

		ASN	2009-CSA-63-COA
		Case Status	EXPIRED
		Date Created	09/18/2009
		Date Submitted	09/18/2009
Proponent Organization		Sponsor	Minnesota Army National Guard Camp Ripley MN
		Attn Of	(b) (6)
		Address	Camp Ripley, 15000 HWY 115
		Address2	
		City	Little Falls
		State	MN
		Postal Code	56345-4173
		Telephone	(320) 616-2699
		Email	(b) (6) @us.army.mil
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	(b) (6)
		Address	150000 HWY 115, Camp Ripley
		Address2	
		City	Little Falls
		State	MN
		Postal Code	56345
		Telephone	(320) 616-2780
		Email	(b) (6) @us.army.mil
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	No
		VFR operation	Yes
		IFR operation	No
		Day operation	Yes
		Night operation	Yes
		Program Executive Summary	(b) (6) Post Commander National Guard Training Site, Camp Ripley Minnesota, requests a Renewal of the Certificate of Authorization (2008-CSA-3) to operate RQ-7B Shadow UAS at Ray S. Miller AAF. The UAS will depart MAAF Class D Airspace to/from adjacent R-4301 and return to/from R-4301 to MAAF upon termination of the flight. The training flights will be conducted by the assigned UAS unit 1/134 BTB and for other RQ-7B Shadow units as scheduled. AR 95-1 establishes currency requirements, AR 95-23 UAS Flight regulations and TC1-600 establishes training requirements for UAS operations. UAS flights will be conducted between 0800 and 2300 hours during scheduled annual training periods and other selected training periods. The total number of training days scheduled could vary from 90 to 120 days due to weather and equipment. The ability to train close to home enhances soldier moral, saves money, and eliminates long pre-deployment periods.
		Operational Summary	The UAS flights will originate and terminate at MAAF for flights to/from R-4301. MAAF has designated Class D airspace from surface to 3700ft MSL and 3.9nm radius. Runway 31 overrun is less than 300 yards from the southern boundary of R-4301. The RQ-7B Shadow will operate from 3000 to 10000ft AGL when operating in R-4301. Training times and duration are in the Executive Summary in the previous paragraph. Hours or flight duration will vary from 2 to 4 hours and will be limited two Shadow UAS flights per training period. UAS flights will be limited to 3 flight periods per day. Flights will be conducted from 0800 to 2300 hours.

			<p>All UAS flights will have approved flight plans, DD form 175 with weather brief and risk assessment approved by their unit approval authority and on file with MAAF Flight Operations. All flight missions and requests for UAS and other aircraft operations will be reviewed, deconflicted and approved by MAAF Flight Operations and then forwarded to MAAF ATC control tower. All flight departures and terminations will be cleared by MAAF ATC tower prior to departure or termination.</p> <p>MAAF will not allow other aircraft in the Class D airspace when a UAS is departing or landing. All UAS flight departures will have a 10 minute separation; landings will be cleared by MAAF ATC when advised by Mission Commander (MC) that the recovery system has been cleared of the UAS and personnel.</p> <p>Aircraft Operator (AO) will advise MAAF 10 minutes prior to recovery to allow other aircraft to land or depart Class D airspace. UAS will not be cleared for departure or landing until after all runways and taxiways are clear of all aircraft. All non UAS aircraft must be in designated parking areas. UAS ground observers (GO) must be positioned so they can maintain visual contact. GO will have binoculars to improve visual tracking of the UAS. For night operations GO will have NVD devices to improve night vision. GO will have access to several range towers and observation posts within R-4301. All UAS ground observers are within 1 Nautical mile from each during night training. These locations and enhanced visual devices will help insure visual contact with the UAS systems. Additional GO sites will be established if the UAS is flown where observation is limited and visual coverage is required. The AO will use the optical ability of the UAS to supplement the GO surveillance capability. The GO, AO and MC will use radios, and land lines when available to communicate and coordinate UAS operations with MAAF tower. The Air Traffic Control Surveillance Radar - AN/TPN-31 will be use as secondary method for Situational Awareness.</p> <p>The ranges in R-4301 will not be operated if the UAS operation creates a conflict. This will be de-conflicted during operation planning meetings prior to UAS training mission approval at MAAF flight operations.</p> <p>Any individual can halt any training operation if they feel a policy, action or practice may injure anyone or cause property or equipment damage.</p>
	Location	State	MN
		County	Morrison
		Nearest Airport	HINES FARM
		AOR	Minnesota
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	Yes
		Class-E	
		Class-G	
System Description		Aircraft Type	8063 - Shadow - RQ-7B
		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)	1500
		Descent Rate (feet/Minute)	600

		Turn Rate (Degrees/Second)	20
	Cruise Speed	Maximum	110
		Minimum	70
		Approach Speed	56
	Operating Attributes	Maximum MSL	15000
		Minimum MSL	0
		Gross Takeoff Wt	375.0
		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	Yes
		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	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	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	Yes
		SATCOM	No
		Relay via aircraft	Yes
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	Yes
		NAS Operational Capability Attachment	1
Visual Surveillance/Detection Capability	Maximum Distance from UA	Vertical	2500 Feet
		Horizontal	10 Nautical Miles
		Airborne based (Chase Aircraft)	No
		Ground based	No
		Visual observation from one or more ground sites	Yes
		Forward or side looking cameras	Yes
		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	All operators and observers are trained IAW DOD and Army standards.
		DOD certified/trained	Yes
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	No
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	Class 3 in compliance with Army Regulations. Air crew currency is maintained to DOD standards. Annual APART and flight physicals and proficiency requirements are maintained at the unit level. The flight crew maintains currency IAW Air Crew Training Manual TC 1-600 which establish the semi-annual and annual flight hours training requirements for operators of the RQ7B Shadow 200.
		Duty Time Restrictions	IAW AR 95-1/Army crew endurance guidance. 12 hours/day with 8 hours rest.
		Single UAS Control	Yes
		UAS Description	Operators and observers will only monitor one (1) UAS at a time.
		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	Same as pilot.
		DOD certified/trained	Yes
		Other Certified Training	No
		Trained on FAR Part 91 Requirement	No
		DOD Certified Training Attachment	0
		Medical Certification Class (FAA or DOD equivalent)	3
		Currency Status	Same as pilot.
		Duty Time Restrictions	Same as pilot.
		Single UAS Control	Yes
		UAS Description	Same as pilot.
		Total Numbers of UAS Controlled	1
Special Circumstances		Special Circumstances	This application is a Renewal to 2008-CSA-3. The Medical Class 3 in compliance with Army Regulations for all the UAS Operators (Pilots and Observers). This request will allow us to train Minnesota and 85th ID assigned UAS units. All units training at Camp Ripley are briefed on all Flight and Range activities conducted during their stay. All Aviation units receive an annual safety briefing covering all activities that would affect their operations. Ray S. Miller AAF is contained completely within Camp Ripley boundaries. MAAF is not a

			civilian joint use airfield. All UAS operations are contained on Camp Ripley, Class D Airspace (3700ft MSL 3.9mn radius) and R-4301. Civilian air traffic and residents in the vicinity of Camp Ripley and MAAF are familiar with our air and ground operations. The Post Commander conducts frequent meetings with County and city officials.
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Flight Operations Area/Plan

Type	User Define Area ID	Point	Loc D	Degree	Distance	Latitude	Longitude	MSL Ceiling	MSL Floor	Maximum Speed	Minimum Speed	Radius	SUA Description
SUA													Restricted area - 4301: BEGINNING AT THENCE ALONG SOUTH BANK OF CROW WING RIVER AND WEST BANK OF MISSISSIPPI RIVER (BEG N GIS POINTS) GIS (END GIS PO NTS) TO LAT. 46-10-49N, LONG. 94-21-53W; TO THENCE ALONG THE WEST BANK OF MISS PPI RIVER TO LAT. 46-6-22N, LONG. 94-21-11W; TO LAT. 46-6-22N, LONG. 94-22-16W; TO LAT. 46-6-3N, LONG. 94-22-16W; TO LAT. 46-6-3N, LONG. 94-26-7W; TO LAT. 46-8-0N, LONG. 94-26-7W; TO LAT. 46-8-0N, LONG. 94-30-1W; TO LAT. 46-18-18N, LONG. 94-30-1W; TO THE PO NT OF BEGINN NG.