**8.1 PRINCIPLES**

Helicopter operations demand a clear understanding of safety requirements for both the air ops personnel and the aircraft. The goal of this guide is to specify the minimum requirements necessary to maintain standards of safety. These requirements should be adhered to at all times for routine operations as well as aerial baiting operations conducted from shore based designated landing zone. Transfer of personnel or stores to or from ships by helicopter should also be conducted in accordance with any relevant national safety standards.

The most important factor in the successful conduct of safe helicopter operations is good communications. It is essential that there is full understanding and agreement between the air operations leader and the helicopter pilot on a clear and simple plan of arrangements both prior to and during operations.

**8.2 RESPONSIBILITIES**

**8.2.1 Air Ops Leader**

(a) The air ops leader is responsible for the overall safety of the landing zone. If he/she is in doubt whether the proposed helicopter operations are safe he/she shall consult his aircrew, any other concerned parties, and inform the Incident Command Center (ICC) . Safety, liability, indemnity and insurance concerns are of paramount importance. He/she should seek all advice before operations commence.

(b) Clearance for the specific helicopter operations proposed and permission for the helicopter to operate are given entirely at the discretion of the air ops leader.

(c) The air ops leader may stop or curtail the operation at any time for reasons of safety. In this event, the helicopter must land immediately. The air ops leader and the helicopter pilot should discuss appropriate further action.

(d) The air ops leader is responsible for ensuring that crew members involved in helicopter baiting operations are trained in standards and procedures necessary to maintain the safety of the landing zone area, its crew and the helicopter aircrew. The air ops leader must ensure that the landing zone members are fully familiar with landing/takeoff operations and are trained and regularly drilled in the tasks required of them in both routine operations and emergencies.

**8.2.2 Helicopter operator**

The helicopter operator must comply with the aeronautical requirements for helicopter operations and pilot standards of the FAA for the Palmyra baiting operation.

1. Helicopters to be used for this operation will be equipped for the relevant operations to be performed IE: VFR/IFR but should never be equipped with less than airborne VHF and marine VHF radio communications transceiver.
2. The helicopter should carry the following minimum equipment- 406Mhz eperb, Spare Air bottles and rescue knives for the pilots, first aid kit; and life jackets for all crew and passengers. For baiting operations in warm water climates it is acceptable to use helicopters without floatation gear. This will allow for increase payload of the helicopter. Risk is minimized due to the vessels close proximity to shore and the temperature of the water.
3. Pathfinder Aviation discourages night operations except in emergencies.
4. Helicopter pilots will wear appropriate PPE as identified in Appendix A of the eradication project operational plan.

**8.2.3 Helicopter Pilot**

The safety of the helicopter remains at all times the responsibility of its pilot. In order to carry out their respective responsibilities the helicopter pilot and the air ops leader must agree on the proposed operation before it commences.

**8.3 COMMUNICATIONS**

The success of any helicopter/baiting operation depends on establishing and maintaining good communications. Communications during the operation itself must be directly between the helicopter and the air ops leader.

**8.3.1** The helicopter must be fitted with a marine VHF FM radio able to transmit and receive on a primary channel and monitor VHF channel 16 simultaneously. This will allow for an immediate response from all parties in the event of an emergency.

**8.4 OPERATING PROCEDURES**

The air ops leader should check all operational requirements in the landing zone shortly before the departure/arrival of the helicopter.

**8.4.1 Rescue boat requirements**

Before helicopter operations are conducted, at least one first response boat shall be standing by, available in the launch position. The vessel will be outfitted in advance with all necessary rescue equipment required to assist a downed aircraft in the water. The minimum list of equipment shall be a full set of snorkel gear, rescue knife, cutting shears, floatation device, and tourniquet. A list of water qualified personnel will be posted in the ICC. If deemed necessary and the risks are acceptable, these personnel may be used at her discretion to assist in the rescue operation. Responding water personnel will be assigned radios during all air operations.

**8.4.2 Loading Zone Emergency Equipment**

The following equipment or its equivalent will be immediately available as a minimum during all helicopter operations. All Air Operations personnel will be briefed on its location and use.

|  |  |
| --- | --- |
| 1 Ea | 20-pound 40-B:C fire extinguisher (for 1-4 helicopters) |
|  |  |
| 1 Ea | Axe, Crash, Smooth Edge |
| 10 Ea | Blade, Hacksaw |
| 1 Ea | Case, Cloth, Carrying, 2-piece Set |
| 1 Ea | Cutter, Bolt, 24” |
| 1 Ea | Frame, Hacksaw |
| 1 Ea | Knife, Rescue, Seat-belt Type |
| 1 Ea | Opener, Door, w/ Claw Tool |
| 1 Ea | Pliers, 12”, adjustable joint, angle nose |

* 1. **INSTRUCTIONS TO HELICOPTER PASSENGERS/ or GROUND CREW** 
     1. **General.** Any general personnel expecting to ride in the helicopter should be instructed in and comply with the procedures set out below to ensure a safe and expeditious operation. A safety briefing is mandatory prior to getting into the helicopter.

1. Do not approach or leave the helicopter without being cleared to do so by the pilot.
2. When approaching or leaving the helicopter, always do so at the crouch. Keep in the forward arc of the helicopter and always in full view of the helicopter pilot or crewman. **DO NOT RUN.**
3. **Keep well clear of the helicopter rotors.** Especially the tail rotor.
4. Wear a life jacket at all times during flights over water.

Note: An inflated life jacket will hamper evacuation if the helicopter is ditched. Life jackets must therefore be worn un-inflated in the helicopter, and clothing which inflates automatically or with built in buoyancy must not be worn at all. Once clear of the helicopter the life jacket can be inflated.

* + 1. **Landing**

1. Embarking

* Enter the operating area when instructed to do so by the air ops leader and cleared by the pilot. Keep well down.
* Sit where the pilot or air ops leader directs.
* Fasten seat belts and review in-flight safety regulations.

1. Disembarking
   * Remain seated until instructed to leave by the helicopter pilot.
   * Keep well down and walk away from the helicopter as directed.
   1. **EMERGENCIES**

Due to the remote location of Palmyra Atoll the primary response to any helicopter accident or incident will be our own personnel. Initially the second helicopter will likely be the first responder and provide situational reporting to the ICC. The ICC will direct the incident response. The following rescue equipment will be located in the Loading Zone, in a single white tote marked with a florescent “E”. Additional emergency rescue equipment will be located on the M/V Aquila in an identified white tote, clearly marked with its location known to appropriate rescue personnel.

1. 1x 50’ helicopter long line with hook
2. 1x 100’ helicopter long line with hook
3. 4 x 20 foot yellow lifting straps
4. 1 helicopter litter kit stretcher
5. 1 sharp serrated rescue knife
6. 1 cutting shears
7. 2 seat belt knives
8. 3 pairs of heavy gloves
9. 2 snorkel, mask and flipper sets
10. 1 rescue tube
11. 2 additional life jackets

A second tote will be located in the workshop bay adjacent to the Loading Zone. The following equipment will be included in the tote or positioned nearby:

1. 2 helicopter cargo nets
2. extra lifting straps
3. 1 short haul line
4. 2 harnesses
5. 3 flight helmets
6. 1 chain saw
7. 1 gas powered water pump and hoses
8. 1 gas powered generator with extension cords
9. 2 portable work lights
10. 1 battery operated spotlight

Medical equipment will be centrally located at the ICC in accordance with the project safety plan. In addition, a satellite phone will be readily available at the ICC for deployment to an incident scene. The ICC will direct all rescue personnel on PPE appropriate for the incident, e.g. a water rescue would not require boots.