

		ASN	2007-AHQ-3-COA
		Case Status	EXPIRED
		Date Created	12/14/2006
		Date Submitted	02/23/2007
Proponent Organization		Sponsor	NASA - DFRC, Operations
		Attn Of	Dave Wright, Director of Operations
		Address	P O Box 273
		Address2	Mail Code - 2802
		City	Edwards
		State	CA
		Postal Code	93523-0273
		Telephone	(661)276-7583
		Email	David.A.Wright@nasa.gov
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	NASA - DFRC, Greg Buoni
		Address	P O Box 273
		Address2	Mail Code/OE
		City	Edwards
		State	CA
		Postal Code	93523-0273
		Telephone	(661)276-7548
		Email	greg.buoni@nasa.gov
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	No
		VFR operation	Yes
		IFR operation	Yes
		Day operation	Yes
		Night operation	Yes
		Program Executive Summary	2007 Western States Fire Mission. Fly over selected western United States fire events, obtain IR images and transfer those images to fire fighters on the ground.
		Operational Summary	Total 4-5 flights. Each flight up to 30 hours in duration. Average 1 flight per week. Take-off and land within R-2508 at Edwards AFB, California.
	Location	State	CA
		County	Kern
		Nearest Airport	BORAX
		AOR	California - Southern
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	
		Class-G	
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	7
Performance Characteristics		Climb Rate (feet/Minute)	1200
		Descent Rate (feet/Minute)	1000
		Turn Rate (Degrees/Second)	6
	Cruise Speed	Maximum	230
		Minimum	80
		Approach Speed	90
	Operating Attributes	Maximum MSL	52000
		Minimum MSL	0
		Gross Takeoff Wt	10500.0
		Launch/Recovery Attachment	1
Airworthiness		FAA Type Certificate	
		If No FAA Certificate (Public Aircraft Only) Attachment	1
Procedures		Lost Link/Mission Procedures Attachment	24
		Lost Communications Procedures Attachment	1

		Emergency Procedures Attachment	1
Avionics/Equipment		Equipment Suffix Type	I
		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	1
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	No
		Quantity	
		In-Flight Retunable	No
	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	No
		Quantity	
		In-Flight Retunable	No
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	No	
	SATCOM	Yes	
	Relay via aircraft	Yes	
Electronic Surveillance/ Detection Capability		EO/IR	No
		Terrain detection	No
		Weather/icing detection	Yes
		Radar	No
		Other Attachment	1
		Electronic detection systems	No

		Electronic detection systems attachment	1	
		Radar observation	Yes	
		NAS Operational Capability Attachment	1	
Visual Surveillance/ Detection Capability	Maximum Distance from UA	Vertical	2500 Feet	
		Horizontal	2.5 Nautical Miles	
		Airborne based (Chase Aircraft)	No	
		Ground based	No	
		Visual observation from one or more ground sites	No	
		Forward or side looking cameras	Yes	
		Attachment for All	0	
Aircraft Performance Recording		Flight data recording	No	
		Control station recording	Yes	
		Voice Recording	Yes	
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes	
		Private (Certified)	Yes	
		Instrument	Yes	
		Commercial	Yes	
		Air Transport	No	
		Unique Trained Pilot	Yes	
		Unique Trained Pilot Description	See Flight Aircrew Qualification Description attachment.	
		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	See Flight Aircrew Qualification Description attachment.	
		Duty Time Restrictions	See Flight Aircrew Qualification Description attachment.	
		Single UAS Control	Yes	
		UAS Description	The NASA GCS will be controlling one UAV (NASA 870 Ikhana)	
		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	Not required in the NAS. All operations below FL180 will be performed in the R-2508/R-2515 Special Use Airspace (SUA) complex.			
DOD certified/trained	No			
Other Certified Training	No			
Trained on FAR Part 91 Requirement	No			
DOD Certified Training Attachment	1			
Medical Certification Class (FAA or DOD equivalent)	3			
Currency Status	Not required			
Duty Time Restrictions	Not required			
Single UAS Control	Yes			
UAS Description	The chase/observer and/or ground observer will be observing one aircraft at a time.			
Total Numbers of UAS Controlled	1			
Special Circumstances			1. NASA DFRC Airworthiness and Flight Safety Review - Prior to flight, the Fire Pod, pylon, and planned operations will have passed a detailed review of the airworthiness and flight safety of the structure, installation, and operation by NASA DFRC management per NASA DFRC Airworthiness and Flight Safety Review Guidelines DHB-X-001 and NASA DFRC Airworthiness and Flight Safety Review Process DCP-X-009 (see attached files under "Aircraft System - Other").	
		Special Circumstances		



WAYPOINT  
ARRIVAL

<u>MSL Floor</u>	<u>Maximum</u>	<u>Minimum</u>	<u>S Radius</u>	<u>SUA Description</u>	
	34-58-35.00N			117-43-42.00W	0
	34-57-56.00N			117-19-59.00W	0
	35-11-04.00N			117-30-14.00W	0
	35-15-56.00N			118-02-55.00W	0
	35-21-32.00N			118-32-47.00W	0
	36-18-52.00N			118-33-15.00W	0
	37-11-27.00N			118-33-41.00W	0
	40-41-27.00N			121-52-07.00W	0
	45-25-19.00N			122-01-48.00W	0
	48-50-05.00N			120-33-00.00W	0
	48-50-05.00N			120-33-00.00W	0
	45-25-19.00N			122-01-48.00W	0
	40-41-27.00N			121-52-07.00W	0
	37-11-27.00N			118-33-41.00W	0
	36-18-52.00N			118-33-15.00W	0
	35-21-32.00N			118-32-47.00W	0
	35-15-56.00N			118-02-55.00W	0
	35-11-04.00N			117-30-14.00W	0
	34-57-56.00N			117-19-59.00W	0
	34-58-35.00N			117-43-42.00W	0
	34-58-40.00N			117-43-41.00W	0
	34-58-13.00N			117-18-11.00W	0
	35-02-27.00N			117-17-56.00W	0
	35-16-07.00N			117-30-19.00W	0
	35-37-31.00N			117-29-06.00W	0
	36-14-34.00N			116-42-19.00W	0
	36-19-46.00N			116-02-58.00W	0
	36-25-30.00N			115-17-29.00W	0
	39-53-46.00N			112-05-21.00W	0
	39-55-46.00N			111-11-02.00W	0
	42-16-01.00N			110-07-51.00W	0
	44-17-22.00N			110-40-50.00W	0
	43-55-59.00N			115-17-12.00W	0
	36-49-23.00N			115-03-05.00W	0
	36-25-30.00N			115-17-29.00W	0
	36-19-46.00N			116-02-58.00W	0
	36-14-34.00N			116-42-19.00W	0
	35-37-31.00N			117-29-06.00W	0
	35-16-07.00N			117-30-19.00W	0
	35-02-27.00N			117-17-56.00W	0
	34-58-13.00N			117-18-11.00W	0
	34-58-40.00N			117-43-41.00W	0
	34-58-52.00N			117-43-39.00W	0
	34-58-23.00N			117-18-49.00W	0
	35-02-41.00N			117-18-56.00W	0
	35-02-41.00N			116-45-07.00W	0
	35-37-53.00N			114-56-26.00W	0
	36-12-55.00N			113-01-03.00W	0
	36-57-46.00N			109-43-20.00W	0

38-00-37.00N	107-23-23.00W	0
40-52-51.00N	107-08-12.00W	0
40-52-51.00N	107-08-12.00W	0
38-00-37.00N	107-23-23.00W	0
36-57-46.00N	109-43-20.00W	0
36-12-55.00N	113-01-03.00W	0
35-37-53.00N	114-56-26.00W	0
35-02-41.00N	116-45-07.00W	0
35-02-41.00N	117-18-56.00W	0
34-58-23.00N	117-18-49.00W	0
34-58-52.00N	117-43-39.00W	0





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