

		ASN	2007-AHQ-56-COA
		Case Status	EXPIRED
		Date Created	09/05/2007
		Date Submitted	11/30/2007
Proponent Organization		Sponsor	NASA ARC
		Attn Of	Mark Sumich
		Address	Aviation Management Office
		Address2	Mail Stop 158-1
		City	Moffett Field
		State	CA
		Postal Code	94035
		Telephone	(650)604-6193
		Email	msumich@mail.arc.nasa.gov
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	Stanley Herwitz
		Address	UAV Collaborative
		Address2	NASA Research Park MS 18-2
		City	Moffett Field
		State	CA
		Postal Code	94035
		Telephone	(650)604-2192
		Email	sherwitz@mail.arc.nasa.gov
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	Yes
		VFR operation	Yes
		IFR operation	No
		Day operation	Yes
		Night operation	No
		Program Executive Summary	The Bat-3 UAV will be operating at Crows Landing for the purpose of NASA flight training and pilot proficiency activities, payload testing, and the acquisition of airborne imagery of the agricultural fields within the defined flight area.
		Operational Summary	The frequency of the Bat-3 UAV operations at Crows Landing in California is expected to be approximately 1 time per month. The number of Bat-3 UAV flights at Crows Landing is expected to be approximately 2 to 6 flights per operational deployment. The anticipated duration of each flight is expected to be approximately 15 to 240 minutes.
	Location	State	CA
		County	Stanislaus
		Nearest Airport	CROWS LANDING
		AOR	California - Northern
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	Yes
		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)	1000
		Descent Rate (feet/Minute)	800
		Turn Rate (Degrees/Second)	20
	Cruise Speed	Maximum	60
		Minimum	30
		Approach Speed	35
	Operating Attributes	Maximum MSL	9000
		Minimum MSL	0
		Gross Takeoff Wt	23.0
		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	Yes
		TCA/MCAS	No
		ELT	No
	Transponder	Transponder On	No
		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	Yes
		NTIA/FCC Authorization Attachment	1
ATC Communications	Transmitter VHF Band	VHF Band	Yes
		Quantity	1
		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	Yes
		Quantity	1
		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/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	2500 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)	Yes
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	No
		Unique Trained Pilot Description	PIC has passed the private pilot written exam.
		DOD certified/trained	No
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	Current.
		Duty Time Restrictions	None.
		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	N/A
		DOD certified/trained	No
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	Yes
		DOD Certified Training Attachment	0
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	Current.
		Duty Time Restrictions	None.
		Single UAS Control	Yes
		UAS Description	
		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	Note that the Waypoint specified on the Flight Operations Area/Plan page corresponds to the Departure point. The flight area is depicted on the attached map.  Note that 2-way voice communication takes place between the Range Safety Officer (safety observer), any other ground observers and ATC. The Range Safety Officer stands next to the PIC and can immediately convey ATC instructions.

Flight Operations Area/Plan

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

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Total Map Attachment 1

MSL Floor	Maximum	Minimum	Radius	SUA Description	
		37-24-30.00N		121-06-30.00W	2500

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