

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**

**AIR FORCE TACTICS TECHNIQUES  
AND PROCEDURES 3-32.41**

**21 MARCH 2025**



**CONTINGENCY FIREFIGHTING  
OPERATIONS**

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The Air Force Tactics, Techniques, and Procedures (AFTTP) presented in this publication provide Air Force (AF) Civil Engineer Fire and Emergency Services (F&ES) personnel with information to help prepare their installations for war. It highlights F&ES preparations in contingency and expeditionary firefighting planning factors and operational considerations. The material presented in this publication is not intended to provide detailed operational procedures; rather it addresses general firefighter preparations for natural and manmade accidents, terrorism, and war. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the DAF 847, *Recommendation for Change of Publication*; route DAF 847 from the field through the appropriate functional chain of command and Major Command (MAJCOM) publications/forms managers. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the AF.

**SUMMARY OF CHANGES**

This document has been substantially revised and needs to be completely reviewed. Major changes include additions of the Air Force Force Generation (AFFORGEN) and alignment with Agile Combat Employment (ACE), Mission Capabilities (MISCAP)/Force Support Packages, and the removal of Self-Aid Buddy Care (SABC) and addition of Tactical Combat Casualty Care (TCCC).

**APPLICATION:** This publication applies to all civilian and military members of the Air and Space Force, Air National Guard, and Air Force Reserve Command F&ES units. ***This AFTTP is nondirective. However, suggests procedures, actions, or tasks may be presented in directive language to improve reliability and understanding by simplifying sentence structure. This AFTTP is not all inclusive and can be adopted or adjusted in the Pacific and European theaters.*** Except when specified actions are mandated by AF or Department of Defense (DoD) directive publications, units may modify the actions, directions, tasks, and worksheets to suit their needs.

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## Chapter 1

### SCOPE

**1.1. Introduction.** This publication explains doctrine and procedures to guide Commanders and F&ES personnel at all levels in protecting mission resources during contingencies. Additionally, this publication provides basic procedures and guidance to ensure survivability of firefighting resources throughout all locations in the contingency Area of Responsibilities (AOR). It describes F&ES organization, planning and risk assessment guidance, firefighting plan development, Joint Firefighter's Integrated Response Ensemble (J-FIRE) concept of operations, contamination avoidance, and fire responses during various attack postures. These operations may occur at "Hub and Spoke" locations: Main Operating Bases (MOBs), Forward Operating Sites (FOSs), or Contingency Locations (CLs).

**1.2. Mission.** The Air Force F&ES mission is to prevent or reduce injury and loss of life, and to minimize damage to property, missions, and the environment. This is an enduring mindset no matter the location or duration of the mission supported. The scope of services will vary at each location type based on the available personnel, vehicles, firefighting agent, and equipment. F&ES will provide ARFF capability during contingency missions supporting Forward Operating Site (FOS) and Contingency location (CL) operations.

**1.3. Contingency Firefighting.** During contingency operations, firefighting forces are the primary installation emergency response team and are responsible for supporting the Commander's primary requirement to launch and recover sorties. To meet this requirement F&ES operations may differ from normal peacetime operations. The information contained herein will assist Commanders and firefighters with assessing the risks and communicating them to leadership (risk owners). Typical contingency manpower and resources will be determined as defined in DAFI 32-2001 Chapter 6 and not by peacetime home station Levels of Service. F&ES planners will assess and communicate risk based on Q factors for each airframe as found in Air Force Technical Implementation Guidance (TIG) to National Fire Protection Association (NFPA) 460.

**1.4. Limiting Factors (LIMFACS).** Firefighters may have limited capabilities or resources during contingency operations (especially during initial stages of a deployment). The number of resources common to peacetime operations, such as manpower, vehicles, agents and equipment, may not be available.

1.4.1. Unit Type Codes (UTCs) do not exist separately for training, logistics, or Emergency Communication Center (ECC). These functions may be performed by shift personnel as additional duties during contingencies. Additionally, unique contingency tasks such as security and shelter management could be tasked to F&ES personnel once follow-on forces arrive. The Senior Fire Officer (SFO) should prioritize the services to be provided and conduct a risk assessment, so sortie support is not compromised during the initial stages of a deployment.

1.4.2. Firefighter performance is greatly reduced when operating in the J-FIRE due to the ensemble placing additional physical burdens on the firefighter. Physical challenges related to J-FIRE include increased weight, thermal burden, increased difficulty breathing through the C-2 canister, the need for increased work-rest cycles (WRC) and rehabilitation difficulties after an emergency response. These LIMFACS are considered during emergency operations.

Expectations from firefighters should be reduced and the focus shifted to protecting only the highest priority resources.

1.4.2.1. Lack of adequate water supply will limit F&ES capability; therefore, SFOs should pre-plan responses taking that potential LIMFAC into consideration. F&ES resources will be vulnerable to attack until splinter protection, hardening and contamination avoidance measures are in place. This includes resources such as fire facilities, vehicles, communications equipment, personnel, rescue equipment, extinguishing agents and personal protective equipment (PPE).

1.4.2.2. Limited supplies of extinguishing agents, (firefighting foam, dry chemical and water) will hinder or prevent operations to extinguish large fully involved fires which include Petroleum, Oil, and Lubricants (POL), munitions, aircraft, and large facilities. Enemy attack may include Chemical, Biological, Radiological, Nuclear, and Explosive Materials (CBRNE),

1.4.2.3. Improvised Explosive Devices (IEDs), Vehicle Born Improvised Explosive Devices (VBIED) or ground attack by enemy forces. Consequently, unexploded ordnance (UXO) can delay fire response. The SFO ensures UXOs blocking access to mission essential assets are cleared by Explosive Ordnance Disposal (EOD) personnel as soon as possible. In this environment, firefighters should perform explosive ordnance reconnaissance in their surrounding areas as well as response routes that could possibly cause delays in emergency response. These delays may allow fires to progress prior to F&ES arrival, increasing the need for larger amounts of firefighting agents. If appropriate, the SFO may allow some fires to burn to save resources for higher priorities or to avoid unreasonable risk to firefighters.

1.4.3. The absence of armored firefighting vehicles limits responses to areas inside the fence in hostile environments where attacks “outside the wire” are expected. Responses outside the wire will only occur with commander’s approval and follow the guidelines established at each location.



## Chapter 2

### ROLES AND RESPONSIBILITIES

**2.1. Installation Commander.** Installation Commanders are responsible for providing F&ES programs. These programs execute Department of Defense Instructions (DoDI) 6055.06, *DoD Fire and Emergency Services (F&ES) Program*, Department of Defense Manual (DoDM) 6055.06, *DoD Fire and Emergency Services Certification Program*, AFD 32-20, *Fire and Emergency Services*, and DAFI 32-2001, *Fire and Emergency Services (F&ES) Program*.

2.1.1. The scope of services provided will vary by location, however, the minimum capability will include aircrew rescue.

2.1.2. Commanders will now have more options and various levels of capability, whether organic to the location or within the Air Task Force (ATF)/Deployable Combat Wing (DCW), providing fire protection at any forward location.

**2.2. A-Staff.** Responsible for informing and implementing wing commander decisions, generating recommendations, and communicating with higher and lateral headquarters.

2.2.1. Increases a wing's effectiveness by synchronizing operations across units and subordinate commanders.

2.2.2. Consolidates related staff functions and functional expertise at the headquarters level to ensure unity of effort.

2.2.3. Properly sourced, trained and empowered A-Staffs cultivate and maintain the internal and external relationships needed for success.

2.2.4. Combat Wings and Air Base Wings will be structured with standardized A-Staffs.

**2.3. Senior Fire Officer (SFO).** The SFO will submit requests to:

2.3.1. MAJCOM Fire Chief to request most current Site Surveys for potential forward deployed locations.

2.3.2. Vehicle Maintenance representative to identify vehicle mechanics, fire department vehicle replacement, and parts as required. Replacement parts receive the highest force activity designator (FAD) assigned to the mission being supported if the part renders a fire department vehicle being out of service or in a limited-service status.

2.3.3. Supply, Contracting and Finance Functions to identify all supplies and firefighting equipment that may be provided through local vendor services and contracts. Ensure firefighting equipment is NFPA compliant. All requisitions for critical firefighting equipment are equal to the highest FAD assigned to the mission being supported. Submit requests to Supply POCs to:

2.3.3.1. Provide firefighter PPE, tools/equipment, and other supplies.

2.3.3.2. Provide J-FIRE component replacements in sufficient quantities to accommodate existing or inbound firefighters.

2.3.3.3. Provide firefighting agents as required.

2.3.4. Personnel Support for Contingency Operations (PERSCO) (A1). The SFO submits requests to:

2.3.4.1. Make emergency manpower requests through the Area of Responsibility (AOR) F&ES functional Manager.

2.3.4.2. Brief Fire Prevention, emergency reporting and other safety procedures during in-processing.

2.3.5. Communications. The SFO submits requests to:

2.3.5.1. The communications function to obtain, install, and maintain the ECC communications network which includes land mobile radios (LMR) and mobile base station units for vehicles.

2.3.5.2. Security Forces. The SFO submits requests to:

2.3.5.3. Provide physical and emergency services as necessary. However, firefighters may be required to carry weapons thus providing self-security.

2.3.6. Civil Engineers. The SFO coordinated actions in the following scenarios below.

2.3.6.1. Provide EOD services on a priority basis when UXOs hinder F&ES response.

2.3.6.2. Provide power production and barrier maintenance expertise for generator support and aircraft arresting system operations.

2.3.6.3. Assist with large-scale decontamination of F&ES assets.

2.3.6.4. Provide required emergency management support elements.

2.3.6.5. Provide a high priority for splinter protection, hardening, and contamination avoidance measures of F&ES assets.

2.3.6.6. Provide, maintain, and improve firefighting water supplies.

2.3.7. The SFO submits requests to the fuels function to:

2.3.7.1. Service fire department vehicles and equipment.

2.3.7.2. Provide POL storage area familiarization training for firefighters.

2.3.7.3. Assist in fuel transfer operations and provide expertise in the event of a POL storage area incident.

2.3.7.4. Secure schedule for Forward Area Refueling Point (FARP) operations and Integrated Combat Turnarounds (ICT) to ensure F&ES crews are there to support.

2.3.8. **Unit Control Centers (UCC).** UCCs ensure that:

2.3.8.1. All personnel are trained in fire prevention, fire reporting, and fire safety procedures/responsibilities (see [Attachment 4](#) and [Attachment 7](#)).

2.3.8.2. All Hazardous Materials (HazMat) storage facilities are limited to only those necessary to accomplish the mission.

2.3.9. **Contingency Response Group Element (CRGE).** The SFO submits requests to CRGE to:

2.3.9.1. Provide information/support on air flow movement.

2.3.9.2. Provide information on aircraft parking.

2.3.10. **Base Operations (Airfield Management).** The SFO submits requests to:

2.3.10.1. Obtain flightline licensing.

2.3.10.2. Obtain airfield layout maps.

2.3.10.3. Obtain daily flying schedules.

## Chapter 3

### AFFORGEN & ACE

**3.1. Introduction.** The DAF uses the AFFORGEN model of packaging force capabilities into standard Force Elements (FE). F&ES capabilities are part of the ATF/DCW FP. While ATF/DCW forces involved in the entire life cycle of a contingency, F&ES forces support force elements to create one whole force package.

**3.2. ACE.** ACE is an operational scheme of maneuver executed within threat timelines to increase aircraft survivability and generate airpower. This dispersal-like maneuver is accomplished proactively or reactively with a small number of aircraft accompanied by ACE capable force elements and tailorable force packages moving to support up to seven locations.

**3.3. Main Operating Base (MOB).** MOB capability. Estimated duration of support is projected in terms of months, up to six (6). Provides initial capability for aircraft interior and exterior firefighting to meet Q factors, emergency medical services (EMS) basic life support (BLS) non-transport, structural firefighting, fire prevention, and emergency communications.

3.3.1. MOBs will be supported with 9,000 gallons of agent according to tables in 4.3.

3.3.2. When supporting ACE operations, MOB DAF F&ES should be staffed with a minimum of seven personnel. Depending on location, this may cause alternative shift schedules and potential of 24-hour non-stop operations until additional forces arrive or CSST teams return.

3.3.3. In addition to personnel forward deploying, P-19Cs will also be sent forward. MOBs will then be supported by the remaining 5,000 gallons of agent.

**3.4. Forward Operating Site (FOS).** FOSs are provided vehicles and equipment to support initial firefighting actions and full extinguishment of exterior fires to deliver aircrew rescue. Interior fire extinguishment is not considered as a primary objective in providing vehicles and equipment. Construct is designed to deploy one (1) ten (10) person F&ES team to each FOS. Teams may be scaled down between ten (10) to four (4) personnel depending on commander's risk acceptance level. AF F&ES teams will be provided with two (2) P-19Cs 2,000 gallons of agent, one 4F9FR and (2) 4F9FZ UTCs at each FOS location. F&ES CSSTs will bring components of the 4F9FE UTC for communications capabilities.

**3.5. Contingency Location (CL).** F&ES CL teams are projected with a minimum composition of one (1) NCO and two (2) firefighters. Primary firefighter objective is aircrew rescue. Fire extinguishment is not a required objective. Other objectives are based on mission essential tasks and ACE firefighter skillsets. F&ES CL teams will bring the 4F9FZ UTC. All required equipment shall be provided on the 4F9FZ UTC. Members will need to bring MREs, water, PPE, three-day bag with personal items, and other necessities as required. F&ES CL team leader will require a laptop computer and/or tablet to perform site surveys, incident command, email communication, etc.

3.5.1. Crews at CLs can expect to support Integrated Combat Turnarounds (ICT). During these operations, crews should strategically place themselves to effectively respond in the event of a mishap. Team lead will establish location specific procedures, but the following are *recommended* crew assignments for pilot egress:

3.5.1.1. Rescue Member #1: (Lead Firefighter)

- 3.5.1.1.1. Ladder aircraft /gain cockpit entry
- 3.5.1.1.2. Perform aircraft shutdown procedures
- 3.5.1.1.3. Egress pilot
- 3.5.1.2. Rescue Member #2: (Driver/Operator)
  - 3.5.1.2.1. Operate pump
  - 3.5.1.2.2. Fight fire/protect rescue path
- 3.5.1.3. Rescue Member #3: (Firefighter)
  - 3.5.1.3.1. Foot ladder
  - 3.5.1.3.2. Receive pilot from rescue member #1

**Table 3.1. Contingency Risk Assessment Chart (Gallonage).**

| AF F&ES Contingency Risk Assessment Chart   |                         |                  |                       |                  |                     |
|---|-------------------------|------------------|-----------------------|------------------|---------------------|
| Location  |                         |                  |                       |                  |                     |
| MOB   |                         | FOS              |                       | CL               |                     |
| <u>Gallonage</u>  | <u>Expectations</u>     | <u>Gallonage</u> | <u>Expectations</u>   | <u>Gallonage</u> | <u>Expectations</u> |
| 5,000 - 9,000 gals  | Exterior fire control   | 2,000 gals       | Exterior fire control | 150 gals         |                     |
|   | Aircrew rescue          |                  |                       |                  | Aircrew rescue      |
|   | Exterior extinguishment |                  | Aircrew rescue        |                  |                     |
|   | Interior firefighting   |                  |                       |                  |                     |
|   |                         |                  |                       |                  |                     |
| NOTE: Firefighting capabilities will be reduced at the MOB as resources forward deploy. |                         |                  |                       |                  |                     |

## Chapter 4

### PLANNING GUIDANCE

**4.1. Introduction.** The primary focus of F&ES resource(s) posturing during wartime or contingency operations is fire prevention and firefighting. Fire prevention focuses on preparing occupants and personnel to operate safely, prevent fires, and to detect or intervene early when and if fires occur. Firefighting FE packages protect weapons systems and facilities needed to accomplish the mission. A critical first step is to develop a list of priorities on the installation. This is a cooperative effort with the Emergency Management element. Depending on the MOB, FOS, or CL, aircraft may be the highest priority for protection while at others, facilities may be more critical than aircraft. Wartime staffing assumes operating from a central fire station where all resources are based. Risk assessment and management procedures, response time standards, and operational procedures are like home station operations at MOBs and will vary at FOS/CLs. F&ES response strategies may be complicated by the presence of chemical agents, antipersonnel devices, and munitions. F&ES capability is included in appropriate base recovery plans.

**4.2. Force Packages.** Firefighters and firefighting resources are postured into force packages identified by unit type codes (UTC).

4.2.1. The 3-person Fire Joint Task Force/Headquarters Staff Management Team (4FPS4) team provides command and control (C2)-level staff assistance at a Numbered Air Force, MAJCOM Headquarters, and FOSs.

4.2.2. The Six (6)-person Fire Operations package (4FPFP) is the basic building block. It provides the manpower to manage emergency operations, including staffing fire trucks and emergency communications centers.

4.2.3. The Two (2)-person Incident Command package (4FPFJ) provides mid-level supervision and incident command for firefighting operations.

4.2.4. The One (1)-person Fire Management package (4FPFN) serves as the Installation Fire Chief (Flight Chief) and provides overall F&ES flight management, established and maintains F&ES capability, serves as the principal F&ES risk manager, and advisor to senior leaders to minimize loss of life and property.

4.2.5. **Attachment 9** lists the F&ES UTC Mission Capabilities (MISCAPS) for quick reference. However, when MAJCOM planners source contingency manpower and vehicle requirements use the most current UTCs found on the AF Expeditionary Engineering Publications Management SharePoint: <https://usaf.dps.mil/sites/13072/SitePages/Publications.aspx>.

**4.3. Vehicles and Equipment.** The SFO will direct the placement and staging of equipment and vehicles based on operational requirements. SFOs identify shortfalls in firefighting vehicles and equipment through an analysis of operations at the site. Where shortages exist, request for release of assets from War Reserve Materials (WRM). Vehicles may be leased with adequate lead time; when lead time is not available, vehicles may be tasked from home station fleets and backfilled with leased vehicles as soon as possible. Additional vehicles and support equipment may be needed at any stage of a conflict. Note: Functional expertise is available from the MAJCOM Representatives or Air Force Civil Engineer Center (AFCEC) Reachback Center at: DSN: 312-

523-6995; Commercial: (850) 283-6995, and Tyndall AFB Command Post: DSN: 523-2155, Commercial: (850) 283-2155.

4.3.1. Firefighter Utility Package (4F9FZ, UTC) non-armored, 4x4 universal terrain vehicle provides light, agile, mobile firefighting capability to support operations at contingency locations. Package includes UTV, ARFF upfit kit and associated firefighting equipment.

4.3.2. **Table 4.1** provides F&ES flights an example of the Q-Factors capabilities to protect people, property, and missions.

4.3.3. Levels of service will no longer be a driving factor for the number of firefighters presented to Joint Forces Commands (JFCs) within an ATF/DCW. Concentration of planning will transition to Q factors and risk assessments. Commitment of forces will be planned by commanders' risk acceptance and evaluation of site surveys. National Fire Protection Association (NFPA) 460 and the DAF Technical Implementation Guidance (TIG): *Aircraft Rescue and Fire Fighting Response Guide* (DAF F&ES TIG 460-24), define Q factors as:

4.3.3.1. Q1: Quantity of water for foam production for initial control of the pool fire.

4.3.3.2. Q2: Quantity of water for foam production to continue or fully extinguish the pool fire.

4.3.3.3. Q3: Water available for interior firefighting.

4.3.4. The chart below from DAF NFPA TIG 460-24 shows the gallons of water required to accomplish the objective of each Q factor for a C-130 E/H/J. Under AFFORGEN, DAF F&ES team leaders will use this information to advise commanders on risk. **Note:** See DAF NFPA Technical Implementation Guidance 460-24, *Air Force Aircraft Rescue and Fire-Fighting Guide*.

**Table 4.1. Aircraft Q-Factor Example.**

| <b>NFPA 460 Q-Factors for a C-130 E/H/J (Gallons of water required to accomplish the objective)</b>   |                       |                    |                |
|---|-----------------------|--------------------|----------------|
| <b>DAF Aircraft Category 6 &amp; 7 Airports by Aircraft Type</b>  | <b>MOB (Q1+Q2+Q3)</b> | <b>FOS (Q1+Q2)</b> | <b>CL (Q1)</b> |
| C-130 E/H/J   | 3,802                 | 2,552              | 1,276          |
| <p>Example Q-Factor Mission: DAF F&amp;ES team of ten with two P-19Cs [1,000 gallons of water ea.] is projected to forward deploy to a Forward Operating Site (FOS). Total of Q1 and Q2 equals 2,552 gallons of water. Risk assessment to the commander would be successful exterior fire control and aircrew rescue MET; however, interior fire extinguishment may not be successful without additional water from host nation, if available.</p> <p><b>Note:</b> Planners may use any P-19 variation as a suitable substitute until future P-19C vehicle procurement goals are met.</p> |                       |                    |                |

**4.4. Risk Management.** Risk requires a subjective assessment of the probability that an F&ES emergency event will occur, and the expected severity of such an event. The probability factor relies heavily on historic emergency response data to predict future events. But for contingency operations, historical data is not available, and assumptions are made on probability and severity in accordance with DAFI 90-802, *Risk Management*, and DAFPAM 90-803, *Risk Management (RM) Guidelines and Tools*.

4.4.1. Risk management (RM) primarily involves allocating resources according to the risk. Normally, resources are allocated according to the most probable time of day and day of the week that a fire emergency event will occur, from historic fire response data. This data may not be available at contingency locations. Consequently, the assumption during initial operations is that the risk is static, and the same level of capability is maintained continuously. This assumption is for the first 120 days of operation then response data is assessed to determine if existing capability is still appropriate.

4.4.2. Probability. Anecdotal information indicates that fire emergency events are more probable during contingencies due to the intensity of aircraft operations, temporary construction, and the potential for enemy actions (such as aircraft battle damage).

4.4.3. Severity. The severity of fire emergency events is expected to be greater than for home stations due to the use of combustible materials in temporary construction, temporary wiring, and the lack of an adequate water supply.

**4.5. Proactive Planning.** Proper planning for deployments can save essential time and effort when down range. When planning for potential deployment to FOSs or CLs (Spokes), take the time to prepare documents/equipment that may be needed. These include, but are not limited to:

4.5.1. Pull the Internal Air Transport Certification (commonly referred to as ATTLEAs) for each potential vehicle you may utilize. All are located on the *Fire & Emergency Services SharePoint: Operations Tab>Ops Programs>Vehicles and Equipment>ATTLEA Certificates*. These will assist teams in preparing vehicles as air worthy for transport. Preparing vehicles for joint inspection is the requirement of Fire and Emergency Services Personnel.

4.5.2. Vehicles and other equipment (Radio Batteries/SCBA Cylinders etc.) will require Hazardous Declaration (HazDec) Forms. Examples and blank forms can be found on the *Fire & Emergency SharePoint: Readiness>HazDec*. Have a copy or access to DAFMAN 24-604 for reference of hazard classifications.

4.5.3. Prepare and practice building pallets with personal gear/equipment that is not tied to a UTC. Reference the Pallet Pocket Guide on the *Fire & Emergency Services SharePoint: Readiness>Readiness Training>Cargo Build-up Booklet*.



## Chapter 5

### INSTALLATION FIREFIGHTING PLAN

**5.1. Introduction.** This chapter outlines F&ES TTPs and generic guidelines to enhance the survivability of firefighters, vehicles, equipment, and resources during contingency operations. Provided is an overview of the F&ES functions and responsibilities in the contingency environment. In the absence of formal training and lesson plans, this section can be used to present training. *Note: this is most applicable to a MOB/Enduring location and not to a FOS/CL (HUB/Spoke Concept of Operations). Trying to implement this chapter wholistically outside of an enduring location is not feasible under the ACE construct.*

**5.2. Planning Period.** Upon arrival, the Installation Fire Chief will create or review plans and execute training and actions required to implement those plans. Deployed firefighters take the following actions immediately upon arrival:

- 5.2.1. Establish fire emergency response posture.
- 5.2.2. Establish water source(s).
- 5.2.3. Establish fire prevention, force protection, and firefighter safety programs.
- 5.2.4. Work with emergency managers to determine response priorities.
- 5.2.5. Communicate risk and capability issues to the installation commander. For more information regarding reporting level of service capability see DAFI 32-2001.
- 5.2.6. Determine and coordinate response capability available in the Readiness & Emergency Management flight. EM personnel may have HazMat response capability (training and equipment) that can help during these types of response.

**5.3. Chain of Command.** The Installation Fire Chief establishes the internal chain of command and disseminates the information to all firefighters. The functional chain of command is dictated by the Installation Fire Chief's geographic AOR and reports to the appropriate MAJCOM representative. For Joint Task Force (JTF) operations, Operational Control (OPCON) will be assumed by the JTF Commander. The designated USAF functional manager will retain Administrative Control (ADCON).

**5.4. Intelligence.** Obtain current intelligence threat assessments of potential adversary's ability and intent to attack the installation, including the use of Weapons of Mass Destruction (WMD). Accurate information enables Installation Fire Chiefs to tailor defensive preplanning and TTPs to mitigate the consequences of an attack.

**5.5. Firefighter Safety and Health.** To the maximum extent possible, *National Fire Protection Association 1500* applies during wartime and contingency operations. When compliance is not possible, RM processes are used to deviate from NFPA requirements. Everything possible should be done to protect firefighters but mission comes first, which may require doing operations during war that would not be done when at peace. However, operations or tasks that cannot be performed safely will not be undertaken.

**5.6. Long Term Planning.** When intelligence indicates the deployment may become "steady state," the Installation Fire Chief should begin long term planning after initial establishment of the installation. This requires the Installation Fire Chief to evaluate the resources in place to determine

if they meet established standards. If additional resources are required, plans to fix shortfalls are communicated to leadership. Plan to improve facilities and obtain proper manpower, fire department vehicles, and equipment for the fire station. Consider water distribution systems, utilities, systems, command, and control facilities, etc.

**5.7. Plans.** Plans include, but are not limited to:

5.7.1. Installation support, mobilization, contingency response, fire prevention, training, and pre-fire plans.

5.7.2. Conducting local training is and should be aligned with the Air Force F&ES Training Plan to ensure career field continuity. Existing lesson plans may be utilized, and new lesson plans developed as necessary.

5.7.3. To the greatest extent possible, establish dispersal locations and obtain shelter assets. Place assets indoors and utilize natural covering (ditches, trees, hillsides, trenches, etc.) as much as possible. All dispersal sites will be splinter protected and hardened as dictated by the threat. Use contamination control procedures and provide appropriate levels of contamination avoidance measures on these locations (see [Attachment 2](#)).

5.7.4. If the threat dictates, harden and splinter-protect all non-dispersed fire assets, including the ECC and communication network as required. Do not overlook supplies, station generators, and fuel containment dikes.

5.7.5. Conduct pre-fire planning and train on mission assigned aircraft, priority facilities, and common transient aircraft as soon as possible,

5.7.6. Establish fire prevention, reporting, education, and safety programs.

5.7.7. Train facility occupants on fire extinguisher operations to enable quick intervention for fires in the initial stages.

5.7.8. Survey water supplies for emergency use. Include both on and off installation locations to include swimming pools, lakes, rivers, towers, tankers, pumps, wells, and basic expeditionary airfield resources mobile water distribution systems. Construct expedient access routes made of dirt or gravel and install dry hydrants and pumps as necessary to expedite re-supply operations.

5.7.9. Coordinate with POL personnel to ensure drainage, dikes and holding areas are in place. Dikes should hold 1.5 times the container's capacity. Survey possible fuel holding or tank drainage diversion areas where spilled fuel can be burned off. Identify fuel transfer possibilities and determine if AFFF inventories are adequate for the amount of fuel stored.

5.7.10. Inventory all firefighting agents and equipment; request high priority fills for shortfalls through local supply channels and the contracting officer.

**5.8. Attack Preparation Period.** The following actions will be taken:

5.8.1. Maintain accountability of all personnel.

5.8.2. Establish a recall roster and system to accomplish the recall.

5.8.3. The SFO initiates appropriate checklist (see [Attachment 2](#) through [8](#)).

5.8.4. Define what assets are available and determine what resources are needed to support the mission while meeting appropriate Air Force standards. Initiate shortfall requests through appropriate channels. Additional firefighting agents, clothing, equipment and supplies may be procured through supply channels (establish good working relationships with Contracting and Finance).

5.8.4.1. When the threat dictates, firefighters will be issued chemical warfare ensemble and nerve agent antidote based on the associated threat conditions. Firefighters should be prepared to utilize the J-FIRE ensemble.

5.8.4.2. Issue weapons as threat conditions dictate. Use selective arming as necessary.

5.8.5. Indicate dispersal plan threat conditions warrant.

5.8.6. Disperse support assets (tools/equipment, emergency water storage (EWS), mobile air compressor, etc.) and implement physical/chemical contamination avoidance actions to maximize survivability.

5.8.7. Disperse vehicles and agents (see [Attachment 2](#)). Correct deficiencies on vehicles/agent status.

5.8.7.1. Vehicles will remain sheltered as much as possible. Vehicles may relocate with approval of the SFO.

5.8.7.2. Implement survivability measures to include contamination control for vehicles and equipment. Black out/tone-down/splinter and chemical contamination avoidance measures will be implemented for the following resources:

5.8.8. Fire Station (ECC network is a critical priority). Include radio antenna(s) and repeater(s) in the protection plan as applicable.

5.8.9. Dispersal sites and personnel bunkers.

5.8.10. EWS sites supplementing existing emergency water sources.

5.8.11. Agent/equipment dispersal.

5.8.12. Determine status/condition of installed fire suppression systems.

5.8.13. Identify communication services for major work centers (i.e., building location, and telephone numbers) (see [Table A8.4](#)).

**5.9. Establish the ECC and Alternate ECC.** The SFO will:

5.9.1. Confirm and create accounts for all firefighting resources prior to actual response.

5.9.2. Maintain overall firefighting, fire vehicles, and equipment status.

5.9.3. Receive installation control center directives and disseminate to firefighters.

5.9.4. Take necessary actions to reverse or limit any degradation to the F&ES mission.

5.9.5. Ensure incident response reporting procedures are in place.

**5.10. The ECC will maintain the following:**

5.10.1. Fire Department vehicles by call sign, type, registration number, and status.

5.10.2. Dispersal points of all resources and crew accountability.

- 5.10.3. Quantities and location of firefighting agents.
- 5.10.4. Installation map to chart blocked roads, craters, UXO's, CBRNE zones, air base defense sectors, utility status, fuel and ammo storage areas.
- 5.10.5. Lists of static water locations and approximate amounts available.
- 5.10.6. Logbook will be used to document significant events.
- 5.10.7. Installation priority listing.

**5.11. The ECC communications network is critical to the success of the F&ES mission and recovery operations. Every attempt should be made to obtain the following communication devices:**

- 5.11.1. Primary and secondary Crash line.
- 5.11.2. Fire reporting lines.
- 5.11.3. Direct Line or Dedicated Line to appropriate work centers (e.g., UCC).
- 5.11.4. Administrative line (two or more is preferred)
- 5.11.5. Portable radios/batteries/charger(s).
- 5.11.6. Back-up generator with auto start and transfer capabilities.

**5.12. The alternate ECC may be activated at any time. Checklists, reference material, supplies, and communications equipment should be maintained for this purpose.**

- 5.12.1. Communication disruption/outages.
- 5.12.2. If communication systems fail, the following may be implemented:
  - 5.12.2.1. Portables/mobile radios.
  - 5.12.2.2. Alternate frequency.
  - 5.12.2.3. Direct lines and runners.
  - 5.12.2.4. Cellular telephones.
- 5.12.3. A completed list of telephone numbers will be maintained in the ECC and command vehicles. *\*If an authentication matrix is used, see [Attachment 3](#).*

**5.13. Operations.** Shift schedules will be determined by the SFO. Work and rest schedules may vary based on various factors at contingency locations. Some considerations are Operations TEMPO, manning levels, weather conditions, wear of PPE in chemical environment, variations in risk, etc. It should be noted that the mission may require periods when firefighters will be required to work for extended shifts. However, extended shifts should only be considered for limited periods when needed due to reduced manning levels and mission requirements. Working extended shifts significantly increases risk to firefighter safety. For deployments over 90 days, work schedules should be adjusted to 72 hours per week where possible. Note: Crews will be rotated in a manner as to reduce their vulnerability to enemy attack.

- 5.13.1. The SFO should establish response priorities based on the installation's emergency management plans, manning/equipment status and mission requirements. Consider things such as aircraft, structural, fuel spill, and munition incidents.

5.13.2. As the threat escalates, firefighters may operate from dispersed locations.

5.13.3. Shift change will be presented by the SFO and in accordance with local directives/operating instructions (OI).

5.13.3.1. The SFO will manage shift change.

5.13.3.2. All firefighters are informed of mission oriented protective posture (MOPP) level, threat condition and intelligence updates at shift change.

5.13.4. Crew Rotation. Each firefighter will be assigned to a specific vehicle. At the beginning of each shift, firefighters will report to their assigned vehicle at the SFO's discretion.

5.13.4.1. Normally, shift change will occur in the fire station, however, during dispersed operations the SFO will rotate crews when safely possible.

5.13.4.2. Accountability for all crews and vehicle status will be accomplished by the SFO immediately following shift change.

5.13.4.3. If firefighters are unable to report to their pre-designated location due to hostile activity, they will assemble in an area designated by the SFO. Transportation to their assigned vehicle will be arranged by the SFO as situation permits.

5.13.4.4. Off duty personnel will report to their assigned billets for rest and recuperation. The senior member maintains accountability of all off-duty firefighters.

5.13.5. Responses and Standbys. At heightened threat conditions, the SFO may need to coordinate all responses with the Emergency Operations Center (EOC).

5.13.5.1. Under SFO direction, the ECC will dispatch incidents using selective response procedures based on priority of asset.

5.13.5.2. When response times cannot be met from fire stations or dispersal standby locations, an alternate plan should be considered.

5.13.6. Other Requirements.

5.13.6.1. Issue authentication matrix to each crew.

5.13.6.2. Secure personnel and departmental records and documentation in a protected shelter area.

5.13.6.3. Arriving firefighters will receive necessary briefings and billeting during in-processing. An F&ES supervisor will be dispatched to the receiving area to ensure a smooth transition.

**5.14. Attack Response Period.** This is the period during an attack or hostile activities that firefighting and rescue activities will be limited. Survivability is the main priority while mission sustainment is the primary objective.

5.14.1. Upon notification that an airfield attack is imminent, the ECC will alert dispersed fire crews. Crews should be attentive to indications of a change in alarm condition and report pertinent information to the ECC (e.g., observing personnel taking cover, changes in displayed flags, giant voice announcements, gunfire, bomb bursts, etc.). If differences in alarm conditions exist, take cover until the difference is resolved.

5.14.2. Firefighters are protected with the appropriate individual protective ensemble (IPE) according to current alarm conditions. They should be able to instantly cease any operation and take immediate cover in the event of an attack. Be alert to surprise and re-attack possibilities. Always be aware of the nearest personnel bunker.

5.14.3. Unless specifically directed to a specific site when an attack occurs, DO NOT attempt to return to the dispersal location. Stop and take appropriate cover where you are.

5.14.4. Personnel in vehicles not in splinter protected facilities will seek the best available protection in their area. If suspected chemical attack, firefighters should remain in vehicles and consider shutting down HVAC.

5.14.5. Communications will be kept to an absolute minimum during and immediately after attack. During the attack, firefighters should provide size, activity, location, uniform, time, and equipment (SALUTE) reports to the ECC.

## **5.15. Attack Recovery Period.**

### **5.15.1. Dispersed Crew Actions.**

5.15.1.1. Upon notification that an attack is over, fire crews will immediately account for crew members, perform TCCC as required, a thorough UXO sweep, check for damage/contamination, and verify status/condition of assigned assets. Report status to the ECC/UCC once completed. **\*Note UXO locations.**

5.15.1.2. Remain at least 300 feet from UXOs; DO NOT transmit handheld radios within 25 feet of UXOs or 100 feet for mobile radios.

5.15.1.3. Identify, mark, and report all UXOs to the ECC in accordance with UXO Training.

5.15.1.4. Make note of other UXO reports as this may alter pending response routes to future emergencies/incidents.

5.15.1.5. Note IED locations. Withdraw all non-essential personnel in accordance with AFTTP 3-4. Personnel will be behind or under cover.

5.15.1.6. In accordance with Defense Explosives Safety Regulation (DESR) 6055.09\_DAFMAN 91-201, minimum withdraw distances for IEDs are:

5.15.1.6.1. 4,452 feet if IED is a small item or box (up to 20 lbs.).

5.15.1.6.2. 6,652 feet if the IED is a barrel or car (up to 1,000 lbs.).

5.15.1.6.3. 8,904 feet if IED is a can or truck (up to 10,000 lbs.).

5.15.1.6.4. 10,500 feet if IED is larger than already described (up to 60,000 lbs.).

5.15.1.7. Response agencies such as EOD may evaluate and recommend an adjustment to response distances to the incident commander (IC). Withdrawal distances are for initial evacuation until command authorities and EOD personnel evaluate the incident.

5.15.1.8. Report personnel injuries/facility and asset damage.

5.15.1.9. Inspect/report M-8 and M-9 readings on vehicles and dispersed assets.

5.15.1.10. Conduct operational decontamination as required.

**5.15.2. Firefighting Actions.**

5.15.2.1. When directed, fire crews will proceed to the incident site.

5.15.2.2. Responding crews will report their observations to the ECC.

**5.15.3. SFO Actions.**

5.15.3.1. The SFO/ECC will immediately announce alarm condition changes and initiate an after-attack vehicle/equipment/personnel status check.

5.15.3.2. Mission sustainment and firefighter safety is the SFO's primary concern. It may not be possible to extinguish every fire and perform every rescue; prudent judgment on when and how to engage firefighting forces is paramount to the success of the mission. The SFO directs the allocations of firefighting resources in concert with command priorities and current mission sustainment and installation recovery operations. In the event of multiple responses, established priority lists and preplanning should dictate multiple response priorities. Decisions are usually made in relation to sortie generation and aircraft recovery, depending on current response capabilities/commitments.

5.15.3.3. The ECC will establish an effective flow of communication between the SFO, appropriate work centers, and firefighting crews.

5.15.3.4. The SFO exercises primary control of responding vehicles. Normally, the SFO will command the fire ground; however, lead firefighters may perform this function on multiple incidents. The following considerations govern what vehicles, if any, are dispatched to incidents:

5.15.3.4.1. Equipment/agent availability.

5.15.3.4.2. Alarm condition.

5.15.3.4.3. Access to incident.

5.15.3.4.4. Firefighting crew status.

5.15.3.4.5. Physical security.

**5.15.4. Responses.**

5.15.4.1. The EOC director, through the SFO, approves responses before dispatch. Responding crews will not deviate from their assignment to render assistance at other incidents. They will, however, report their observations to the ECC. Resource priorities are listed in the facility priority list; this is maintained in the ECC and as required by the SFO.

5.15.4.2. When necessary, use the authentication matrix prior to responding to validate all responses or order (see [Attachment 3](#)).

5.15.4.3. If damages exceeded firefighting capability, the SFO will recommend "Let Burn" to the EOC director. Note: Firefighter safety is the first consideration.

5.15.4.4. Interior fire operations should only be attempted if there is high probability for successful fire stop to a mission essential asset or rescue.

5.15.4.5. Debris, UXOs and other hazards may hinder response. Make every attempt to stay on the hard surface. If possible, do not drive or walk through contaminated areas,

puddles or vapors; find an alternate route. If leaving the hard surface becomes necessary, use spotters in front of the vehicle to sweep for UXOs.

#### **5.15.5. Re-Attack Actions.**

5.15.5.1. The SFO considers ceasing all operations that are not mission essential.

5.15.5.2. Crews should evaluate the location/status of available cover at every incident site.

5.15.5.3. At the conclusion of the re-attack, revert to attack recovery actions.

#### **5.15.6. Communications.**

5.15.6.1. Personnel will use LMR handheld radios as primary means of communication.

5.15.6.2. Plans should be in place in the event the ECC is destroyed.

5.15.6.3. In the event the Primary ECC is inoperable, the ECC operator will relocate to the alternate ECC.

5.15.6.4. If all communication channels are jammed or inoperative for any reason, communications between firefighting units will be by any means available (E.g., portables radios, alternate frequency, direct lines and runners, cellular telephones, public address systems, etc.).

5.15.6.5. An authentication matrix will be distributed to each vehicle to verify information passed over the radio net. This matrix will be changed if compromise is suspected.

#### **5.15.7. Administration and Logistics.**

5.15.7.1. Vehicle and manpower calculations can be made utilizing the appropriate Air Force publications.

5.15.7.2. Shortfalls are up channeled through the appropriate authority.

5.15.7.3. Manpower replacements are made through PERSCO and coordinated through the commander.

5.15.7.4. Firefighting equipment and agents may be obtained locally. Quickly identify shortfalls and request through local established procedures.

5.15.7.5. When appropriate, add critical contractors to the entry access list E.g., HazMat clean up companies, fire truck maintenance, etc.

5.15.7.6. Consider mutual aid agreements when feasible.



## Chapter 6

### J-FIRE CONCEPT OF OPERATIONS

**6.1. General.** The purpose of this chapter is to establish procedures for utilizing J-FIRE in CBRNE environments.

6.1.1. J-FIRE is designed specifically for a wartime mission that allows firefighters to operate in CBRNE environments, engage fires, effect rescue and transition between filtered air and supplied air.

6.1.2. LIMFACS. The firefighter is using two complete protective ensembles when using the J-FIRE, a firefighting gear and a battle dress overgarment. This causes increased physical stress for the firefighter. Rehabilitation after engaging in emergency response is necessary.

**6.2. Concepts.** Due to the extra stress placed on firefighters under J-FIRE conditions it is highly recommended to limit responses to defensive operations as much as practical. The danger of exhausting firefighters has a greater impact than losing an inconsequential facility or asset.

**6.3. Procedures.** Complete procedures for employing the J-FIRE are contained in T.O. 14P3-1-181, *Joint-Firefighter Integrated Response Ensemble (J-FIRE)*.

#### 6.3.1. Exterior Firefighting.

6.3.1.1. The main firefighting objective is to minimize the spread of fire to exposures, especially those that have a direct impact on the mission. Firefighting is normally accomplished using fire department vehicle turrets or master streams.

6.3.1.2. Firefighting may assume MOPP 4 non-firefighting posture or MOPP 4 firefighting posture as determined by the SFO.

#### 6.3.2. Interior Firefighting.

6.3.2.1. Offensive interior operations will only be conducted when necessary to save mission critical assets or to rescue personnel and will only occur when directed by the SFO.

6.3.2.2. As soon as the fire attack crew makes entry, a 5-minute countdown will begin, and the IC will maintain the count and notify the ECC. At the 5-minute mark the IC will ensure the interior crews are informed. At this time, communications between the attack crew and IC become critical. The IC requires a status report that can help him/her make a tactical decision as to whether to continue interior fire attack.

6.3.2.3. At the 10-minute mark, the ECC will again inform the IC and, in turn, the attack crew. The IC will also advise the interior crew to complete their task or withdraw at the 15-minute mark.

6.3.2.4. At the 15-minute mark, the fire attack crew may be ordered to withdraw from the facility for rehabilitation. If there is a delay in withdrawal, the IC will employ the rapid intervention team (RIT). The RIT can perform other fire ground duties if they do not hinder their primary objective of providing rescue for the attack team if required. \*Note: C2 CB canisters should not be used above the maximum qualified use temperature of 120°F in accordance with T.O. 14P3-1-181. Canisters should be protected by helmet shrouds when in use during interior firefighting operations.

**6.4. Work/Rest Cycles (WRC).** WRCs will be enforced for firefighters. WRC will be at the direction of the IC. As rest cycles do not exclude firefighting activities, priority responses are still likely to be mounting. However, the IC considers the WRC when deciding attack modes and fire ground tasks. Note: Refer to [Chapter 8](#) for further guidance.

## Chapter 7

### CONTAMINATION AVOIDANCE AND DECONTAMINATION

**7.1. General.** This chapter establishes procedures for detecting contamination and subsequent decontamination. More detailed information can be found in *DAFI 10-2503 – Operations in a Chemical, Biological, Radiological and Nuclear (CRBN) Environment*.

#### 7.2. Detection.

7.2.1. When directed by the EOC Director or CE Commander, all personnel, vehicles, facilities, shelters and equipment will have M-8 paper/M-9 tape appropriately applied.

7.2.2. All personnel will carry M-8 paper for random sampling of specific items when necessary.

7.2.3. Notify the ECC when contamination is evident. After reporting, accomplish expedient decontamination and wait for further direction from the leadership or the ECC.

**7.3. Operational Decontamination.** All dispersal sites should have the materials listed in [Table 7.1](#) on-hand for decontamination.

**Table 7.1. Suggested Decontamination Materials for Dispersal Sites.**

|                    |   |
|--------------------|---|
| Bucket             | Bleach  |
| Scrubbing brushes  | Rags/sponges and/or wiping cloths   |
| Plastic trash bags | Reactive Skin Decontamination Lotion  |
| Bug sprayer        | Tape and pens/markers for marking contaminated                                    |
| Plastic bags       | Rubber bands to seal self-contained breathing apparatus (SCBA) bottle connections |
|                    |   |

7.3.1. When contamination is suspected:

7.3.1.1. Report M-8 paper/M-9 tape readings to the ECC. Decontamination efforts should be limited to those actions necessary to meet mission requirements. Always minimize the risk of exposure and contact hazard to personnel and equipment.

7.3.1.2. When directed, contaminated personnel should report to a contamination control area (CCA) for decontamination.

7.3.1.3. For minor contamination, spot decontamination procedures should be accomplished. Contaminated material should be placed in plastic bags for appropriate disposal at predetermined unit contaminated waste collection points.

7.3.1.4. For gross contamination, use bleach and water solution to decontaminate.

#### 7.4. Barrier Materials.

7.4.1. Calculate how much barrier material will be required to protect critical assets from chemical contamination (e.g., repellent plastic sheets, canvas, tarpaulins, etc.).

7.4.2. Cover critical assets when directed by leadership in accordance with procedures listed in AFTTP 3-4 and follow local procedures after a chemical attack.

7.4.3. Chemically Contaminated Object Rule. (CCOR). CCOR applies when chemical contamination is liquid in nature (e.g., this special handling procedure will not be necessary past the point of the hazard duration of the major terrain surface when the resource has been exposed only to agents in vapor or dusty form). This rule applies to assets that were not protected by a barrier material and therefore pose a percutaneous and/or vapor hazard.

7.4.4. In relation to the CCOR, objects are considered either small or large and hazard distances directly correlate to the size of the object. For all intents and purposes, firefighters should be aware that a large object encompasses resources that have more than 10 square meters of metal and/or glass surfaces. Examples include 44-passenger buses, fuel trucks, P- 19 fire trucks, and all aircraft. Based on the size of the object, the hazard distances will be different.

**Table 7.2. Simplified CCOR Guidelines.**

| Time from Attack | Small Object           | Large Object                      |
|------------------|------------------------|-----------------------------------|
| 0-1 Hour         | MOPP 4 in all Zones    |                                   |
| 1-3 Hours        | MOPP 4 within <10 feet | MOPP 4 within identified Zone (s) |
| 3-24 Hours       |                        | MOPP 4 within <50 feet            |

## Chapter 8

### DISPERSAL SITE PROCEDURES

**8.1. General.** Dispersal management is a means of physically tracking and protecting assets at dispersal sites.

**8.2. Dispersal Site Procedures.**

8.2.1. The oncoming shift crew will ensure items are inventoried at shift change. Annotate results and pass the information to the ECC.

8.2.2. Arrange resources to enhance their accessibility in shelters.

8.2.3. Dispersal sites should NOT be within *300 feet* of a priority facility.

8.2.4. Terrain and prevailing winds should be considered when hardening/splinter protecting.

**8.3. General Considerations.**

8.3.1. Only one Aircraft Rescue Firefighting (ARFF) or structural vehicle should be dispersed to the same location. Properly mark all vehicles for chemical detection and avoidance.

8.3.2. Separate vehicles housed in the situation as much as possible.

8.3.3. Arrange dispersal points so that no more than two sites are in straight target line.

8.3.4. Disperse one ARFF vehicle so that it has a view of the active runway.

8.3.5. Firefighters will ensure vehicles and equipment are protected from direct attack. Each vehicle will be equipped with a first aid kit, Tactical Combat Casualty Care (TCCC) kit or equivalent UXO/contamination marking kit and an operational decontamination kit.

8.3.6. Contamination avoidance techniques will be utilized. All assets will be splinter protected, covered in plastic, and marked with chemical detection material.

8.3.7. Dispersal may not be practical or possible at FOSs or CLs. Fire Officers should use their best judgement and coordinate with on-site senior leaders when positioning and dispersing vehicles and equipment.

## Chapter 9

### HEAT EXHAUSTION AND WORK/REST CYCLES

**9.1. Introduction.** This section establishes guidance for making decisions on firefighter Work/Rest Cycles (WRCs) while operating in J-FIRE ensembles. Successfully functioning in a contingency environment depends on understanding the factors contributing to heat stress, knowing, and implementing the preventive measures and maintaining constant observation of personnel for risk factors and signs of heat illness. Hot and/or humid environments severely exacerbate heat stress and lead to extreme heat exhaustion for firefighting crews who are performing emergency operations.

**9.2. Responsibilities.** All personnel will become familiar with the provisions of this section. All personnel should drink as much as possible and stay hydrated. It is important to reinforce that water alone is not sufficient at “hydrating” firefighting crews. Balanced electrolyte consumption from both electrolyte-based powders/drinks and consumption of Meals Ready to Eat (MRE), Unitized Group Rations (UGR), and other food sources [natural salts] is essential to the nutritional needs of firefighters operating in a wartime environment. Beware of existing climatic conditions and prepare and react accordingly. The SFO can alter these procedures if necessary.

9.2.1. SFO. The SFO will consider the circumstances of each incident and make adequate provisions early in the incident for a WRC, or rest and rehabilitation, for all personnel operating at the scene.

9.2.2. Lead Firefighter. All Lead Firefighters will maintain awareness of the condition of each member operating within their span of control and ensure adequate steps are taken to provide for each member’s safety and health.

9.2.3. Firefighters. All firefighters should remain aware of the health and safety of other crew members.

### 9.3. Terms.

9.3.1. Dehydration. Following the loss of sweat, water should be consumed to replace the body’s loss of fluids. If the body fluid lost through sweating is not replaced, dehydration will follow. Whenever consumption of water fails to keep up with output of sweat, the body will become progressively dehydrated. Thirst is a poor indicator of dehydration. Dehydration is possible without any signs of thirst; mental and physical performance can degrade so slowly that individuals may not recognize the problem in themselves or others.

9.3.2. Heat Exhaustion. This condition appears as marked fatigue and weakness, nausea, dizziness, fainting, vomiting, elevated body temperature, and disorientation. Factors that compound heat exhaustion are lack of acclimatization and failure to replace water and electrolytes lost in sweat.

9.3.3. Heat Stroke. This is a medical emergency that is caused when the body stops sweating, leading to loss of evaporative cooling and a dangerous rise in core temperature. It can include all the signs and symptoms of heat exhaustion but is more severe and can be fatal. One heat casualty is usually followed by others.

9.3.4. Acclimatization. Personnel that are not acclimated are those who have not built up a tolerance for working in a hot environment. They will experience degraded mental and

physical performance and be highly susceptible to heat illness. Persons who are poorly conditioned become fatigued more easily and do not adjust to working in excessive climatic conditions as quickly as those in good physical condition.

#### 9.4. Heat Illness Prevention.

9.4.1. The key to preventing heat illness and sustaining performance is knowledge of preventive measures. Utilize the heat stress index tables in [Table 9.1](#) for general guidance. Be aware these tables require temperature/humidity level input from a competent authority such as the weather flight for complete accuracy.

**Table 9.1. Heat Stress Index.**

|   | <i>RELATIVE HUMIDITY</i> |                        |     |  |     |     |     |     |     |     |
|---|--------------------------|------------------------|-----|--|-----|-----|-----|-----|-----|-----|
|   |                          | 10%                    | 20% | 30%  | 40% | 50% | 60% | 70% | 80% | 90% |
| <b>TEMPERATURE DEGREES F.</b>   | 104                      | 98                     | 104 | 110  | 120 | 132 |     |     |     |     |
|   | 102                      | 97                     | 101 | 108  | 117 | 125 |     |     |     |     |
|   | 100                      | 95                     | 99  | 105  | 110 | 120 | 132 |     |     |     |
|   | 98                       | 93                     | 97  | 101  | 106 | 110 | 125 |     |     |     |
|   | 96                       | 91                     | 95  | 98   | 104 | 108 | 120 | 128 |     |     |
|   | 94                       | 89                     | 93  | 95   | 100 | 105 | 111 | 122 |     |     |
|   | 92                       | 87                     | 90  | 92   | 96  | 100 | 106 | 115 | 122 |     |
|   | 90                       | 85                     | 88  | 90   | 92  | 96  | 100 | 106 | 114 | 122 |
|   | 88                       | 82                     | 86  | 87   | 89  | 93  | 95  | 100 | 106 | 115 |
|   | 86                       | 80                     | 84  | 85   | 87  | 90  | 92  | 96  | 100 | 109 |
|   | 84                       | 78                     | 81  | 83   | 85  | 86  | 89  | 91  | 95  | 99  |
|   | 82                       | 77                     | 79  | 80   | 81  | 84  | 86  | 89  | 91  | 95  |
|   | 80                       | 75                     | 77  | 78   | 79  | 81  | 83  | 85  | 86  | 89  |
|   | 78                       | 72                     | 75  | 77   | 78  | 79  | 80  | 81  | 83  | 85  |
|   | 76                       | 70                     | 72  | 75   | 76  | 77  | 77  | 77  | 78  | 79  |
|   | 74                       | 68                     | 70  | 73   | 74  | 75  | 75  | 75  | 76  | 77  |
| <b>Note:</b> Add 10° F. when protective clothing is worn and additional 10 ° F. when in direct sunlight |                          |                        |     |  |     |     |     |     |     |     |
| <b>HUMITURE DEG F°</b>  |                          | <b>DANGER CATEGORY</b> |     | <b>INJURY THREAT</b>   |     |     |     |     |     |     |
| BELOW 60°   |                          | NONE                   |     | Little or no danger under normal circumstances   |     |     |     |     |     |     |
| 80 – 90°  |                          | CAUTION                |     | Fatigue possible if exposure is prolonged and there is physical activity                                       |     |     |     |     |     |     |
| 90 – 105°   |                          | EXTREME CAUTION        |     | Heat cramps and heat exhaustion possible if exposure is prolonged and there is physical activity               |     |     |     |     |     |     |
| 105 – 130   |                          | DANGER                 |     | Heat cramps or exhaustion likely, heat stroke possible if exposure is prolonged and there is physical activity |     |     |     |     |     |     |
| ABOVE 130   |                          | EXTREME DANGER         |     | Heat stroke imminent!  |     |     |     |     |     |     |

9.4.2. Water is critical for maintaining health and individual performance, since the human body is highly dependent on water to cool itself in a hot environment. All water consumed is from a medically approved source to prevent waterborne illnesses. All personnel should ensure there is an adequate supply of drinking water protected from biological and chemical fallout at

each dispersal site. Canteens are to be kept full; ensure individuals are trained on the proper techniques to fill canteens in a contaminated environment. It is important to reinforce that water alone is not sufficient at “hydrating” firefighting crews. Balanced electrolyte consumption (from both electrolyte-based powders/drinks and consumption of MREs, UGRs and other food sources [natural salts]) is essential to the nutritional needs of firefighters operating in CBRNE conditions.

9.4.3. Increased sweating requires additional water consumption. As mentioned earlier, thirst alone is not a good indicator of adequate fluid intake. Personnel always need to drink before they feel thirsty. They drink small amounts of water frequently rather than drink large amounts occasionally. When IPE is worn in an extreme heat environment, water requirements are more than 20 quarts per day.

9.4.4. The insulating effects of IPE and firefighting ensembles exacerbate exhaustion even when ambient temperature and humidity are relatively low. Variations to protective levels, such as opening or removing the JSLIST jacket, or removing some or all the protective clothing will reduce barriers to body cooling. Therefore, the SFO should continually conduct risk analyses and consider adjusting the wear of protective equipment and clothing to balance personnel protection and performance of mission critical tasks.

## **9.5. Work/Rest Cycles (WRC).**

9.5.1. To prevent a dangerous increase in body temperature, heat production is minimized by reducing work pace, increasing rest periods, and removing protective equipment and clothing as mentioned previously. In very hot and humid conditions, reducing the duration of physical activity may be the only way to prevent dangerous increases in body temperature. WRC recommendations, as advised by AFTTP 3-4 are provided in [Table 9.2](#). This table is to be used by the SFO when determining fire crew WRCs.

9.5.2. Allow personnel to seek relief periodically from potentially dangerous heat stress situations by resting in shaded or air-conditioned areas (vehicle cabs), and by removing IPE and firefighter PPE. Rotating dispersed crews to the station for rest/rehabilitation will assist in effecting this means.

9.5.3. Even moderate exertion in MOPP gear, protective equipment, and firefighting ensembles can cause heat illness at lower Wet Bulb Globe Temperature (WBGT) indices. When MOPP gear, protective equipment, and firefighting ensemble are worn, add at least 10° F to the measured WBGT index.

9.5.4. Avoid resting directly on the hot ground. The ground heated by the sun can be 30-45 degrees hotter than the air.



| Heat Category | WBGT Index (°F) | Easy Work (250 W)   | Moderate Work (425 W)  |   | Heavy Work (600 W)   |                     | Very Heavy Work (800 W)    |                     |                            |
|---------------|-----------------|---|--|---|--|---------------------|----------------------------|---------------------|----------------------------|
|               |                 | Weapon maintenance, marksmanship training, drill and ceremony | Patrolling with 30 lb load, low and high crawl, dig defensive position | Patrolling with 45 lb load, four-person litter carry (180 lbs), jogging 4 mph | Two-person litter carry (150 lbs), move under direct fire, obstacle course |                     |                            |                     |                            |
|               |                 | Work/Rest (minutes)   | Fluid Intake (quarts/hour)   | Work/Rest (minutes)   | Fluid Intake (quarts/hour)   | Work/Rest (minutes) | Fluid Intake (quarts/hour) | Work/Rest (minutes) | Fluid Intake (quarts/hour) |
| 1             | 78-81.9         | NL  | 1/2  | NL  | 3/4  | 40/20<br>(110)*     | 3/4                        | 20/40<br>(45)*      | 1 (3/4)*                   |
| 2<br>(GREEN)  | 82-84.9         | NL  | 1/2  | NL  | 3/4 (1)*   | 30/30<br>(70)*      | 1                          | 15/45<br>(40)*      | 1                          |
| 3<br>(YELLOW) | 85-87.9         | NL  | 3/4  | NL  | 3/4 (1)*   | 30/30<br>(60)*      | 1                          | 10/50<br>(25)*      | 1                          |
| 4<br>(RED)    | 88-89.9         | NL  | 3/4  | 50/10<br>(180)*   | 3/4 (1 1/4)*   | 20/40<br>(50)*      | 1 (1 1/4)*                 | 10/50<br>(20)*      | 1 (1 1/4)*                 |
| 5<br>(BLACK)  | > 90            | NL  | 1  | 20/40<br>(70)*  | 1 (1 1/2)*   | 15/45<br>(45)*      | 1 (1 1/2)*                 | 10/50<br>(20)*      | 1 (1 1/2)*                 |

NL = No limit to work time per hour

\*Use the amounts in parentheses for continuous work when rest breaks are not possible. Leaders should ensure several hours of rest and rehydration time after continuous work

**CAUTION:** Hourly fluid intake should not exceed 1.25 quarts. Daily fluid intake should not exceed 12 quarts.

<sup>1</sup>This guidance will sustain performance and hydration for at least 4 hours of work in the specified heat category.

<sup>2</sup>Fluid needs can vary based on individual differences (+/-0.25 qt/hr) and exposure to full sun or full shade (+/-0.25 qt/hr).

<sup>3</sup>Rest means minimal physical activity (sitting or standing) in the shade if possible.

<sup>4</sup>Body Armor - Add 5°F to WBGT index in humid climates.

<sup>5</sup>NBC (MOPP 4) - Add 10°F (Easy Work) or 20°F (Moderate or Hard Work) to WBGT index.

## Chapter 10

### FIRE RESPONSE DURING ALARM CONDITIONS

**10.1. General.** This section establishes procedures for actions to be taken under alarm conditions of yellow, red/blue and black. F&ES actions when under attack require determining, within certain guidelines, the number of firefighters and fire department vehicles to respond to incidents. This section should be used to supplement locally developed checklists.

#### **10.2. Alarm Yellow.**

10.2.1. Implement MOPP as directed by the installation commander.

10.2.2. Conduct fire response as directed by the SFO.

#### **10.3. Alarm Red/Blue.**

10.3.1. Implement MOPP 4 or as directed by the installation commander.

10.3.2. If Alarm Red or Blue is declared, it is imperative that firefighters know what type of attack is occurring (e.g., tactical ballistic missile, aircraft, or ground forces). The ECC or SFO notifies fire crews by radio of the type of attack. Firefighter actions based on the type of attack are as follows:

10.3.3. Tactical Ballistic Missile (TBM). Firefighters dispersed around the base will remain in their fire vehicles and assume directed MOPP. Consider shutting down HVAC in vehicle to prevent vapors from being ingested into the system. This action is based upon the concept that a TBM is normally not guided and normally has no predetermined target prior to launch. If a hardened facility or overhead shelter for the vehicle is nearby, it should be utilized. Personnel outside their fire vehicle during attack and unable to expeditiously return to their vehicle should seek shelter in the nearest hardened facility or overhead cover. Avoid the following locations:

10.3.3.1. Within 500 feet of an aircraft.

10.3.3.2. Within 1,000 feet of POL or munitions storage facilities.

10.3.4. Aircraft Attack. Firefighters dispersed around the base will immediately exit their fire department vehicle, seek shelter in a pre-constructed personnel bunker or hardened facility, and assume the directed MOPP. This action is based upon the concept that attack aircraft can see targets on the ground. Avoid the following locations:

10.3.4.1. Inside/beneath fire department vehicles.

10.3.4.2. Within 300 feet of a priority facility.

10.3.4.3. Within 500 feet of an aircraft.

10.3.4.4. Within 1,000 feet of POL or munitions storage facilities.

10.3.5. Ground Forces. Firefighters dispersed around the base will first determine where the ground forces attack is occurring in relation to their location, then provide a SALUTE report. Firefighters near the attack will either establish defensive fighting positions or leave the immediate area as soon as possible if it is safe to do so. Firefighters not in the ground forces attack sector will monitor radio transmissions and be prepared to react if their sector becomes

involved. Firefighting activities should not be conducted in the attack area until it is declared secure by security forces.

10.3.6. Unmanned Aircraft Systems (UAS). UAS vehicles are remote piloted aircraft that have become more weaponized, which could include explosive and CBRNE material. If a UAS is sighted, take cover and report observation to the ECC and/or BDOC with as much identification information about type, size, location, and direction it is heading. If the UAS lands or crashes, use extreme caution and treat site in the same manner as an IED using the UAS size to determine cordon size. (Use the 5-C method of reporting as outlined in the Airman's Manual).

10.3.7. Movement of fire department vehicles during Alarm Red/Blue conditions will only be accomplished with direct authority of the SFO and EOC director. Unless directed, fire crews will remain in place during Alarm Red/Blue until told to proceed. Firefighters remain vigilant for any attack related threat or damage to themselves and the installation. Any such threat noted will be radioed to the SFO for broadcast to other firefighters (use the SALUTE method of reporting as outlined in the Airman's Manual).

#### **10.4. Alarm Black.**

10.4.1. Implement MOPP 4 or as directed by the installation commander.

10.4.2. Following the declaration of Alarm Black by the EOC, firefighters are required to take an array of actions. First and foremost is to ensure the crew is not injured or otherwise affected by the attack. After determining the status of the crew, firefighters will report their status to the ECC. A thorough sweep of the immediate dispersal site is imperative. Crews should concentrate on those areas that could jeopardize their response to emergencies or their safety. All vehicle movement during Alarm Black is coordinated and approved by the EOC director. Crews will not move their vehicle unless directed by the SFO.

**10.5. Observing MOPP.** Firefighters will not reduce MOPP level until validated and directed by the SFO.

## Chapter 11

### VEHICLE OPERATIONS

**11.1. General.** This chapter established procedures for fire department vehicle operations.

**11.2. Daily Maintenance.**

11.2.1. Daily maintenance will be accomplished on each fire department vehicle and recorded on the appropriate form immediately following shift change or as directed by the SFO.

11.2.2. Inspection completion and vehicle status will be provided to the ECC.

**11.3. Agent Resupply.**

11.3.1. If F3 or dry chemical is used, notify the ECC for agent tracking.

11.3.2. Agent tanks will be topped off daily or as necessary.

**11.4. Water Resupply.**

11.4.1. If EWS tanks are used, notify the ECC for agent tracking.

11.4.2. Top off all EWS tanks when situation permits.

**11.5. Safety.**

11.5.1. Maintaining safe vehicle operations is of the utmost importance.

11.5.2. Observe posted speed limits and speed restrictions for runways, taxiways, and while operating around aircraft.

11.5.3. Only licensed and task qualified drivers as annotated on the AF Form 483, Certificate of Competency will be allowed to drive while wearing the protective mask.

11.5.4. Local policy is established for operating lights and sirens on emergency vehicles.

11.5.5. Extra caution and safety apply to driver operators while maneuvering in cantonment areas. These areas are massed with personnel and many times are poorly lit during nighttime hours. Local requirements may dictate the use of a ground guide to maneuver through these areas.

**11.6. Efficiency.** Conservation of fuel and agent should be strictly observed.

**11.7. Vehicle Maintenance, Repair and Refueling.**

11.7.1. Major discrepancies that effect the vehicle operation will be reported to the ECC immediately.

11.7.2. Where possible, fire truck maintenance will be dispatched to the vehicle's location. If fire apparatus and refueler maintenance is not available, submit a request for maintenance support. Firefighters should have knowledge of minor repairs.

11.7.3. Refueling will be accomplished at dispersal points when possible.

**11.8. Vehicle Kits.** All vehicles will maintain the following kits:

11.8.1. First Aid Kit.

11.8.2. TCCC Kit.

- 11.8.3. UXO/Contamination Marking Kit.
- 11.8.4. Decontamination Kit.
- 11.8.5. Installation CBRNE map (AOR Specific).

## Chapter 12

### EMERGENCY COMMUNICATION CENTER OPERATIONS

**12.1. General.** This chapter establishes procedures for operating the ECC. Due to the sensitive nature of the systems and information stored in the ECC, the ECC should be established in a facility that enables the user to have the ability to limit access to mission essential personnel only. **\*Note: ECCs may only be located at the MOBs\***

**12.2. Personnel.** Manpower for the ECC may not be available; this section may be manned by shift personnel at the direction of the SFO.

**12.3. Status Boards.** A status board will be maintained with the following information as a minimum:

12.3.1. Personnel by name, rank, AFSC, and position.

12.3.2. Vehicle by registration number, call sign, assigned crew, and dispersed MGRS coordinates.

12.3.3. Available resources by location, type, quantity, (i.e., gallon/pound, etc.) and grid coordinates.

12.3.4. EWS systems by location and capacity.

**12.4. Visual Aid Board.** A visual aid board will be maintained with the following information as a minimum:

12.4.1. Current alarm condition and MOPP level.

12.4.2. Building priority listings.

12.4.3. Pertinent phone numbers.

12.4.4. Pertinent information (i.e., duress words, sign/countersign, chemical codes, and installation control center directives).

12.4.5. Munition's locations if applicable.

**12.5. Maps.** The following maps should be maintained and updated as required and the alternate ECC should be similarly equipped.

12.5.1. Installation MGRS map with CBRNE zones and split MOPP sectors/zones.

12.5.2. Vehicle, personnel, and resource dispersal sites.

12.5.3. Buildings and airfield.

12.5.4. Roadways and bridges.

12.5.5. EWS systems.

12.5.6. Munitions/weapons storage locations.

**12.6. Communication Equipment.** The ECC, and if possible, the alternate ECC should be equipped with the following:

12.6.1. LMR (with multi-channel capability is preferred).

12.6.2. Hardline (i.e., field phone, etc.) with air traffic control tower, EOC, UCC, SFS, maintenance control and other agencies deemed appropriate by the SFO.

12.6.3. Fire reporting phone lines (from key locations).

12.6.4. Public Address system that broadcasts to the fire stations.

**12.7. Logbook.** The ECC operator should keep a daily logbook current with all pertinent information. The daily logbook in conjunction with checklists should be able to serve as a backup for status boards, visual aids, and charts in the event of ECC relocation.

## Chapter 13

### RADIO COMMUNICATION, PROCEDURES, AND DISCIPLINE

**13.1. General.** This chapter establishes procedures when utilizing radios as a means of communication. Radio communication procedures and discipline may be defined as the process of maintaining clear, decisive, open channels of communication with as little confusion and repetition as possible.

#### **13.2. Transmissions.**

13.2.1. Speak in plain language, i.e., unit responding, on location, in service, etc.

13.2.2. Vehicles may be assigned letter designation in accordance with their real-world vehicle radio call sign (i.e., Crash 10 will become Charlie 10).

13.2.3. Also, designators for A and B shift may be employed (i.e., Alpha or Bravo 10).

13.2.4. Vehicles may use letter designations as call signs. Personnel may be assigned letter designations also (i.e., Bravo-10; 1, 2, and 3).

13.2.5. An alternative to this is to code name the vehicle (i.e., Jackpot) and designate the personnel as 1, 2, and 3 (Lead Firefighter, Driver/Operator, Firefighter).

**13.3. Authentication Matrix.** Authentication matrix should be used to verify radio transmissions. All personnel should update their matrix as codes are used. For more information, see [Attachment 3](#).

#### **13.4. Duress Signal.**

13.4.1. Firefighters under duress should communicate the assigned duress words to the ECC followed by as much information as possible (i.e., location, and nature of problem, injuries, etc.).

13.4.2. Firefighters will then wait for direction from ECC or SFO.

13.4.3. If a firefighter under duress is unable to orally transmit a duress message, a secondary means should be established.

**13.5. Discipline.** Radio transmissions are reserved for pertinent communications only. General conversation and chit-chat are avoided to keep vital channels open and prevent efforts to locate dispersed units through tracking devices.



## Chapter 14

### SELF-CONTAINED BREATHING APPARATUS AIR SUPPLY

**14.1. General.** This chapter establishes procedures for SCBA air supply operations.

**14.2. Refilling.**

14.2.1. SCBA cylinders will not be filled while potential CBRNE contamination conditions exist.

14.2.2. SCBA cylinders will be filled by qualified personnel only. A bottle fill log will be used with annotations denoting bottle number, date and firefighter's printed name and signature.

**14.3. Decontamination.**

14.3.1. SCBA cylinders will not be filled while potential CBRNE contamination conditions exist.

14.3.2. SCBA cylinders will be filled by qualified personnel only. A bottle fill log will be used with annotations denoting bottle number, date filled and firefighter's printed name and signature.

**14.4. Breathing Air Re-Servicing.**

14.4.1. All cylinders requiring servicing are filled during attack preparation. Plastic caps/covers will be put on spare bottles to keep contaminants out.

14.4.2. Disperse as many spare bottles as possible with vehicles. The air filtration system and associated equipment will be stored in a suitable shelter and covered with plastic.

14.4.3. The air compressor intake valves and filters will be covered and taped closed. The air filtration system will be sealed in plastic. M8/M9 chemical detection paper will be affixed to the top and sides of air compressors to aid in identification and contamination avoidance.

14.4.4. Additional filter sets for the purification system will be stored in plastic bags.

14.4.5. SCBA re-servicing will not be conducted during an Alarm Red/Blue/Black condition where there is a potential chemical presence.

## Chapter 15

### INSTALLATION UTILITY OUTAGES

**15.1. General.** This chapter establishes procedures in the event of utility outages.

**15.2. Water.** When water services are interrupted, every effort should be made to conserve water. Out of service hydrants should be annotated on all maps. Crews should resupply vehicles as necessary utilizing existing EWS systems.

**15.3. Sewage.** When sewage service is interrupted, all personnel should make efforts to not over tax the waste treatment plant, or drains tied to the plant, by dumping excess water from firefighting operations or decontamination efforts into the system.

**15.4. Telephone.** When telephone services are interrupted, communication may be made by runner, radio, field phone, or cell phone.

**15.5. Gas.** When gas service is interrupted, all units should be notified. In the event of a fire or gas leak, F&ES should make efforts to contain or terminate the fire or leak. It may become necessary to shut off other facility utilities to prevent fire or damage.

**15.6. Electrical.** When electrical service is interrupted to the ECC, auxiliary power should be utilized. Consideration for finding an alternative electrical source to recharge batteries and portable devices should take immediate priority if the auxiliary power source fails (i.e., generator on vehicles).

**15.7. Radio Service.** It may become necessary to align vehicles in the field to act as repeaters for long distance transmissions. The ECC or SFO will manage this coordination on the scene.

**15.8. PACE.** The SFO will establish a PACE communications plan.

15.8.1. Primary – i.e., Two-Way Radios (PRC 163)/Base Stations

15.8.2. Alternate – i.e., alternate channel on Two-Way Radios/Base Stations

15.8.3. Contingency – i.e., Land Mobile Radios/Cell Phones

15.8.4. Emergency – i.e., Runners/Hand Signals **\*Note:** Ensure to contact Communications Squadron personnel to verify SKL key rollover dates if using encrypted communications on PRCs.

## Chapter 16

### CONTINGENCY FIRE PREVENTION

**16.1. General.** This chapter describes unique fire prevention and inspection issues to consider when operating in a contingency environment.

**16.2. Standard Compliance.** As with firefighter occupational safety and health and all aspects of F&ES, our goal is to meet the same criteria at deployed locations as we do at home station. However, this is not practical when operating at locations for short durations and using expedient construction methods. On the other hand, once a location becomes “enduring,” SFOs should consider adhering to established criteria as outlined in DoDIs, DAFIs, Unified Facility Criteria, Engineering Technical Letters, NFPA codes, and other relevant engineering and prevention documents.

**16.3. Facility Plans Reviews.** F&ES Flights will conduct plans reviews as required and coordinate with MAJCOM Fire Chief and engineering staff when needed.

**16.4. Reference Material.** Guidance for F&ES flights include the NFPA Code online on the AF Portal and applicable sources listed in [Attachment 1](#).

TOM D. MILLER, Lieutenant General, USAF  
DCS/Logistics, Engineering & Force Protection

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

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WMP-1, *Civil Engineer Supplement to the War and Mobilization Plan-1 (WMP-1)*, 13 April 2020, <https://portal.afcec.hedc.af.mil/CX/fes/SitePages/Home.aspx>

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*, 15 April 2022

AF Form 483, *Certificate of Competency*, 13 May 2020

AF Form 1800, *Operator's Inspection Guide and Trouble Report*, 1 April 2010

SF 91, *Motor Vehicle Accident Report*, 14 September 2020

DD Form 518, *Accident Identification Card*, 1 October 1978

***Abbreviations and Acronyms***

**AFSC**—Air Force Specialty Code

**AOR**—Area of Responsibility

**AFTTP**—Air Force Tactics, Techniques, and Procedures

**ARFF**—Aircraft Rescue and Fire Fighting

**ATF**—Air Task Force

**CBRNE**—Chemical, Biological, Radiological, Nuclear, and Explosive Materials

**CCA**—Contamination Control Area or Chemical Contamination Avoidance

**CE**—Civil Engineer

**DCW**—Deployable Combat Wing

**DoD**—Department of Defense

**ECC**—Emergency Communications Center

**EOC**—Emergency Operations Center

**EOD**—Explosive Ordnance Disposal

**EWS**—Emergency Water Storage

**FAD**—Force Activity Designator

**F&ES**—Fire and Emergency Services

**FPCON**—Force Protection Condition

**HazMat**—Hazardous Material

**IAW**—In accordance with

**IC**—Incident Commander

**ICCD**—Installation Control Center Directive

**IED**—Improvised Explosive Device

**IPE**—Individual Protective Equipment

**J-FIRE**—Joint Firefighter's Integrated Response Ensemble

**LIMFACS**—Limiting Factors

**MCO**—Major Combat Operations  
**MISCAPS**—Mission Capabilities  
**MOC**—Maintenance Operations Center  
**MOPP**—Mission- Oriented Protective Posture  
**NFPA**—National Fire Protection Association  
**OLS**—Optimum Level of Service  
**OPR**—Office of Primary Responsibility  
**PERSCO**—Personnel Support for Contingency Operations  
**POL**—Petroleum, Oil, and Lubricants  
**PPE**—Personal Protective Equipment  
**RIT**—Rapid Intervention Team  
**RM**—Risk Management  
**SCBA**—Self-Contained Breathing Apparatus  
**SFO**—Senior Fire Officer  
**TCCC**—Tactical Combat Casualty Care  
**TBM**—Tactical Ballistic Missile  
**TTP**—Tactics, Techniques, and Procedures  
**UCC**—Unit Control Center  
**UTC**—Unit Type Code  
**UXO**—Unexploded Ordnance  
**WBGT**—Water Bulb Globe Temperature  
**WMD**—Weapons of Mass Destruction  
**WRC**—Work/Rest Cycle

## Attachment 2

## SAMPLE DISPERSAL LOCATION CHECKLISTS

**Table A2.1. Fire Dept. Dispersal Location & Manpower Assignments.**

| Asset  | Personnel |       | Total | Sectors/<br>Zones | Location | MGRS |
|--|-----------|-------|-------|-------------------|----------|------|
|  | Day       | Night |       |                   |          |      |
| SFO  |           |       |       |                   |          |      |
| FCC  |           |       |       |                   |          |      |
| Operator   |           |       |       |                   |          |      |
| A/C  |           |       |       |                   |          |      |
| Station Chief  |           |       |       |                   |          |      |
| MCV # 1  |           |       |       |                   |          |      |
| MCV # 2  |           |       |       |                   |          |      |
| MCV # 3  |           |       |       |                   |          |      |
| Rescue   |           |       |       |                   |          |      |
| Pumper   |           |       |       |                   |          |      |
| Tanker (optional)  |           |       |       |                   |          |      |
| Security/ Shelter Management   |           |       |       |                   |          |      |
| <b>TOTAL</b>   |           |       |       |                   |          |      |
| <b>Note:</b> The SFO may direct different manpower assignments and different dispersal locations |           |       |       |                   |          |      |

**Table A2.2. Follow-on Forces or Alternate Vehicle Dispersal Sites.**

| <i>Asset</i>             | <i>Personnel</i> |              | <i>Total</i> | <i>Sectors/<br/>Zones</i> | <i>Geographic<br/>Location</i> | <i>MGRS</i> |
|--------------------------|------------------|--------------|--------------|---------------------------|--------------------------------|-------------|
|                          | <i>Day</i>       | <i>Night</i> |              |                           |                                |             |
| MCV # 4                  |                  |              |              |                           |                                |             |
| MCV # 5                  |                  |              |              |                           |                                |             |
| Pumper                   |                  |              |              |                           |                                |             |
| Command Van              |                  |              |              |                           |                                |             |
| HazMat<br>Trailer        |                  |              |              |                           |                                |             |
| Flat Bed P/U             |                  |              |              |                           |                                |             |
| Hose/Foam<br>Cart        | N/A              | N/A          | N/A          |                           |                                |             |
| Mobile Air<br>Compressor | N/A              | N/A          | N/A          |                           |                                |             |
| Support<br>Vehicle       | N/A              | N/A          | N/A          |                           |                                |             |

**Note:**  
1. Once vehicles reach their dispersal sites, a crew status check is to be accomplished. When status of crews is reported, the ECC updates the

appropriate work centers. Also, dispersal sites (tools and equipment, EWS, etc.) should be inspected/annotated for damage/contamination after every at- tack. This should be done at the first available opportunity and coordinated by the SFO.

2. Vehicles should be maintained in the station and simulated dispersed for real-world commitments.



## Attachment 3

## AUTHENTICATION MATRIX

Table A3.1. Sample Authentication Matrix.

|           | <i>A</i> | <i>B</i> | <i>C</i> | <i>D</i> | <i>E</i> | <i>F</i> | <i>G</i> | <i>H</i> | <i>I</i> | <i>J</i> | <i>K</i> | <i>L</i> | <i>M</i> |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>1</b>  | 28       | 81       | 1        | 79       | 9        | 92       | 10       | 97       | 96       | 7        | 71       | 40       | 19       |
| <b>2</b>  | 53       | 22       | 99       | 13       | 22       | 70       | 80       | 1        | 11       | 21       | 76       | 17       | 57       |
| <b>3</b>  | 4        | 87       | 17       | 69       | 38       | 2        | 23       | 27       | 44       | 49       | 12       | 50       | 14       |
| <b>4</b>  | 42       | 18       | 32       | 26       | 58       | 93       | 74       | 3        | 78       | 25       | 34       | 24       | 6        |
| <b>5</b>  | 29       | 73       | 18       | 46       | 82       | 15       | 26       | 15       | 5        | 66       | 56       | 11       | 13       |
| <b>6</b>  | 77       | 95       | 36       | 19       | 91       | 63       | 45       | 55       | 61       | 48       | 27       | 37       | 75       |
| <b>7</b>  | 10       | 62       | 59       | 88       | 2        | 6        | 68       | 20       | 5        | 28       | 23       | 29       | 34       |
| <b>8</b>  | 65       | 16       | 32       | 98       | 54       | 12       | 39       | 20       | 83       | 9        | 67       | 90       | 30       |
| <b>9</b>  | 52       | 16       | 85       | 8        | 94       | 47       | 31       | 35       | 4        | 89       | 30       | 3        | 43       |
| <b>10</b> | 33       | 41       | 25       | 8        | 72       | 7        | 21       | 33       | 60       | 84       | 31       | 54       | 14       |

**Note:** When authentication is required, sending members will call out a phonetic letter and a number. Receiving members will cross-reference the matrix to find the correct code to authenticate the communication.

**Note:** Matrix should be new and generated prior to deployment. To generate a randomized matrix using Microsoft Excel, create this chart and enter the formula "`=RANDBETWEEN(1,99)`" in each numbered cell. Once the formula is in each cell, simply put the cursor next to the formula and press "enter" and all numbers will change.

**Note:** All members must delete codes as they are used.

## Attachment 4

## SAMPLE TENT CITY FIRE SAFETY PLANNING AND INSPECTION CHECKLISTS

Table A4.1. Fire Safety Checklists.

| <i>Planning Task</i>          | <i>Inspection Item</i>   |
|-------------------------------|--|
| 1. Tent City Layout           | <p>a. Dispersed layout</p> <p>12 ft. between tents in a row (6-7 tents per row)</p> <p>60 ft. between tent rows (4 rows per group)</p> <p>150 ft. between tent groups (25-27 tents per group)</p> <p>b. Non-dispersed layout</p> <p>12 ft. between tents in a row (6-7 tents per row)</p> <p>30 ft. between tent rows (4 rows per group)</p> <p>60 ft. between tent groups (25-27 per group)</p> <p>c. Facility Group Areas.</p> <p>Refer to dispersal distance matrix (AFPAM 10-219V5)</p> <p>d. Marking Tents/Facilities</p> <p>Ensure tents/facilities and rows are named, numbered, and placarded.</p> <p>e. Vehicle Parking.</p> <p>Vehicle parking should not be allowed within tent city.</p> <p>Parking should be in designates areas only.</p> <p>f. Separation Distances</p> <p>Refer to recommended distanced between functional &amp; individual facilities (AFPAM 10-219V5)</p> |
| 2. Tent City Fire Inspections | <p>a. Conduct frequent inspections.</p> <p>b. Include flight supervisors.</p> <p>c. Invite ground safety personnel</p>   |
| 3. General inspection items   | <p>a. Electrical wiring, serviceability, and installation</p> <p>b. Check for unapproved extension cords or lighting.</p> <p>c. Ensure max 60-watt light bulbs in tent lighting to prevent pyrolysis of tent material and possible fire.</p> <p>d. Ensure AC/heating units, generators, and similar equipment is positioned far enough away from tents to maximize safety.</p> <p>e. Electrical equipment is properly grounded.</p> <p>f. Proper aisle space inside tents</p>  |

|  |  |
|--|--|
| 4. Special Hazard Areas  | <p>a. Field kitchens</p> <p>Burner refueling located 50 ft. from tents/facilities and lighting/generator equipment; fire extinguisher is readily available.</p> <p>No accumulation of grease on tent surfaces</p> <p>Grease disposal areas at least 8 ft. from tents</p> <p>A minimum of 2 fire extinguishers with rating of 2A: 40 BC provided for cooking areas; extinguishers located at entrances to cooking areas.</p> <p>Electrical distribution panel located at least 6 ft. from kitchen tent and of protected connector type.</p> <p>Electrical generators positioned at least 15 ft. from tent walls; fuel tanks positioned remote as possible from generators &amp; diked with fuel lines protected.</p> <p>Portable water heaters at least 20 ft. from serving area</p> <p>Adequate aisles and exits are maintained.</p> <p>b. Generators</p> <p>Fuel bladders located as far as practical from other facilities</p> <p>Fuel bladders earth bermed to contain any spillage/leak; earthen berms capable of containing 125% of tank capacity.</p> <p>All generators properly grounded.</p> <p>An extinguisher with minimum rating of 2A:10 B, C is available in the area.</p> <p>“No Smoking” signs posted around fuel storage areas</p> <p>Vegetation control in generator and fuel storage areas.</p> <p>c. Medical Facilities</p> <p>In addition to general inspection areas, ensure at least one 150-LB flightline fire extinguisher available for air evacuation/helipad operations</p> |
| 5. Fire Reporting  | <p>a. At least 1 local signaling device in/near each tent grouping to warn personnel of fire (warning triangle, blow horn with a unique sound, or other distinct signaling devices)</p> <p>b. A bullhorn or public address system available at Mayor’s tent/office to use in event of a fire.</p> <p>c. Telephone/radio link to Fire Communication Center from Mayor’s tent/office if designated fire reporting phone lines not available (i.e., 911 or 117)</p> <p>d. See general fire prevention and reporting procedures attachment for additional details</p>  |
| <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Post this checklist in a readily accessible, highly visible area.</li> <li>2. Senior member ensures all assigned personnel are familiar with the contents and their responsibilities in these checklists.</li> <li>3. Suggest submitting this attachment for installation control center directive (ICCD) or faxing to appropriate agencies.</li> </ol> |  |

## Attachment 5

## SAMPLE MUNITIONS STORAGE AREAS SAFETY PLANNING AND INSPECTION CHECKLISTS

Table A5.1. Storage Checklists.

| <i>Planning Task</i>  | <i>Inspection Item</i>  |
|---|---|
| 1. General Layout   | <p>a. Minimum distance from other facilities (AFPAM 10-219V5 and AFMAN 91-201).</p> <p>b. Minimum separation distances based upon storage.</p>  |
| 2. General Storage Requirements   | <p>a. Open storage without any type of barricades, munitions storage should be temporary only. Separation distances between stacks are maintained (AFPAM 10-219V5).</p> <p>b. Covered storage Normally accomplished by using igloo ammunition storage facilities or combat zone type steel arch or culvert igloos/covered igloos. Net Explosive Weight (NEW) in nonstandard earth covered igloos is 250,000 pounds (quantity- distance criteria outlined in AFPAM 10-219V5).</p>                                    |
| 3. Fire Prevention Practices  | <p>a. Ensure flame and spark-producing devices are kept out of the area.</p> <p>b. Maintain proper separation distances and vegetation control.</p> <p>c. Ensure refuse and packing material is not allowed to accumulate.</p> <p>d. Ensure firebreaks provided around each storage area.</p> <p>e. Intentional/controlled burning should not be permitted without Installation Fire Chiefs approval.</p> <p>f. No flammable liquids for cleaning.</p> <p>g. Flammable storage should be located at least 50 ft</p> |
| <i>Planning Task</i>  | <i>Inspection Item</i>  |
|   | <p>from explosive storage locations.</p> <p>h. Vehicles, other than those loading or unloading, not parked closer than 25 ft to any storage facility.</p>   |
| <p><b>Notes:</b></p> <p>is checklist in a readily accessible, highly visible area.</p> <p>2. Senior member ensures all assigned personnel are familiar with the contents and their responsibilities in these checklists.</p> <p>3. Suggest submitting this attachment for ICCD or faxing to appropriate agency.</p> |   |

## Attachment 6

**FIRE EMERGENCY SERVICES GUIDE FOR AUXILIARY FIREFIGHTING TEAMS**

**A6.1. At contingency locations, it is likely that firefighters will be engaged in mission essential F&ES tasks.** In such situations, firefighters may be unable to respond to incidents involving lesser priorities as listed in base emergency management plans. Therefore, fire prevention training becomes crucial so non-firefighting personnel can intervene early to extinguish small fires.

**A6.2. Chapter 4 in AFPAM 10-219, Volume 3, provides additional information for auxiliary firefighting tactics and training.** The following checklist provides a brief overview of firefighting actions.

**Table A6.1. Auxiliary Firefighting.**

| <b>GENERAL FIREFIGHTING AND REPORTING PROCEDURES</b>   |  |
|--|--|
| <p>D Know location &amp; operation of fire extinguishers prior to needing them. D Fight small fires within limitations of extinguisher &amp; personal training. D Always operate using buddy system, work in teams.</p> <p>D Maintain fire escape route to your back and never allow fire to get between you &amp; your way out.</p> <p>D For auxiliary firefighters trained to utilize fire hoses/nozzles and fire pumps, always perform within the realms of your training.</p> <p>D Always remember, if fire gets out of control, evacuate &amp; try to contain fire to building from outside. Limit spread of fire to adjacent structures.</p> |  |
| <b>BASIC FIREFIGHTING METHODS</b>  |  |
| <b>Type</b>  | <b>Methods</b>   |
| Fire Prevention  | D Preventing fires is always the best line of defense.   |
| Structural Fire  | <p>D Do not enter a burning building to fight a fire.</p> <p>D If fire is found in early stages of development, the appropriate fire extinguisher can extinguish the fire.</p>   |
| Structural Fire (cont.)  | D Auxiliary firefighters with proper training can utilize hose streams from exterior in order to control the spread of fire.   |
| Vehicle Fire   | <p>D A fuel fire can be put out with a portable fire extinguisher.</p> <p>D Do not allow flowing fuel to flow towards you.</p> <p>D Do not stand in puddles of fuel.</p> <p>D If fuel tank has ruptured; do not attempt to fight the fire.</p> <p>D Remove exposures if this can be done safely.</p> |
| Electrical Fire  | <p>D Never use water on an electrical fire.</p> <p>D Only use type C fire extinguishers.</p>   |
| Gas Fire<br>(Natural/ Propane)   | <p>D Turn gas off at shut-off valve and fight fire as a structural or tent fire.</p> <p>D Do not extinguish the fire prior to removing the fuel source.</p>  |
| Tent Fire  | D Fire spreads with alarming speed in a tent fire and can be very dangerous.   |
| Ground<br>Cover Fire   | D Utilize shovels, rakes, fire brooms, etc.  |
| <b>Note:</b> Suggest submitting this attachment for ICCD or faxing to appropriate agencies.  |  |

## Attachment 7

### GENERAL FIRE PREVENTION AND REPORTING PROCEDURES

#### **A7.1. Tent Chief.** Senior member assigned to each tent has the following responsibilities:

A7.1.1. Ensure personnel assigned to your tent are familiar with this checklist and their fire prevention and reporting responsibilities.

A7.1.2. Ensure this checklist is posted in each tent, readily available and visible for use in the event of an emergency.

#### **A7.2. Fire Reporting and Evaluation.**

A7.2.1. SOUND THE ALARM. YELL FIRE, FIRE, FIRE.

A7.2.1.1. Evacuate the tent area immediately.

A7.2.1.2. Get far enough away to ensure safety.

A7.2.1.3. Take a head count to ensure everyone evacuated safely.

A7.2.1.4. Do not reenter a burning structure for any reason.

#### **A7.3. Report the fire.**

A7.3.1. Use designated fire phone number or locally established fire reporting procedures.

A7.3.2. Provide your name and telephone number/radio call sign where you can be reached.

A7.3.3. Provide a detailed description:

A7.3.4. Type of fire.

A7.3.5. Size of fire.

A7.3.6. Location of the fire.

A7.3.7. Other pertinent information, i.e. number of victims.

A7.3.7.1. Contact your UCC immediately and follow up to ensure it's been reported.

A7.3.7.2. Firefighters may not be able to respond; in the event this occurs, implement auxiliary firefighting procedures (see Auxiliary Firefighting Checklist in \*Note: DO NOT attempt to extinguish the fire unless you can do so safely.

A7.3.7.3. REMEMBER: While fighting fire in MOPP 4, your protective mask will not protect you from the products of combustion. Stay upwind and always have an escape route at your back.

A7.3.7.4. Evacuate adjacent tents and facilities.

A7.3.7.5. Drop adjacent tents if you can do so safely.

## Attachment 8

## SAMPLE F&amp;ES OPERATIONAL CHECKLISTS

Table A8.1. Chain of Command/Duty Assignment Charts.

| <b><i>DUTY ASSIGNMENTS</i></b> |             |           |             |                    |              |                    |
|--------------------------------|-------------|-----------|-------------|--------------------|--------------|--------------------|
| <b>First</b>                   | <b>Last</b> | <b>MI</b> | <b>RANK</b> | <b>Duty Assign</b> | <b>DEROS</b> | <b>Duty Assign</b> |
|                                |             |           | CMSgt       |                    |              |                    |
|                                |             |           | SMSgt       |                    |              |                    |
|                                |             |           | MSgt        |                    |              |                    |
|                                |             |           | TSgt        |                    |              |                    |
|                                |             |           |             |                    |              |                    |
|                                |             |           |             |                    |              |                    |

Table A8.2. Fire and Emergency Services Dispersal Plan.

| <b><i>CALL SIGN/ VEHICLE/<br/>REGISTRATION</i></b> | <b><i>ASSIGNMENTS</i></b> |                           | <b><i>DISPERSAL<br/>LOCATION</i></b> | <b><i>STATUS</i></b> |
|--|---------------------------|---------------------------|--------------------------------------|----------------------|
|  | <b><i>Day Shift</i></b>   | <b><i>Night Shift</i></b> |                                      |                      |
| Chief 1 C2 REG #<br>Weapon #                       |                           |                           |                                      | Personnel            |
|  |                           |                           |                                      | Fuel                 |
|  |                           |                           |                                      | Equipment            |
| Chief 2 C2 REG #<br>Weapon #                       |                           |                           |                                      | P:                   |
|  |                           |                           |                                      | F:                   |
|  |                           |                           |                                      | E:                   |
| Command Van Step Van REG. #<br>Weapon #            |                           |                           |                                      | P:                   |
|  |                           |                           |                                      | F:                   |
|  |                           |                           |                                      | E:                   |
| Rescue P-XX REG. #<br>Weapon #                     |                           |                           |                                      | P:                   |
|  |                           |                           |                                      | F:                   |
|  |                           |                           |                                      | E:                   |

Table A8.3. Emergency Water Source Locations.

| <b><i>IDENTIFIER.</i></b> | <b><i>MGRS COORD</i></b> | <b><i>CAPACITY</i></b> | <b><i>STATUS</i></b> |
|---------------------------|--------------------------|------------------------|----------------------|
| EWS SITE # 1              |                          |                        |                      |
| EWS SITE # 2              |                          |                        |                      |
| TANK # 1                  |                          |                        |                      |
| TANK # 2                  |                          |                        |                      |
| TANK # 3                  |                          |                        |                      |
| TANK # 4                  |                          |                        |                      |
| TANK # 5                  |                          |                        |                      |
| TANK # 6                  |                          |                        |                      |
| TANK # 7                  |                          |                        |                      |
| TANK # 8                  |                          |                        |                      |
| RAW WATER # 1             |                          |                        |                      |
| RAW WATER # 2             |                          |                        |                      |
| RAW WATER # 3             |                          |                        |                      |
| POOL                      |                          |                        |                      |
| DRAFTING PIT              |                          |                        |                      |

|       |  |  |  |
|-------|--|--|--|
| RIVER |  |  |  |
|-------|--|--|--|

**Table A8.4. Important Contact Information.**

| <i>NAME</i>             | <i>PHONE</i> | <i>CALL SIGN</i> | <i>LOCATION/GRID</i> |
|-------------------------|--------------|------------------|----------------------|
| EOC                     |              |                  |                      |
| Alternate               |              |                  |                      |
| UCC – CE Reps.          |              |                  |                      |
| Alt. UCC – CE Reps.     |              |                  |                      |
| Tertiary UCC – CE Reps. |              |                  |                      |
| BCE                     |              |                  |                      |
| Alternate               |              |                  |                      |
| Tower                   |              |                  |                      |
| Alternate               |              |                  |                      |
| MOC                     |              |                  |                      |
| Alternate               |              |                  |                      |
| MUNS                    |              |                  |                      |
| Alternate               |              |                  |                      |
| Trans                   |              |                  |                      |
| Alternate               |              |                  |                      |
| Fuels                   |              |                  |                      |
| Alternate               |              |                  |                      |
| SFS                     |              |                  |                      |
| Alternate SFS           |              |                  |                      |
| ECC                     |              |                  |                      |
| Alternate               |              |                  |                      |
| Tertiary                |              |                  |                      |
| Medical                 |              |                  |                      |
| Alternate               |              |                  |                      |

**Table A8.5. Preparation Checklist.**

| TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA |  | OPR:            | DATE:     |     |
|--|--|-----------------|-----------|-----|
| 1. Preparation Checklist               |  | XXX CES/<br>CEF | Oct 2005  |     |
| NO.                                    | ITEM   | Go              | No/<br>Go | N/A |
| 1                                      | <b>FACILITY:</b><br><b>A. Blackout/Tone down/Hardening Actions:</b><br>- Turn off all outside lighting. Disable automatic exterior lights.<br>- Install Blackout boards or window covers on all exterior windows.<br>- Cover all bldg. numbers & facility use ID markings.<br>- Install camouflage netting over covered access to entry control point (ECP).<br>- Lock all exterior doors & establish single entry point (as required by FPCON levels). Post signs on all doors (except ECP) stating “Door Locked - Use Main Entrance.”<br>- Post current FPCON level on entry door and toxic free area (TFA) entry/exit.<br>- Place M-8 chemical detection boards.<br>- Place weapon clearing procedures sign near weapons clearing barrel outside ECP. |                 |           |     |



|  |  |  |  |
|--|--|--|--|
|  | <ul style="list-style-type: none"> <li>- Place weapon storage rack inside ECP.</li> <li>- Ensure shuffle boxes are in place outside of main ECP &amp; outside of TFA main entrance. Ensure brushes are available; boxes are filled with sand &amp; have covers.</li> <li>- Hang shuffle box instructions.</li> <li>- Shelter manager's/security will use UXO marking kit to conduct facility sweeps.</li> </ul> <p><b>B. Establish CCA Processing Line.</b></p> <ul style="list-style-type: none"> <li>- Set up various stations and instructional signs.</li> <li>- Position additional JS-LIST/J-FIRE items near CCA/TFA processing line.</li> </ul> <p><b>C. Emergency Generator Procedures</b></p> <ul style="list-style-type: none"> <li>- The emergency generator will be inspected as soon as possible. Check fuel and top off as required.</li> <li>- Harden generator fuel tank.</li> <li>- M-8 placards will be placed on a horizontal surface around the generator facility.</li> </ul> <p><b><u>VEHICLES:</u> SEE VEHICLE PREPARATION CHECKLIST</b></p> <p><b><u>VEHICLE DISPERSAL SITES:</u> Camouflage &amp; Hardening Actions:</b></p> <p><b>A. Set-up camouflage splinter protection and contamination avoidance.</b></p> <ul style="list-style-type: none"> <li>- Erect frame to support plastic and camouflage covering at sites.</li> <li>- Establish vehicle splinter protection, defensive fighting position and bunker.</li> <li>- Install concertina wire around dispersal site to control access.</li> </ul> <p><b>B. Ensure equipment items are secured and protected inside splinter protected areas.</b></p> <p><b><u>EMERGENCY COMMUNICATION CENTER AND ALTERNATE LOCATIONS:</u></b></p> <p><b>A. Primary ECC (Bldg. XXX):</b></p> <ul style="list-style-type: none"> <li>- Restrict access.</li> <li>- Inventory ECC Kit and place in the ECC.</li> <li>- Prepare Bug Out Kit</li> </ul> <p><b>B. Alternate ECC (Bldg. XXX):</b></p> <ul style="list-style-type: none"> <li>- Inventory the Alternate ECC Kit.</li> </ul> <p>Inspect phone and radios.</p> <p><b><u>INDIVIDUAL PROTECTIVE EQUIPMENT (IPE) FOR MOPP 0 OR HIGHER:</u></b></p> <p><b>A. Personnel:</b></p> <ul style="list-style-type: none"> <li>- Inspect members for ID Card, Line Badge, Dog Tags, and other documents as locally required, place in outer pocket.</li> <li>- Inspect protective mask and update your inspection card, re-inspect at proper intervals.</li> </ul> <p><b>B. IPE:</b></p> <ul style="list-style-type: none"> <li>- Mark JS-LIST gear with M-9 tape IAW AFTTP 3-4</li> </ul> <p>Mark items with Kill Tag numbers, fill canteen and don IPE to current MOPP - Ensure personnel have required equipment to include helmet, web belt, canteen, body armor, protective mask, flashlight</p> |  |  |
|--|--|--|--|

|  |  |  |  |  |
|--|--|--|--|--|
|  | Ensure EWS hardening/splinter protection is accomplished.4 |  |  |  |
|--|--|--|--|--|

**Table A8.6. Vehicle and Equipment Dispersal Sites.**

| TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA   |  | OPR:           | DATE:    |
|--|--|----------------|----------|
| 2. Vehicle and Equipment Dispersal Sites |  | XXX<br>CES/CEF | Oct 2023 |
| NO.                                      | ITEM   |                |          |
| 1  | <b>Vehicle/Equipment Dispersal Sites:</b><br><br><u>SITE</u> <u>GRID</u> <u>LOCATION</u> <u>VEHICLE</u> <u>SECTOR/ZONE</u><br>-   ALPHA BRAVO CHARLIE DELTA ECHO FOXTROT ECC<br>-   Alt. ECC<br>-   Mobile Air Trailer Firefighting agent/Hose SCBA Units F3 5-gal CN<br>-   PKP 50-lbs CN |                |          |

**Table A8.7. Dispersal Trailer Inventories.**

|  |      |                      |           |     |
|--|------|----------------------|-----------|-----|
| TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA |      | OPR: XXX<br>CES/ CEF | DATE:     |     |
| 3. Dispersal Trailer Inventories       |      |                      | Oct 2023  |     |
| NO.                                    | ITEM | Go                   | No/<br>Go | N/A |

|   |  |  |  |  |
|---|--|--|--|--|
| 1 | <b>ALPHA Site Trailer (Crash Truck):</b> <ul style="list-style-type: none"> <li>- Spare Tire and Rim, Qty (1 EA)</li> <li>- 3% F3 in 5-gal containers</li> <li>- 100' of 3" Supply Hose and misc. tools and adapters</li> <li>- 5-gal Diesel Jerry Can, Qty (2 EA)</li> <li>- SCBA Units, Qty (3 EA)</li> <li>- Extra SCBA Cylinders, Qty (3 CY)</li> <li>- 50-lb Cans of PKP, Qty (3 CN) or 150 pounds</li> </ul>   |  |  |  |
| 2 | <b>BRAVO Site Trailer (P-23 Crash Truck):</b> <ul style="list-style-type: none"> <li>- P-23 Spare Tire and Rim, Qty (1 EA)</li> <li>- 3% F3 in 5-gal containers,</li> <li>- 100' of 3" Supply Hose and misc. tools and adapters</li> <li>- 5-gal Diesel Jerry Can, Qty (2 EA)</li> <li>- MSA SCBA Units, Qty (3 EA)</li> <li>- Extra SCBA Cylinders, Qty (3 CY)</li> <li>- 50-lb Cans of PKP, Qty (3 CN) or 150 pounds</li> </ul>  |  |  |  |
| 3 | <b>CHARLIE Site Trailer (Water Tanker):</b> <ul style="list-style-type: none"> <li>- Spare Tire and Rim, Qty (1 EA)</li> <li>- 100' of 3" supply hose and misc. tools and adapters</li> <li>- 5-gal Diesel Jerry Can, Qty (1 EA)</li> <li>- SCBA Units, Qty (1 EA)</li> <li>- Extra SCBA Cylinder, Qty (1 CY)</li> <li>- 500' of 5" Supply Hose</li> </ul>   |  |  |  |
| 4 | <b>DELTA Site Trailer (Crash Truck):</b> <ul style="list-style-type: none"> <li>- Spare Tire and Rim, Qty (1 EA)</li> <li>- 3% F3 in 5-gal containers</li> <li>- 100' of 3" supply hose and misc. tools and adapters</li> <li>- 50-lb Cans of PKP, Qty (3 CN) or 150 pounds</li> <li>- 5-gal Diesel Jerry Can, Qty (2 EA)</li> <li>- SCBA Units, Qty (3 EA)</li> <li>- Extra SCBA Cylinders, Qty (3 CY)</li> </ul>   |  |  |  |
| 5 | <b>ECHO Site Trailer (Structural Pumper):</b> <ul style="list-style-type: none"> <li>- Power Saw Kit and extra blades.</li> <li>- Spare Tire and Rim, Qty (1 EA)</li> <li>- 1000' of 5" supply hose &amp; misc. tools &amp; adapters</li> <li>- 5-gal Diesel Jerry Can, Qty (1 EA)</li> <li>- SCBA Units, Qty (4 EA)</li> <li>- Extra SCBA Cylinders, Qty (4 CY)</li> <li>- 3% F3 in 5-gal containers</li> </ul>   |  |  |  |
| 6 | <b>FOXTROT Site Trailer (Crash Truck):</b> <ul style="list-style-type: none"> <li>- Spare Tire and Rim, Qty (1 EA)</li> <li>- 3% F3 in 5-gal containers</li> <li>- 100' of 3" supply hose and misc. tools and adapters</li> <li>- 50-lb Cans of PKP, Qty (3 CN) or 150 pounds</li> <li>- 5-gal Diesel Jerry Can, Qty (1 EA)</li> <li>- 200' of 1-3/4" Fire Attack Hose Lines and spare TFT nozzle, Qty (2 EA)</li> <li>- SCBA Units, Qty (3 EA)</li> <li>- Extra SCBA Cylinders, Qty (3 CY)</li> </ul> |  |  |  |
| 7 | <b>SUPPORT Vehicle Trailer:</b> <ul style="list-style-type: none"> <li>- Spare Tire &amp; Rims (1 each per vehicle type)</li> <li>- 5-gal Diesel Jerry Can, Qty (1 EA) and 5-gal MOGAS Jerry Can, Qty (1 EA)</li> <li>- Gross Decon buckets &amp; brushes</li> </ul>   |  |  |  |

**Table A8.8. Vehicle Preparation Checklist.**

| TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA |  | OPR: XXX<br>CES/ CEF | DATE:     |     |
|--|--|----------------------|-----------|-----|
| 4. Vehicle Preparation Checklist       |  |                      | Oct 2023  |     |
| NO.                                    | ITEM   | Go                   | No/<br>Go | N/A |
| 1                                      | Items required: Vehicle Kits (Decon, UXO, self-aid & buddy care), inventory checklist, M-9 tape, freshwater containers and vehicle books.<br>- Conduct complete vehicle checkout and inventory using vehicle books, appropriate checklists, vehicle Tech Order excerpts, and AF 18XX cards.<br>- Top off vehicle with fuel and oils as required.<br>- Ensure agent is topped off as required.<br>- Inventory and store vehicle kits.<br>- Check first aid kit for seal and current date.<br>- Place spare SCBA air bottles on each vehicle.<br>- Place full freshwater container on each vehicle; attach a piece of M-8 on top of the container. |                      |           |     |
| 2                                      | Complete other passive defense measures.<br>- Camouflage.<br>- Expedient hardening/splinter protection.<br>- Blackout vehicles.<br><b>*Remember, if you can be seen, you are a target*</b>   |                      |           |     |
| 3                                      | Place M-8 on horizontal surfaces.<br>- Mark M-8 with date & time placed on vehicle.<br>Replace and re-mark if contaminated or saturated.<br>- Cover vehicle registration numbers or unit ID during FPCON "Charlie" or higher levels.   |                      |           |     |
| 4                                      | <b>DECON, Tactical Combat Casualty Care (TCCC) and Unexploded Ordnance (UXO) Kits:</b><br>- Inventory & place a vehicle decon kit on each vehicle.<br>- Inventory & place a TCCC kit on each vehicle.<br>- Inventory & place a UXO Marking kit on each vehicle<br>vehicle Kits should include:   |                      |           |     |
|  | <b>DECON KIT</b><br>- Bucket<br>- Bug Sprayer<br>- Bleach<br>- Decontamination mitt/paper bag<br>- Brushes; long and short handled<br>- Sponges<br>- Plastic bags and rubber bands to seal SCBA bottle connections<br>- Plastic bags<br><b>TCCC KIT</b><br>- Assorted splints<br>- Triangle bandages<br>- Slings<br>- Assorted bandages<br><b>UXO KIT</b><br>- Markers for UXO and contamination.<br>- Chemical “Glow Sticks.”<br>- Surveyors ribbon and stakes.<br>- Flashlight.<br><b>Maintain the following items on each Emergency Response Vehicle:</b><br>- AF Form 1800 - Operator's Inspection Guide and Trouble Report                  |                      |           |     |

|  |   |  |  |  |
|--|---|--|--|--|
|  | <ul style="list-style-type: none"><li>- Vehicle's Waiver Card</li><li>- Vehicle Equipment/Tool Inventory Sheet</li><li>- Standard Form 91 - Motor Vehicle</li></ul> <b>Accident Report</b> <ul style="list-style-type: none"><li>- DD Form 518 - Accident Identification Card</li><li>- SCBA Operator Inspection</li></ul> <b>Checklist (as applicable)</b> <ul style="list-style-type: none"><li>- Vehicle Fuel Key</li><li>- Decontamination Kit</li><li>- TCCC Kit</li></ul> |  |  |  |
|--|---|--|--|--|

## Attachment 9

## MISCAPS

**A9.1. Force Packages. Personnel UTC's.** There are three (3) F&ES personnel UTCs. F&ES teams organize based on mission assigned aircraft, structural firefighting requirements, other required emergency services, and levels of acceptable risk.

**A9.1.1. UTC: 4FPN, Title: EN Deputy or Fire Chief Manager.** Provides essential F&ES management for wing personnel and firefighters when combined with a 4FPFJ, or 4FPFP UTC in support of bedding down, sustaining, and recovering garrison and contingency locations for natural and manmade disaster response. Advises senior leadership on vital information for minimizing loss of life, property damage, and limiting damage from fire that would seriously degrade mission capability. Personnel will deploy with individual protective equipment and personal protective equipment, weapons and ammo. Lower skill level substitution is not allowed. Base operating support is required.

**Table A9.1. Man-hour capability based on 12-hrs/day: F&ES man-hours = 12.**

| <i>FAC</i>  | <i>Grade</i>       | <i>AFSC</i>        | <i>AFSC Title</i>      | <i>Qty</i> |
|-------------|--------------------|--------------------|------------------------|------------|
| <i>44F1</i> | <i>CMSgt/SMSgt</i> | <i>3E700/3E791</i> | <i>Fire Protection</i> | <i>1</i>   |

**A9.1.2. UTC: 4FPJ , Title EN Firefighter Management 2 PS TM.** Provides fire ground/HazMat incident C2 for single or multiple 4FPFP UTCs in support of bedding down, sustaining, and recovering garrison and contingency locations for natural and manmade disaster. Team is capable of providing 24-hour fire ground incident C2 for aircraft, structural, Petroleum, Oil, and Lubricants (POL), and munitions fire suppression and rescue operations. Team is also capable of providing Expeditionary Combat Support (ECS) fire prevention functions and limited fire prevention inspections. Personnel will deploy with individual protective equipment and personal protective equipment, weapons, and ammo. Skill level substitution is not allowed. Base operating support is required.

**Table A9.2. Man-hour capability based on 12-hrs/day: F&ES man-hours = 24.**

| <i>FAC</i>  | <i>Grade</i>     | <i>AFSC</i>  | <i>AFSC Title</i>      | <i>Qty</i> |
|-------------|------------------|--------------|------------------------|------------|
| <i>44F1</i> | <i>MSgt/TSgt</i> | <i>3E771</i> | <i>Fire Protection</i> | <i>1</i>   |
| <i>44F1</i> | <i>MSgt/TSgt</i> | <i>3E771</i> | <i>Fire Protection</i> | <i>1</i>   |

**A9.1.3. UTC: 4FPFP , Title: EN Firefighter Truck Crew 6 PS TM.** Provides 24-hour staffing for a single ARFF vehicle operation or for one rapid resupply water tender and fire alarm communications in support of bedding down, sustaining, and recovering garrison and contingency locations for natural and manmade disaster. One 4FPFP UTC is required for each ARFF vehicle. When combined with additional 4FPFP UTCs, one 4FPFJ and one 4FPFN UTC is required. Capable of providing 24-hour crash rescue/fire suppression service and fire ground C2. Also provides limited support for structural, POL, and munitions fires. HazMat response capability is limited to HazMat defensive operations only. Personnel will deploy with individual protective equipment and personal protective equipment, weapons, and ammo. Substitutions authorized for execution, reporting, and posturing IAW AFI 10-403.

**Table A9.3. UTC: 4FPFP, Title: EN Firefighter Truck Crew 6 PS TM.**

| <i>FAC</i> | <i>Grade</i> | <i>AFSC</i> | <i>AFSC Title</i>   | <i>Qty</i> |
|------------|--------------|-------------|---------------------|------------|
| 44F1       | AB - SrA     | 3E731       | FIRE PROTECTION APR | 2          |
| 44F1       | Amn - SSgt   | 3E751       | FIRE PROTECTION     | 3          |
| 44F1       | SSgt - MSgt  | 3E771       | FIRE PROTECTION     | 1          |

**A9.2. Equipment Packages. Equipment UTCs/Vehicle UFM.** There are sixteen (16) F&ES equipment UTCs/UFMs.

**A9.2.1. UTC: 4F9FB. Title: EN Firefighter Self-Contained Breathing Apparatus (SCBA) Package.** Provides deployed firefighters with SCBA backplate and hose assemblies, air cylinders, and facepieces providing capability to support immediate danger to life and health emergency response operations in support of regional conflicts, Major Combat Operations (MCO), and natural disaster relief efforts for ARFF and/or structural firefighting emergency response operations.

**A9.2.2. 4F9FC, Engineer Firefighter Foam Package.** Consists of 420 gallons of foam to support two UFM38 P-19Cs. This is designed to provide foam resupply without the inclusion of additional equipment items located within the 4F9FR.

**A9.2.3. 4F9FE, EN Firefighter Communications Package.** Provides deployed firefighters with essential communications to perform limited firefighting operations in support of regional conflicts, MCOs, and natural disaster relief efforts for both crash and/or structural firefighting operations.

**A9.2.4. 4F9FF, EN Firefighter SCBA Compressor.** Provides deployed firefighters with essential breathing air reservicing capability to support limited firefighting operations in support of regional conflicts, MCOs, and natural disaster relief efforts for both crash and/or structural firefighting operations.

**A9.2.5. 4F9FX, EN Firefighter Station Support Kit.** Provides deployed firefighters with essential firefighting equipment to perform limited firefighting operations to bed down, sustain, and recover garrison and contingency locations for natural and manmade disaster response for both crash and/or structural firefighting operations.

**A9.2.6. 4F9FR, EN Firefighter Aircraft Rescue Support Kit.** Provides two deployed Aircraft Rescue Firefighting Vehicles with essential firefighting equipment to perform limited aircraft firefighting operations to bed down, sustain and recover garrison and contingency locations for natural and manmade disaster response for both crash and/or structural operations. Must be deployed with either UFM36 and/or UFM38.

**A9.2.7. 4F9FS, EN Firefighter Structural Support Kit.** Provides one deployed structural vehicle or water tanker with essential firefighting equipment to perform limited structural firefighting operations to bed down, sustain and recover garrison and contingency locations for natural and manmade disaster response. Must be deployed with either the UFM33, UFM34 or UFM35.

**A9.2.8. 4F9FZ, EN Firefighting and Rescue Utility Package.** Provides deployed firefighters at forward operating sites and contingency locations equipment to perform limited firefighting and rescue operations in support of regional conflicts. Must be deployed as part of

Establish the Air Base (EAB) Force Element (FE) in support of Forward Operating Site (FOS) and Contingency Location (CL) requirements.

A9.2.9. **UFM32, F&ES Vehicle.** Provides P-18 Water Tanker.

A9.2.10. **UFM33, F&ES Vehicle.** Provides P-26 Water Tanker.

A9.2.11. **UFM34, F&ES Vehicle.** Provides P-24 Pumper.

A9.2.12. **UFM35, F&ES Vehicle.** Provides P-22 Pumper.

A9.2.13. **UFM36, F&ES Vehicle.** Provides P-23 Crash Rescue.

A9.2.14. **UFM38, F&ES Vehicle.** Provides P-19C Crash Rescue.