6 Emergency Procedures and Equipment

[NX19 A.1.4]

6.1 Authority of the PIC

[14 CFR § 91.3] [NX6 2.1.1.4]

The Pilot in Command (PIC) will remain in command of the aircraft during and after any emergency until the aircraft has been safely landed or, in the event of a forced landing, he/she has been relieved by appropriate emergency response and/or medical personnel. In emergency situations that require immediate decisions and action, the PIC may follow any course of action that he/she considers necessary. In such instances, he/she may deviate from prescribed operational procedures and methods, weather minimums, and CFRs.

Assisted by the members of the crew, the PIC will:

a. Consider factors that would affect the safety of the people onboard and on the ground

b. Notify appropriate controlling agencies of the situation, location, and intentions

c. After landing, evacuate the aircraft and take immediate actions necessary to prevent additional injury or loss of life

d. Treat injuries and provide for the continued safety and welfare of survivors

e. Establish contact in accordance with the Acme Corp Flight Department Emergency Response Program

In the event the PIC exercises emergency authority, he/she will keep appropriate ATC and other facilities fully informed of the progress of the flight. Each PIC who deviates from a CFR shall, upon the request of the administrator, send a written report of that deviation to the administrator within 48 hours.

6.2 Emergency and Abnormal Procedures

[NX6 3.9.2]

An emergency situation will be dealt with on a priority basis and integrated into the flight related duties currently being performed. The priority of action should be based on the seriousness of its effect on the operation of the aircraft and the ability to continue the mission.

6.2.1 Crew Duties

[NX6 3.9.2]

During an abnormal or emergency situation the main priority of the PF is flying and maintaining control of the aircraft. The PM will assist the PF by examining the cause of the abnormality and taking appropriate action, as called for by the flight manual and/or checklist.

If immediate action is not required, the crew should complete any checklist in progress before dealing with the abnormality.

The following items must be considered along with the items called for in the emergency checklist:

a. Maintain control of the aircraft

b. Silence aural warnings

c. Identify and confirm the emergency among crewmembers

d. Confirm that memory items were accomplished and complete the checklist. Address notes, cautions, and warnings

6.2.2 Use of Checklists

[NX6 3.4.2.5]

The aircraft checklist will be used to the maximum extent possible during phases of an emergency situation. Crewmembers must commit immediate action items to memory and be able to perform initial actions without hesitation.

6.2.3 Guarding Critical Systems

The PF will guard critical operating systems to ensure they are not inadvertently shut down or disabled. These include:

a. Operating engine throttle

b. Operating generator

c. Operating engine fuel supply

d. Any other operating system needed for continued flight of the aircraft

NOTE: Both pilots will identify and agree on the movement of any switches or controls of critical systems. The PM will read the challenge item from the checklist, place his/her hand on the appropriate switch or control, and state the response action to be taken. He/she will not move the switch or control until the PF has visually confirmed the selection and verbally agreed with the action to be taken.

6.2.4 Declaring an Emergency

[14 CFR § 91.3] [NX6 2.1.1.4]

Ground stations must be notified immediately of any emergency that requires priority handling or could result in a crash landing or ditching.

a. Set transponder to code 7700

b. Declare an emergency using the most appropriate means (voice or CPDLC) on the assigned air/ground frequency, emergency frequencies (ex. 121.5), and/or the maritime distress frequencies 2182 or 4125 kHZ

c. Be prepared to relate the number of souls onboard, and the fuel remaining in minutes (or hours)

d. Comply with information and clearances received. Accept the communications control offered by the ground radio station, silence interfering stations, and do not shift frequency unless absolutely necessary or instructed to do so. Keep the controller informed of the current status of the situation

6.3 Emergency Landing or Ditching

Prior preparation and crew coordination are critical to an emergency landing.

6.3.1 Unplanned Emergency Landing

An unplanned emergency is defined as one without time for crewmember or passenger briefings or cabin preparation. They can be on land or in water. Be prepared. If possible, the flight crew will announce “BRACE, BRACE, BRACE!” prior to impact. Situational awareness, assessment, and quick and effective decision making are the keys to safety and survival.

6.3.2 Planned Emergency Landing

During an unplanned evacuation the flight crewmembers may only be able to shout instructions or make a PA announcement reminding passengers to stow loose equipment, stow tray tables, tighten seat-belts, brace on signal and evacuation plan.

Information required by the passengers for preparation may be recalled by using the acronym, TESTS:

a. T – Type of emergency

b. E – Exit and Evacuation plans

c. S – Signal for evacuation

d. T – Time to prepare

e. S – Special circumstances

Special circumstances include high aircraft deck angles, jammed doors, darkness, structural damage, rough terrain or water, and disabled or handicapped persons that might inhibit a successful evacuation.

6.3.2.1 Passenger Emergency Briefing and Cabin Preparation

[14 CFR § 91.519]

[NX6 2.2.2.3.3, NX6 2.2.2.3.4, NX6 3.4.2.9.3 and NX6 3.4.2.9.4]

The emergency briefing provided in the event of an emergency, where time and circumstances permit, shall consist of instructions pertaining to:

a. Seatbelts/shoulder harnesses:

i. Lap belts must be fastened snug around the hips

ii. If carried, child restraint devices should be checked to ensure they are secured to the aircraft seat with a seatbelt and do not restrict access to emergency exits

iii. Seatbelts and, if installed, shoulder harnesses must remain fastened until the aircraft comes to a complete stop

b. Seat backs and tables: Seat backs must be upright and tables must be secured

c. Carry on baggage: Carry on baggage, including handbags or any other items of mass, must be safely stowed in approved locations.

Seat pockets may be used for smaller items

d. Emergency exits:

i. Advise passengers to review the Passenger Information Card and to pay particular attention to exit locations and operation

ii. Ensure that passengers seated next to emergency exits are willing and able to open that exit. If not, request the assistance of an Able Bodied Person (ABP)

iii. If possible, assign an ABP to assist young or special needs passengers

iv. Advise passengers of the safest direction and least hazardous route to move away from the aircraft once outside

e. Brace position (when to assume, how long to remain). Advise passengers that they must listen for verbal commands:

i. 500 ft to landing: Upon hearing this call, ensure passengers are in their seats with their seatbelts fastened

ii. 50 ft prior to landing: The command “BRACE, BRACE, BRACE” will be given prior to impact/landing, at which time the passengers will assume and maintain the brace position illustrated on the passenger information card until the aircraft has stopped

iii. After impact/landing: If required, when the command

“EVACUATE, EVACUATE, EVACUATE” is given the

passengers will be instructed to immediately “RELEASE SEATBELTS” and “GET OUT” of the aircraft using the nearest useable exit. If an evacuation is not required, the command “REMAIN SEATED” will be given by the flight crew

f. Life jackets (if applicable): If an emergency landing is anticipated on water, advise passengers to immediately locate and don life jackets, secure with straps, and to inflate only when outside the aircraft

g. Child restraint system (if applicable): Evacuation procedures for the occupant of a child restraint system are to remove the child, leave the seat

6.3.2.2 Crew Communication

After landing (or impact), if it is determined that fire or possibility of fire exists or that remaining with the aircraft would otherwise endanger life or physical well being, an emergency evacuation will be accomplished. After completing the Evacuation Checklist, if the PIC decides that an evacuation is required, he/she will announce, “EVACUATE, EVACUATE, EVACUATE.” Upon hearing this call, the PM will first assess the conditions of the evacuation route and then initiate the evacuation of the passengers. If an emergency evacuation is not required, the crew can advise by announcing, “REMAIN SEATED.” The PM will instruct the passengers to “REMAIN SEATED” and will explain his/her intentions.

6.3.3 Ditching

6.3.3.1 AMVER System

The crew should be aware of a report known as the Automated Merchant Vessel Report System (AMVER). Every merchant vessel on the North Atlantic has filed a sail plan through (www.amver.com), giving the intended route, speed, etc. If an aircraft is in trouble with a ditching possible, the crew may contact the Coast Guard or ATC and ask for AMVER information. In approximately 10 minutes, the crew will have the name and location of every merchant vessel within 100 miles of the aircraft’s reported position. Oceanic control should report the situation to the Coast Guard. The Coast Guard then initiates the AMVER system. This expedites the diversion of a seagoing vessel to the area.

Once the decision has been made to ditch, the crew should take advantage of assistance provided by a seagoing vessel. Any nearby ship can provide the surface wind, the recommended ditching heading, and the sea condition. The ship also can give radar vectors to a ditching when weather is a factor. Set up a pattern for the ditching in close proximity to the vessel that will standby to pick up passengers and assist in any way.

NOTE: HF Frequency 2182 is Guarded by Coastal Rescue Coordination Centers.

6.3.3.2 Ditching Heading

The crew must determine the best ditching heading, using information based on weather reports and reading sea conditions. Normally, there is a primary swell and one or more secondary swells, often moving in different directions. During daylight the primary swells can best be observed from an altitude of 10,000 to 12,000 ft. Secondary swells become visible at lower altitudes. At night, the landing lights should be used to illuminate the surface of the sea.

If the surface wind is more than 35 kts, the ditching should be made into the wind, regardless of the direction of the swells. However, a ditching into the upslope of a swell should be avoided. If the surface wind is less than 35 kts, ditch parallel to a major swell.

6.3.3.3 Water Landing

If possible, the landing should be accomplished while engine power is available to permit maneuvering to a favorable touchdown area.

Water contact should be made at minimum speed, not less than stick shaker, and at the lowest descent rate possible. The thrust levers will be brought to shutoff upon water contact.

A water landing can result in sudden and violent forces acting on the aircraft, so it is imperative that crewmembers and passengers remain in their seats with seatbelts and shoulder harnesses securely fastened until the aircraft comes to a complete stop.

6.4 Evacuation

A crewmember will give the order to evacuate the airplane when the airplane has come to a complete stop. When the command to evacuate is given, the evacuation must be executed in a prompt, but orderly fashion.

The suitability of an exit must be considered before it is opened. Some considerations include its height above the ground or waterline, and its proximity to any fire. Passengers should be directed to the nearest suitable exit, and urged to move rapidly through it.

6.4.1 Land Evacuation

After landing, passengers must be instructed to clear the exit area and move without delay to a safe distance from the aircraft to reduce the risks of injury from a fire or explosion. The crew will brief a predetermined rally point.

6.4.2 Water Evacuation

After ditching, each crewmember will quickly move to the assigned exit to position life rafts and assist in evacuating passengers from the aircraft. Life rafts will not be removed from their stowage areas nor should an exit be opened until the aircraft has come to a complete stop.

After the aircraft has come to a complete stop, the over wing emergency exit must be opened and the lifeline attached with one end to the inside and the other end to the wing. Passengers must inflate life jackets after exiting the aircraft. The life raft should be removed from its stowage area, the retaining lanyard secured to the lifeline, the raft lifted through the exit, and inflated.

The raft should be boarded initially by two able bodied passengers to assist the others during boarding.

The first person aboard the raft should ensure raft inflation and, to the extent possible, hold the raft away from damaged aircraft structures. The second person onboard will assist other passengers in boarding.

Depending on the seas and extent of injuries, people may be transferred directly from the aircraft into the life raft. Persons on the wing should hold on to the wing lifeline. Those in the water should hold on to a life raft heaving line to avoid drifting or being washed away.

Persons entering the raft will be instructed to sit with their backs against the rail and their feet toward the center. No one should be allowed to stand.

Sharp objects, including shoes that can damage the raft should be removed. Persons should move on hands and knees and unnecessary movement should be restricted.

When everyone is aboard the raft, the lanyard may be cut and the sea anchor deployed immediately. Rafts should remain as close as possible to the floating aircraft, because the aircraft would be easier for search and rescue teams to find. Life rafts should not be tied together, unless the seas are very calm. Loose equipment should be secured when not in use so that it is not washed overboard.

6.5 Inflight Passenger Illness

Crew will utilize Medlink and Tempus unit services as needed. If the PIC determines that a passenger needs immediate medical assistance, he/she will divert the aircraft to the closest suitable airport. Suitability of an airport, military, or civilian, will depend on the nature of the illness and the medical support available.

An emergency may be declared if the PIC believes that the situation demands priority handling.

If a passenger is removed from a company aircraft for medical reasons, a crewmember or other company employee should accompany the passenger to the hospital. The Director of Aviation should be notified as soon as possible.

6.6 Survival and Survival Equipment

[NX6 3.6.2.1(a)(b)]

When passengers have been evacuated and are safely away from the aircraft, a member of the flight crew may be assigned to remove any emergency equipment or personal items that would be of use in a survival situation. Such items include, but are not limited to, fire extinguishers, flashlights, crash axe, portable oxygen bottles, first aid kits, blankets, clothing, food, and water.

6.6.1 Survival Kits

[NX6 2.8.3 and NX6 3.6.2.1]

Life rafts should be removed from the aircraft (if possible) in any survival situation to enable the crew and passengers to access the survival kits. Lists containing information on the emergency and survival equipment carried on board the aircraft must be readily available for immediate communication to rescue coordination centers. The information shall include, as applicable, the number, color, and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies, and the type and frequencies of the emergency portable radio equipment.

This equipment is included in Acme Corp Flight Department survival kits:

Flashlight

Mooring Line

Radar Reflector

Signal Mirror

Sea Anchor

Sponge

Whistle

Bailing Bucket

Fishing Kit

Dye marker

Hook Type Knife

First Aid Kit

Canopy and Mast

Rations Kit

Repair Kit

Utility Knife

Compass

Heaving Ring

Manual Inflation Pump

Survival Manual

Flare Kit

Locator Light

Water Bag/Cup

6.6.2 Survival Crew Duties

The primary responsibility of the PIC and members of the crew is the welfare of the passengers and each other. When rescue assistance arrives, the PIC will ensure the orderly transfer of responsibility for the passengers and crewmembers to competent authority.

6.7 First Aid Kits

First aid kits are specially designed for the environment in which they will be deployed. First aid procedures must meet applicable regulations.

6.7.1 Advanced Aviation Medical Kit

The Advanced Aviation Medical Kit (AAMK) contains advanced medical equipment and medication to be used by and released to medically qualified individuals who are trained in the use of the equipment and medication per Medlink guidance.

6.8 Reporting Aircraft Overdue

6.8.1 30 Minutes After ETA

30 minutes after the ETA, the Flight Coordinator will:

a. Review the Trip Sheet

b. Begin a communications search

c. Contact the Director of Aviation and the Director of Maintenance, and have the Trip Sheet available

d. If the Director of Maintenance is unavailable, contact a designated pilot

e. Notify appropriate authorities of search and rescue needs and refer to Emergency Response Plan

6.8.2 60 Minutes After ETA

60 minutes after the ETA, the Flight Coordinator will:

a. Contact the ATC Unit

b. Continue the communications search

c. Carry out any other duties determined by the company

6.8.3 Emergency Response Plan

[14 CFR § 91.3] [NX6 2.2.5.3 and NX6 3.4.5.2] [14 CFR § 91.3] [NX6

2.1.1.4]

The Acme Corp Flight Department Emergency Response Program shall be carried out in the event of an accident, incident, or act of terrorism involving company aircraft or passengers.

In the event of any accident involving an Acme Corp Flight Department aircraft, the PIC or the senior crewmember that is not incapacitated will direct the following procedures, to the extent possible, and notify the nearest appropriate authority by the quickest available means.

Able bodied crewmembers or passengers should be asked to assist. Follow all procedures noted in company ERP.