

		ASN	2010-ESA-23-COA
		Case Status	EXPIRED
		Date Created	06/01/2010
		Date Submitted	07/12/2010
Proponent Organization		Sponsor	Virginia Army National Guard
		Attn Of	(b) (6)
		Address	18272 AP Hill Blvd
		Address2	
		City	Bowling Green
		State	VA
		Postal Code	22472
		Telephone	(804) 633-3541
		Email	(b) (6) @us.army.mil
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6)
		Address	18272 AP Hill Blvd
		Address2	
		City	Bowling Green
		State	VA
		Postal Code	22427
		Telephone	(804) 633-3541
		Email	(b) (6) @us.army.mil
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	ARNG/Active Army/USAR RQ-7 Shadow UAS units conducting New Equipment Training (NET) and proficiency training to achieve Army flight standards and/or deployment training at Fort AP Hill, Bowling Green, VA. Frequency of use will be determined by the needs of the ARNG and other users as necessary. The purpose of this Certificate of Authorization (COA) is to obtain approval for UAS TALS loiter point(090, 2 kilometers)from R-6601. AC will exit the restricted area about a half kilometer in preparation for landing.
		Operational Summary	The UAS COA is required to support Army National Guard New Equipment Training and Proficiency training of the Shadow UAS unit. Shadow UAS flights will vary from 2 to 5 days a week, 10 flights a day, and conducted in daytime VFR conditions only. Launch and recovery operations and all flight training will remain within the restricted area. The UAS proceeds to the Return Home Point (RHP), programmed in the GCS by the unit during pre-flight, within R-6601. The designated TALS loiter point west of R-6601 where the AC will exit the restricted area a half kilometer in preparation for landing. The using unit will have trained observers with binoculars to maintain positive visual contact with the UAS until the UAS is on the ground.
	Location	State	VA
		County	Caroline
		Nearest Airport	A P HILL AAF (FORT A P HILL)
		AOR	Virginia
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	

		Class-D	
		Class-E	Yes
		Class-G	
System Description		Aircraft Type	8063 - Shadow - RQ-7B
		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)	500
		Descent Rate (feet/Minute)	600
		Turn Rate (Degrees/Second)	6
	Cruise Speed	Maximum	118
		Minimum	60
		Approach Speed	70
	Operating Attributes	Maximum MSL	15000
		Minimum MSL	0
		Gross Takeoff Wt	380.0
		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	1
		Emergency Procedures Attachment	1
Avionics/Equipment		Equipment Suffix Type	A
		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	No
		Mode C	Yes

		Transponder Retuneable in Flight	Yes
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	0
ATC Communications	Transmitter VHF Band	VHF Band	Yes
		Quantity	3
		In-Flight Retunable	Yes
	Transmitter UHF Band	UHF Band	Yes
		Quantity	2
		In-Flight Retunable	Yes
	Transmitter HF band	HF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver VHF Band	VHF Band	Yes
		Quantity	3
		In-Flight Retunable	Yes
	Receiver UHF Band	UHF Band	Yes
		Quantity	2
		In-Flight Retunable	Yes
	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/IR	Yes
		Terrain detection	Yes
		Weather/icing detection	Yes
		Radar	No

		Other Attachment	0
		Electronic detection systems	No
		Electronic detection systems attachment	0
		Radar observation	Yes
		NAS Operational Capability Attachment	0
Visual Surveillance/Detection Capability	Maximum Distance from UA	Vertical	3000 Feet
		Horizontal	1.0 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	Yes
		Voice Recording	Yes
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	Yes
		Unique Trained Pilot Description	All crewmembers and observers are trained and evaluated under US Army regulations and guidelines.
		DOD certified/trained	Yes
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	IAW TC1-600
		Duty Time Restrictions	IAW AR95-23
		Single UAS Control	Yes
		UAS Description	Observers are trained under the rules and responsibilities described in 14 CFR 91.111 and 14 CFR 91.113. Observer duties are to visually monitor air traffic outside of R-6601 and communicate clearly to the operator any turning instructions required to stay clear of conflicting traffic.
		Total Numbers of UAS Controlled	1
	Observers	Private (Written)	No
		Private (Certified)	No
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		Commercial	No
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Special Circumstances		Special Circumstances	

Flight Operations Area/Plan

Type	User Define Area ID	Point	Loc ID	Degree	Distance	Latitude	Longitude	MSL Ceiling	MSL Floor	Maximum Speed	Minimum Speed	Radius	SUA Description
SUA	Restricted area - 6601:	BEGINNING AT LAT. 38-4-37N, LONG. 77-18-44W; THENCE ALONG U.S. HIGHWAY 301; TO LAT. 38-9-45N, LONG. 77-11-59W; THENCE ALONG U.S. HIGHWAY 17; TO LAT. 38-7-50N, LONG. 77-8-29W; TO LAT. 38-5-30N, LONG. 77-9-5W; TO LAT. 38-4-40N, LONG. 77-10-19W; TO LAT. 38-3-12N, LONG. 77-9-34W; TO LAT. 38-2-22N, LONG. 77-11-39W; TO LAT. 38-2-30N, LONG. 77-14-39W; TO LAT. 38-1-50N, LONG. 77-16-7W; TO LAT. 38-2-15N, LONG. 77-18-3W; TO LAT. 38-2-40N, LONG. 77-18-59W; THENCE TO THE POINT OF BEGINNING.											