current UAS COAs (2009-WSA-118 and 2010-WSA-79) are already in place for the YMQ-18A to fly at Victorville, California with AATD (Army) and SOCOM. The YMQ-18A flights conducted under this requested COA will be similar to the flights flown under the COAs referenced in this paragraph.</p> <p>This is a COA Replacement for 2010-WSA-79-COA with updated AWR and RFA.</p>

Flight Operations Area/Plan

Type	User Defin Point	Loc ID	Degree	Distance	Latitude	Longitude	MSL Ceilin
USER DEFINED ARE SCLA			1				
USER DEFINED ARE Altitude Tunnel			1				
			2				
			3				
			4				

Total Map Attachment 2

<u>MSL Floor Maximum</u>	<u>Minimum</u>	<u>Radius</u>	<u>SUA Description</u>	
	34-35-50.90N		117-22-58.80W	5885
	34-40-15.00N		117-25-30.00W	13000
	34-51-32.60N		117-24-22.76W	13000
	34-51-51.90N		117-22-20.44W	13000
	34-40-33.42N		117-24-15.80W	13000

2885	120	60	6.0
2000	120	40	
2000	120	40	
2000	120	40	
2000	120	40	