

		ASN	2010-ESA-6-COA
		Case Status	EXPIRED
		Date Created	01/25/2010
		Date Submitted	02/25/2010
Proponent Organization		Sponsor	U.S. Army, Night Vision and Electronic Sensors Directorate (NVESD)
		Attn Of	RMAX UAS Operations
		Address	10221 Burbeck Road
		Address2	
		City	Fort Belvoir
		State	VA
		Postal Code	22060-5806
		Telephone	(703) 704-3056
		Email	(b) (6) @nvl.army.mil
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6)
		Address	10221 Burbeck Road
		Address2	
		City	Fort Belvoir
		State	VA
		Postal Code	22060-5806
		Telephone	(703) 704-9446
		Email	(b) (6) @nvl.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	Request a renewal of Certificate of Authorization (COA) certificate (2008-ESA-50) signed April 17, 2009. This COA is for the U.S. Army NVESD to perform Unmanned Aircraft System (UAS) flight operations in the airspace coordinated by the Range Control Office for Fort AP Hill, VA. UAS flight will be conducted over the Fort AP Hill military reservation. The UAS that will be utilized for this U.S. Army activity is an RMAX helicopter manufactured by Yamaha of Japan under a contract to the U.S. Army.
		Operational Summary	<p>Operation Times - RMAX Operations will be conducted daily for periods of not more than one week every two to three months over the 12 month period. The maximum flight duration will not exceed 2 hours (typical flight duration is approximately 1-1.5 hours) and will only be performed during daylight hours, in low wind conditions, and when weather conditions ensure basic VFR minimums can be maintained as the mission may dictate.</p> <p>The flight area is over the Fort AP Hill Military reservation an contained entirely within Class G airspace; more specifically the Drop Zone and Laser Range areas.(see chart attached in "Flight Operations Area/Plan" section).</p> <p>Route of flight - The RMAX will takeoff from the Drop Zone or Laser Range launch and recovery site and after reaching the max cruise altitude (400 feet AGL), RMAX will operate as programmed within the flight area depicted in the attachments and terminate at the launch and recovery sites. (see chart attached in "Flight Operations Area/Plan" section).</p> <p>Altitudes for each segment - There are four flight operations scenarios: (1) check out flights, (2) test flights, (3) training flights, and (4) sensor development flights. All flights will be performed no higher than 400 feet AGL. Test flights validate the operational capability of the airframe, flight control system, and associated operating systems. These flights will be performed no higher than 400 feet AGL. Training flights are intended to provide currency and operational expertise for the pilots and ground control operators. These flights will be performed no higher than 400 feet AGL. Lastly, sensor development flights are to test sensors as installed on the RMAX. These flights will be performed no higher than 400 feet AGL even though the operator's manual states that the ideal altitude is 500-600 feet AGL. For training and to meet more with FAA standards, 400 feet AGL is the preferred altitude.</p>

	Location	State	VA
		County	Caroline
		Nearest Airport	HETH AHP
		AOR	Virginia
	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	1
		Control Station Attachment	1
		Communications System Attachment	1
		List Certified Components (TSO) Attachment	1
		Other Attachment	0
Performance Characteristics		Climb Rate (feet/Minute)	0
		Descent Rate (feet/Minute)	0
		Turn Rate (Degrees/Second)	0
	Cruise Speed	Maximum	46
		Minimum	0
		Approach Speed	46
	Operating Attributes	Maximum MSL	3000
		Minimum MSL	0
		Gross Takeoff Wt Launch/Recovery Attachment	207.0 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	X
		GPS	Yes
		Moving map indicator (Command Station)	Yes
		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	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	1
		In-Flight Retunable	Yes
	Transmitter UHF Band	UHF Band	Yes
		Quantity	1
		In-Flight Retunable	Yes
	Transmitter HF band	HF Band	Yes
		Quantity	1
		In-Flight Retunable	Yes
	Receiver VHF Band	VHF Band	Yes
		Quantity	1
		In-Flight Retunable	Yes
	Receiver UHF Band	UHF Band	Yes
		Quantity	1
		In-Flight Retunable	Yes
	Receiver HF band	HF Band	Yes
		Quantity	1
		In-Flight Retunable	Yes
	Guard (Emergency) Frequencies VHF Band	VHF Band	Yes
		Quantity	1
	Guard (Emergency) Frequencies UHF Band	UHF Band	Yes
		Quantity	1
	Instantaneous Two-Way Voice	Direct to pilot	Yes
		SATCOM	No
		Relay via aircraft	No
Electronic Surveillance/Detection Capability		EO/IR	No
		Terrain detection	No
		Weather/icing detection	No
		Radar	No
		Other Attachment	1

		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	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	1
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	Yes
		Voice Recording	No
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	Pilots/observers are trained in accordance with DOD standards
		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	DOD pilots maintain currency in accordance with DOD standards.
		Duty Time Restrictions	12 Hours
		Single UAS Control	Yes
		UAS Description	Only 1 RMAX UAS per operation.
		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	Pilots/observers are trained in accordance with DOD standards
		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)	3
		Currency Status	DOD observers maintain currency in accordance with DOD standards
		Duty Time Restrictions	12 Hours
		Single UAS Control	Yes
		UAS Description	Only 1 RMAX UAS per operation.
		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	COA is a renewal. Operations will only be conducted during daylight hours in VFR conditions at 400' and below.

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													MOA - HILL: BEGINNING AT LAT. 38-4-37N, LONG. 77-18-44W; THENCE ALONG U.S. ROUTE 301 TO LAT. 38-8-1N, LONG. 77-14-3W; TO LAT. 38-10-8N, LONG. 77-16-6W; TO LAT. 38-14-0N, LONG. 77-19-4W; TO LAT. 38-10-30N, LONG. 77-22-44W; TO LAT. 38-4-45N, LONG. 77-20-59W; TO THE POINT OF BEGINNING.

Total Map Attachment 3