

		ASN	2011-WSA-106-COA
		Case Status	APPROVED
		Date Created	10/05/2011
		Date Submitted	10/12/2011
Proponent Organization		Sponsor	US Army Aeroflightdynamics Directorate
		Attn Of	(b) (6)
		Address	Mail Stop 248-3 (Bldg N248, Room 220)
		Address2	
		City	Moffett Field
		State	CA
		Postal Code	94035
		Telephone	(650) 604-3505
		Email	(b) (6)
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6)
		Address	Bldg N248, Room 220
		Address2	NASA Ames Research Center
		City	Moffett Field
		State	CA
		Postal Code	94035
		Telephone	(650) 604-3505
		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 Aeroflightdynamics Directorate (AFDD) operates the RMAX UAS to conduct autonomous obstacle field navigation research.
		Operational Summary	The RMAX UAS is operated in daytime, VMC conditions at 100 feet AGL (450 feet MSL) and below within the Fort Ord Military Operations in Urban Terrain (MOUT) site. The Fort Ord MOUT site, called "Impossible City" is a 1,000 meter by 800 meter area and is located in Class G and C (KMRY) airspace. Estimated frequency of flights: 5 flights per year (5 hours per year).
	Location	State	CA
		County	Monterey
		Nearest Airport	MARINA MUNI
		AOR	California - Northern
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	Yes
		Class-D	
		Class-E	
		Class-G	Yes
System Description		Aircraft Type	102154764 - RMAX
		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)	400
		Descent Rate (feet/Minute)	400
		Turn Rate (Degrees/Second)	20.0
	Cruise Speed	Maximum	40
		Minimum	0
		Approach Speed	0
	Operating Attributes	Maximum MSL	1000
		Minimum MSL	0
		Gross Takeoff Wt	200.0
		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	X
		GPS	Yes
		Moving map indicator (Command Station)	Yes
		Tracking capability	No
		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	1
ATC Communications	Transmitter VHF Band	VHF Band	No
		Quantity	
		In-Flight Retunable	No
	Transmitter UHF Band	UHF Band	Yes
		Quantity	3
		In-Flight Retunable	Yes
	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	Yes
		Quantity	3
		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	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	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	100 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	1
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	Yes
		Voice Recording	No
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	Yes
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	No
		Unique Trained Pilot Description	IAW DOD Standards
		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 DOD Standards
		Duty Time Restrictions	12 hours daily
		Single UAS Control	Yes
		UAS Description	
		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	IAW 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)	2
		Currency Status	IAW DOD Standards
		Duty Time Restrictions	12 hours daily
		Single UAS Control	Yes
		UAS Description	
		Total Numbers of UAS Controlled	1

Special Circumstances		Special Circumstances	<p>UPDATE: 30 September 2011</p> <p>1. Request operations in a larger area of the Fort Ord MOUT site than previously used under 2009-WSA-94-COA. The increased area would provide additional MOUT training structures, such as buildings, that can be used in the development of helicopter UAS autonomous obstacle field navigation and safe landing site determination research. The requested area would increase the flight operations area from 200 m x 200 m to 1,000 m x 800 m.</p> <hr/> <p>This UAS COA request was previously issued to NASA under UAS COA #2008-WSA-11-COA. The U.S. Army has assumed proponency for this UAS operation.</p> <p>UPDATE: 4 December 2009 - Corrections made:</p> <p>1. Spectrum Analysis Approval Document. Correction: Deleted previous document and inserted Spectrum Analysis Approval document issued by NTIA to the U.S. Army AFDD.</p>
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Flight Operations Area/Plan

Type	User Defin Point	Loc ID	Degree	Distance	Latitude	Longitude	MSL Ceilin	MSL Floor
DEPARTURE								

Total Map Attachment 2

Maximum	Minimum	Radius	SUA Description		
	36-37-13.00N		121-44-55.00W	450	350

40

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