

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION <u>Experimental (Unmanned Aircraft)</u>	
	PURPOSE <u>R&D or Crew Training or Market Survey</u>	
B	MANUFACTURER	NAME <u>N/A</u>
		ADDRESS <u>N/A</u>
C	FLIGHT	FROM <u>N/A</u>
		TO <u>N/A</u>
D	N- <u>338FH</u>	SERIAL NO. <u>08021006</u>
	BUILDER <u>Honeywell International</u>	MODEL <u>gMAV</u>
	DATE OF ISSUANCE <u>7/31/08</u>	EXPIRY <u>7/30/09</u>
E	OPERATING LIMITATIONS DATED <u>7/31/08</u> ARE PART OF THIS CERTIFICATE	
	SIGNATURE OF FAA REPRESENTATIVE <i>James M. Fote</i> James M. Fote	DESIGNATION OR OFFICE NO. SW-MIDO-43

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production flight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the Administrator as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.



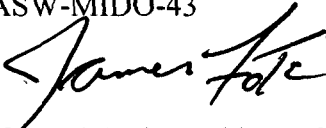
Federal Aviation Administration

Memorandum

Date: 5/5/2009

To: Aircraft Registry

From: James Fote, Aviation Safety Inspector, San Antonio Manufacturing
Inspection District Office, ASW-MIDO-43

Prepared by: James Fote 

Subject: Surrender of Special Airworthiness Certificate for N338FH

The Special Airworthiness Certificate for N338FH was surrendered by Honeywell International after the Unmanned Aircraft was destroyed.

Attachment

Handwritten text or signature, possibly illegible.

FAA FORM 8130-6, APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE

Form Approved O.M.B. No. 2120-0018
09/30/2007

Accepted KA Oct/22/2008

APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE		INSTRUCTIONS - Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use attachment. For special flight permits complete Sections II, VI and VII as applicable.																							
I. AIRCRAFT DESIGNATION	1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3. AIRCRAFT MODEL DESIGNATION	4. YR. MFR.	FAA CODING																				
	N338FH	Honeywell International	gMAV	2008																					
	5. AIRCRAFT SERIAL NO.	6. ENGINE BUILDER'S NAME (Make)	7. ENGINE MODEL DESIGNATION																						
	08021006	3W	3W56iB2-CS																						
8. NUMBER OF ENGINES	9. PROPELLER BUILDER'S NAME (Make)	10. PROPELLER MODEL DESIGNATION	11. AIRCRAFT IS (Check if applicable)																						
1	AAI	38573-4190-1	IMPORT																						
APPLICATION IS HEREBY MADE FOR: (Check applicable items)																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">A</td> <td style="width: 5%;">1</td> <td style="width: 40%;">STANDARD AIRWORTHINESS CERTIFICATE (Indicate Category)</td> <td style="width: 5%;">NORMAL</td> <td style="width: 5%;">UTILITY</td> <td style="width: 5%;">ACROBATIC</td> <td style="width: 5%;">TRANSPORT</td> <td style="width: 5%;">COMMUTER</td> <td style="width: 5%;">BALLOON</td> <td style="width: 5%;">OTHER</td> </tr> <tr> <td>B</td> <td></td> <td>SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)</td> <td colspan="7"></td> </tr> </table>						A	1	STANDARD AIRWORTHINESS CERTIFICATE (Indicate Category)	NORMAL	UTILITY	ACROBATIC	TRANSPORT	COMMUTER	BALLOON	OTHER	B		SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)							
A	1	STANDARD AIRWORTHINESS CERTIFICATE (Indicate Category)	NORMAL	UTILITY	ACROBATIC	TRANSPORT	COMMUTER	BALLOON	OTHER																
B		SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)																							
II. CERTIFICATION REQUESTED																									
						7	PRIMARY																		
						9	LIGHT-SPORT (Indicate Class)	AIRPLANE	POWER-PARACHUTE	WEIGHT-SHIFT-CONTROL	GLIDER	LIGHTER THAN AIR													
						2	LIMITED																		
						5	PROVISIONAL (Indicate Class)	1	CLASS I																
								2	CLASS II																
						3	RESTRICTED (Indicate operation(s) to be conducted)	1	AGRICULTURE AND PEST CONTROL		2	AERIAL SURVEY		3	AERIAL ADVERTISING										
								4	FOREST (Wildlife Conservation)		5	PATROLLING		6	WEATHER CONTROL										
								0	OTHER (Specify)																
						4	EXPERIMENTAL (Indicate operation(s) to be conducted)	1	RESEARCH AND DEVELOPMENT		2	AMATEUR BUILT		3	EXHIBITION										
								4	AIR RACING		5	CREW TRAINING		6	MARKET SURVEY										
								0	TO SHOW COMPLIANCE WITH THE CFR																
								7	OPERATING (Primary Category) KIT BUILT AIRCRAFT																
								8	OPERATING LIGHT-SPORT	8A	Existing Aircraft without an airworthiness certificate & do not meet § 103.1														
										8B	Operating Light-Sport Kit-Built														
				8C	Operating light-sport previously issued special light-sport category airworthiness certificate under § 21.190																				
8	SPECIAL FLIGHT PERMIT (Indicate operation(s) to be conducted, then complete Section VI or VII as applicable on reverse side)	1	FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE, OR STORAGE																						
		2	EVACUATION FROM AREA OF IMPENDING DANGER																						
		3	OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT																						
		4	DELIVERING OR EXPORTING			5	PRODUCTION FLIGHT TESTING																		
		6	CUSTOMER DEMONSTRATION FLIGHTS																						
C	6	MULTIPLE AIRWORTHINESS CERTIFICATE (check ABOVE "Restricted Operation" and "Standard" or "Limited" as applicable)																							
III. OWNER'S CERTIFICATION																									
A. REGISTERED OWNER (As shown on certificate of aircraft registration) IF DEALER, CHECK HERE →																									
NAME Honeywell International			ADDRESS 9201 San Mateo Blvd NE Albuquerque, NM 87113-2227																						
B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)																									
AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No. and Revision No.)			AIRWORTHINESS DIRECTIVES (Check if all applicable AD's are compiled with and give the number of the last AD SUPPLEMENT available in the biweekly series as of the date of application)																						
AIRCRAFT LISTING (Give page number(s))			SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated)																						
C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS																									
CHECK IF RECORDS IN COMPLIANCE WITH 14 CFR Section 91.417			TOTAL AIRFRAME HOURS 28.6 hours		3 EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed) N/A																				
D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101, et seq. and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.																									
DATE OF APPLICATION 13 June 2008		NAME AND TITLE (Print or type) Vaughn Fulton, Senior Program Manager UAS		SIGNATURE 																					
IV. INSPECTION AGENCY VERIFICATION																									
A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.)																									
2	14 CFR part 121 CERTIFICATE HOLDER (Give Certificate No.)	3	CERTIFICATED MECHANIC (Give Certificate No.)	6	CERTIFICATED REPAIR STATION (Give Certificate No.)																				
5	AIRCRAFT MANUFACTURER (Give name or firm)																								
DATE		TITLE		SIGNATURE																					
V. FAA REPRESENTATIVE CERTIFICATION																									
(Check ALL applicable block items A and B)																									
A. I find that the aircraft described in Section I or VII meets requirements for				4	THE CERTIFICATE REQUESTED																				
				4	AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE																				
B. Inspection for a special permit under Section VII was conducted by:				FAA INSPECTOR	FAA DESIGNEE																				
				CERTIFICATE HOLDER UNDER	14 CFR part 65																				
				14 CFR part 121 OR 135	14 CFR part 145																				
DATE	DISTRICT OFFICE	DESIGNEE'S SIGNATURE AND NO.		FAA INSPECTOR'S SIGNATURE																					
7/31/08	SW-MIDO-43	4																							

1000

1000

VI. PRODUCTION FLIGHT TESTING	A. MANUFACTURER							
	NAME		ADDRESS					
	B. PRODUCTION BASIS <i>(Check applicable item)</i>							
	<input type="checkbox"/>	PRODUCTION CERTIFICATE <i>(Give production certificate number)</i> →						
	<input type="checkbox"/>	TYPE CERTIFICATE ONLY						
	<input type="checkbox"/>	APPROVED PRODUCTION INSPECTION SYSTEM						
C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS								
DATE OF APPLICATION		NAME AND TITLE <i>(Print or Type)</i>		SIGNATURE				
VII. SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST	A. DESCRIPTION OF AIRCRAFT							
	REGISTERED OWNER		ADDRESS					
	BUILDER <i>(Make)</i>		MODEL					
	SERIAL NUMBER		REGISTRATION MARK					
	B. DESCRIPTION OF FLIGHT							
	FROM		TO					
	VIA		DEPARTURE DATE	DURATION				
	C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT							
	<input type="checkbox"/>	PILOT	<input type="checkbox"/>	CO-PILOT	<input type="checkbox"/>	FLIGHT ENGINEER	<input type="checkbox"/>	OTHER <i>(Specify)</i>
	D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS:							
	E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION: <i>(Use attachment if necessary)</i>							
F. CERTIFICATION – I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 <u>et seq.</u> and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is safe for the flight described.								
DATE		NAME AND TITLE <i>(Print or Type)</i>		SIGNATURE				
VIII. AIRWORTHINESS DOCUMENTATION (FAA/DESIGNEE USE ONLY)	<input type="checkbox"/>	A. Operating Limitations and Markings in Compliance with 14 CFR Section 91.9, as applicable.		G. Statement of Conformity, FAA Form 8130-9 <i>(Attach when required)</i>				
	<input checked="" type="checkbox"/>	B. Current Operating Limitations Attached		H. Foreign Airworthiness Certification for Import Aircraft <i>(Attach when required)</i>				
	<input checked="" type="checkbox"/>	C. Data, Drawings, Photographs, etc. <i>(Attach when required)</i>		I. Previous Airworthiness Certificate Issued in Accordance with 14 CFR Section _____ CAR _____ <i>(Original Attached)</i>				
	<input type="checkbox"/>	D. Current Weight and Balance information Available in Aircraft		<input checked="" type="checkbox"/>				
	<input type="checkbox"/>	E. Major Repair and Alteration, FAA Form 337 <i>(Attach when required)</i>		J. Current Airworthiness Certificate Issued in Accordance with 14 CFR Section 21.191(a) (c) & (f) <i>(Copy Attached)</i>				
	<input checked="" type="checkbox"/>	F. This inspection Recorded in Aircraft Records		K. Light-Sport Aircraft Statement of Compliance, FAA Form 8130-15 <i>(Attach when required)</i>				



COPY

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION SPECIAL AIRWORTHINESS CERTIFICATE	
A	CATEGORY/DESIGNATION <u>Experimental (Unmanned Aircraft)</u>
	PURPOSE <u>R&D or Crew Training or Market Survey</u>
B	MANUFACTURER NAME <u>N/A</u>
	ADDRESS <u>N/A</u>
C	FLIGHT FROM <u>N/A</u>
	TO <u>N/A</u>
D	N- <u>338FH</u> SERIAL NO. <u>08021006</u>
	BUILDER <u>Honeywell International</u> MODEL <u>qMAV</u>
E	DATE OF ISSUANCE <u>7/31/08</u> EXPIRY <u>7/30/09</u>
	OPERATING LIMITATIONS DATED <u>7/31/08</u> ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE <u>James M. Fote</u> DESIGNATION OR OFFICE NO. <u>SW-MIDO-43</u>

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

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E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Rotorcraft Directorate
San Antonio Manufacturing Inspection District Office

10100 Reunion Place, Suite 650
San Antonio, Texas 78216-4168
Phone: (210) 308-3360
Fax: (210) 308-3370

**Operating Limitations
Experimental: Research and Development, Market Survey,
and/or Crew Training**

<p>Registered Owner Name: Honeywell International</p> <p>Registered Owner Address: 9201 San Mateo Blvd., NE Albuquerque, NM 87113-2227</p> <p>Aircraft Description: Micro Unmanned Air Vehicle</p> <p>Aircraft Registration: N338FH</p>	<p>Aircraft Builder: Honeywell International</p> <p>Year Manufactured: 2008</p> <p>Aircraft Serial Number: 08021006</p> <p>Aircraft Model Designation: Micro Unmanned Air Vehicle</p> <p>Engine Model: 3W56iB2-CS</p>
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The following conditions and limitations apply to all unmanned aircraft system (UAS) flight operations for the Honeywell gMAV while operating in the National Airspace System (NAS).

1. General Information.

a. Integrated system. For the purposes of this special airworthiness certificate and operating limitations, the Honeywell gMAV operated by Honeywell International is considered to be an integrated system. The system is composed of the following:

- (1) Honeywell gMAV, S/N 08021006.
- (2) UAS control station(s), fixed, mobile, or ground-based.
- (3) Telemetry, launch, and recovery equipment.
- (4) Communications and navigation equipment, including ground and/or airborne equipment used for command and control of the Honeywell gMAV UAS.



(5) Equipment on the ground and in the air used for communication with other members of the flightcrew, observers, air traffic control (ATC), and other users of the NAS.

b. Compliance with 14 CFR part 61 (Certification: Pilots, Flight Instructors, and Ground Instructors) and part 91 (General Operating and Flight Rules). Unless otherwise specified in this document, the UA pilot-in-command (PIC) and Honeywell International must comply with all applicable sections and parts of 14 CFR including, but not limited to, parts 61 and 91.

c. Operational requirements.

(1) No person may operate this UAS for other than the purpose of research and development, market survey, and/or crew training, to accomplish the flight operations outlined in Honeywell International program letter dated 06/10/2008, which describes compliance with § 21.193(d), Experimental certificates: General, and has been made available to the UA PIC.

(2) This UAS must be operated in accordance with applicable air traffic and general operating rules of part 91 and all additional limitations herein prescribed under the provisions of § 91.319(i), Aircraft having experimental certificates: Operating limitations.

(3) Honeywell International must accumulate at least 50 flight hours under its experimental airworthiness certificate before customer crew training is permitted, in accordance with § 21.195(d), Experimental certificates: Aircraft to be used for market surveys, sales demonstrations, and customer crew training.

d. UA condition. The UA PIC must determine that the UA is in a condition for safe operation, and in a configuration appropriate for the purpose of the intended flight.

e. Multiple-purpose operations. When changing between operating purposes of a multiple purpose certificate, the operator must determine that the aircraft is in a condition for safe operation and appropriate for the purpose intended. A record entry will be made by an appropriately rated person (that is, an individual authorized by the applicant and acceptable to the FAA) to document that finding in the maintenance records.

f. Operation exceptions. No person may operate this UA to carry property for compensation or hire (§ 91.319(a)(2)).

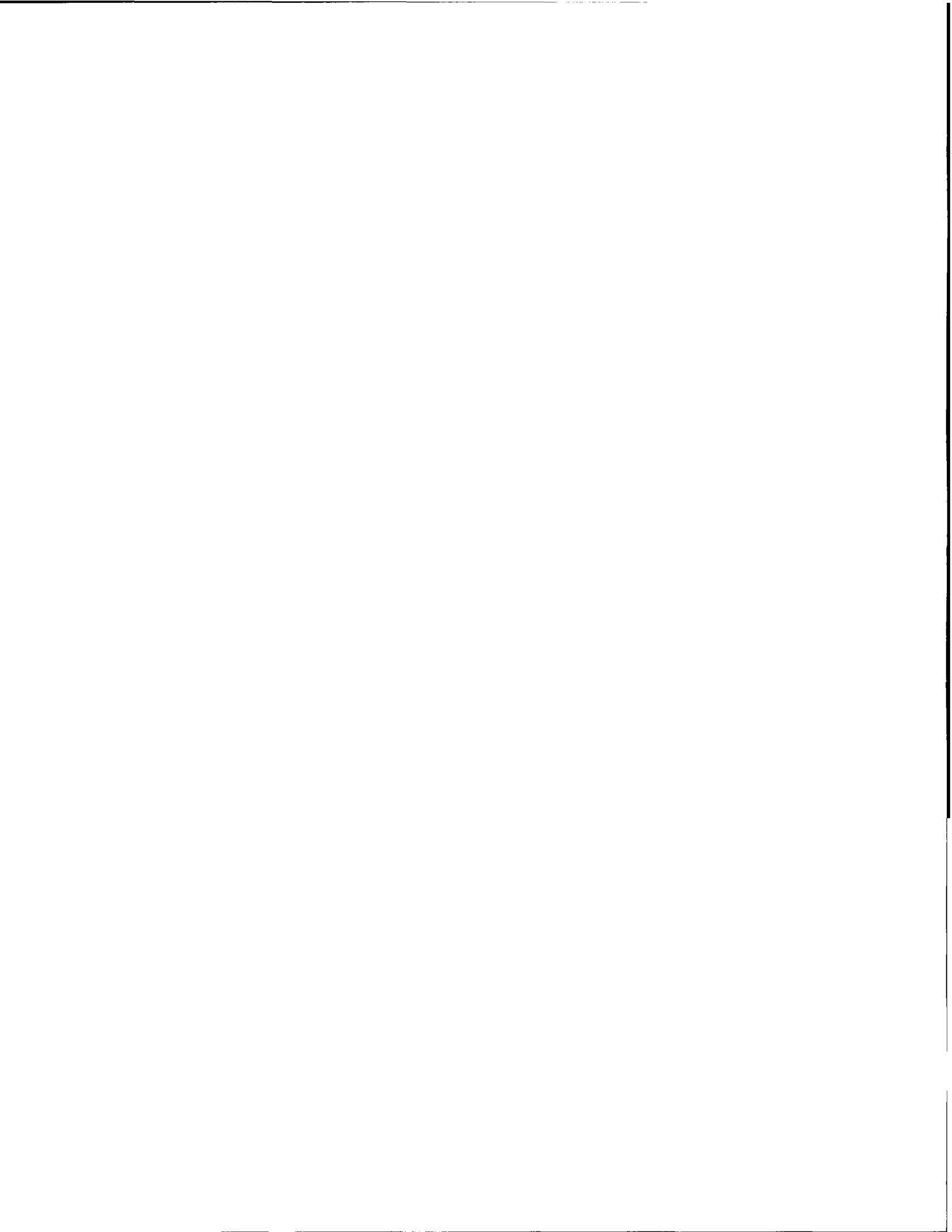
g. UA markings.

(1) This UA must be marked with its U.S. registration number in accordance with part 45 or alternative marking approval issued by the FAA Production and Airworthiness Division (AIR-200).

(2) This UA must display the word *Experimental* in accordance with § 45.23(b), Display of marks, unless otherwise granted an exemption from this requirement.

h. Required documentation. Prior to conducting the initial gMAV flight operations, Honeywell must forward a copy of the gMAV Special Airworthiness Certificate, Operating Limitations and Program Letter to the following FAA personnel:

(1) Mr. Roger Trevino, System Support Specialist, FAA Central Service Area, System Support Group, AJO2-C2, email: roger.trevino@faa.gov, fax: 817-222-5547.



(2) Richard Posey, Aviation Safety Inspector, Production and Airworthiness Division, AIR-200, 800 Independence Ave, SW, Washington, DC 20591, telephone (202) 267-9538, email richard.posey@faa.gov.

i. Change in registrant address. Section 47.45, Change of address, requires that the FAA Aircraft Registry be notified within 30 days of any change in the aircraft registrant's address. Such notification is to be made by providing AC Form 8050-1, Aircraft Registration Application, to the FAA Aircraft Registration Branch (AFS-750) in Oklahoma City, Oklahoma.

j. Certificate display and manual availability. The airworthiness and registration certificates must be displayed, and the aircraft flight manual must be available to the pilot, as prescribed by the applicable sections of 14 CFR, or as prescribed by an exemption granted in accordance with 14 CFR part 11, Investigative and Enforcement Procedures, to Honeywell International.

2. Program Letter. The Honeywell International gMAV program letter, dated 06/10/2008, will be used as a basis for determining the operating limitations prescribed in this document. All flight operations must be conducted in accordance with the provisions of this document.

3. Initial Flight Testing.

a. Requirements. Flight operations shall be conducted within visual line of sight of the pilot/observer. Initial flight-testing shall be completed when the pilot in command can certify compliance with § 91.319(b). Compliance with § 91.319(b) must be recorded in the aircraft records with the following, or a similarly worded, statement:

“I certify that the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation.”

b. Aircraft operations for the purpose of market surveys, sales demonstrations, and customer crew training. These operations cannot be performed until 50 flight hours have been accomplished. An entry in the maintenance records is required as evidence of compliance.

4. Authorized Flight Operations Area.

a. Description of the authorized flight operations area. The containment area for flight test will be on the property of the Laguna Pueblo, New Mexico. This area is approximately 60 miles west of the Honeywell facility. It is a remote, desert terrain area with restricted access controlled by the government of the Laguna Pueblo. The attached map shows the layout and the operational area. Population areas near the site are (1) State Hwy 279 which runs through the southwest section, (2) a small housing community approximately 0.5 miles to the northwest, and (3) Interstate 40 approximately 5.5 miles to the south.



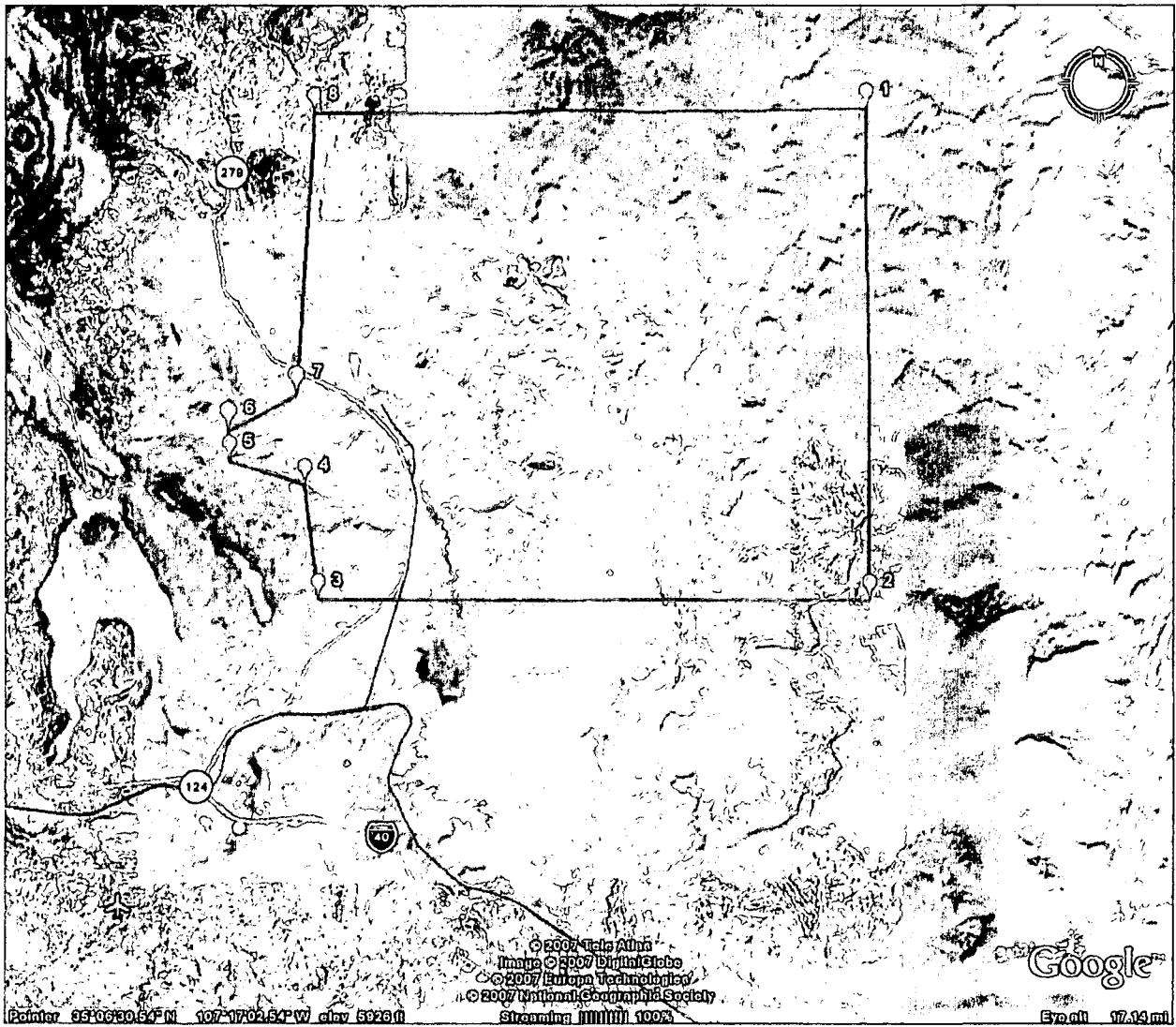
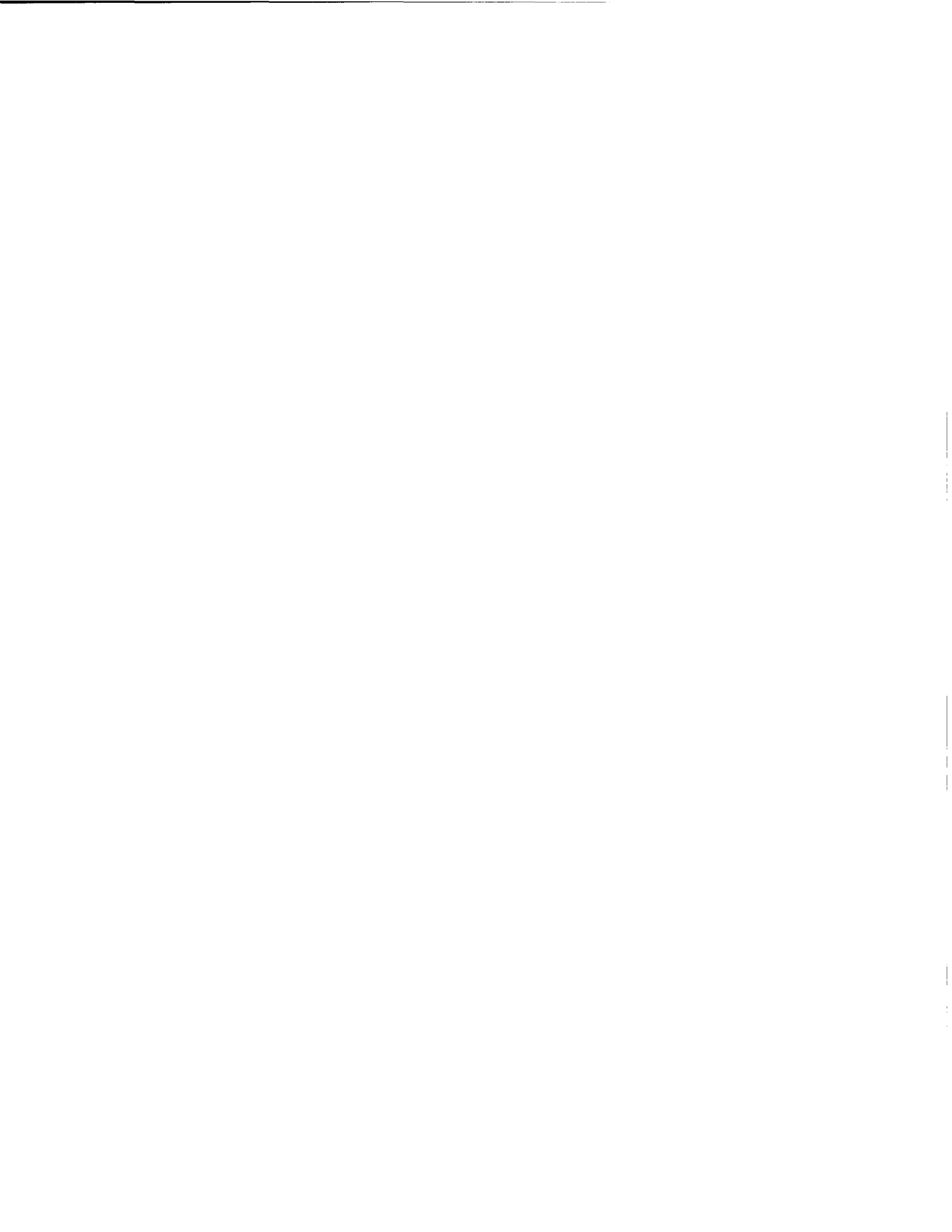


Figure1. Boundary for Flight Operations

b. Flight test area. The containment area is in Class G airspace. **The aircraft shall not be flown above an altitude of 400 ft AGL.** The vertices points of the area are shown below:

Laguna Flight Test Area

WPT	Latitude	Longitude	(Leg) Distance
1	35°12'5.17"N	107°12'27.57"W	(1-2) ~7.732
2	35° 5'21.43"N	107°12'23.70"W	(2-3) ~8.710
3	35° 5'21.25"N	107°21'37.06"W	(3-4) ~1.833
4	35° 6'56.33"N	107°21'50.36"W	(4-5) ~1.230
5	35° 7'15.29"N	107°23'5.06"W	(5-6) ~0.466
6	35° 7'39.59"N	107°23'6.48"W	(6-7) ~1.207
7	35° 8'9.70"N	107°21'59.07"W	(7-8) ~4.440
8	35°12'1.02"N	107°21'39.65"W	(8-1) ~8.678



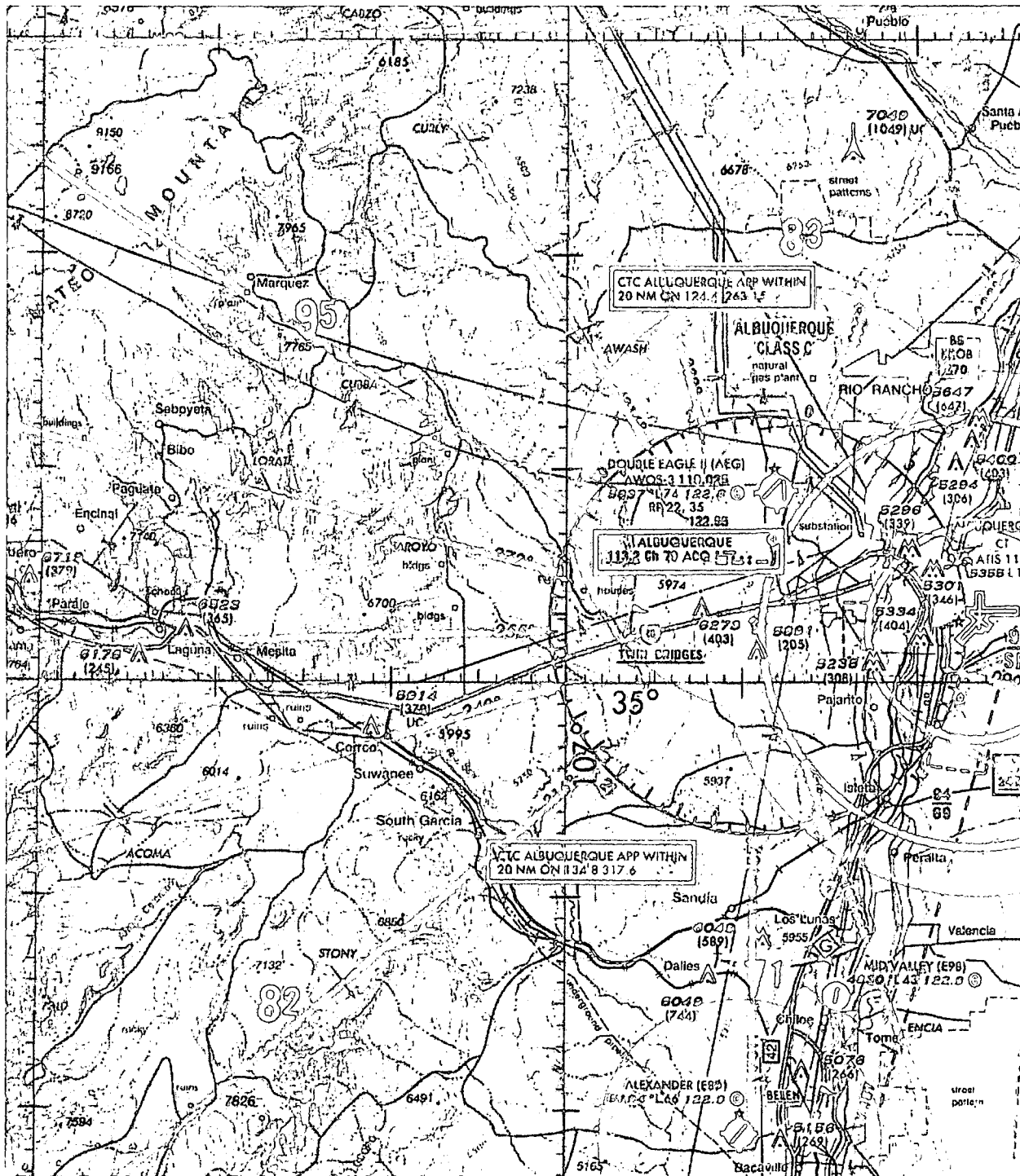


Figure 2. Aeronautical Chart of Albuquerque Area showing Test Site

c. **Authorized flight times and conditions.** All flight operations must be conducted during daylight hours under visual flight rules (VFR).

d. **Criteria for remaining in the flight test area.** The UAS PIC must ensure all UA flight operations remain within the lateral and vertical boundaries of the flight test area.



Furthermore, the UAS PIC must take into account all factors that may affect the capability of the UA to remain within the flight test area. This includes, but is not limited to, considerations for wind, gross weight, and glide distances.

e. Incident/accident reporting. Any incident/accident and any flight operation that transgresses the lateral or vertical boundaries of the flight test area or any restricted airspace must be reported to the FAA within 24 hours. This information must be reported to the Unmanned Aircraft Program Office, AIR-160. AIR-160 can be reached by telephone at 202-385-4636 and fax at 202-385-4651. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.gov. Further flight operations must not be conducted until the incident is reviewed by AIR-160 and authorization to resume operations is provided to Honeywell International.

5. UA Pilots and Observers.

a. UA PIC roles and responsibilities.

- (1) The UA PIC must perform crew duties for only one UA at a time.
- (2) All flight operations must have a designated UA PIC. The UA PIC has responsibility over each flight conducted and is accountable for the UA flight operation.
- (3) The UA PIC is responsible for the safety of the UA as well as persons and property along the UA flight path. This includes, but is not limited to, collision avoidance and the safety of persons and property in the air and on the ground.
- (4) The UA PIC must avoid densely populated areas (§ 91.319) and exercise increased vigilance when operating within or in the vicinity of published airway boundaries.

b. UA PIC certification and ratings requirements.

- (1) The UA PIC must hold and be in possession of, at a minimum, an FAA private pilot certificate, with either an airplane, rotorcraft, or powered-lift category; and single or multiengine class ratings, appropriate to the type of UA being operated.
- (2) The UA PIC must have, and be in possession of, a valid second-class airman medical certificate issued under 14 CFR part 67, Medical Standards and Certification.

c. UA PIC currency, flight review, and training.

- (1) No person may act as pilot in command of an unmanned aircraft unless that person has made at least three takeoffs and three landings in manned aircraft within the preceding 90 days acting as the sole manipulator of the flight controls.
- (2) The UA PIC must have a flight review in manned aircraft every 24 calendar months in accordance with § 61.56, Flight review.
- (3) The UA PIC must maintain currency in unmanned aircraft in accordance with Honeywell International company procedures.
- (4) The UA PIC must have a flight review in unmanned aircraft every 24 calendar months in accordance with Honeywell International procedures.
- (5) All UA PICs must have successfully completed applicable Honeywell International training for the UAS.



d. Supplemental UA pilot roles and responsibilities.

(1) Any additional UA pilot(s) assigned to a crew station during UA flight operations will be considered a supplemental UA pilot.

(2) A supplemental UA pilot assists the PIC in the operation of the UA and may do so at the same or a different control station as the PIC. The UA PIC will have operational override capability over any supplemental UA pilots, regardless of position.

(3) A supplemental UA pilot must perform crew duties for only one UA at a time.

e. Supplemental UA pilot certification. The supplemental UA PIC need not be a certificated pilot, but must have successfully completed a recognized private pilot ground school program.

f. Supplemental UA pilot currency, flight review, and training.

(1) All UA pilots must maintain currency in unmanned aircraft in accordance with Honeywell International company procedures.

(2) All UA pilots must have a flight review in unmanned aircraft every 24 calendar months in accordance with Honeywell International procedures.

(3) All UA pilots must have successfully completed applicable Honeywell International training for the UAS.

g. Observer roles and responsibilities. The task of the observer is to provide the UA PIC(s) with instructions to maneuver the UA clear of any potential collision with other traffic. To satisfy these requirements:

(1) The observer must perform crew duties for only one UA at a time.

(2) At no time will the observer permit the UA to operate beyond the line-of-sight necessary to ensure maneuvering information can be reliably determined.

(3) At no time will the observer conduct his/her duties more than 2000 ft laterally or 400 ft vertically from the UA.

(4) An observer must maintain continuous visual contact with the UA to discern UA attitude and trajectory in relation to conflicting traffic.

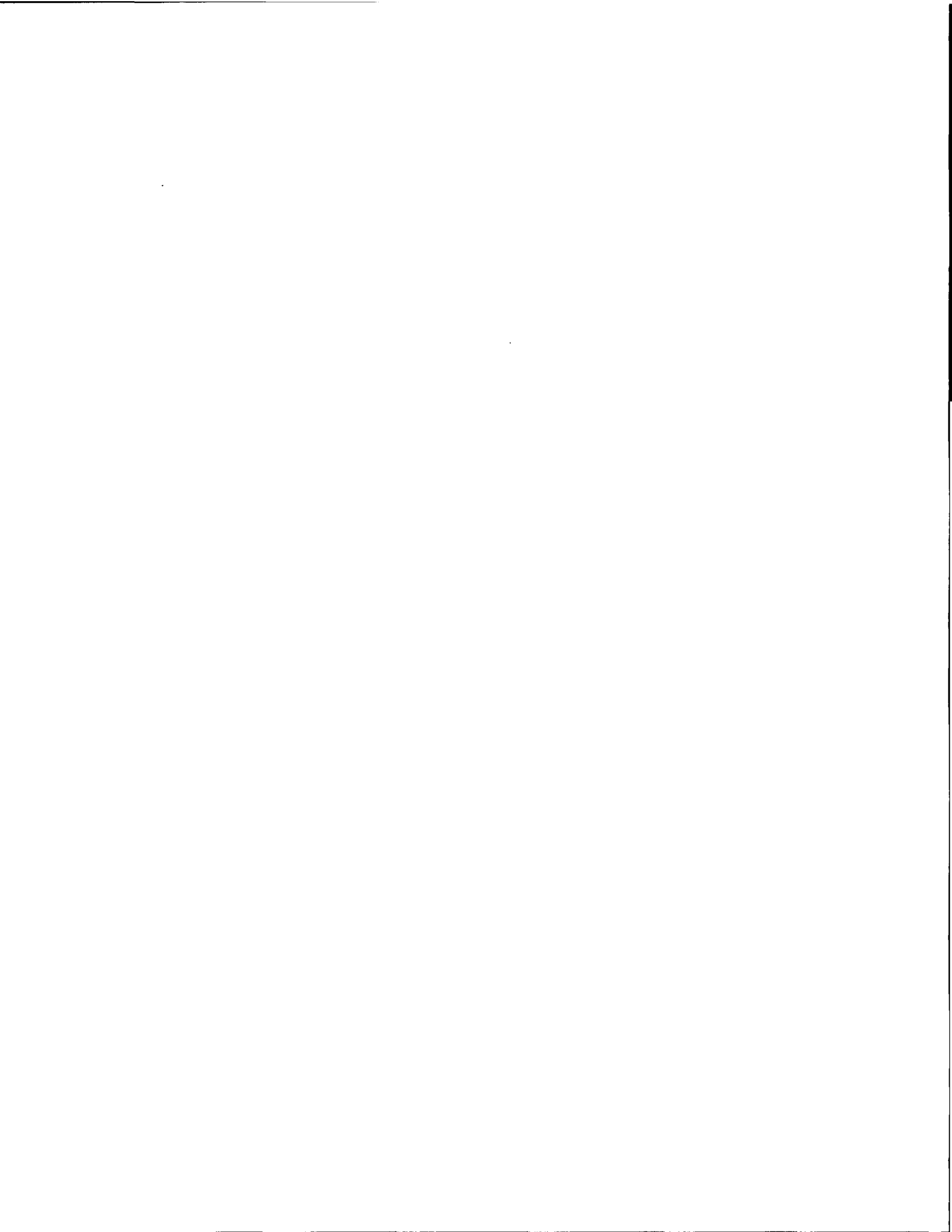
(5) The 2000 ft lateral limit is the maximum range allowed and that a practical distance may be something less, with the determination of such at the discretion of the applicant. Therefore, it will remain the responsibility of the applicant to insure the safety of flight and adequate visual range coverage to mitigate any potential collisions.

(6) Observers must continually scan the airspace for other aircraft that pose a potential conflict.

(7) All flight operations conducted in the flight test area must have an observer to perform traffic avoidance and visual observation to fulfill the see-and-avoid requirement of § 91.113, Right-of-way rules: Except water operations.

h. Observer certification.

(1) All observers must either hold, at a minimum, an FAA private pilot license or must have successfully completed specific observer training acceptable to the FAA. An observer does not require currency as a pilot.



(2) All observers must have in their possession a second-class airman medical certificate issued under part 67.

i. Observer training.

(1) All observers must be thoroughly trained, be familiar with, and possess operational experience with the equipment being used. Such training is necessary for observation and detection of other aircraft for collision avoidance purposes as outlined in Honeywell International program letter.

(2) All observers must have successfully completed applicable Honeywell International training for the UAS.

6. Equipage. The UA must be equipped with operable navigation, position, and/or strobe/anti-collision lights. Strobe/anti-collision lights must be illuminated during all operations.

7. Communications.

a. Before UA flights. Before conducting operations, the frequency spectrum used for operation and control of the UA must be approved by the Federal Communications Commission or other appropriate government oversight agency.

b. During UA flights.

(1) Appropriate air traffic frequencies must be monitored during flight operations.

(2) Honeywell International must contact the local Albuquerque Air Route Traffic Control Center (ARTCC), at (505)-856-4571 in the event of an aircraft fly-away that breaches the flight test area.

(3) All UA positions must maintain two-way communications with each other during all operations. If unable to maintain two-way communication, the UA PIC will expeditiously return the UA to its base of operations while remaining within the flight test area and conclude the flight operation.

8. Flight Conditions.

a. Daylight operations. All flight operations must be conducted during daylight hours in visual meteorological conditions (VMC), including cloud clearance minimums as specified in § 91.155, Basic VFR weather minimums. Flight operation in instrument meteorological conditions (IMC) is not permitted.

b. Prohibitions.

(1) The UA is prohibited from aerobatic flight, that is, an intentional maneuver involving an abrupt change in the UA's attitude, an abnormal acceleration, or other flight action not necessary for normal flight. (See § 91.303, Aerobatic flight.) If aerobatic flight is anticipated, it must be thoroughly discussed during the safety evaluation and be appropriately described in the operating limitations.

(2) Flight operations must not involve carrying hazardous material or the dropping of any objects or external stores.

(3) Each UA must be operated by only one control station at a time. A control station may not be used to operate multiple UAS.



c. Notice to airman. Honeywell International must request the issuance of a Notice to Airman (NOTAM) through the local FAA Automated Flight Service Station at least 24 hours before flight operation. The following information shall be provided:

- (1) Name, address, and telephone number of the person giving notice.
- (2) Nature of the activity.
- (3) Date, time, and duration of the activity.
- (4) Size of the affected area in nautical mile radius and affected altitudes.
- (5) Location of center of affected area.
- (6) Location of center of affected area in relation to nearest VOR/DME or VORTAC.

9. Flight Termination and Lost Link Procedures.

a. Flight termination. In accordance with Honeywell International program letter, dated 6/10/2008, flight operations must be discontinued at any point that safe operation of the UA cannot be maintained or if hazard to persons or property is imminent.

b. Lost link procedures. In the event of lost link, the UA must provide a means of automatic recovery that ensures airborne operations are predictable and that the UA remains within the flight test area. The observer and all other UAS controls stations will be immediately notified of the lost link condition and the expected UA response.

10. Maintenance and Inspection.

a. General requirements. The UAS must not be operated unless it is inspected and maintained in accordance with the Honeywell Maintenance Manual for Small Unmanned Aerial Systems (SUAS) Micro Air Vehicle (MAV) MMTM8532075-100, dated 07/28/08, or later accepted FAA revision. Honeywell International must establish and maintain aircraft maintenance records (see paragraph 10(d) below).

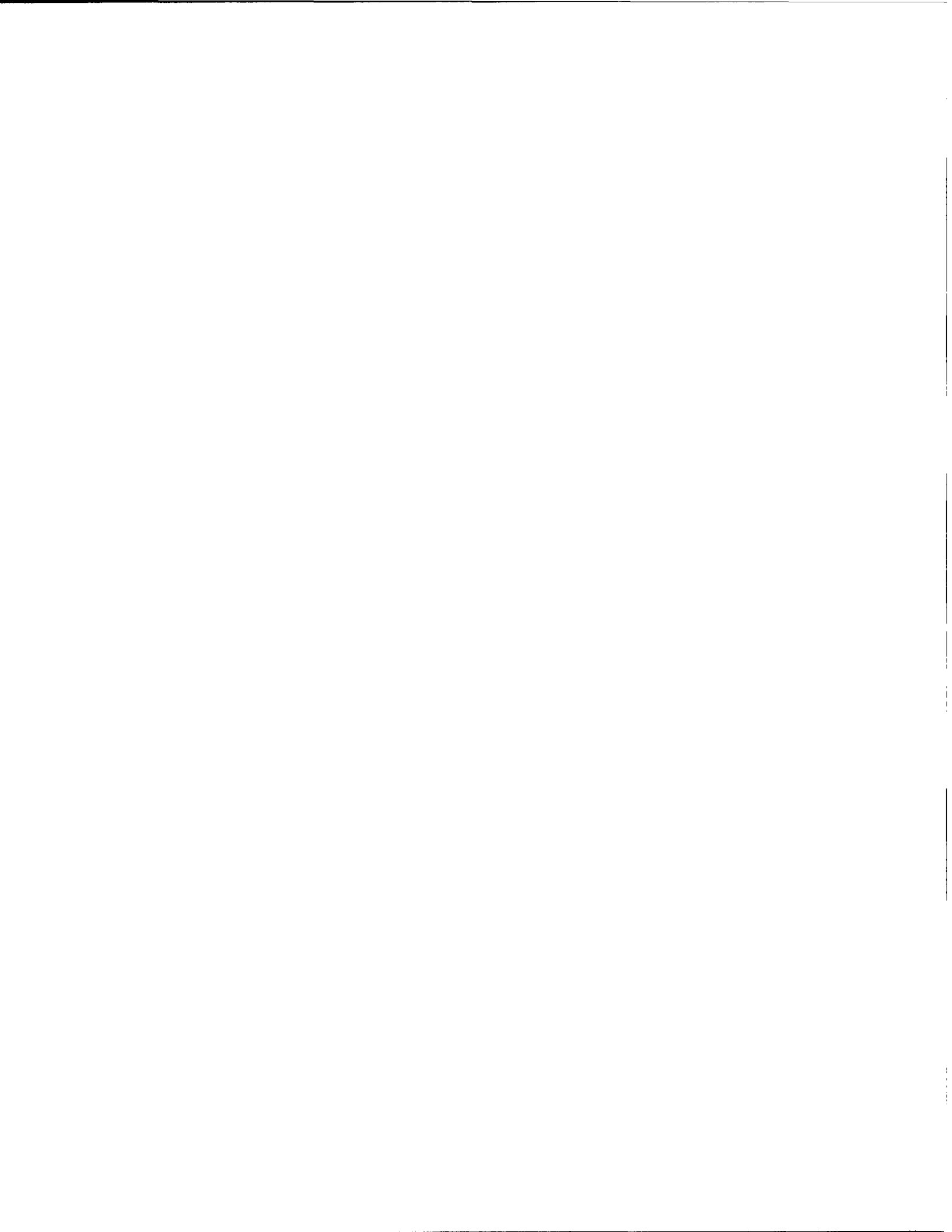
b. Inspections. No person may operate this UAS within the preceding 12 calendar months unless it has had a condition inspection performed according to the Honeywell Maintenance Manual for Small Unmanned Aerial Systems (SUAS) Micro Air Vehicle (MAV) MMTM8532075-100. The UAS must also have been found to be in a condition for safe operation. This inspection will be recorded in the UAS maintenance records as described in paragraph 10(d) below.

c. Authorized inspectors. Only those individuals trained and authorized by Honeywell International and acceptable to the FAA may perform the inspections and maintenance required by these operating limitations.

d. Maintenance and inspection records. Maintenance and inspections of the UAS must be recorded in the UAS maintenance records. The following information must be recorded:

(1) Maintenance record entries must include a description of the work performed, the date of completion for the work, the UAS's total time-in-service, and the name and signature of the person performing the work.

(2) Inspection entries must contain the following, or a similarly worded, statement:
I certify that this UAS was inspected on (date), in accordance with the scope and detail of the (applicant name) Inspection and Maintenance Program, and was found to be in a condition for safe operation.



(3) UAS instruments and equipment required to be installed must be inspected and maintained in accordance with the requirements of the Honeywell Maintenance Manual for Small Unmanned Aerial Systems (SUAS) Micro Air Vehicle (MAV) MMTM8532075-100. Any maintenance or inspection of this equipment must be recorded in the UAS maintenance records.

11. Information Reporting. Honeywell International will provide the following information to donald.e.grampp@faa.gov on a monthly basis. A copy of the report shall be provided to AIR-200.

- a. Number of flights conducted under this certificate.
- b. Pilot duty time per flight.
- c. Unusual equipment malfunctions (hardware or software).
- d. Deviations from ATC instructions.
- e. Unintended entry into lost link flight mode that results in a course change.

12. Revisions and Other Provisions.

a. Experimental certificates, program letters, and operating limitations. The experimental certificate, FAA-accepted Honeywell International program letter, and operating limitations cannot be reissued, renewed, or revised without application being made to the San Antonio Manufacturing Inspection District Office, in coordination with AIR-200. AIR-200 will be responsible for FAA Headquarters internal coordination with the Aircraft Certification Service, Flight Standards Service, Air Traffic Organization, Office of the Chief Council, and Office of Rulemaking.

b. Certificates of waiver or authorization. No Certificate of Waiver or Authorization (COA) may be issued in association with this experimental certificate unless coordinated with the San Antonio MIDO and AIR-200.

c. Amendments and cancellations. The provisions and limitations annotated in this operational approval may be amended or cancelled at any time as deemed necessary by the FAA.

d. Reviews of revisions. All revisions to Honeywell International FAA-accepted Inspection and Maintenance Program must be reviewed and accepted by the Albuquerque Flight Standards District Office (FSDO). The Albuquerque FSDO can be reached at telephone number (505) 764-1200.

13. UAS Modifications.

a. Software and system changes. All software and system changes will be documented as part of the normal maintenance procedures and will be available for inspection. All software and system changes must be inspected and approved per the Honeywell Maintenance Manual for Small Unmanned Aerial Systems (SUAS) Micro Air Vehicle (MAV) MMTM8532075-100. All software changes to the aircraft and control station are categorized as major changes, and must be provided in summary form at the time they are incorporated.

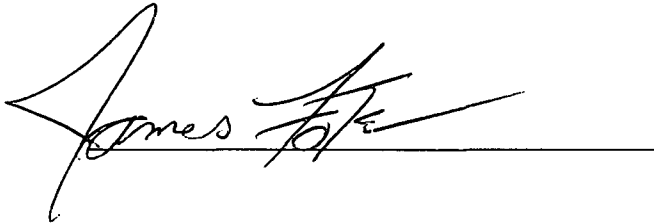
b. Major modifications. All major modifications, whether performed under the experimental certificate, COA, or other authorizations, that could potentially affect the safe operation of the system, must be documented and provided to the FAA before operating



the aircraft under this certificate. Major modifications incorporated under COA or other authorization need to be provided only if the aircraft is flown under these authorizations during the effective period of the experimental certificate.

c. Submission of modifications. All information requested must be provided to AIR-200.

End of Limitations



07/31/2008
Issued at Albuquerque, NM

James Fote
Aviation Safety Inspector (Mfg)
San Antonio Manufacturing Inspection District
Office, MIDO-43
10100 Reunion Place
Suite 650
San Antonio, Texas 78216

I certify that I have read and understand the operating limitations and conditions that are a part of the special airworthiness certificate, FAA Form 8130-7, issued on 07/31/2008, for the purposes of research and development, market survey, and crew training.

This special airworthiness certificate is issued for Honeywell International gMAV, serial number 08021006, registration number N338FH.



7/31/08
Date:

Applicant (signature)

Name: Vaughn Fulton

Title: Honeywell Unmanned Aerial Systems Program Manager

Company: Honeywell International

