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│              PHOENIX REGIONAL                            │
│          STANDARD OPERATING PROCEDURES                  │
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│       SKY HARBOR RESPONSE AVIATION EMERGENCIES          │
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PURPOSE

The purpose of this procedure is to establish guidelines for the response of fire department personnel and equipment to aircraft emergency situations occurring at Phoenix Sky Harbor International Airport. The procedure outlines responsibilities for **both** on and off airport fire personnel and details dispatch terminology, apparatus response, standby locations, and staging areas.

DISPATCH TERMINOLOGY

Aircraft emergencies are broken down into three categories: Alert 1, Alert 2 and Alert 3. These categories are defined by the Federal Aviation Administration (FAA) to provide standard descriptions and terminology for aircraft emergencies.

Alert 1: Indicates an aircraft is having minor difficulties (i.e., minor oil leak; one engine out on a three or four-engine commercial aircraft or one engine out on a two-engine general aviation aircraft; fire warning lights; etc.). A safe landing is expected.

Alert 2: Indicates that an aircraft is having major difficulties (i.e., a positive indication of fire on board the aircraft; faulty landing gear; no hydraulic pressure; engine failure on a two-engine large aircraft; etc.). A difficult or crash landing may be expected.

Alert 3: Indicates that an aircraft has crashed on or off the airport, or there is a high probability the aircraft will crash, or the pilot has indicated that the aircraft landing gear will not work and, therefore, the pilot will have to crash land on the airport.

SKY HARBOR RESPONSE - AVIATION EMERGENCIES

The type of fire department response at Sky Harbor will be dictated by a fire captain at Sky Harbor Airport Fire Station #19. The captain will assess the information he/she has received from the FAA Control Tower or other source, and direct fire Dispatch to send the appropriate level of alert response. In all cases, the captain will take a pessimistic view and select the alert level most appropriate for the expected problems.

An Alert 1 = **ARF Response**, consisting of: Foam 1, Foam 2, Foam 3, Attack 19, E19 and BC19.

An Alert 2 = **ARF2-1 Response,** consisting of: Foam 1, Foam 2, Foam 3, Attack 19, E19, BC19, three (3) off-airport engine companies (one (1) which will be A.L.S.), one (1) ladder company.

An Alert 3 = **ARF1A Response,** consisting of: Foam 1, Foam 2, Foam 3, Attack 19, E19, BC19, four (4) off-airport engine companies (two (2) of which will be A.L.S.), Support 8, two (2) ladder companies (one (1) will be a platform), one (1) utility truck, one (1) Command Van (CV-1), three (3) rescues, and 6 (6) additional Battalion Chiefs, SDC, NDC.

STAFF REDUCTIONS

Squad19 / Attack 19 serves as the same crew with capabilities of two different apparatus. Squad 19 is a smaller more mobile unit for dispatches to medical, car fires, and special duty calls. Attack 19 is a foam truck for use with fuel spills and alerts. If Squad 19 / Attack 19 is dispatched on another call, along with E19, this causes a significant reduction of available personnel for aircraft emergencies at the airport. In this case, the alert assignment should be increased to cover for staff reductions.

RESPONSE AND STANDBY POSITIONS

On Alert 1's -- Station 19 with Foam 2 out of Station 29 will handle the emergencies along with Battalion19, Foam 1, Foam 2, Foam 3, Attack 19 and E19, and will respond to their ARFF staging locations along the runway.

On Alert 2's -- Foam 1, Foam 2, Foam 3, Attack 19 and E19, BC19, will respond to their ARFF staging locations along the runway. Off-airport units will respond to Gate 118 - east of Fire Station 29 (3949 E. Air Lane), Level II staging.

On Alert 3's -- Foam 1, Foam 2, Foam 3, Attack 19 and E19, BC19, will respond to the crash site. All off-airport units will also respond directly to the crash site, unless Command directs them to a level two staging area -- Gate 118, east of Fire Station 29 (3949 E. Air Lane). The Battalion chief will respond directly to the crash site and assume Sky Harbor Command. Sky Harbor Airport ARFF staging locations in general are:

Foam 1 will be near the west-end of the runway.

Foam 2 will be near east-end of the runway; and

Foam 3 will be near the mid-point of the runway;

Attack 19, E19, & BC19 will stage near the midpoint of the runway with Foam 3.

Each position will be at least 500 feet away from the runway.

STAGING

The first off-airport unit to arrive at the staging location will assume staging sector responsibilities and announce "staging." Additional equipment will be assembled in an organized manner. Command may relocate staging as needed. All radio communications will use the radio designation "staging."

TACTICAL BENCHMARKS

Below listed are tactical benchmarks to consider for any type of aircraft accident.

1. The first arriving unit should assume command and determine if the flight crew has initiated emergency evacuation procedures. Fire Department personnel should make every effort to prevent an unnecessary evacuation by immediately contacting the flight crew and reporting exterior conditions to them.

2. If emergency evacuation is in progress, assist evacuation of passengers and/or provide them a path of egress, by discharging **Class B foam only**, from apparatus. Create a path through the burning flammable liquid from the escape exit door to a safe area. If **Class B foam** is not available, use large volumes of water. Protect the aircraft fuselage from direct flame impingement since fire can burn through fuselage within 60 seconds. Ensure your own supply line. Master stream appliances (Stang Guns) utilizing fog patterns; provide quick water in large volumes to protect passengers during evacuation.

3. Deploy an attack line to the aircraft's interior, without inhibiting passenger egress. Fire intensity will require the use of 1-3/4" or 2" hand-lines, utilizing fog patterns.

4. Provide interior ventilation as soon as possible inside the aircraft. Fatalities in survivable aircraft crashes are usually due to smoke inhalation. Use wide angle fog patterns from hand-lines to ventilate. Positive Pressure Ventilation (PPV) is beneficial, however may not be initially expedient. Pressurize from unburned area and provide ventilation exit in fire area. Ventilation should be started at the same time as the attack lines are put into operation, if possible.

5. Aircraft have common attic spaces, large open cargo areas (in belly), and sidewalls that can have running fires in these confined spaces. Consider using penetrating nozzles to reach fire in confined spaces or any location where interior attack lines cannot be deployed.

6. Use ladders at the aircraft at the wing or other accessible points. Some aircraft may require aerial ladders to reach access points.

7. Obtain primary and secondary all clears. Never assume absence of survivors.

8. Provide for interior lighting.

9. Request Police Department secures the scene and provides a holding area to assist in the control of the ambulatory passengers.

10. Establish both fire and medical sectors as soon as possible. Designate sectors for both sides of the aircraft to protect the escape routes and manage the evacuated passengers, assign sectors to address scene lighting, extrication, treatment, transportation and site safety.

11. Consider establishing a branch level command system to address fire and medical operations separately.

12. Ensure necessary amounts of foam extinguishing agents to amounts of flammable liquids on fire.

13. Maintain effective foam blanket to prevent ignition / re-ignition of fuel.

14. Maintain awareness of electricity generated by large aircraft, it is sufficient to seriously injure personnel and/or ignite fuel sources.

15. Jagged metal from aircraft can cut through protective clothing and hose lines.

16. To gain access into the fuselage, use the wing area or a platform ladder truck to work from. The optimum place to cut is around windows, doors, and roof area. Hydraulic powered tools (Hurst, Holmatro, etc.) and pry bars do not work well on aircraft metals due to the lack of solid supports to work against.

17. If saws are used for extrication or ventilation, arcing and sparking will need to be suppressed with water/foam from hand lines. Maintain integrity of foam blanket on the flammable liquids. Be aware that aircraft have numerous high pressure hydraulic lines that can cause serious injury if cut or broken.

18. Ensure back-up crew/s with charged hose lines in place to protect all personnel who will be working inside the spilled flammable liquid areas. All personnel working in these areas shall be fully turned out with protective gear and S.C.B.A. face piece on.

19. Have police secure a route of ingress / egress, to permit emergency equipment, particularly ambulances, unimpeded movement to / from the incident.

20. Do not allow any overhaul operations to take place until all investigative agencies are finished or unless needed to suppress fire.

21. Large aircraft have oxygen cylinders on board that can explode, become missiles, and/or accelerate the spread of fire.

22. Adopt a defensive mode of operation, as needed, to protect personnel and exposures.

23. Request the Alarm Room notify the National Transportation Safety Board (NTSB). Notification can be made contacting the FAA Air Traffic Control Tower at Sky Harbor Airport or by calling Sky Harbor Communications at 273-3311.

24. Request the Alarm Room notify area hospitals, Salvation Army, Red Cross, County Emergency Disaster Coordinator, C.I.D. Team and Sky Harbor Communication Center.

25. For off airport responses consider requesting ARFF foam trucks, Medical Support 19 or Foam 34, if they have not been dispatched.

26. Have an airline representative report to the Command Post along with the liaison from the Police Department, Aviation Department, and any other agency that can assist with the incident.

27. Send a fire department representative to staff the Airport Emergency Operations Center (EOC).

PHOENIX SKY HARBOR
GATE REFERENCE AND STAGING MAP

PHOENIX FIRE DEPARTMENT
SEPTEMBER 2008

Form M-2