

		ASN	2008-ESA-51-COA
		Case Status	DISAPPROVED
		Date Created	12/03/2008
		Date Submitted	12/08/2008
Proponent Organization		Sponsor	US Army Installation Management Command, Adelphi Laboratory Center
		Attn Of	(b) (6) Facility Management Specialist
		Address	2800 Powder Mill Road
		Address2	
		City	Adelphi
		State	MD
		Postal Code	20783-1197
		Telephone	(301) 870-2329
		Email	(b) (6) @arl.army.mil
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6) , Facility Management Specialist
		Address	Headquarters, US Army Garrison, Blossom Point Proving Ground
		Address2	Blossom Point Road
		City	Welcome
		State	MD
		Postal Code	20693
		Telephone	(301) 394-1534
		Email	(b) (6) @arl.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	<p>COA request for operations of the Kestrel-T UAS in Class "E" airspace at or below 2000 feet AGL.</p> <p>The ARMY has an urgent need to evaluate emerging sensor technologies that assist in ongoing intelligence gathering operations as well as observation from above for EOD teams who are in process of preparing to disarm IED devices. Very often the persons of interest who may have planted said IED's are in or near the area and lie in wait to explode these devices during attempts by U.S. forces to de-arm and or make device safe for removal. Light UAV with proper sensor suite can observe the area from above to give greater intelligence capabilities during these operations. These sensors, weighing up to 10 pounds, will be evaluated at the Blossom Point Research Facility on a 30 pound Test UAV to characterize their usage and mission benefits.</p> <p>Other devices such as Shot detectors, Chemical detectors, Software Auto Routers, will also be evaluated on the Kestrel-T UAV (Test Mule) during the period. Additional emerging sensor technologies are expected to be available in a prototype form-fit-function for testing during the period. An example is a hyper-spectral imager which is predicted to be useful in de-mining operations along sea shore.</p> <p>The ARMY in support of its customer base will oversee the local flights. The range manager, Jack Kaiser (or his qualified designee) will be the responsible government representative on site during all of these operations. The flights will be conducted by Defense Technologies Inc. a Government Support Contractor for these events. All flights will be conducted by DTI and will be supervised by qualified FAA certificated pilots.</p> <p>The Blossom Point Research Facility location is located at N 38.4072 W -77.09819.</p>

		Operational Summary	
	Location	State	MD
		County	Charles
		Nearest Airport	BURGESS FIELD
		AOR	Maryland
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	Yes
		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	0
Performance Characteristics		Climb Rate (feet/Minute)	500
		Descent Rate (feet/Minute)	500
		Turn Rate (Degrees/Second)	180
	Cruise Speed	Maximum	60
		Minimum	45
		Approach Speed	38
	Operating Attributes	Maximum MSL	5000
		Minimum MSL	200
		Gross Takeoff Wt	40.0
		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	U
		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	No
		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	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	Yes
		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	2000 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	Yes
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	Yes
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	Yes

		Unique Trained Pilot Description	<p>Flight crew is supervised by at least one private pilot who acts as mission commander and or External Pilot. He has a back-up pilot and one or more observers depending on mission profile to be flown. There is a Control Station Telemetry Operator, Telemetry Back-up operator, and usually additional technical person to gather data or act as safety observer.</p> <p>All DTI personnel who act as flight crew have been through King Private Pilot course. Some are in process of proceeding to written and others to private pilot status. DTI has access to other formerly military UAV pilots, most of which have private pilot ratings as well.</p>
		DOD certified/trained	No
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	The PIC must be manned in manned aircraft operations, including three takoff and landings of UAS along with a current Class 2 medical certification.
		Duty Time Restrictions	10 Hours
		Single UAS Control	Yes
		UAS Description	1 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	Yes
		Unique Trained Pilot Description	<p>Flight crew is supervised by at least one private pilot who acts as mission commander and or External Pilot. He has a back-up pilot and one or more observers depending on mission profile to be flown. There is a Control Station Telemetry Operator, Telemetry Back-up operator, and usually additional technical person to gather data or act as safety observer.</p> <p>All DTI personnel who act as flight crew have been through King Private Pilot course. Some are in process of proceeding to written and others to private pilot status. DTI has access to other formerly military UAV pilots, most of which have private pilot ratings as well.</p>
		DOD certified/trained	No
		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	Observers maintain currency IAW DTI regulation which include biennial flight review.
		Duty Time Restrictions	10 Hours
		Single UAS Control	Yes
		UAS Description	1 UAS observed per operation.

		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	<p>Operational Summary:</p> <p>"Request COA for operations of the Kestrel-T UAS in Class "E" airspace at or below 2000 feet AGL at Blossom Point, MD. The operation will launch/recover to/from the Blossom Point Research Facility, and remain overhead. UAS will remain within a 3 NM. radius of launch point. Altitudes range from sea level to 2000 feet MSL. Kestrel UAS is Mode C equipped and will transmit the assigned code from Potomac TRACN (PCT). Operations will be coordinated with PCT at least 30 minutes prior to launch and immediately upon termination. Times of flight will be from 6:30 until 15:00 daily from Monday through Friday, Flight duration will vary but generally less than 1.5 hours per flight with multiple flights during normal operating day. The frequency of flight is dependent on the sensors being tested and when each flight scenario makes its way through Garrison and Army Test Plan evaluators. Tests will consist of the vehicle flying over some representative items that are similar to what end user might see through a camera.</p> <p>The flight team is comprised of a minimum of four (4) individuals; External Pilot, Internal Pilot (Control Station Operator who is tasking the vehicle when the autopilot mode is selected, Mission Commander and Safety observer. Missions may require additional personnel such as payload operators and additional safety observers.</p> <p>Operations are preceded by an Operations Briefing, Weather Briefing, and Safety Briefing as well as a Post Flight Brief.</p>

Flight Operations Area/Plan

Type	User Define Area ID	Loc Point ID	Degree	Distance	Latitude	Longitude	MSL Ceiling	MSL Floor	Maximum Speed	Minimum Speed	Radius	SUA Description
DEPARTURE		38-24-37.57N			77-06-01.86W		2000	0	55	40	3.0	

Total Map Attachment 1