DEPARTMENT OF THE INTERIOR – AVIATION MANAGEMENT

AIRCRAFT RENTAL AGREEMENT PROVISIONS: SUPPLEMENT NO. 4

SPECIAL USE - HELICOPTER AERIAL CAPTURE, ERADICATION AND TAGGING OF ANIMALS

Definitions

ACETA (Aerial Capture, Eradication and Tagging of Animals) As used in this supplement, ACETA is defined as operations conducted from a helicopter, i.e.: Eradication (elimination by use of a firearm), marking (use of paint ball gun or similar device), Tagging (Hand held net gun, Airframe mounted net gun, or darting).

B8.4.1 CERTIFICATION.

B8.4.1.1 The aircraft and the pilot must be carded for the appropriate operations under the Department of Interior ACETA (Aerial Capture, Eradication, and Tagging of Animals) Handbook (351 DM 2 - 351 DM 3).

B8.4.2 FLIGHT OPERATIONS.

B8.4.2.1 A restriction while carrying weapons. While conducting ACETA operations, the designated gunner may carry aboard the aircraft and operate appropriate weapon(s) for the accomplishment of the mission. The weapon shall not be loaded (in the chamber) or cocked unless the muzzle is outside and pointed away from the aircraft.

B8.4.2.2 VFR Minimum Altitudes. While conducting ACETA operations over sparsely populated areas, the aircraft may be operated below 500 feet above the surface in compliance with FAR 91.119.

B8.4.3 PERSONNEL REQUIREMENTS.

B8.4.3.1 Pilot Requirements. Pilots shall have logged the following hours as PIC in addition to the general requirements of the ARA.

B8.4.3.1.1 Helicopter.

B8.4.3.1.1.1 100 hours in class size (small, medium, and large as applicable).

B8.4.3.1.1.2 200 hours, including 10 hours in the last 6 months, low-level flying over hazardous/mountainous terrain and operating from unimproved heli-spots at high-density altitudes.

B8.4.3.1.1.3 50 hours experience as pilot for predator control hunting operations, or 200 hours experience in agriculture application type flying.

B8.4.3.1.1.4 Pilot Endorsements. The pilot will be endorsed for the specific mission requested i.e.: Handheld Net Gun, Airframe mounted Net Gun, Eradication (shotgun, rifle, etc:), Darting/tagging (dart gun, paint ball).

B8.4.3.2 All ACETA pilots must demonstrate the following:

B8.4.3.2.1 Positive flying safety attitudes and habits.

B8.4.3.2.2 Positive attitude regarding requirements and procedures for aerial hunting of predator animals.

B8.4.3.2.3 Emotional stability under the stress of low-level aircraft operations required for aerial hunting.

B8.4.3.2.4 Positive personality characteristics required to work and communicate effectively with field personnel and cooperating agencies.

B8.4.3.2.5 Knowledge of and/or willingness to learn predator habits and how to effectively and efficiently hunt them.

B8.4.3.2.6 Ability to identify and safely maintain effective airborne contact with the target animal.

B8.4.3.2.7 Willingness to work unusual hours and lodge at remote field locations.

B8.4.3.3 Pilots shall have recorded minimum flying time as pilot-in-command as follows:

B8.4.3.3.1 200 hours Mountainous Terrain (When operating in mountainous terrain)

B8.4.3.3.2 10 hours Mountainous Terrain in Make and Model

PIC mountainous terrain experience is defined as: Experience in maneuvering a helicopter at more than 7,000 feet mean sea level (MSL) altitude including numerous take-offs and landings in situations indicative to mountainous terrain. This terrain consists of abrupt, rapidly rising terrain resulting in a high land mass projecting above its surroundings, wherein complex structures in which folding, faulting, and igneous activity have taken place. These mountainous areas produce vertical mountain winds, and turbulence associated with mountain waves, producing abrupt changes in wind direction often resulting in up flowing or down flowing air currents.

Mountain qualified pilots are considered rough terrain qualified.

B8.4.3.3.3 200 hours Rough Terrain (When operating in rough terrain)

B8.4.3.3.4 10 hours Rough Terrain in Make and Model

PIC with rough terrain experience is defined as: Experience in maneuvering a helicopter at less than 7,000-feet MSL altitude including numerous takeoffs and landings in situations indicative to rough terrain. This terrain consists of abrupt, rapidly rising terrain resulting in a high land mass projecting above its surroundings, wherein complex structures in which folding, faulting, and igneous activity have taken place. Rough terrain features can disrupt smooth wind flow into a complex of eddies or mechanical turbulence. Characteristic of this type of terrain is the higher the wind speed and/or the rougher the terrain the greater the turbulence.

B8.4.3.4 Personnel Protective Equipment (PPE). The following items shall be worn by the pilot, be operable, and maintained in good repair:

B8.4.3.4.1 An aviator's flight helmet, consisting of a one-piece hard shell made of polycarbonate, Kevlar, carbon fiber, or fiberglass, must cover the top, sides (including the temple area and to below the ears), and the rear of the head. The helmet shall be equipped with a chinstrap and appropriately adjusted for proper fit. Flight helmets for helicopter usage must conform to a national certifying agency standard, such as DOT, Snell-95, SFI, or an appropriate military standard, and be compatible with required avionics (see section B8.4.5.4.2). "Shorty" (David Clark style) helmets are not approved. Flight helmets currently meeting this requirement are the SPH-3, SPH-4, SPH-5, SPH-4B, SPH-8, HGU-56 and HGU-84. Helmets designed for use in fixed wing aircraft do not provide adequate protection for helicopter occupants and are not approved for helicopter use.

B8.4.3.4.2 A long-sleeved shirt and trousers (or long-sleeved flight suit) made of fire-resistant polyamide or aramid material or equal.

B8.4.3.4.3 Boots made of all-leather uppers which extend above the ankles.

B8.4.3.4.4 Gloves made of leather, fire-resistant polyamide or aramid material.

B8.4.3.4.5 Shirt with sleeves overlapping gloves and pants with legs overlapping boots.

B8.4.4 AIRCRAFT REQUIREMENTS.

B8.4.4.1 A first aid kit containing items specified in Exhibit 4 shall be furnished by the Vendor and carried aboard the aircraft on all flights.

B8.4.4.2 A survival kit containing items specified in Exhibit 4 shall be furnished by the Vendor and carried aboard the aircraft on all flights.

B8.4.4.3 Shoulder harness/lap belts.

B8.4.4.3.1 Front seat occupants. Helicopters will have double-strap shoulder harness with self-locking inertia or locking reel and lap belt for pilot and gunner. Shoulder straps and lap belts will fasten with metal-to-metal, single point, quick-release mechanism. A rotary-type buckle, similar to Pacific Scientific "Saf-T-Matic", will be required on helicopters not equipped with an approved shooting door or window.

B8.4.4.3.2 Rear seat occupants with door on. Lap belts will fasten with metal-to-metal mechanism.

B8.4.4.3.3 Rear seat occupants without door. The gunner shall wear a DOI AM approved adjustable full-body harness equipped with a quick release system. A safety strap will be attached to the harness and the aircraft, at a location and in a manner approved by DOI AM. The DOI AM Division of Technical Services will establish requirements for specific aircraft types.

B8.4.4.3.4 If a shooting door is not installed, the aircraft shall be capable of flight with door(s) removed for shooting. (Not applicable for net guns attached to the aircraft exterior.)

B8.4.4.4 Tundra Boards or Snow Pads. Mandatory in Alaska when the helicopter is not equipped with standard or emergency flotation gear as noted in the aircraft order.

B8.4.4.5 Dual controls are required for pilot performance evaluations. Dual controls shall be removed prior to use under this agreement.

B8.4.4.6 The following optional equipment and accessories are recommended for helicopters:

B8.4.4.6.1 High-skid landing gear.

B8.4.4.6.2 Personnel access step. Helicopters equipped with extended gear shall have a personnel access step to assure safe entrance and exit from each door of the helicopter. A section of external cargo rack may be utilized as a step by providing a clear space covered with nonskid material.

B8.4.4.6.3 Shooting door or window.

B8.4.4.6.4 Cabin heater and defogger.

B8.4.5 AVIONICS REQUIREMENTS.

B8.4.5.1 General. The following systems shall be furnished, installed and maintained by the Vendor in accordance with the manufacturer's specifications and the installation and maintenance standards of Section B8.4.5.5.

B8.4.5.2 Communications systems.

B8.4.5.2.1 One VHF-AM aeronautical transceiver, operating in the 118.000 to 135.975 MHz band, with a minimum of 720 channels, in no greater than 25 KHz increments, and a minimum of 5 watts carrier output power, shall be installed in the aircraft.

B8.4.5.2.2 Provisions for Auxiliary VHF-FM (AUX-FM) Portable Radio.

B8.4.5.2.2.1 The Contractor shall provide the necessary interface for installing and properly operating an auxiliary VHF-FM portable radio through the aircraft's audio control system(s). The interface shall consist of the appropriate wiring from the audio control system, terminated in an ITT/Cannon type MS3112E12-10S 10-pin connector conveniently located for use by the observer/copilot, and utilizing the contact assignments as specified by drawing FS/OAS-17 in Exhibit 6.

B8.4.5.2.2.2 One weatherproof, external, broadband antenna covering the 150-174 MHz band, with associated RG-58A/U (or equivalent) coaxial cable and connector, terminated in a bulkhead-mounted, female BNC connector (type UG-290A), conveniently located for use by the observer/copilot adjacent to the above 10-pin connector (Comant model CI-177 or equal).

B8.4.5.2.2.3 Mounting facilities, in accordance with the specifications of FAA AC 43.13-2A, for secure installation of the auxiliary VHF-FM portable radio in the cockpit shall be provided. The location of the mounting facilities shall be such that, when connected with an 18-inch adapter cable, the radio's controls shall be located and arranged so that the observer/copilot, when seated, has full and unrestricted movement of the radio's controls, without interference from clothing, the cockpit structure, or the flight controls.

B8.4.5.2.2.4 Positive-polarity microphone excitation voltage shall be provided to the AUX-FM system from the aircraft DC power system through a suitable resistor network. A blocking capacitor shall be provided to prevent the portable radio microphone excitation voltage from entering the system. Sidetone for the AUX-FM shall also be provided (NAT model AA34-300, Premier model PA-34, or equivalent).

B8.4.5.2.2.5 In lieu of the above AUX-FM requirements, the Contractor may substitute one VHF-FM aeronautical transceiver (FM-1) which is capable of communicating with the Government’s VHF-FM portable radios.

B8.4.5.3 Navigational systems. No requirements.

B8.4.5.4 Audio Control System.

B8.4.5.4.1 One audio control system shall be installed for the pilot and spotter/gunner, which provides control, selection and operation of multiple radio transceivers. Separate audio system controls shall be provided for the pilot to select specific receiver audio outputs and transmitter microphone/PTT inputs of multiple radios. An intercom system shall also be provided for the pilot and spotter/gunner position. Audio level controls shall be provided for the pilot and observer to adjust audio outputs to their respective earphones.

B8.4.5.4.1.1 Transmitter selection and operation. Whenever a transmitter (or PA system, when installed) is selected, the companion receiver audio shall automatically be selected for the corresponding earphone. Transmitter sidetone audio shall be provided for the user as well as at the other position for cross monitoring.

B8.4.5.4.1.2 Receiver Audio Selection and Operation. Controls shall be provided for selection of receiver audio from any one or combination of all receivers. The receiver audio output shall be free of excessive distortion, hum, noise, and crosstalk, and shall be amplified sufficiently to facilitate ease of use in a noisy cockpit/cabin environment.

B8.4.5.4.1.3 Location and Marking. The respective controls of each audio control system shall be located conveniently for the pilot. Labeling and marking of controls must be clear, understandable, and permanent. Electronic label maker marking is acceptable.

B8.4.5.4.2 Earphones, Microphones, and PTT Switches.

B8.4.5.4.2.1 The system shall be designed for operation with 600 ohm earphones and 150 ohm carbon-equivalent, noise-canceling boom type microphones (Gentex electret type Model 5060-2, military dynamic type M-87/AIC with CE-100 TR preamplifier, or equivalent) with U-174/U (single/male) type connector plug. The only exception to this is the pilot's position, which may be a low impedance (dynamic) configuration.

B8.4.5.4.2.2 All earphone/microphone jacks in the aircraft (except the pilot’s) shall be U-92A/U (single/female) type, which will accept U-174/U type plugs.

B8.4.5.4.2.3 Push-to-Talk (PTT) Operation. Separate PTT switches shall be provided for radio transmitter and intercom operation at the pilot's position. The pilot's switches shall be located on the stick or cyclic control, as applicable. The spotter/gunner shall be provided with an interphone PTT switch located on the cord to the earphone/microphone connector.

B8.4.5.4.3 Intercom System. An intercom system shall be provided to serve the pilot and spotter/gunner. Intercom audio shall mix with, but not mute, selected receiver audio (Override Type). The intercom shall provide switchable "hot mike" and "push-to-talk" capability for the pilot and the spotter/gunner. An intercom audio level control shall be provided for adjusting the earphone audio to a comfortable listening level. ICS sidetone audio shall be provided for the earphones corresponding with the microphone in use. The ICS audio output shall be free of excessive distortion, hum, noise, and crosstalk; and shall be amplified sufficiently to facilitate ease of use in a noisy cockpit/cabin environment.

B8.4.5.5 Avionics Installation and Maintenance Standards (in addition to those of the Basic Aircraft Rental Agreement)

B8.4.5.5.1 Although the aircraft to be provided may not be certified for IFR flight, the aircraft's static pressure system, altimeter instrument system, and automatic pressure altitude reporting system shall be maintained in accordance with the IFR requirements of 14 CFR 91.411 and inspected and tested every 24 calendar months as specified by 14 CFR Part 43, appendices E and F.

B8.4.6 MAINTENANCE REQUIREMENTS.

B8.4.6.1 **Weight & Balance.** The aircraft's required weight and balance data shall be determined by actual weighing of the aircraft within 24 calendar months preceding the starting date of the agreement, or renewal date, and following any major repair or major alteration or change to the equipment list which significantly affects the center of gravity of the aircraft.

B8.4.6.1.1 All weighing of aircraft shall be performed on scales that have been certified as accurate within preceding 24 calendar months. The certifying agency may be any accredited weights and measures laboratory.

B8.4.6.1.2 A list of equipment installed in the aircraft at the time of weighing must be compiled. The equipment list will include the name of each item installed. Items which may be easily removed or installed for aircraft configuration changes (seats, doors, radios, cargo hook, baskets, special mission equipment, etc.) shall also be listed including the name, the weight and arm of each item. Each page of the equipment list must identify the specific aircraft by at least serial number or registration number of the aircraft. Each page of the equipment list will be dated indicating the last date of weighing or computation. The weight and balance must be revised each time new equipment is installed or old equipment is removed. Weight and balance procedures under 14 CFR 135.23(b) and 135.185 are acceptable.

B8.4.6.2 **Time Between Overhaul and Life Limited Parts.**

B8.4.6.2.1 All components, including engines, shall be replaced upon reaching the factory-recommended TBO or FAA-approved extension. Life limited parts shall be replaced at the specified time in service hours or cycles.

B8.4.6.2.2 Aircraft operated with components or accessories on approved TBO extension programs are acceptable provided: (1) the Vendor is the holder of the approved extension authorization (not the owner if the aircraft is leased), and (2) the Vendor operates in accordance with the extension authorization.

B8.4.6.2.3 The Vendor shall supply, at the time of the initial agency inspection, a list of all items installed on the aircraft that are required to be overhauled or replaced on a specified time basis. This list shall include the components name, part number, serial number, total time, service life (or inspection/overhaul time interval), and time and date when component was overhauled, replaced, or inspected.

B8.4.6.3 **Turbine Engine Power Assurance Check**. The first day of operation and no more than each ten hours of operation thereafter, a power assurance check shall be performed. The power assurance check shall be accomplished in

accordance with the helicopter flight manual (pilots operating handbook) or approved company performance monitoring program. The results shall be recorded and kept in the helicopter or at the designated base. Engines with power output below minimum approved limits shall be removed from use until the cause of the low power condition is corrected.

EXHIBIT 4

FIRST AID & SURVIVAL KITS

These are minimum required items for Special Use Activities in the United States and U.S. Possessions. Additional survival kit items are required for flight activities conducted in Canada and Alaska.

Minimum First Aid Kit Items

Each kit must be in a dust-proof and moisture-proof container.
The kit must be readily accessible to the pilot and passengers.

Item	Passenger Seats 0-9	Passenger Seats 10-50
Adhesive bandage strips, (3"long)	8	16
Antiseptic or alcohol wipes (pkts)	10	20
Bandage compresses, 4"	2	4
Triangular bandage, 40" (sling)	2	4
Roller bandage, 4"x 5 yds (gauze)	2	4
Adhesive tape, 1"x 5 yds (std roll)	1	2
Bandage scissors	1	1
Body Fluids Barrier kit:	1	1
2 - pair latex gloves		
1 - face shield		
1 – mouth-to-mouth barrier		
1 – protective gown		
2 – antiseptic towelettes		
1 – biohazard disposable bag		

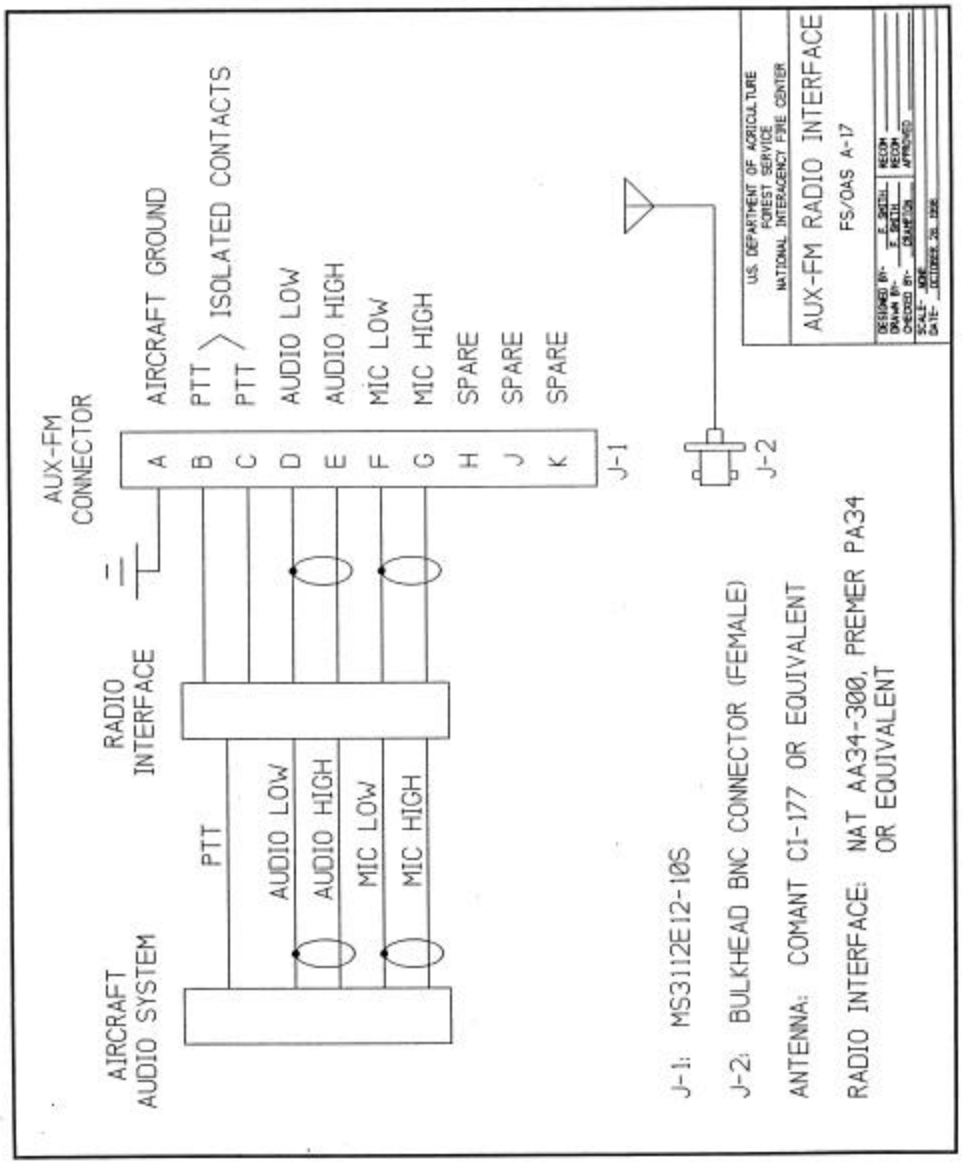
NOTE: Splints are recommended if space permits.

MINIMUM AIRCRFT SURVIVAL KIT ITEMS

These are minimum required items for special use activities in the Hawaiian Islands.

Fire Starter (can be two boxes of matches in a waterproof container)
Magnesium fire starter
One knife
Signal Mirror
Signal Flares (six each) - Flares carried shall be capable of penetrating above a forest canopy of 60’
Food (two days emergency rations per occupant)
Candles
Water purification tablets
Collapsible water bag
Whistle
Space Blanket (one per occupant)
Nylon rope or parachute cord (50 feet)
Heavy plastic sheeting or waterproof tarps (2 each – 8’ X 10’)
Machete (2 each)

Exhibit 6


AUX-FM CONNECTOR
A
B
C
D
E
F
G
H
J
K
J-1
AIRCRAFT GROUND
PTT
PTT
ISOLATED CONTACTS
AUDIO LOW
AUDIO HIGH
MIC LOW
MIC HIGH
SPARE
SPARE
SPARE
RADIO INTERFACE
AIRCRAFT AUDIO SYSTEM
PTT
AUDIO LOW
AUDIO HIGH
MIC LOW
MIC HIGH
J-2
J-1: MS3112E12-10S
J-2: BULKHEAD BNC CONNECTOR (FEMALE)
ANTENNA: COMANT CI-177 OR EQUIVALENT
RADIO INTERFACE: NAT AA34-300, PREMER PA34 OR EQUIVALENT
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
NATIONAL INTERAGENCY FIRE CENTER
AUX-FM RADIO INTERFACE
FS/OAS A-17
DESIGNED BY: E. SMITH
DRAWN BY: E. SMITH
CHECKED BY: CRAMPTON
SCALE: NONE
DATE: OCTOBER 26, 1995
RECOM
REVIEWED
APPROVED