BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE MANUAL 10-2504

1 DECEMBER 2009

Operations



AIR FORCE INCIDENT MANAGEMENT GUIDANCE FOR MAJOR ACCIDENTS AND NATURAL DISASTERS

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This manual implements Air Force Policy Directive (AFPD) 10-2, Readiness; AFPD 10-25, Emergency Management; and Air Force Instruction (AFI) 10-2501, Air Force Emergency Management Program Planning and Operations. It also aligns the Air Force Emergency Management Program with Homeland Security Presidential Directive 5 (HSPD-5), the National Incident Management System (NIMS) and the National Response Framework (NRF). This manual also supplements the Air Force Incident Management System (AFIMS) based on the NIMS methodology and aligns Air Force Emergency Management (EM) planning and response with the NRF as directed by HSPD-5. This manual integrates major accident and natural disaster procedures and standards for planning, logistical requirements, emergency response actions, emergency response organizational guidelines, exercises and evaluations, personnel training, detection, identification, warning and notification actions. Establishes responsibilities, procedures and standards for prevention, preparedness, response, recovery, and mitigation resulting from major accidents or natural disasters within the continental United States (CONUS) and Outside the Continental United States (OCONUS). It prescribes the planning process to help responders achieve unity of effort, allocate and use resources effectively and identify shortfalls in response capabilities. This publication applies to Active Duty, Air Force Reserve Command (AFRC) and Air National Guard (ANG) units. Consult cited policy directives, instructions, manuals and their supplements for specific policies, procedures and requirements. Send recommended changes and major command (MAJCOM) supplements to this publication to HQ AFCESA/CEXR, 139 Barnes Drive, Tyndall AFB, FL 32403-5319. Use AF IMT 847, Recommendation for Change of Publication for recommended changes. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of in accordance

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Chapter 1

OVERVIEW AND POLICY

1.1. Purpose. This manual provides Emergency Management (EM) Program guidance on major accident and natural disaster prevention, preparedness, response, recovery, and mitigation for higher headquarters, installation commanders, unit commanders, first responders and emergency responders. It implements the Air Force Incident Management System (AFIMS) and complies with the intent and guidelines in Homeland Security Presidential Directive (HSPD) 5. It also provides policy guidance to prepare installation and unit plans and checklists for major accidents and natural disasters.

1.2. Mission. The missions of the Air Force (AF) EM Program are to save lives, minimize the loss or degradation of resources, continuity of operations (COOP), and sustain and restore operational capability in an "all hazards" physical threat environment at AF installations worldwide. Major accident and natural disaster physical threats are defined in **Chapter 2**.

1.3. Policies. This manual supports the AF single integrated EM Program as required by Air Force Policy Directive (AFPD) 10-25, *Emergency Management*, and Air Force Instruction (AFI) 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*. There are a number of Federal, DOD, and Air Force policies governing response to major accidents and natural disasters at Air Force installations.

1.3.1. The President establishes national security emergency policy through the Department of Homeland Security (DHS) within the Continental United States (CONUS) and through the Department of State (DOS) outside the CONUS (OCONUS). In the CONUS, the Federal Emergency Management Agency (FEMA) implements the policy through coordination with other federal departments, agencies and geographical combatant commands. These entities work together to prepare for emergencies, develop systems for response, protect essential resources and critical infrastructures, ensure continuity of government, and conduct training. Some emergencies are the responsibility of government agencies other than FEMA; for example, forest fire emergencies are the responsibility of either the US Department of Agriculture or the Department of the Interior. Department of Defense (DOD) assistance may be requested by a lead federal government agency regardless of the type of emergency.

1.3.2. The National Response Framework explains that the Robert T. Stafford Disaster Relief & Emergency Assistance Act (Stafford Act) authorizes the President to provide assistance to State and local governments to support response, recovery, and mitigation efforts following Presidential emergency or disaster declarations.

1.3.3. After the President declares a major incident or emergency under the Stafford Act, he may direct any federal government agency including DOD, to provide support to state and local agencies.

1.3.4. AF Policies. The AF must respond to major accidents or natural disasters involving DOD resources when civil authorities request support or when the major accident or disaster involves DOD resources. The references that provide detailed reporting requirements for all mishaps involving AF equipment or personnel are AFI 10-2501, *Emergency Management Program Planning and Operations*, AFI 91-204, *Safety Investigations and Reports*, and AFI

10-206, *Operational Reporting*. AFI 10-2501 states that commanders at OCONUS locations will follow DOS, theater, and MAJCOM guidance when assisting local authorities. Commanders at United States territories and US possessions will follow Department of the Interior (DOI), theater, and MAJCOM guidance when assisting local authorities. MAJCOMs will coordinate with the DOI to determine appropriate response protocols at US territory and US possession locations.

Chapter 2

PREVENTION AND PREPAREDNESS

2.1. Prevention and Preparedness Overview. AFIMS outlines Prevention and Preparedness as the first two phases of incident management. The prevention phase begins before a major accident or natural disaster and includes actions taken to detect, contain, and forestall events or circumstances, which, if left unchecked, could result in an incident. The preparedness phase is a continuous process involving efforts at all levels to identify hazards, determine vulnerabilities, and identify required resources to prevent, protect against, respond to, and recover from major accidents and natural disasters.

2.2. Prevention. Prevention actions include those activities to protect lives and property and avoid an incident or to intervene to stop an incident from occurring. While major accident preventive actions such as hazard analysis, fire prevention, safety programs, and lessons learned are specific in nature, natural occurring disaster preventive actions are more general as natural disasters are difficult to know, when or where they may occur. Additional preventive actions include; planning, training responders, and educating the installation populace based upon the known threats and hazards to the installation. Throughout the remainder of the document the term "installation" will be used to denote both home station and deployed i.e., expeditionary. The following major accident and natural disaster hazards are provided to assist installations in defining preventive actions.

2.2.1. Major Accidents. AFI 10-2501 defines a major accident as an accident involving DOD materiel or DOD activities that is serious enough to warrant response by the installation DRF. Major accidents may occur at home station, in transit, at deployment locations, or during any phase of training, civil support, humanitarian support, or wartime operations. Major accidents may include the following:

2.2.1.1. Hazardous Substances. Hazardous Substances include radioactive materials, Toxic Industrial Chemicals (TIC)s, Toxic Industrial Materials (TIM)s, or explosives.

2.2.1.2. Class-A Mishaps - defined by AFI 91-204. A mishap resulting in one or more of the following: direct mishap cost totaling \$1,000,000 or more; a fatality or permanent total disability; or destruction of a DOD aircraft. **Note:** A destroyed UAV is not a Class A mishap unless the above criteria are met. Such incidents could include releases of materials that are immediately dangerous to life and health, TIC/TIM, aircraft crash, mid-air collision, space systems, or fires involving priority aircraft generation facilities.

2.2.1.3. Extensive Property Damage - defined by AFI 91-204 and AFI 10-206. The threat of extensive property damage includes incidents when damage of \$50,000 or more to Air Force property occurs or when fire incidents cause five or more disabling injuries or impairs the operational readiness of a unit. Incidents may include facilities involved in fire or explosions, mass casualty incidents, or HAZMAT responses.

2.2.1.4. Grave Risk, Injury or Death. Installations must be prepared to mitigate those accidents and/or disasters that potentially create grave risk to the populace that could result in injuries and/or death. This manual details procedures to prepare the installation and its personnel for that threat and outlines the appropriate prevention, preparedness, response, and recovery actions to take in the event of an incident or natural disaster.

2.2.1.5. Adverse Public Reaction. These types of situations can contribute to adverse public reaction. Efficient and appropriate response activities combined with quick and honest communication on the situation and planned actions will help alleviate concerns. This will not only aid in limiting the negative reaction but also will assist in returning the installation to normal operations.

2.2.2. Major Accident Hazards. Installations must conduct an assessment of the types of major accidents that are a threat to their installation. Identifying the hazards allows installation commanders to prepare plans, checklists and train response forces to efficiently respond to these major accidents. Below are examples of major accidents:

2.2.2.1. HAZMAT. Air Force installations store and use hazardous materials, both at home station and deployed locations. In addition, AF Installations may be located near storage locations and transportation routes (highways, rail yards etc.) for hazardous materials that may affect installation property, resources, and personnel. Storage and use locations include aircraft maintenance facilities, logistics warehouses, medical laboratories and research facilities, wastewater treatment plants, and hazardous waste accumulation sites. AF installations must be able to respond to incidents involving the transportation, transfer, or storage of hazardous materials or hazardous waste. HAZMAT incidents include organic and inorganic air releases, hazardous liquid spills, toxic industrial chemical (TIC) and toxic industrial material (TIM) spills that pose an immediate or potential health and ecological safety hazard to personnel, the environment, or the mission. The three levels of HAZMAT response are in Table 2.1 Typical hazardous materials on air bases are stored in logistic warehouses and central staging areas, while others are stored in industrial work areas around the base. Regulations and policy regarding transport and storage of HAZMAT at both CONUS and OCONUS operating locations are intended to ensure safe operations. Accidental releases and releases that occur because of a weather event (tornado, flood, etc), can produce hazards that threaten AF operations or the health and safety of personnel. Table 2.2, reflects typical hazardous materials on an installation that can pose a hazard to operations and personnel.

Response Level	Characteristics		
Level I	Confined to small area that can be controlled by first responder. Does		
	not require evacuation beyond involved structure. Poses no immediate		
	threat to life or property.		
Level II	Involves greater hazard or area than Level I. May require limited		
	protective action for surrounding area. Poses potential threat to life or		
	property.		
Level III	Involves severe hazard or larger area than Level II. May require large-		
	scale protective action. Poses extreme threat to life or property.		

Table 2.1	ΗΔΖΜΔΤ	Resnanse	Levels
1 apre 2.1.		Response	Levels.

Activity	Typical HAZMAT(s).
Aircraft Maintenance	Paints (containing isocyanates, chromates), solvents
	(such as methyl ethyl ketone (MEK),
	tetrachloroethylene).
Petroleum, Oil, Lubricant Storage	Jet fuel, hydrazine, motor vehicle fuel, motor oil.
Medical Operations	Formaldehyde, gluteraldehyde, methyl alcohol,
	anesthetic gases, radioactive materials.
Hazardous Waste Accumulation	Hazardous wastes.
Wastewater Treatment	Chlorine.
Pest Management	Pesticides.
Special (Research, Medical Lab,	Osmium tetroxide, picric acid, formaldehyde, nitrogen
etc.)	tetroxide, methyl hydrazine, fluorine, chlorine,
	radioactive materials.

Table 2.2. Typical Hazardous Materials on Air Bases.

2.2.2.2. Aircraft Accidents. Aircraft accidents may involve DOD, coalition, and multinational or military aviation aerospace platforms and commercial airframes from the Civil Reserve Air Fleet (CRAF) and contract flight services. An incident that requires AF response may include aircraft, aerial target drones, and unmanned aerospace vehicles.

2.2.2.2.1. On Base Response. The installation must plan, equip and train to provide immediate, decisive incident response anytime an incident occurs on the installation. The installation mobilizes and deploys the installation disaster response force (DRF) to respond to the incident. The incident commander (IC) will initiate recall of the DRF and start lifesaving, rescue, suppression, and containment actions after arriving on scene and complete an initial assessment.

2.2.2.2.2 Off Base Response. Coordinate with local civil authorities if areas under civil jurisdiction are affected by the incident or the incident occurred in a civil jurisdiction. If the incident is close enough for emergency responders to assist in saving lives and controlling the scene, they should immediately respond to the incident site. Once on scene the installation responders will integrate with local responders. If the incident is far enough away where emergency responders will not be able to assist in immediate rescue and hazard mitigation then an IC and others should be notified to respond to the incident site. The arriving installation DRF will integrate and support the local authorities in responding to the incident unless the installation commander declares the area a National Defense Area (NDA). In a declared NDA, the installation DRF must integrate the local authorities into the response and recovery actions of the incident.

2.2.2.2.3. Advanced Aerospace Material. Installations provide emergency response to, airframes, and weapons platforms, which contain advanced aerospace composites, depleted uranium, titanium and other HAZMAT materials. Each of these materials presents unique hazards that must be considered by responders when choosing types of personal protective equipment (PPE) to be worn. Additionally, care in the handling and cleanup of these materials must be taken in order to prevent an additional airborne hazard from being created. Refer to Tab C to Appendix 2 to Annex A to the CEMP 10-2 Advanced Aerospace Materials (Composites) Checklist for detailed information about this topic.

2.2.2.3. Nuclear Weapons Accident Radiological Incident. The DOD installation nearest to a nuclear or radiological weapons incident will respond and perform emergency rescue and suppression activities, contain the incident hazards within their capabilities, secure and safeguard classified materials, provide initial detection for radiological hazards, perform emergency render safe procedures, perform emergency withdrawal and maintain a federal presence until arrival of the response task force (RTF). The nearest DOD installation will coordinate efforts with Department of Homeland Security/Federal Emergency Management Agency IAW the Nuclear/Radiological Incident Annex (NRIA) to the National Response Framework. The guidance and authority to accomplish the response is contained in DOD Instruction 5200.08, Security of DOD Installations and Resources, AFI 10-2501, Emergency Management Program Planning and Operations; DOD 3150.8-M, Nuclear Incident Response Procedures; Air Combat Command (ACC) Plan 10-2, Continental United States (CONUS) Radiological Accident Response and Recovery Plan or Air Force Space Command (AFSPC) Plan 10-1, Intercontinental Ballistic Missile (ICBM) Radiological Accident/Incident Response and Recovery Plan; AFMAN 91-221, Weapons Safety Investigations and Reports; AFMAN 91-222, Space Safety Investigations and Reports; AFMAN 91-223, Aviation Safety Investigations and Reports and AFMAN 91-224, Ground Safety Investigations and Reports. OCONUS response guidance includes current Status of Forces Agreements (SOFA), host nation (HN) agreement and supplementary guidance provided by MAJCOM and the DOS. Additional information and procedures are defined in Attachment 7 Nuclear Weapons Accident/Incident Response Flowchart, Attachment 8 Nuclear Weapons Incident On-Scene Setup, and Attachment 9 Nuclear Weapons Accident/Incident Recovery.

2.2.2.4. Accidents Involving Space Systems. Installations may be called on to respond to incidents involving space systems, including spacecraft, launch platforms, spacecraft fuel sources, satellites and other materiel. Incidents can range from accidents prior to or during launch, to downed satellites or the Space Shuttle. Space systems can include radiological and chemical hazards, including TICs and TIMs. Each of these materials presents hazards that must be considered by responders when selecting personal protective equipment (PPE) to be worn during the response. Additionally, care in the handling and cleanup of these the materials must be taken in order to prevent additional airborne hazards from being created. Installations identified as DOD space shuttle contingency support sites provide emergency landing sites, launch abort sites, transoceanic abort landing sites, fire, crash, rescue and HAZMAT capabilities and shuttle turn around support to National Aeronautics and Space Administration (NASA) when tasked by higher headquarters. Installation support is in response to shuttle mission aborts, system failures, and severe weather problems. Spacecraft rescue, turn around response and recovery services at emergency and contingency landing sites are conducted IAW NASA requests as directed in United States Northern Command (USNORTHCOM) Annex C Contingency Plan 3501-02, Defense Support of Civil Authorities(DSCA) Shuttle; DOD Manager's Space Shuttle Procedures Document; AFI 10-2501; AFMAN

15-129, Air and Space Weather Operations Processes and Procedures; and AFMAN 91-222.

2.2.3. Natural Disaster Hazards. Natural disasters include: severe weather events such as tornados, cyclones, floods, thunderstorms, lightning, extreme cold and heat, winter storms, hurricanes, typhoons, and tropical storms; tsunamis; earthquakes; fires; wild land fires; volcanoes; and any other natural weather phenomena specific to the installation. In addition to the obvious array of natural disasters listed, naturally occurring outbreaks of disease must not be overlooked in planning. Installations must develop severe weather and epidemic plans for the hazards likely to affect the location. The installation commander will provide emergency response and recovery operations for the dispersal, protection, or sheltering of DOD personnel and resources during natural disasters.

2.2.3.1. Severe Weather. Installations will include severe weather plans into the Comprehensive Emergency Management Plan (CEMP) 10-2 for the hazards likely to affect the installation. Installations will provide emergency response to severe weather operations IAW AFI 10-229, *Responding to Severe Weather Events*. Installations provide weather notifications and updates, including watches and warnings, based upon weather updates from national or international weather monitoring agencies such as the National Weather Service (NWS).

2.2.3.1.1. Hurricanes, Typhoons, and Tropical Storms. A tropical cyclone has sustained surface wind, using the United States one-minute average, of 64 knots, 74 miles per hour (mph), or 119 kilometers per hour (km/hr) and, in extreme cases, exceed 150 mph with gusts surpassing 200 mph. A hurricane is a northern hemisphere cyclone, east of the International Dateline to the Greenwich Meridian. A typhoon is a Pacific cyclone, north of the equator west of the International Dateline. Installations threatened by the catastrophic effects of hurricanes or typhoons develop plans to respond in a phased echelon of operational and support functions. Hurricane or typhoon ancillary effects include high wind projectile damage, large accumulations of rain resulting in flash floods, bridge and road closures, wind-driven storm surge, coastal flooding, and disruptions to electrical power, water and sewage. The hurricane season in the Atlantic, Caribbean, and Gulf of Mexico runs from June 1 to November 30, in the Eastern Pacific basin it runs from May 15 to November 30, in the Central Pacific basin it runs from June 1 to November 30. A cyclone is the generic term for a non-frontal synoptic scale low-pressure system over water with organized convection, i.e., thunderstorm activity and definite cyclonic surface wind circulation. Tropical cyclones with maximum sustained surface winds of less than 17 m/s (34 knots, 39 mph) are called "tropical depressions". Once the tropical cyclone reaches winds of at least 17 m/s (34 knots, 39 mph) they are called a "tropical storm" and assigned a name. Winds in the North Atlantic Ocean, the Northeast Pacific Ocean east of the dateline or east of 160E in the South Pacific Ocean are called a "hurricane" when winds of 64 knots or 74 mph are measured. However, in the Northwest Pacific Ocean west of the dateline, the same conditions are called a "typhoon". In addition, in the Southwest Pacific Ocean west of 160E or Southeast Indian Ocean east of 90E, the 64 knots or 74 mph conditions are called a "severe tropical cyclone." In the North Indian Ocean, those same wind conditions are called a "severe cyclonic storm." Finally, in the Southwest Indian Ocean the aforementioned wind conditions are referred to as a "tropical cyclone." Cyclones primarily occur in tropical regions, such as northern Australia, South-East Asia, and many Pacific islands. They sometimes drift into the temperate coastal areas, threatening more heavily populated regions to the South. Northern Australia has about four or five tropical cyclones every year during the summer wet season.

2.2.3.1.1.1. The stages of hurricane and typhoon development are broken into four elements. These elements are described in **Table 2.3**

2.2.3.1.1.2. The intensity of a hurricane is rated using the Saffir-Simpson Hurricane Scale. This scale is a 1-5 category rating based on the hurricane's present intensity to give an estimate of the potential for property damage and flooding expected along the coast from a hurricane landfall. Wind speed is the determining factor in the scale, as storm surge values are highly dependent on the slope of the continental shelf and the shape of the coastline in the landfall region. **Table 2.4**, describes damage that results from each hurricane category.

 Table 2.3. Elements of Hurricane and Typhoon Development.

TYPE OF STORM	DEFINITION
Tropical Wave	These are the most common of tropical disturbances with about 100 forming each season. They lack a closed circulation, which is when there are winds in every direction. Wind speeds are less than 20 knots, or 25 mph.
Tropical Depression	A wave becomes a depression when there is a presence of a closed circulation, and sustained winds are 20 knots, or 25 mph. At this point, the system is still quite disorganized.
Tropical Storm	A depression becomes a tropical storm when shower and thunderstorm activity moves over the closed circulation. At this point, the system is capable of causing minimal damage. This weather phenomenon, also known as a tropical cyclone, has a maximum sustained surface wind speed (using the US 1-minute average) ranging from 34 knots (39 mph or 63 km/hr) to 63 knots (73 mph or 118 km/hr). Installations that experience tropical storm effects (including high winds, large rain accumulations, flash floods and coastal flooding, bridge and road closures, tornado activity, downed power lines, sewage system failures) respond to provide life safety and protection. The goal of response is to protect personnel, resources, installation equipment, and infrastructural capabilities; disperse essential and critical equipment and weapons systems; curtail nonessential operations; and issue emergency sheltering or evacuation orders.
Hurricane	A tropical storm becomes a hurricane when the closed circulation becomes an eye and sustained winds reach at least 65 knots, or 74 mph. At this point, the system is capable of causing significant damage.

Hurricane	Wind Examples of Damage		
Category	Speeds		
One	74-95 mph (64-82 knots or 119-153 km/hr)	Storm surge generally 4-5 feet above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.	
Two	96-110 mph (83-95 knots or 154-177 km/hr)	Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage to buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.	
Three	111-130 mph (96- 113 knots or 178-209 km/hr)	Storm surge generally 9-12 feet above normal. Some structural damage to small residences and utility buildings with a minor amount of curtain wall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Flooding near the coast destroys smaller structures with larger structures damaged by battering from floating debris. Terrain continuously lower than 5 feet above mean sea level may be flooded inland 8 miles [13 kilometer (km)] or more. Evacuation of low-lying residences within several blocks of the shoreline may be required.	
Four	131-155 mph (114- 135 knots or 210-249 km/hr)	Storm surge generally 13-18 feet above normal. More extensive curtain wall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of structures near the shore. Terrain lower than 10 feet above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).	
Five	Winds greater than 155 mph (135 knots or	Storm surge generally greater than 18 feet above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs are blown down. Complete destruction of mobile homes. Severe	

 Table 2.4. Saffir-Simpson Hurricane Scale Categories.

249 km/hr)	and extensive window and door damage. Low-lying escape
	routes are cut by rising water 3-5 hours before arrival of the
	center of the hurricane. Major damage to lower floors of all
	structures located less than 15 feet above sea level and within
	500 yards of the shoreline. Massive evacuation of residential
	areas on low ground within 5-10 miles (8-16 km) of the
	shoreline may be required.

2.2.3.1.1.3. Hurricane Conditions (HURCON) and Tropical Cyclone Conditions of Readiness (TCCOR). Installations use HURCONs and TCCORs warning codes to prepare for a pending hurricane or typhoon. The HURCON/TCCOR codes provide arrival timelines and wind speed information to guide installation sheltering and evacuation decisions. Those hurricane and tropical cyclone conditions are listed in Table 2.5

Table 2.5. Hurricane Conditions and Tropical Cyclone Conditions of Readiness.

HURCON/TCCOR	Indicates surface winds in excess of 58 mph (50 knots) could
4	arrive within 72 hours.
HURCON/TCCOR	Indicates surface winds in excess of 58 mph could arrive within
3	48 hours.
HURCON/TCCOR	Indicates surface winds in excess of 58 mph could arrive within
2	24 hours.
HURCON/TCCOR	Indicates surface winds in excess of 58 mph could arrive within
1	12 hours.
HUDCON/TCCOD	Indicates surface winds in excess of 58 mph are occurring and
	other dangerous condition associated with the storm are present.
IL	All outside activity is strictly prohibited.
HURCON/TCCOR	Indicates life-threatening storm hazards have passed but damage
1 R	may persist and only emergency responders and damage
	assessment personnel are released to move about.

2.2.3.1.2. Tornadoes. A tornado is a violently rotating column of air extending between, and in contact with, a cloud and the surface of the earth. Tornadoes are generally spawned by thunderstorms. Tornadoes have wind speeds that exceed 200 mph and in extreme cases may approach 300 mph. Tornadoes can come one at a time, or in clusters, and they can vary greatly in length, width, direction of travel, and speed. They can leave a path 50 yards wide or over a mile wide. They may touch the ground for only a matter of seconds, or remain in contact with the ground for over an hour. Tornados can occur anywhere in the US.

2.2.3.1.2.1. Tornado intensities are classified using the Enhanced Fujita (EF) Tornado Scale with ratings between EF 0 through EF 5 (see **Table 2.6**). A storm of EF 0 is the weakest and EF 5 is the strongest. The most violent tornadoes have rotating winds of 250 mph (402 km/hr) or more. They are capable of destroying well-made structures, uprooting trees, and hurling normally harmless objects through the air like deadly missiles. Most tornadoes are rated EF 0 and EF 1, and these usually span just a few dozen yards and touch down only briefly. Highly

destructive, violent tornadoes—EF 4 and EF 5—can carve out paths more than a mile (1.6 kilometers) wide and 50 miles (80 kilometers) long. Although these violent tornadoes comprise only two percent of all tornadoes, they are responsible for nearly 70 percent of tornado-related fatalities.

1 abic 2.0.	2007 Emilanceu F	ujita 10111at	io scale.
	Enhanced		

Table 2.6 2007 Enhanced Fujita Ternado Scala

Enhanced Fujita Rating	Enhanced Fujita 3-second gust wind speed (mph)	Intensity Phrase	Damage
EF 0	65-85	Gale tornado	Light: Some chimney damage, broken tree branches; damaged sign boards.
EF 1	86-109	Moderate tornado	Moderate: Mobile homes moved or overturned; roofing stripped off houses; moving autos pushed off roads.
EF 2	110-137	Significant tornado	Considerable: Mobile homes demolished; roofs torn from frame houses; large trees snapped or uprooted.
EF 3	138-167	Severe tornado	Severe: Roofs and most outer walls torn off even well-built houses; trains overturned.
EF 4	168-199	Devastating tornado	Devastating: All houses leveled and some are blown some distance from their foundations; autos thrown through the air.
EF 5	over 200	Incredible tornado	Incredible: Houses picked up and carried considerable distance in pieces, automobiles fly through the air farther than 100 yards; pavement removed from highways.

2.2.3.1.2.2. Tropical storms and hurricanes that come ashore can also generate tornadoes. Installations subject to tornadoes provide notification of watches and warnings using the Installation Notification and Warning System (INWS). A tornado warning is issued when a tornado is indicated by radar or sighted by spotters. Personnel in the affected area should seek safe shelter immediately. Tornado warnings can be issued without a tornado watch in effect.

2.2.3.1.2.3. A tornado warning is issued by the local NWS office. The warning will identify the tornado's location and its projected path. A tornado near coastal waters will also require a special marine warning from the NWS. If the thunderstorm causing the tornado is producing torrential rains, a flash flood warning will be issued.

2.2.3.1.2.4. A tornado watch is issued by the Storm Prediction Center (SPC) in Norman, Oklahoma. Before a tornado watch is issued, SPC will usually contact the affected local office of the NWS to discuss the current weather situation. Afterwards, SPC will issue a preliminary tornado watch; the local NWS office

will adjust the watch by adding or eliminating counties and issue it to the public. During the watch, the local NWS will inform the public of the watch area status and the watch expiration or cancellation time. Tornado watch areas vary in size depending on the weather situation. Watches are usually issued for duration of 4 to 8 hours and are issued well in advance of the actual occurrence of severe weather. During the watch, personnel should review tornado safety rules and be prepared to move to a place of safety if threatening weather approaches.

2.2.3.1.3. Floods. Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss. As much as 90 percent of the damage related to all natural disasters (excluding drought) is caused by floods and associated debris flows. From 1992 to 2001, floods cost the nation, on average, more than \$4.1 billion annually. Between 1972 and 2001, on average, 127 people a year were killed by floods—mostly by flash floods.

2.2.3.1.3.1. Most geographic areas can experience some kind of flooding. Melting snow can combine with rain in the winter and early spring; severe thunderstorms can bring heavy rain in the spring and summer; or tropical cyclones can bring intense rainfall to coastal and inland states in the summer and fall.

2.2.3.1.3.2. As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization increases runoff two to six times more than what occurs on natural terrain. During periods of urban flooding, streets can become swiftly moving rivers, while basements and viaducts can become death traps as they fill with water.

2.2.3.1.3.3. Several factors contribute to flooding. Two key elements are rainfall intensity and duration. Intensity is the rate of rainfall, and duration is how long the rain lasts. Topography, soil conditions, and ground cover also play important roles.

2.2.3.1.3.4. Flooding occurs in known floodplains when prolonged rainfall occurs over several days, intense rainfall over a short period of time, or an ice or debris jam causes a river or stream to overflow and flood the surrounding area. Floods can be slow- or fast-rising, but generally develop over a period of hours or days.

2.2.3.1.3.5. Most flash flooding is caused by slow-moving thunderstorms, thunderstorms repeatedly moving over the same area, or heavy rains from hurricanes and tropical storms. Flash floods take from several minutes to several hours to develop. Flash floods occur within six hours of a rain event, or after a dam or levee failure, or following a sudden release of water held by an ice or debris jam. Flash floods can occur without warning.

2.2.3.1.3.6. Floods can roll boulders, tear out trees, destroy buildings and bridges, and scour new channels. Floodwater can reach heights of 10 to 20 feet (3 to 6 meters) and often carries a deadly cargo of debris. Flood-producing rains can also trigger catastrophic debris slides, i.e., the inundation of a normally dry area caused by an increased water level in an established watercourse, such as a river, stream, or drainage ditch, or "ponding" of water at or near the point where the rain fell.

2.2.3.1.3.7. Installations subject to monsoons, torrential rains, flash floods or accumulation of large rainfall in short periods will provide notification of flash flood watches and warnings. In addition, installations will perform mitigation operations for the protection of installation infrastructure. Other actions include evacuating personnel from low lying areas, trailer parks, and family camps, and securing sewage lift stations and potable water distribution points.

2.2.3.1.4. Thunderstorms. All thunderstorms are dangerous as every thunderstorm produces lightning. Each year, in the US, an average of 300 people are injured and 80 people are killed by lightning. Associated dangers of thunderstorms include tornadoes, strong winds, hail, and flash flooding. Nearly 2,000 thunderstorm cells are estimated to be present over the planet at any given time. It is estimated that globally there are 16 million thunderstorms each year. In the US, central Florida has almost 100 thunderstorm days annually. Other areas with large numbers of thunderstorms include much of the Gulf Coast region, the Rocky Mountains, and the adjacent High Plains.

2.2.3.1.5. Lightning. Installations that experience lightning, static electrical discharges, or ball lightning must notify installation personnel. In addition, the Crisis Action Team (CAT) must issue stop-work orders and back-to- work orders; protect essential equipment, computers, electromagnetic capabilities, and communications systems; and perform emergency response, damage assessment, and recovery and restoration of services in response to emergency conditions resulting from incidents involving lightning strikes and static discharges. Lightning watches and warnings are mandatory. Notification of the affected installation's airfield management personnel will occur 30 minutes prior to storm arrival IAW AFI 10-229. Installations and units will use guidance from Air Force Occupational Safety and Health (AFOSH) Standard 91-66, General Industrial Operations, and AFOSH Standard 91-100, Aircraft Flightline Ground Operations and Activities, to identify protective actions when lightning is observed or detected within 5 nautical miles of the airfield. Unit control centers (UCCs) will monitor, disseminate, and report incident-specific information as directed. Lightning warnings are issued to installations or deployed locations upon receipt of the warning. Lightning watches are cancelled only when the potential for lightning within the next 30 minutes is no longer forecasted. Observed lightning warnings are cancelled only when thunderstorm and lightning activities have passed beyond 5 nautical miles of the installation.

2.2.3.1.6. Mudslides/Landslides. Mudslides are a common type of fast-moving landslide that tends to flow in channels. Landslides occur when masses of rock, earth, or debris move down a slope. Areas where wildfires or human modification of the land has destroyed vegetation areas are likely to experience mudslides and landslides. Area examples include: where landslides have occurred before; steep slopes; areas at the bottom of slopes or canyons; slopes that have been altered for construction of buildings, roads, and channels along a stream or river; and areas where surface runoff is directed. Installations and Air and Space Expeditionary Forces (AEF) that are subject to landslides and mudslides provide notification of landslide and mudslide warnings and watches and they perform mitigation operations for the protection of installation infrastructure capabilities. Mitigation operations

include securing sewage lift stations and potable water distribution points and evacuating low lying areas, trailer parks, and family camps in response to potential landslide and mudslide threats.

2.2.3.1.7. Extreme Cold/Heat. Installations and AEF operations located in extremely arid, humid, high heat and extreme cold environments execute Emergency Operations Plan (EOP) protective measures in response to environmental conditions that present physical and psychological safety hazards to personnel. The Emergency Operations Center (EOC) will initiate and the UCCs will implement and monitor work rest cycles and other measures for the prevention of heat exhaustion, heat stroke, heat cramps, exposure, hypothermia, frostbite, and wind chill exposure. The EOC must consider sheltering personnel to include special needs and the elderly during blackouts or brownouts due to electrical disruptions. The EOC should initiate measures to safeguard DOD equipment, computers, vehicles, and resources from mechanical failures from overheating or freezing due to extreme climatic conditions specific to the installation or deployed location.

2.2.3.1.7.1. Extreme Cold. In some northern regions, cold temperatures are not considered severe until they are well below 0° Fahrenheit (-18° Celsius). In some more southerly regions, near-freezing temperatures (around 32° Fahrenheit or 0° Celsius) are considered severe. Severe cold can cause much harm; for example, it can damage crops and other vegetation and freeze pipes causing them to burst. Unusually cold temperatures are especially dangerous in areas not accustomed to them because residents are generally unprepared and may not realize the dangers that severe cold weather presents. Table 2.7, describes extreme cold considerations.

Table 2.7. Extreme Cold Considerations.

Exposure to cold can cause frostbite and life-threatening hypothermia. Frostbite is the freezing of body tissue, and it most frequently affects fingers, toes, earlobes, and the tip of the nose. Frostbite damage ranges from superficial and reversible to deep and permanent. Frostbite can result in tissue loss and even loss of digits and limbs. Hypothermia begins to occur when a person's body temperature drops to 3° below its normal temperature. On average, a person would begin to suffer hypothermia if his or her temperature dropped to 96° Fahrenheit (35.6° Celsius). Cold temperatures can cause hypothermia in anyone who is not adequately clothed or sheltered in a place with adequate heat, or who has been immersed in cold water, exposed to wind-chill, or has been immobile on a cold surface. Extended periods of hypothermia can be fatal. However permanent effects depend on core temperature, duration of hypothermia, and other indicators such as cardiac stability, and are not easily predicted. Infants and elderly people are the most susceptible. People who are taking certain medications, who have certain medical conditions, or who have been drinking alcohol are at increased risk for hypothermia.

2.2.3.1.7.2. Extreme Heat. Heat can kill by pushing the human body beyond its limits. Under normal conditions, the body's internal thermostat produces perspiration that evaporates and cools the body. However, in excessive heat and high humidity, evaporation is slowed and the body must work extra hard to

maintain a normal temperature. **Table 2.8**., describes extreme heat considerations.

Table 2.8. Extreme Heat Considerations.

Installations located in extremely arid, humid, high heat environments execute protective measures in response to environmental conditions that present physical and psychological safety hazards to personnel. Installations must implement work rest cycles and other measures for the prevention of heat exhaustion, heat stroke, and heat cramps. The CAT must consider sheltering personnel, to include special needs and the elderly during blackouts or brownouts due to electrical disruptions and safeguarding DOD equipment, computers, vehicles, and resources from mechanical failures due to extreme climatic conditions specific to the installation or deployed location.

Elderly people, young children, and those who are sick or overweight are more likely to become victims of excessive heat. Because men sweat more than women do, they become dehydrated more quickly and are more susceptible to heat illness.

The best ways to protect yourself from the ill effects of excessive heat are to dress appropriately, stay indoors, refrain from strenuous work or exercise during the hottest part of the day, and stay hydrated. Spending at least two hours a day in air conditioning significantly decreases a person's risk of heat-related illnesses.

The duration of excessive heat plays an important role in how people are affected. Studies have shown a significant rise in heat-related illnesses when excessive heat lasts more than two days.

People living in urban areas may be at greater risk from the effects of a prolonged heat wave than are people living in rural regions. An increased health problem, especially for those with respiratory difficulties, can occur when stagnant atmospheric conditions trap pollutants in urban areas, thus adding unhealthy air to excessively hot temperatures. In addition, asphalt and concrete store heat longer and gradually release heat, resulting in significantly higher temperatures, especially at night—an occurrence known as the "urban heat island effect."

2.2.3.1.8. Winter Storms (Blizzards/Ice Storms). Installations must prepare responses to the effects of winter storms if the installation or AEF experience snow accumulations, ice storms, and blizzard conditions. Blizzard conditions must be expected to last 3 hours or longer, including sustained wind or frequent gusts to 35 mph or greater with considerable falling or blowing snow that frequently reduces visibility to less than one-quarter mile. Installations respond to protect personnel and DOD resources from exposure to extreme cold weather due to electrical disruptions by providing shelters, identifying the primary evacuation routes, and providing clearance priority of the installation snow IAW the ice control plan. In addition, the installation monitors snow accumulations on facility horizontal surfaces and directs thermal injury prevention and protective measures for the safety and health of the installation population and emergency responders during winter storm operations.

2.2.3.1.8.1. A major winter storm can last for several days and can include high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. People can become marooned at home without utilities or other services. Heavy snowfall and blizzards can trap motorists in their vehicles and make walking to find help a

deadly effort. The aftermath of a winter storm can impact a community or region for days, weeks, or months.

2.2.3.1.8.2. Winter storms can range from a moderate snow over a few hours to a blizzard with blinding, wind-driven snow that lasts for several days. Some winter storms are large enough to affect several states, while others affect only a single community. Many winter storms are accompanied by dangerously low temperatures and sometimes by strong winds, icing, sleet, and freezing rain.

2.2.3.1.8.3. Heavy snow can immobilize a region and paralyze a city, stranding commuters, closing airports, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can cause roofs to collapse and knock down trees and power lines. In urban areas, the cost of snow removal, damage repair, and lost business can have severe economic impacts. In the mountains, heavy snow can lead to an avalanche. More than 80 percent of midwinter avalanches are triggered by a rapid accumulation of snow, and 90 percent of those occur within 24 hours of snowfall. An avalanche can reach a mass of a million tons and travel at speeds up to 200 miles (322 kilometers) per hour.

2.2.3.1.8.4. Table 2.9 describes the various intensities of snowfall

Snow Flurries	Light snow falling for short durations with little or no accumulation.			
Snow Showers	Snow falling at varying intensities for brief periods with some			
	accumulation possible.			
Snow Squalls	Brief, intense snow showers accompanied by strong, gusty winds and			
	significant accumulation.			
Blowing Snow	Wind-driven snow that reduces visibility – may be falling snow or			
	snow on the ground picked up by the wind.			
Blizzard	Winds of 35 mph or more with snow or blowing snow reducing			
	visibility to ¹ / ₄ mile or less for at least three hours.			
Ice Storm	Freezing rain that produces significant, possibly damaging ice			
	accumulation can create hazardous travel conditions and damage to			
	utilities.			

Table 2.9.Snowfall Intensities.

2.2.3.2. Tsunamis. Installations and forces located in coastal flood plain areas threatened by tsunamis will respond to warnings issued by the West Coast/Alaska Tsunami Warning Center or the Pacific Tsunami Warning Center. The response will focus on providing immediate sheltering or evacuation of DOD equipment, resources, and installation personnel. The desired effects for response are to minimize the catastrophic effects of the tidal wave. Tsunamis create the potential loss of infrastructure capabilities such as water, sewage, and power. Due to the loss of sewage and water infrastructure, the commander must implement a contagious disease monitoring and prevention program.

2.2.3.2.1. Tsunamis are large ocean waves generated by major earthquakes beneath the ocean floor or major landslides into the ocean. Tsunamis caused by nearby earthquakes may reach the coast within minutes. When the waves enter shallow water, they may rise to several feet or, in rare cases, tens of feet, striking the coast

with devastating force. People on the beach or in low coastal areas need to be aware that a tsunami could arrive within minutes after a severe earthquake. The tsunami danger period can continue for many hours after a major earthquake.

2.2.3.2.2. Tsunamis also may be generated by very large earthquakes far away in other areas of the ocean. Waves caused by these earthquakes travel at hundreds of miles per hour, reaching the coast several hours after the earthquake. When a tsunami comes ashore, it can cause great loss of life and property damage. Tsunamis can travel upstream in coastal estuaries and rivers, with damaging waves extending farther inland than the immediate coast. A tsunami can occur during any season of the year and at any time, day or night. The International Tsunami Warning System monitors ocean waves after any Pacific earthquake with a magnitude greater than 6.5. If waves are detected, warnings are issued to local authorities who can order the evacuation of low-lying areas.

2.2.3.2.3. All tsunamis are potentially dangerous. Twenty-four tsunamis have caused damage in the US and its territories in the past 200 years. Since 1946, six tsunamis have killed more than 350 people and caused significant property damage in Hawaii, Alaska, and along the West Coast. Tsunamis have also occurred in Puerto Rico, the Virgin Islands, and recently Indonesia.

2.2.3.3. Earthquake. Installations and AEF respond to protect DOD resources and personnel from the effects of tectonic plate movements. The desired effects of response are to mitigate the loss of essential infrastructure capabilities, facility collapse, confined space rescue, and mass casualty conditions. In addition, installations provide essential life-saving emergency rescue services, critical life-sustaining services, subsistence, water, and medical services for victims affected by the incident. Finally, the installation directs sheltering and evacuation of DOD personnel and equipment.

2.2.3.3.1. An earthquake is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the earth as the huge plates that form the surface move slowly over, under, past, and away from each other. Sometimes the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy as they bend or stretch. When the forces grow strong enough, the plates suddenly break free causing the ground to shake. Most earthquakes occur at the boundaries where two plates meet; however, some earthquakes occur in the middle of plates.

2.2.3.3.2. Aftershocks are smaller earthquakes that follow the main shock and can cause further damage to weakened buildings. Aftershocks occur in the first hours, days, weeks, or even months after the quake. Some earthquakes are actually foreshocks that precede a larger earthquake.

2.2.3.3.3. Ground shaking from earthquakes can collapse buildings and bridges; disrupt gas, electric, and telephone service; and sometimes trigger landslides, avalanches, flash floods, fires, and tsunamis. Buildings with foundations resting on unconsolidated landfill and other unstable soils are at increased risk of damage. In addition, mobile homes and homes not attached to their foundations are at particular risk because they can be shaken off their foundations during an earthquake. When an

earthquake occurs in a populated area, it may cause deaths, injuries, and extensive property damage.

2.2.3.3.4. Earthquakes strike suddenly, without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Loss estimates from a future earthquake in the US approaches \$200 billion.

2.2.3.3.5. The majority of the US and territories are at moderate to very high risk of earthquakes, and they are located in every region of the country. California has experienced the most frequent damaging earthquakes; however, Alaska has experienced the greatest number of large earthquakes— many of which caused little damage because of the area's low population density at the time.

2.2.3.3.6. The most widely felt sequence of earthquakes in the contiguous 48 states was along the New Madrid Fault in Missouri, where a three-month long series of quakes from 1811 to 1812 included three with estimated magnitudes of 7.6, 7.7, and 7.9 on the Richter Scale. These earthquakes were felt over the entire eastern US, with Missouri, Tennessee, Kentucky, Indiana, Illinois, Ohio, Alabama, Arkansas, and Mississippi experiencing the strongest ground shaking. Where earthquakes have occurred in the past, they will happen again.

2.2.3.4. Fires. Installations threatened by large fires respond to provide life safety and evacuation of surrounding areas, request mutual aid for containment of hazards, protect DOD resources, and to suppress and extinguish fires. Large fire incidents include often involve petroleum, oil, and lubricant products; open munitions storage during AEF operations; large housing complexes; aircraft depot and maintenance facilities; and conflagration fire hazards. In addition to large incidents, the responder also manages special or target fire hazards, which includes fuel storage areas, aircraft hangars, hospitals, schools, and day care facilities. Further guidance is provided in AFI 10-2501, AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*, and AFMAN 91-201, *Explosive Safety Standards*.

2.2.3.5. Wildland Fire. Installations need to understand that while it is often thought of as occurring in forests, rangelands, or crop fields, it may also occur in areas such as vacant lots, highway medians, parks, and golf courses. With residential development spreading into once pristine areas, a relatively new phenomenon has been created called the wildland/urban interface. This phenomenon has changed the nature of wildland firefighting in significant ways. Both the life hazard and the potential economic losses have increased greatly as a result from an increase in human activities, which has multiplied the number and variety of ignition sources. The response must provide for the protection or evacuation of personnel and equipment within the incident area, and must coordinate support efforts with federal, state, local, or host nation officials for area fire suppression support or mutual assistance. The applicable references are AFI 10-2501, AFI 32-2001, and the National Fire Protection Association (NFPA) Standard 1144, *Protection of Life and Property from Wildfire*.

2.2.3.6. Volcanoes. Installations located where volcanic activity, pyroclastic flows, acid rain, or volcanic ash discharges occur may have immediate and long-term water shed impacts. Installations must provide initial shelter of mission-essential and mission-

critical personnel and must direct the evacuation of personnel and equipment from the incident area. Long-term impacts include destruction of economic and infrastructure capabilities. Installations must respond with life-saving and mitigating forces to provide emergency management services.

2.2.3.6.1. Volcanoes produce a wide variety of hazards that can kill people and destroy property. Volcanic eruptions fall into two broad types: explosive, and quiet. Hazards from large explosive eruptions include widespread ash fall (fine glass particles), pyroclastic flows (mixtures of hot gases and pumice blocks), and massive lahars (volcanic mud or debris flows) that can endanger people and property. Eruptions can even affect global climate. Hazards from quiet lava flows include igniting fires and producing chlorine-rich gas clouds where lava pours into the sea. Since 1980, as many as five volcanoes have erupted each year in the US. Eruptions are most likely to occur in Hawaii and Alaska. In the Cascade Mountain Range in Washington, Oregon, and northern California, volcanoes erupt on the average of one to two or more each century.

2.2.3.6.2. Volcanic ash can affect people and equipment hundreds of miles from the volcano. Inhaling volcanic ash can cause serious respiratory problems for people, especially those with heart and lung ailments.

2.2.3.6.3. Explosive eruption columns pose a serious hazard to all aircraft. Air traffic control personnel must be aware of this hazard so they can divert aircraft away from these hazards. These columns come from vents in the surface of the earth that release magma and gases. The ash column can grow rapidly and reach more than 12 miles (19 kilometers) above a volcano in less than 30 minutes, forming an ash cloud. During the past 14 years, about 80 commercial jets have been damaged by flying into ash clouds, and several have nearly crashed because of engine failure.

2.2.3.7. Additional natural incident related information can be obtained at the FEMA website at <u>http://www.fema.gov</u>/.

2.3. Preparedness. The preparedness phase begins before a major accident or natural disaster occurs and includes planning, training, and exercising. Developing the installation CEMP 10-2 and checklists and establishing TTPs to respond to all hazards are vital to the preparedness planning phase. Base training is vital to ensure personnel are prepared to respond to an event. The EM Information Program provides the base populace training on major accident and natural disaster procedures and threats. Exercising provides the means for the installation to test their plans, TTPs, and response forces before a natural disaster or major incident. Installations are also required to maintain and test appropriate response equipment and supplies in case of a major accident or natural disaster.

2.3.1. Planning. When developing or updating installation plans, a thorough review of Memorandums of Agreements, civilian agency plans, base installation support requirements, as well as any other tasking documents must be accomplished. The development of checklists and standard operating procedures must be part of this planning process to ensure the installation and response forces are able to respond to the hazards that threaten the installation. Planning prior to a major accident or natural disaster allows installations to minimize the effects of an incident. EM planning implements AFIMS to standardize incident management. Installations begin the planning phase by completing a threat analysis, a

vulnerability analysis, and a capabilities assessment. Information gathered in these studies allows installations to determine what personnel, supplies, and equipment are required for response, recovery, and mitigation. Installations must plan for the worst-case scenario.

2.3.1.1. Incident Types. Incident Types are used by the civilian authorities to categorize the incident. Incidents are categorized by five types based on complexity. Type 5 incidents are the least complex and Type 1 the most complex. Incident Types are determined based on the number of resources and number of incident operational periods needed to handle the incident. Many factors determine the complexity of an incident, including, but not limited to, area involved, threat to life and property, political sensitivity, organizational complexity, jurisdictional boundaries, values at risk, weather, strategy and tactics, and agency policy. Personnel who work with civilian agencies such as Fire and Emergency Services, Emergency Management, Command Post, and Medical should be familiar with these incident types. This familiarity enhances an understanding of the complexity of Type 3, 2 or 1 incidents and possible resources that will be required if the local community asks for assistance.

2.3.1.1.1. **Table 2.10** shows that incidents may be typed to make decisions about resource requirements. Incident Command System (ICS) incident types based on five levels of complexity.

Incident Type	Description					
Type 5	• The incident can be handled with one or two single resources with					
	up to six personnel.					
	Command/General Staff positions (other than the IC are not activated.					
	• No written Incident Action Plan (IAP) is required.					
	• The incident is contained within the first operational period and					
	often within an hour to a few hours after resources arrive on scene.					
	• Examples include a vehicle fire, an injured person, a vehicle					
	accident, or a police traffic stop.					
Type 4	Command staff and general staff functions are activated only if					
	needed.					
	• Several resources are required to mitigate the incident; a Task Force					
	or Strike Team.					
	• The incident is usually limited to one operational period in the					
	control phase.					
	• The agency administrator may have briefings and will ensure the					
	complexity analysis and delegation of authority is updated.					
	• No written IAP is required, but a documented operational briefing					
	will be completed for all incoming resources.					
	• Agency administrator role includes operational plans including					
	objectives and priorities.					
	• Examples include a vehicle accident with injuries, building fire,					
	hostage or domestic violence incident, or small fuel spill.					

Table 2.10. Incident Types.

Type 3	• When capabilities exceed initial attack, the appropriate ICS positions				
	should be added to match the complexity of the incident.				
	• Some or all of the Command and General Staff positions may be				
	activated as well as Division/Group Supervisor and/or Unit Leader level				
	positions.				
	• A Type 3 Incident Management Team or incident command				
	organization manages initial action incidents with a significant number				
	of resources manages an extended attack incident until control is				
	achieved, or manages an expending incident until transition to a Type 1				
	or 2 toom				
	of 2 team.				
	• The incident may extend into multiple operational periods.				
	• A written IAP may be required for each operational period.				
	• Examples include a HAZMAT incident, aircraft crash, hostage				
	situation with several hostages, tornado, or flood.				
Type 2	• This type of incident extends beyond the capabilities of local control				
	and is expected to go into multiple operational periods. A Type 2				
	incident may require the response of resources out of area, including				
	regional and/or national resources, to manage effectively the operations				
	command, and general staffing.				
	• Most or all of the Command and General Staff positions are filled.				
	 A written IAP is required for each operational period 				
	 Many of the functional units are needed and staffed 				
	 Many of the functional units are needed and staticu. Operations personnal permulty do not exceed 200 per exceptional. 				
	• Operations personnel normany do not exceed 200 per operational				
	period, and total incident personnel do not exceed 500 (guidennes only).				
	• The agency administrator is responsible for the incident complexity				
	analysis, agency administrator briefings, and the written delegation of				
	authority.				
	• Examples are aircraft crash off base, terrorist incident, large				
	wildland fire, CAT 1-3 hurricane or extensive flooding on and off base.				
Type 1	1. This type of incident is the most complex, requiring national				
	resources to safely and effectively manage and operate.				
	2. All Command and General Staff positions are activated.				
	3. Operations personnel often exceed 500 per operational period,				
	and total personnel will usually exceed 1,000.				
	4. Branches need to be established.				
	5. The agency administrator will have briefings and will ensure that				
	the complexity analysis and delegation of authority are updated.				
	6. Use of resource advisors at the incident base is recommended.				
	7. There is a high impact on the local jurisdiction, requiring				
	additional staff for office administrative and support functions.				
	8. Examples are nuclear weapons incident, terrorism incident like				
	9/11 or Hurricane Katrina.				

2.3.1.2. Hazard Assessment. A hazard assessment identifies vulnerabilities to major accidents or natural disasters. The hazard assessment identifies an installation's facilities, roadways, and other infrastructure subject to potential exposure or to the physical effects

of a major accident or natural disaster. The hazard assessment should consider all hazard types, the likelihood of each type of hazard occurring, and the vulnerability of the supported missions, assigned personnel, property, the environment, and the installation as a whole to these hazards. Once identified, mitigation actions for potential effects of the identified hazards are necessary. The hazard assessment allows installations to prioritize and plan response, recovery, and further mitigation efforts. Hazard assessments serve as one of the foundational components for effective emergency management. Results of the hazard assessment directly affect the planning for activities such as resource management, capability development, public education, and training and exercises.

2.3.1.2.1. The steps in hazard assessment are shown in Table 2.11.

Table 2.11. Hazard Assessment Steps.

1. Identify and characterize the hazards. Identify types of natural disasters the installation is susceptible to (i.e., hurricanes, tornadoes, etc.) Identify types of major accidents possible (i.e., aircraft, munitions, fuel storage, etc.) What additional hazards do they project? 2. Evaluate each hazard for severity and frequency. Review historical data to determine frequency. What actions may help reduce the severity of these hazards? 3. Estimate the risk. Identify and quantify what missions or areas are potentially affected by these hazards. 4. Determine the operational implications and costs of the direct and indirect effects of the identified hazards. 5. Determine the acceptable risks. What level of damage or mission loss can be accepted? 6. Identify risk reduction opportunities. This step takes mitigation actions to reduce the threat or impact of the hazard.

2.3.1.3. Capabilities Assessment. A capabilities assessment is an installation's evaluation to identify capabilities for response to a major accident or natural disaster. The capabilities assessment identifies response resources and limiting factors of mission- derived tasks with associated conditions and standards. Capability assessments serve as one of the foundations for effective EM activities and include: planning, resource management, capability development, public education, and training and exercise. Steps for a capabilities assessment are listed in Table 2.12.

Table 2.12. Capabilities Assessment Steps.

1- Analyze the installation's Threat Assessment and Vulnerability Assessment.2- Capture information on specific hazards applicable to the installation.

3- List installation resources.

4- List installation personnel with a mission-essential task responsibility for EM.

5- Identify shortfalls: equipment, resources, and personnel.

6- Report shortfalls and develop funding requirements as necessary.

2.3.1.4. The CEMP 10-2 Template. The template located on the Air Force Portal/Air Force/Emergency Management/Publications and Plans, lists executable tasks commanders must accomplish based on the appropriate hazards that threaten the installation. The CEMP 10-2 template contains information and generic checklists for response agencies. Each AF installation is required to develop an all-hazards environment CEMP 10-2 according to AFI 10-2501. Annexes should not repeat the main plan. When EM guidance is included in another plan, such as the Expeditionary Site Plan or War and Mobilization Plan (WMP)-1, Civil Engineer (CE) Supplement, reference the other plan but do not repeat the guidance. Basic CEMP template information is explained in AFMAN 10-2502, *Air Force Incident Management System Guidance*. Units and agencies must prepare detailed checklists to implement actions specified in this template. As previously stated, the pertinent CEMP 10-2 annexes addressed in this manual are Annex A, Major Accidents, and Annex B, Natural Disasters.

2.3.1.5. CEMP 10-2 Functional Checklists. Each installation unit, including tenants, must develop unit-specific checklists supporting the CEMP 10-2 within 30 days of publication. Checklists should follow the format used in the template located on the AF Portal Air Force/Emergency Management/Publications and Plans, and should be based on taskings and requirements in your installation CEMP 10-2. Specify who, what, when, where, why, and how to respond to and recover from all incidents. These checklists must be dated, reviewed by, and coordinated with the installation Readiness and EM Flight prior to publication. Reviews must be conducted at least annually, or when a significant portion of the plan has changed.

2.3.1.6. Mutual Aid Agreement. Commanders develop and execute Mutual Aid Agreements (MAAs) as directed in AFI 25-201, *Support Agreement Procedures*. All MAAs must be coordinated through the installation Legal Office before finalization and implementation. In addition, all MAAs should be regularly reviewed to ensure they are current and complete. MAAs are also known as "mutual assistance", "outside aid", "memorandums of understanding", "letters of agreement", "cooperative assistant agreement", or "intergovernmental compacts". An MAA template can be downloaded from the Emergency Management Community of Practice under folder F: Publications and Plans/Mutual Aid Agreements.

2.3.1.7. Civilian Agency Plans. The Base Civil Engineer (BCE) appoints in writing an installation representative to the Local Emergency Planning Committee. Participation in local planning should not be limited to this single appointee. All installation responders that anticipate involvement with their off-base counterparts should be fully engaged in the community incident response planning process. They should ensure that their parts of the Installation CEMP 10-2 meld with local plans. The installation emergency responders should have a good understanding of local plans and how the installation fits into the plan for receiving and providing support.

2.3.1.8. Base Support Installation (BSI). A BSI is a military installation within the US, its territories, or possessions controlled by any Service or agency, in or near an actual or projected domestic emergency operational area, designated by the DOD to provide military support for DOD and federal agency incident response operation efforts.

2.3.1.8.1. The Secretary of Defense will designate the appropriate BSI. Locations are based on previous site surveys, assessments, and mission analyses. Air Force installations are chosen for BSI by suitability.

2.3.1.8.2. Resources provided by a designated BSI may include: marshalling and laydown areas, security forces, personnel and equipment reception/staging areas and facilities, personnel support, billeting, transportation, material handling equipment, maintenance, general supply and subsistence support, contracting support, communications support, and medical services.

2.3.1.8.3. Installation may be tasked as a BSI for incident relief efforts. The BSI serves as the main logistical hub for military support operations. Refer to CEMP 10-2, Annex B, Appendix 3 for detailed information on BSI requirements and actions.

2.3.1.9. Shelters. Circumstances may require installations to move some or all of the base populace into shelters during a major accident or natural disaster. Potential shelters should be pre-designated based on expected events. In other words, installations in hurricane/typhoon prone areas should designate buildings that are built to withstand hurricane/typhoon force winds; installations in flood prone areas should designate buildings that sit above the flood plain, etc. It is the BCE's responsibility to identify and evaluate installation facilities that may be used for shelters. Installations should not rely on one shelter; several potential shelters should be identified. On-base agencies that provide a service to the population will normally be required to provide that service to shelter occupants. Services will provide food and bedding; CE will provide power, water, sanitary facilities and trash removal; medical will provide medical care; and security forces will provide security for the shelters. Some of these requirements, e.g., food and bedding; may require staging in the shelter prior to the event. Others, e.g., water and power may be readily available through the normal infrastructure, if it is not damaged. If it is damaged, then bottled water and generator power may be needed. Sources for both should be located before the need arises. These shelter requirements should not be confused with shelter-in-place requirements, which are described later in this manual. The installation CEMP 10-2, Annex B, Appendix 4 outlines the necessary shelter-related steps to take in case of a major accident or natural disaster.

2.3.1.10. Evacuation. Evacuation is a circumstance when personnel move from a hazardous area to a safe location. The decision to evacuate from the incident area is made by the IC for incidents that require an IC on the scene. The installation commander will make decisions to evacuate personnel from the installation. A major factor in an evacuation decision is shelter availability, transportation to move personnel, mission criticality of assets to be moved, and the safety of personnel evacuated. AFI 10-2501 outlines the steps necessary to conduct evacuation planning within the installation CEMP 10-2. It is also important to ensure that the local evacuation procedures for both major accidents and natural disasters are briefed and disseminated through the Base Emergency Preparedness Orientation (BEPO) as described in AFI 10-2501.

2.3.1.10.1. For major accidents, an evacuation will most likely be an ICs decision based upon the information received at the incident site during initial incident assessment. This decision will occur when it is too dangerous to have personnel

shelter in place. An IC must have a means to move safely, and a location to move personnel before evacuating.

2.3.1.10.2. In most natural disasters, an installation commander has time to conduct and make an operational risk management decision based on weather watches and warnings. MAAs, with installation participation in local community emergency planning committee meetings, assists the Readiness and EM Flight in developing a well formulated evacuation plan for the CEMP 10-2, Annex B. The installation EOC Emergency Support Functions (ESFs) can gather the needed information from the local or regional EOC. Ensuring that base populace is prepared for an eventual evacuation is essential to the installation's mission continuation. A standard base populace and personnel natural disaster evacuation brief should include the route of evacuation, available shelters off base, supplies to bring, disposition of pets, and notification information. When the installation commander gives the evacuation order, the EOC must coordinate evacuation procedures with the local authorities.

2.3.1.10.3. Areas to consider for both a major accident response plan and preparation for a natural disaster are listed in **Table 2.13**.

Table 2.13. Considerations for Major Accident and Natural Disaster Response Planning.

1- Plans. Has the installation developed MAAs with the local community to ensure safe transport and handling of wounded, injured, or ill personnel to medical treatment facilities?

2- Plans. Are the needs of base personnel who own house pets and other domesticated animals included in the CEMP 10-2?

3- Plans. Ensure Emergency Action Plans are completed, trained and exercised for the safe storage or destruction of classified material and IAW AFI 31-401, *Information Security Program Management*.

4- Plans, Training. Are installation procedures in place for the continued security of small arms and munitions storage areas?

5- Plans, Training, Exercises. Are the CEMP 10-2 and Integrated Defense Plans linked to consider the physical security of AF Protection Level Resources? Do security forces remain in place and do security forces have the appropriate PPE for the major accident? Are national security assets moved to secure areas within the installation or evacuated from the installation?

6- Plans, Training, Exercises, Equipage. How are installation personnel informed of the evacuation information? Has Public Affairs provided the Command Post (CP) with canned public information announcements to use via the INWS? How are base housing residents informed? Are A76 housing units included in mass notification processes?

2.3.1.10.4. The CEMP 10-2 must work with all functional area plans within the installation in order to ensure life, property, and installation mission are preserved.

2.3.2. Installation Notification and Warning System (INWS). AFI 10-2501 requires every AF installation to have a rapid and effective system to disseminate emergency information. INWS includes signals or messaging appropriate to Force Protection Condition (FPCON), watches, warnings, evacuation routes, and other alerting information to meet DOD and

federal warning requirements. Installations should incorporate all available resources to provide warning, which may include cable override, reverse 911, or a Network Broadcast System. All required incorporated resources compose the Air Force INWS.

2.3.2.1. The installation's CEMP 10-2 must incorporate all INWS requirements listed in AFI 10-2501 and include any and all local procedures.

2.3.2.2. AF Communications Squadrons are responsible for identifying new installation, testing, activating, and maintaining the Giant Voice systems IAW AFI 21-116, *Maintenance Management of Communications-Electronics*, on AF installations. CE is responsible for the physical installation of the INWS and maintenance of all system power requirements.

2.3.2.3. CE Squadrons are responsible for maintaining individual building Mass Notification Systems (MNS) on AF installations IAW AFI 10-2501 when designated real property installed equipment.

2.3.2.4. The installation's CP serves as the focal point for the installation notification and warning operations. The installation's CEMP 10-2 must include specific local procedures used by the CP, which are identified in AFI 10-2501.

2.3.2.5. Each AF installation's CEMP 10-2 will identify the notification and warning system requirements specific to their location. As a minimum, the requirements must include the following: alert, warning, notification, and response. Incident notification and warning occur at all levels of the installation. See **Table 2.14.**, for the types of notification systems used.

2.3.2.6. Air Force Visual Aid 10-2510, US Air Force Emergency Notification Signals (Refer to Attachment 10), provide specific incident warning signals associated with three major emergencies (natural disasters, wildfires, HAZMAT release) and attacks from hostile entities in peacetime and contingency operations. The installation's CEMP 10-2 should identify this visual aid and include definitions for each warning notification category.

2.3.2.7. The INWS must meet standards identified in Unified Facilities Criteria (UFC) 4-021-01, MNS Standards. INWS must incorporate systematic and coordinated standards to support the installation's AFIMS IAW AFI 10-2501.

BASE-WIDE NOTIFICATION	TARGETED NOTIFICATION		
Base Siren/Giant Voice	Primary & Secondary Crash Nets		
Base Network (Audio and Visual Alert)	Radio Net		
Intra-Base Radio Network	Base Network (Audio and Visual Alert)		
Primary & Secondary Crash Nets	Centralized Paging System		
Mobile Public Address Systems	Cell Phone / Blackberry		
Commander's Access Channel	Land Line Telephone		
Computer-based Notification System	Runner		

 Table 2.14. Base-Wide and Targeted Notification.

2.3.3. Training. Training is an integral part of the Air Force Emergency Management Program. It provides the requisite knowledge and skills for effective EM preparedness

planning, operations, and recovery. Formal courses and on-the-job training develop functional expertise in primary EM personnel. Some formal training courses also provide emergency preparedness knowledge and skills for other personnel with EM program responsibilities. Installation-level training helps develop knowledge and proficiencies DRF members need to conduct emergency operations. It also provides the base populace with the knowledge and skills needed to survive and operate during major accidents and natural disasters.

2.3.3.1. Training for major accident and natural disaster response is conducted IAW AFI 10-2501. Installation or base personnel must, upon arriving at the duty station, receive an initial orientation on the threats that could be encountered at their assignment. The training covers local procedures and features the web-based BEPO product "Are You Ready?" This product is for family members as well as base personnel. The Readiness and EM Flight will also train all assigned military and civilian personnel on the following topics: the installation warning and notification systems, incident planning, major accident and natural disaster threats, shelters, and protective actions.

2.3.3.2. Readiness and EM Flight. The Readiness and EM Flight provides the training described in AFI 10-2501. They manage and provide materials for the Air Force Emergency Management Information Program. The flight uses readiness training packages and develops courses of instruction and training materials for the installation-level EM training program. In addition, the EM Flight requests formal training quotas for assigned personnel and DRF members.

2.3.3.3. Unit commanders, through the unit EM representatives, conduct recurring EM training for unit personnel through the Air Force EM Information Program. Supplemented training is provided by the EM Flight for shelter management teams, contamination control teams, and EOC representatives with training on unit procedures and equipment. Unit commanders also coordinate needed EM training with the installation EM Flight. They also ensure personnel are trained to perform mission-critical tasks in a chemical, biological, radiological, and nuclear (CBRN) environment. Finally, unit commanders schedule assigned people for training and ensure they attend and document training for assigned personnel.

2.3.3.4. Air Force Emergency Management Information Program. This program consists of an initial orientation, as described above, and recurring education. Recurring education is conducted throughout the year by unit commanders and staff agency chiefs using materials provided by the installation EM Flight. The program emphasizes applicable hazards and protective actions. It should address the major accidents likely to occur at the installation. Consider the threat, mission, and assigned weapon systems. Improve response capability by highlighting problem areas and corrective actions identified by inspections, exercises, or actual major accidents and natural disasters.

2.3.3.5. Assign and train specialized teams IAW AFI 10-2501 to ensure response capabilities exist to mitigate local threats and hazards. Team equipment requirements are tailored for the installation based on specific mission and threat in the employment environment.

2.3.3.6. First and Emergency Responder Training. Training for major accident and HAZMAT incident response is conducted IAW AFI 10-2501. It lists courses for the

response members and directs training events and frequencies to support the CEMP 10-2 for the installation. Members should complete these courses as soon as possible after being assigned to these positions.

2.3.3.6.1. Incident Commanders (ICs). Title 29, Code of Federal Regulations, Part 1910.120, *Occupational Safety and Health Standards, Hazardous Waste Operations and Emergency Response*, requires ICs to be properly certified and credentialed when responding to HAZMAT incidents.

2.3.3.6.2. Investigation Board Members. Personnel assigned to the safety investigation board and incident investigation board must be suitably trained and equipped to enter any site where HAZMAT (including biohazards posed by blood-borne pathogens) may pose a threat to their safety.

2.3.4. Exercises. A key factor to preparedness is ensuring the installation training and equipment meet the needs of the DRF by conducting exercises. Exercises should be conducted to stress and test every facet of major accident and natural disaster response IAW AFI 10-2501.

Chapter 3

RESPONSE

3.1. Response Overview. There are three phases of response for major accidents and natural disasters, notification, response, and withdrawal or evacuation. The phases of response are sequential and overlap each other. Notification is when the installation command control element receives the notification of an accident or disaster. Once the notification is received, response forces are dispatched to respond to the incident. Once responders arrive on scene, they will assess the situation and if needed they will initiate protective actions for personnel in the affected area and for responders. The response phase ends when emergency actions have been implemented and lifesaving actions have been completed. However, some response actions may be accomplished during prevention, preparedness, or recovery. This section addresses response actions that should be considered during major accidents and natural disasters. The first step is notification that an incident has occurred.

3.2. Notification. Emergency response operations begin with a notification. Notifications can come from a variety of sources (i.e., telephone call; 911, crash phone, radio transmission, weather forecast warning, watch or advisory, or eyewitness). Regardless of how the installation is notified, an emergency response is initiated. Installation major accident and natural disaster responses are outlined in the CEMP 10-2 annexes and must be modified by the installation according to potential local threats, national security assets associated with the installation, and natural disaster phenomena.

3.2.1. Notifications and Communications. Notifications and communications begin when a report of the major incident arrives at a link in the notification chain. Those witnessing the incident should alert others in the immediate area and report it to the Emergency Communications Center (ECC), security forces, fire department, or the CP. For natural disasters like hurricanes or tornados, response personnel will be unable to take action until the immediate danger subsides. Alert the installation command structure, higher headquarters, and local civil authorities of the natural disaster as appropriate.

3.2.1.1. Primary and Secondary Crash Nets. Installations use primary and/or secondary crash nets to notify first responders and other emergency response and support organizations. AFI 13-213, *Airfield Management*, provides requirements and procedures for organizations utilizing primary and secondary crash networks.

3.2.1.2. Commander Notifications. The CAT alerts the installation command structure, higher headquarters, and local civil authorities of the incident. If appropriate, the CAT closes the runway and issues a Notice to Airmen, advises taxiing and airborne aircraft of appropriate information, and instructs aircraft to divert or hold position as required. Additionally, the CAT implements the CEMP 10-2 and other plans depending on the situation.

3.2.1.3. Incident Response Force Recall. Units will use an emergency communications network (very high frequency or ultrahigh frequency radio network, touch2talk walkie-talkie capability, pagers, or cell phones) to notify fire, medical, security forces, and other response elements. The installation commander directs notification and activates the DRF in response to incidents through the CP.

3.2.2. Installations provide weather notifications and updates, including watches, warnings, and advisories, via the INWS based upon information received from national or international weather monitoring agencies such as the NWS.

3.2.3. The goal of quick, informative notification is to protect personnel, critical equipment, weapons systems, and infrastructure. Notification provides the time needed to disperse equipment and weapons systems, curtail non-essential operations, provide shelter, or evacuate when ordered.

3.2.4. Determine government agencies' notification requirements in advance. Notification must be made immediately to local government agencies when an emergency has the potential to affect public health and safety. Notify local civil authorities if the incident is off-installation or is a hazard to the civilian community. Also, notify affected local federal installations and facilities. Civil authorities are responsible for evacuation within their jurisdiction. If necessary, enlist the help of local civil agencies and radio and television stations. A list of special notification requirements and procedures should be annotated in the CEMP 10-2.

3.2.5. Higher Headquarters. See AFI 10-206 for the Operational Report (OPREP)-3 Reports Matrix. AFI 10-206 is a quick reference guide to assist users in determining the type of report to submit. The matrix provides broad guidance and is not all-inclusive. The level of the report is based on whether or not an accidents or natural incident will attract national-level interest (PINNACLE) or will only be of interest to Headquarters (HQ) United States Air Force (USAF) (BEELINE) or a MAJCOM (HOMELINE).

3.3. Response Actions. Response actions are taken in the response and mitigation phases of incident management. Initial responders must apply the initial response governing principles shown in **Table 3.1**. The successful application of these principles will yield the protection of lives, property, and the mission. The pragmatic application of the principles includes a multitude of response activities such as analyzing the incident, planning the response, implementing the planned response, and evaluating progress.

Table 3.1.	Initial	Response	Governing	Principles.
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Respond and Establish Incident Command		
Lifesaving and Rescue		
Suppression and Containment		
Cordon		
Establish Tactical Priorities		
Determine and Communicate Protective Measures		

3.3.1. Initial Actions. This section describes in more detail the application of the general principles governing initial response actions and includes elements of the Emergency Responders Missions. The initial actions involve responders' attempts to recognize clues that define the scope and nature of the incident. For example, responders will look for clues on what hazards they may face such as type and size of HAZMAT containers, hazard placards, weapon systems, or aircraft.

3.3.1.1. Respond and Establish Incident Command. The first responder arriving on scene first will assume the role of IC, gain situational awareness, and establish the ICS.

The initial IC automatically assumes all on-scene responsibilities until each responsibility is transferred to designated staff members. The IC uses Attachment 5, to designate which responding agency has primary responsibility for a Responder Missions during the assessment period. As the needs of the IC expand, the staff can be expanded. After initial assessment, the IC will advise the ECC of status. The IC can request support directly from units until the response is expanded and the EOC and additional UCCs are activated. If the EOC is activated, all requests for support and logistics will flow through the EOC rather than the ECC. The EOC will continue to develop and update the common operational picture (COP), and the IC will begin developing the IAP. Attachment 2 and Attachment 8 provide recommended generic models for initial incident site set-up by the IC and responding forces. Each scenario may require a slightly different arrangement but the basic concept will not change.

3.3.1.2. Lifesaving and Rescue. Specific lifesaving and rescue activities will be directed by the IC. First responders will implement immediate lifesaving and rescue operations. They will conduct fire fighting operations and perform incident medical care at established casualty collection points. Established plans should describe how the augmentation of resources would be provided to the IC.

3.3.1.3. Suppression and Containment. Closely associated with other lifesaving activities is hazard suppression and containment. First responders suppress fires and similar incidents using a variety of strategies, including confinement, containment, and control.

3.3.1.4. Establish Cordon. The IC determines the size of the incident cordon. As the situation matures and the type and scope of the problem is identified, the cordon is redefined based upon that information. Technical Order 11A-1-46, *Fire Fighting Guidance*, and US Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Pamphlet PHH-50-ERG2008, *Emergency Response Guidebook*, lists initial cordon sizes for most HAZMAT. The EM Flight may advise on evacuation and cordon size based upon type and size.

3.3.1.4.1. Security forces execute operational and tactical security procedures to ensure the safety and security of emergency response forces and populations at risk. Security Forces provide initial site and incident cordon security functions. In addition, they respond to natural disasters on the installation, establish locations for protection of classified materials, identify and secure traffic control points (TCP), direct identification of personnel entering the incident site, coordinate with local law enforcement agencies, and advise the IC on security forces issues during the establishment of a NDA at CONUS locations.

3.3.1.4.1.1. Control Site Access. Isolating the scene of the incident takes place when the emergency is discovered. If possible, the discoverer should secure the scene and control access, but no one should be placed in physical danger to perform these functions.

3.3.1.4.1.2. Only trained personnel perform advanced security measures. Access to the incident scene must be limited to persons directly involved in the response. Entry control points are thus established. Entrance locations into the controlled zones will be determined by the IC. Access through the control points will only

be allowed with permission of the IC or designee.

3.3.1.4.1.3. Entry Control Point (ECP). The ECP is where ingress and egress of all responders from an incident cordon takes place and is controlled by Security Forces or other government agencies. During an incident, the ECP is primarily located upwind and adjacent to the established evacuation distance as a minimum. The initial location of the ECP can change as new information is gathered during continued assessment of the incident provides information that is more detailed. During natural disasters the ECP will, in most cases, be located for ease of resource entry to the incident area or region.

3.3.1.4.2. National Defense Area. As described in AFI 31-101, *Integrated Defense*, NDAs are established in the CONUS and U.S. territories when necessary to secure Protection Level 1, 2, or 3 resources located off installation lands not under the jurisdiction or administration of, or in the custody of, DOD or a military department of the DOD. **Note:** OCONUS procedures will be established based on host nation agreements and follow these guidelines as closely as possible. Establishment of a NDA temporarily places these non-federal lands under effective control of the DOD during emergencies. There must be close coordination with the commander, Staff Judge Advocate (SJA) and local authorities. The senior DOD representative at the scene will define the boundary, mark it with a physical barrier, and post warning signs. The landowner's consent and cooperation will be obtained whenever possible. Although not necessary for implementation/establishment, consent and cooperation of the authorities with jurisdiction and/or landowner is preferred.

3.3.1.4.2.1. Only the senior DOD official authorized to designate installation restricted areas may declare a NDA as identified in AFI 31-101, and then <u>only</u> to safeguard government resources.

3.3.1.4.2.2. Ensure military personnel do not violate the Posse-Comitatus Act. Brief all personnel on the rules for use of force and apprehension and detention legalities. Military personnel are precluded from assisting civilian law enforcement pursuing or apprehending individuals outside the NDA. Request support from local civil authorities/officials in preventing unauthorized entry and in removing unauthorized personnel who enter the NDA. Ask civilian authorities to apprehend or arrest civilians who violate any security requirements at the NDA. Note: If local civil authorities are unavailable, or refuse to give assistance, on-scene military personnel should detain violators or trespassers. Disposition should be completed quickly following coordination with the legal officer.

3.3.1.4.2.3. Military commanders retain no specific rights or jurisdictional control of an incident in a civilian-controlled area unless the installation commander, in conjunction with the SJA, establishes a NDA. A transfer of authority must be provided to relinquish both operational and tactical control of the incident from civil authorities to the DOD component, installation EOC, and the IC. The civil authorities will be debriefed and will forward all financial expenditures, after action reports, and lessons learned to the installation incident investigations board. Relevant references include AFI 10-2501, AFI 10-802, AFI 10-204, *Readiness Exercises and After-Action Reporting Program*, and AFI 10-206.
Table 3.2. Zone Boundary Criteria.

3.3.1.4.3. Hot, Warm, and Cold Zones. An initial task within the Emergency Responder Missions is that the IC must establish control of the site to protect first responders and keep out unauthorized personnel. The strategy is to establish three distinct zones: the exclusion zone (Hot Zone), the contamination reduction zone (Warm Zone), and the support zone (Cold Zone). See Attachment 2 for additional information on typical incident site setup procedures. The following paragraphs describe hot, warm, and cold zones.

3.3.1.4.3.1. Hot Zone. The hot zone is the area where the actual incident occurred and contamination exists. Individuals entering the hot zone must wear the prescribed levels of PPE and be decontaminated before leaving the hot zone. Entry and exit check points will be established at the outer boundary of the hot zone to regulate ingress and egress of personnel and equipment. The outer boundary of the hot zone is initially established by visually surveying the immediate area and determining where hazardous materials are located. Monitoring equipment may also be used to define the area.

3.3.1.4.3.2. Warm Zone. The warm zone is the transitional area between the hot zone and the cold zone. This zone contains the decontamination area and access control points through which personnel and equipment ingress and egress. Since this zone is less hazardous, personnel can wear lower levels of PPE.

3.3.1.4.3.3. Cold Zone. The cold zone is the outermost part of the site and is considered non-contaminated. This is where the incident command post (ICP) and support equipment are located. Normal work clothes are acceptable in this area. The ICP should be situated upwind and upstream of the hot zone and should be easily accessible to highways or other transportation routes. The press can be allowed in this zone.

3.3.1.4.4. The size and distances between the hot zone, warm zone, cold zone and the ICP is a function of incident-specific conditions, the material involved, and the judgment of the IC. The criteria in **Table 3.2**. should be considered when establishing zone boundaries.

Site physical and topographical features.
Weather conditions and wind direction.
Air contaminants field measurements.
Hazard/chemical air dispersion models.
Physical, chemical, toxicological, and other hazard characteristics present.
Cleanup activities.
Presence of adequate roads, power sources, water, and the potential for fire or explosion.

3.3.1.5. Establish Tactical Priorities. IC takes actions to implement the strategic objectives developed in previous steps. Tactical priorities address the following: rescue/ responder life safety, incident stabilization, and property and environmental conservation.

3.3.1.6. Determine and Communicate Protective Measures. The IC in conjunction with the EOC determines initial protective measures for personnel within the affected areas.

The IC decides whether to evacuate personnel from the hazard area or to shelter-in-place within the cordon. Possible protective measures may also include the type and level of PPE, and type and location of contamination sensors. Evacuation or in-place sheltering augments PPE and protects personnel from the effects of an accidental HAZMAT release. If personnel evacuations are likely, temporary assembly areas must be identified and clearly marked.

3.3.1.7. Responder Protection. Emergency responders face serious hazards during the execution of their tasks. Some protection can be afforded using various forms of personal protective technologies such as protective garments, respiratory protection, environmental monitoring equipment, communications equipment, and practices and protocols. Limitations in existing protective technologies as well as the continually expanding roles of emergency responders, drives the need to improve understanding of the risks responders face and the protection needed.

3.3.1.7.1. Determining Responder Protection. Response to fires are less than 10 percent of service calls for firefighters but account for about half of firefighter injuries and fatalities and represent most of the hazard and protection needs. The criteria for deciding appropriate responder protection includes: (1) performance of turnout gear (i.e., protective clothing), (2) heat stress and exhaustion while working in turnout gear, (3) necessity of respiratory protection, (4) type of intra-responder communications needed, (5) protection from explosive fragmentation and blast hazards, and (6) potential need for protection from chemical and biological hazards.

3.3.1.7.2. Criteria for determining the appropriate level of responder protection includes the need to protect from exposure to infectious diseases and blood borne pathogens as outlined in 29 CFR 1910.1030, *Bloodborne Pathogens*, e.g., Human Immunodeficiency Virus, Hepatitis B Virus, and Hepatitis C Virus. Pathogens are a growing hazard; although such exposure accounts for few actual responder illnesses. Responder protection level considerations include all DRF members such as security forces, explosive ordnance disposal (EOD), and heavy equipment operators. Criteria for deciding responder protection also includes interoperability of radio communications systems, a hazard assessment capability, and use of personnel location monitoring technology.

3.3.1.8. Public Protection. Lines of authority and communication must be established and routinely tested to ensure functionality. All AF personnel should be trained to notify the chain of command and proper authorities of a suspected incident. Typically, units would use an emergency network to notify fire and medical personnel, security forces, and response elements. The installation notification and warning system is described in AFI 10-2501 and paragraph 2.2.2, Installation Notification and Warning System (INWS), of this manual. Public protection measures include notification, sheltering, and evacuation. The set of protective actions available to the IC to protect the population are: (1) withdrawal, (2) evacuation, (3) sheltering-in-place, or a combination of the three, each defined below. This strategy is usually implemented after the IC has established an isolation perimeter and defined the control zones for responders.

3.3.2. Defense Support to Civil Authorities (DSCA) Response. Within the US, its territories and possessions, the DHS coordinates response activities for federal agencies if the incident

affects areas outside the installation boundaries. The initial response base coordinates directly with local officials until FEMA officials arrive. The applicable references are the NRF, NIMS, and AFI 10-2501. When the effects of an incident on the installation extend to surrounding civilian communities, installation commanders provide Defense Support of Civil Authorities (DSCA) under "imminently serious conditions". In addition, a civilian community can request assistance for an incident that occurs off base under imminently serious conditions that include the need to save lives, prevent human suffering, and mitigate great property damage. The installation providing DSCA will report the incident to their MAJCOM as soon as possible when time does not allow the commander or installation to obtain prior approval from higher headquarters and when a civil authority requests assistance. Civil authorities' requests must be in writing and must contain the scope and nature of the request. If a verbal request is given that requires an immediate response, the civil authorities must submit the request in writing as soon as possible. Applicable references are AFI 10-2501, AFI 10-802, the CEMP 10-2, the NRF, and NIMS.

3.4. Withdrawal or Evacuation. Withdrawal is a protective action used when responders are in imminent danger or when all response actions have been completed. Withdrawal may be immediate or planned. Persons who are in immediate danger of downwind hazards must be evacuated immediately. Move victims away from the scene and away from responders. Evacuation is a protective action to remove all personnel (military or civilian) from a threatened area to a safer location. It is typically regarded as the controlled relocation of people from an area of known danger or unacceptable risk to a safer area or to one in which the risk is considered acceptable.

3.4.1. Shelter-In-Place. Shelter-in-place is a protective action used during a major accident or natural disaster emergency condition to provide limited protection for to otherwise unprotected personnel or casualties. Use in-place protection when evacuation may cause greater risk than remaining in place.

3.4.2. Decision Trees. Decision trees are useful decision support aids to implement specific major accident or natural disaster action goals. The trees are not specifically for toxic corridors or downwind hazards, but each decision tree is supported by data from determining the toxic corridor and the downwind hazard. Prominent incident action goals include:

3.4.2.1. Minimize total population exposure, number of people exposed, and expected population risk. Avoid or minimize fatalities.

3.4.2.2. Reduce exposure below a threshold level (i.e., no deaths exposure) and reduce exposure to as low as reasonably achievable.

3.4.2.3. Goal Specific Decision Trees. The choice of goals is essentially a command policy decision involving difficult tradeoffs. For example, command policy makers must decide whether it is better to: (1) minimize fatalities by having a large percentage of the population exposed to a sub-lethal but harmful level of chemical, or (2) minimize the number of people exposed by choosing to avoid exposure for most people, while allowing a few to be exposed to a potentially fatal level of the chemical. Refer to **Attachment 3**, Protective Actions to Minimize Exposure and **Attachment 4**, Protective Actions to Avoid Fatalities.

3.5. Command and Control (C2). C2 during major accidents or natural disasters starts at the incident command level and migrates to one of the installation operation centers as the situation matures. Operation centers are required at numerous levels of command to implement an installation-wide EM program. During major accidents or natural disasters, notification and dissemination of critical information are provided by a single integrated command structure within the DRF. Each C2 level is assigned responsibilities to ensure overall success of unit and installation mission priorities and management of emergency response and recovery operations. Each level also performs organization and installation support functions to organize, train, plan, and prepare to execute actions to enable safe management of domestic incidents that threaten the primary mission of the installation. Actions are prompted from standard operating instructions, checklists and other written procedures.

3.5.1. Communications' Principles. Preparedness organizations must ensure effective communications systems exist to support incident management activities. Individual installations will comply with national interoperable communications standards during development. Such standards appropriate for the NIMS community will be designated by the National Integration Center (NIC). Incident communications follow the standards called for under the AFIMS.

3.5.1.1. The incident command manages communications at an incident using a common communications plan and an incident-based communications center established solely for use by the command, tactical, and support resources assigned to the incident. All entities involved in managing the incident should communicate using common terminology.

3.5.1.2. Effective communications, information management, and information and intelligence sharing are critical aspects of domestic incident management. Establishing and maintaining a COP and ensuring accessibility and interoperability are principal goals of communications and information management. A COP and systems interoperability provides the framework necessary to:

3.5.1.2.1. Formulate and disseminate indications and warnings.

3.5.1.2.2. Formulate, execute, and communicate operational decisions at an incident site as well as between incident management entities across jurisdictions and functional agencies.

3.5.1.2.3. Prepare for potential requirements and requests supporting incident management activities.

3.5.1.2.4. Develop and maintain overall awareness and understanding of an incident within and across jurisdictions.

3.5.2. Incident Commander (IC). The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site. The IC must be fully qualified to manage the response. The IC is equivalent to the on-scene IC as defined in OSHA 1910.120(8), *Hazardous Waste Operations and Emergency Response*.

3.5.3. Incident Command Post (ICP). The ICP is the on-scene location where the IC develops objectives, communicates with subordinates, and coordinates activities between

various agencies and organizations. The ICP is the field office for response operations and requires access to communications, and information with the support of technical and administrative personnel.

3.5.4. Disaster Response Force (DRF). The DRF includes the CAT, EOC, ECC, IC, First Responders, Emergency Responders, UCCs, and specialized teams. The DRF is used to respond to all incidents, although the team's configuration is incident-dependent. The installation commander directs notification and activation of the DRF through CP controllers for all-hazard incidents. The DRF duties, as outlined in AFI 10-2501, include C2, contamination control, and shelter management.

3.5.5. Senior Military Representative. The installation commander can dispatch to, or the incident commander can request a senior military representative (SMR) at the incident site. The SMRs' primary purpose is to liaison with media and outside agencies during high visibility incidents or to support the incident commander. A SMR is not required at a vast majority of incidents. On scene, unless a transfer of Incident Command authority occurs, the existing IC maintains tactical control.

3.5.6. Crisis Action Team (CAT). The CAT directs strategic actions supporting the installation's mission via the CP. The CAT's primary focus after a major accident or natural disaster is continuation of the installation's mission. The CAT, through the CP sends and receives information and requests pertinent to emergencies. When notification of a major accident or natural disaster is received, the CP activates the INWS, notifies all base organizations and notifies off-base agencies supported by the installation. The CAT also activates the EOC, notifies senior leadership, and recalls the DRF.

3.5.6.1. The CAT controls the CP, EOC and UCCs. The installation commander serves as the senior leader of the CAT. The CAT is an organization capable of devoting fulltime attention to a crisis and is composed of pre-designated personnel, with possible representation from outside agencies as needed. The CAT is scalable and tailorable at the discretion of the commander based on the situation. It is intended to provide intense management of "limited" crises and works collaboratively with the EOC. Additional staff members or senior officers representing major tenant units or host-nation forces may also be present to support CAT operations. The CAT's primary functions are listed in **Table 3.3**.

3.5.6.2. The CP is the essential C2 node of the CAT. The CP provides a communication link with higher headquarters and civilian agencies. The CP communicates directions, information, and recommended courses of action concerning the incident as the focal point for installation-wide warning and notification operations. Another major duty for the CP to support the incident includes the request for forces (RFF) process.

Table 3.3. Crisis Action Team Primary Functions.

Maintaining the primary operational and support mission capabilities of the
installation within the parameters of the incident.
Providing support to the CAT and EOC Director during EM operations.
Receiving advice from the SJA regarding NDAs at off-base incidents.
Controlling CP, EOC, and UCCs.
Disseminating and collecting information from the EOC and ICP.

Coordinating RFFs through the appropriate MAJCOM.

Coordinating required requests for external specialized teams such as State National Guard Civil Support Teams (CST), Hammer Adaptive Communications Element (ACE), Nuclear Emergency Search Team (NEST), Army's Technical Escort Unit (TEU), and Air Force Radiation Assessment Team (AFRAT) required for response through their respective MAJCOM or component commander.

Receiving and disseminating orders and missions to ensure continuity of operational and support mission requirements.

3.5.7. Emergency Operations Center (EOC). The installation commander activates the EOC and designates the EOC Director to manage incident response resources. The installation commander provides guidance to the EOC Director on mission priorities. The installation commander approves, directs, or ensures IC or EOC requests for assistance from external specialized teams are forwarded through the MAJCOM or DOD component commanders. During a major incident, HAZMAT incident, or natural incident, the EOC Director must consider the initial response actions listed below.

3.5.7.1. Convene the EOC. Based on the magnitude of the incident, the EOC Director decides to recall the full EOC or to tailor the recall to include only those staff members and ESFs required to handle the incident. When there is doubt, it is easier to recall the full EOC staff and subsequently dismiss those members not required.

3.5.7.2. Situational Awareness. The EOC Director must establish and maintain an accurate and timely situational awareness. As the EOC staff convenes, it is the EOC Director's responsibility to ensure the entire staff is populating current incident information through the installation's COP.

3.5.7.3. Coordinate Information and Resources Supporting the Incident. Once the EOC staff is operating, the EOC Director ensures the EOC staff is coordinating responsive information and resources the IC needs to respond to the incident.

3.5.7.4. Keep the Installation Commander Informed. The EOC Director must keep the installation commander fully informed on the incident response efforts throughout the operation.

3.5.7.5. The EOC has several simultaneous requirements to communicate information and decisions. Communications may include checklists to activate required resources, provide direction to evacuate or take cover, and accomplish specific actions associated with emergency actions.

3.5.7.6. Information flows from the individual and continues via the UCC to the EOC. The EOC also communicates with MAJCOM or area of responsibility through the installation commander to report any critical shortages or incidents affecting the mission. Additionally, information flows from the EOC to the UCCs to keep them informed of any changes in the threat following major accidents or natural disasters.

3.5.7.7. The EOC staff coordinates and consolidates all communication inputs and eliminates any duplicate or contradictory information. During responses, the EOC receives reports from several sources. EOC processing of these reports includes organizing the reports; developing messages; and status updates relative to their source.

3.5.7.8. Unit commanders activate their UCCs and initiate unit personnel accountability; however, the EOC Director determines which UCCs remain activated. UCCs serve as a communications conduit to each individual on the installation and provide a point of contact for resources requested from within the ESF construct. UCCs relay emergency information within the chain of command regarding major accidents and natural disasters. The UCCs also direct, monitor, report mitigation and preparedness activities, and maintain unit continuity for C2. UCCs are responsible for coordinating activities in preparation for, response to, and recovery from incidents. This includes gathering and disseminating information, accounting for personnel and resources, and performing initial damage assessment for their functional areas of responsibility.

3.5.7.9. Determine Specialized Teams to Activate. The IC can request any specialized team support needed for response operations. Upon request from the IC, the EOC will coordinate and activate the installation's indigenous specialized teams. If the IC requires a specialized team not available locally, the request will go to the CAT. The CAT coordinates requests for external specialized teams required for response through the RFF process through their respective MAJCOM. Examples of external specialized teams include: (1) State National Guard CST, (2) Hammer ACE, (3) US Marine Corps Chemical Biological Incident Response Force, (4) NEST, (5) Army's TEU, and (6) AFRAT.

3.5.7.9.1. At the installation level, specialized team duty should be a member's primary focus during emergency response operations, exercises, and training. Do not assign specialized team members with conflicting emergency operations duties. Appoint enough team members to conduct 24-hour operations. Department of the Air Force civilian personnel may be assigned to specialized teams.

3.5.7.9.2. Only the installation commander or designated representative should approve the release of a specialized team member for reasons other than permanent change of station, retirement, discharge, or medical disqualification. The replacement must be trained before releasing the incumbent.

3.5.7.10. Provide Initial Situation Briefings. Upon initial recall of the ESF, personnel will report to the EOC and receive a briefing regarding the following topics: (1) description of the incident or natural incident, (2) forces on-scene, (3), casualty estimate, (4), cordon size and location description, (5) protective measures being taken, and (6) tactical priorities.

3.5.8. Emergency Communication Center (ECC). During a major accident or natural disaster, the ECC receives and processes emergency calls and dispatches sufficient emergency response, e.g., fire, Security Force, and medical, if available resources to mitigate incidents as requested by the IC or the EOC once activated. The ECC provides follow-on communications related to the incident. This information is shared with CP, CAT, EOC, and Base Defense Operations Center.

3.5.8.1. The ECC supports the IC as the single dispatch point for initial emergency response. The ECC may dispatch other emergency responders until the EOC is activated.

3.5.8.2. The ECC is the gathering point for initial emergency response information and populates the tactical level COP within the ECC. Upon activation of the EOC, the ECC

will share installation COP information with the ESFs 4, 5, and 13. The ECC will continue to manage routine, non-emergency operations for security forces and fire emergency services and in most cases will act as a UCC.

3.5.9. Unit Control Centers (UCC). UCCs provide mission support to the IC through the EOC (when activated) and to the installation commander as directed by the CAT. The EOC Director and CAT Director resolve any conflicting resource requirements. UCCs are the essential focal point within an organization during a major accident or natural disaster to maintain unit C2, relay information to and from unit personnel, provide expertise to the EOC or IC, and leverage unit resources to respond to and mitigate the incident.

3.5.9.1. UCCs are responsible for coordinating activities for incident response with the respective ESFs identified in AFMAN 10-2502. UCCs are responsible for personnel accountability, emergency notification, accomplishing unit-level preparation and recovery actions and providing any support required by the EOC or IC. Effective accountability during major accidents and natural disasters is an essential function to maintaining safety and continuing search and rescue efforts. All responders report IAW procedures established by the IC to receive mission assignments.

3.5.9.2. To ensure efficient accountability of all personnel affected by the incident, including first and emergency responders, tactical operations must be directed and coordinated as outlined in the IAP. Post-incident actions include participating in the recovery from major accidents or natural disasters. Additional UCC responsibilities are listed in **Table 3.4**.

Table 3.4. Unit Control Center Responsibilities.

UCCs support the IC, EOC Director, unit commander and the installation commander, as directed by the CAT, for mission requirements.

UCCs serve as a communications conduit to unit personnel and provide a single point of contact at unit level for resources requested from within the ESF construct.

UCCs maintain a permanent log of events, status of unit activities, and a base map identifying unit areas of responsibility, structures, and shelters.

During major accidents and natural disasters, UCCs provide essential notification and dissemination of pertinent information to all personnel and support the execution of preparedness.

UCCs conduct prevention and mitigation activities at unit level to support the installation CEMP 10-2.

UCCs provide personnel, resources, supplies, and technical expertise to the DRF structure to conduct EM operations.

3.5.10. Local and State Government and Emergency Managers. Determine government agencies' notification requirements in advance. Notification must be made immediately to local government agencies when an emergency has the potential to affect public health and safety. Notify local civil authorities if the incident is off-installation or is a hazard to the civilian community. Also, notify affected local federal installations and facilities. Civil authorities are responsible for evacuation within their jurisdiction.

Chapter 4

RECOVERY

4.1. Recovery Overview. Recovering from a major accident or natural disaster often extends past the incident itself. The recovery phase may require days, weeks, or even years before an installation resumes normal operations. Responders develop a recovery plan for short-term and long-term goals for restoration of functions, services, resources, facilities, programs, and infrastructures. Responders analyze damage assessment reports and identify priorities to restore the installation's mission primary capabilities. During recovery, installations must also conduct and maintain installation security, provide support and assistance to personnel (to include fatality management and mortuary affairs), evaluate the incident, and identify lessons learned.

4.1.1. Recovery. The recovery phase begins when first responders have completed emergency response and lifesaving actions. The EOC, using the CEMP 10-2 and appropriate checklists, develops the installation recovery plan. The EOC Director, with approval from the installation commander, is responsible for developing and overseeing recovery actions. The main goal of recovery is to re-establish installation mission and return to normal operations. There may be critical missions that must continue before or during the recovery phase. Installations must plan for those operations and develop procedures to remove or minimize the hazards in an area or at a facility in order to continue the critical mission. See paragraph 4.2, for additional information on mission continuation.

4.1.2. Recovery Operations Chief. Once the emergency is over and recovery starts. Control of the site must be officially transferred from the IC to another individual or organization. This person is not referred to as an IC but called the Recovery Operations Chief. The Recovery Operations Chief must be a subject matter expert in the hazards or activities within the incident site. If it is a HAZMAT incident, the organization or individual that assumes control of the site must be knowledgeable of the hazards and recovery procedures. For example, initiating actions to contain the hazard and clean up the site to restore the area to its condition before the incident. The person in charge of that work should have an environmental engineering background and be familiar with HAZMAT clean-up requirements. If it is an aircraft incident, the recovery operations chief should be familiar with that aircraft or be a member of the interim aircraft mishap investigation team. The EOC Director should select the individual that will be in charge of the site.

4.1.3. Reporting. The EOC has requirements to communicate simultaneously certain information and decisions. Communications may include checklists to activate, resources needed, directions to evacuate or take cover, and accomplishment of specific actions associated with states and stages of alert.

4.1.3.1. Information flow starts with individuals and continues upward to the UCC and finally to the EOC. The EOC must communicate with MAJCOM or area of operations through the installation commander to report critical shortages or incidents affecting the installation's mission capability.

4.1.3.2. Information flow from the EOC downward informs UCCs of the situation as it changes. This includes alert stages, natural disaster threats, or major accident information.

4.1.3.3. The EOC staff must coordinate and consolidate inputs to eliminate duplication of information.

4.1.3.4. The EOC receives reports from several sources during responses. Organized reports, messages, and status updates usually originate from base personnel or designated teams to include the CAT, ECC, UCCs, and first and emergency responders. The reports are funneled to UCCs and passed to the EOC.

4.1.4. Document Report Information. The EOC Director and EOC Emergency Support Functions will maintain the necessary maps and status boards to show the key operations status in their areas of responsibility. In addition, they will maintain a permanent log of actions. This log of actions provides continuity between shift changes and assists in the preparation of daily situation reports (SITREP). A well-maintained and thorough log of actions provides the alternate EOC with periodic updates to enable a rapid resumption of operations if the primary EOC is damaged or destroyed; therefore, the log must be regularly copied and given to the alternate EOC. Detailed documentation is also required for continuity during the event, and for identifying lessons learned, reviewing planning documents, and updating execution checklists after an event. The EOC or CAT assimilates airbase information and forwards essential elements to joint force, theater, and MAJCOM command centers. The process is reversed for downward information flow.

4.1.4.1. Expense Accounting. The finance/administrative section is an essential part of the ICS. In addition to monitoring multiple sources of funds, the section chief tracks and reports to the IC the financial "burn rate" (the rate at which resources are being consumed) as the incident response progresses. This enables the IC to forecast the need for additional funds before operations are adversely affected. This is important if significant operational assets are contracted to the private sector. The section chief may also need to monitor cost expenditures to ensure statutory rules are met. Close coordination with the planning and logistics sections are also essential to ensure operational records are reconciled in a timely manner with financial documents. The finance/administrative section tracks incident response costs, procurements, time costs, compensation and claims. The finance/administrative section chief may organize the different incident response costs into specialized units.

4.1.4.2. Events Logs. Events logs detail unit and resource activity. These logs provide the basic reference from which to extract information for after-action reporting. An event log is initiated and maintained by each UCC, the EOC, CAT and the ECC. Completed logs are submitted for after-action reporting when directed.

4.1.4.3. UCCs, EOC, CAT and other reporting activities use computer generated or installation approved events logs. A sample of the ICS-G incident command system log is shown in **Attachment 6**. See **Table 4.1**., for instructions on how to complete the log. Additional ICS forms can be downloaded from the Emergency Management Community of Practice/F.Publications and Plans/ICS Forms or at the FEMA website: http://training.fema.gov/EMIweb/IS/ICSResource/ICSResCntr_forms.htm.

4.1.4.4. After-Action Reports. IAW AFI 10-2501, commanders must develop and submit installation-wide lessons learned reports to their respective Headquarters AF, MAJCOM, Field Operating Agency (FOA), or Direct Reporting Unit (DRU) for all emergency responses. After-action reports should include actions implemented and any

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lessons learned during actual incident response and exercises. AFI 10-204 provides guidance on reportable actions as well as preparing and submitting the report.

Table 4.1. Unit Log (ICS Form 214-CG) Instructions.

Purpose. The Unit Log records details of unit activity, including strike team activity or individual activity. These logs provide the basic reference from which to extract information for inclusion in any after-action report. Preparation. A Unit Log is initiated and maintained by Command Staff members, Division/Group Supervisors, Air Operations Groups, Strike Team/Task Force Leaders, and Unit Leaders. Completed logs are submitted to supervisors who forward them to the Documentation Unit. Distribution. The documentation unit maintains a file of all unit logs. All completed original forms MUST be given to the documentation unit. Item # Item Title Instructions 1. Incident Name Enter the name assigned to the incident. 2. Check-In Location Enter the time interval for which the form applies. Record the start and end date and time. Enter the title of the organizational unit or resource 3. Unit Name Designators designator (e.g., Facilities Unit, Safety Officer, Strike Team). 4. Unit Leader Enter the name and ICS Position of the individual in charge of the Unit. 5. Personnel Assigned List the name, position, and home base of each member assigned to the unit during the operational period. 6. Activity Log Enter the time and briefly describe each significant occurrence or event (e.g., task assignments, task completions, injuries, difficulties encountered, etc.) 7. Prepared By Enter name and title of the person completing the log. Provide log to immediate supervisor, at the end of each operational period. Date/Time Enter date (month, day, year) and time prepared (24-hour clock).

4.1.4.5. After-action reports should include dissemination and notification successes and shortfalls, installation-wide response checklists, deficiencies, deficiency correction plans, required training, dates of implementation, any corrective action, follow-up actions, and

lessons learned. After-action reports are also required by the Air Force After-Actions Reporting System (AFAARS) when AF elements participate in the Chairman of the Joint Chiefs of Staff Exercise Program, other joint exercises, AF exercises, and real-world operations. AFAARS reporting is required on humanitarian operations, base closure, peacekeeping, and Noncombatant Evacuation Operations. Headquarters AF, MAJCOMs, FOAs, and DRUs must establish internal after-action reporting procedures to ensure AFAARS objectives are met, problems are solved, and results are disseminated.

4.1.4.6. IAW AFI 90-1601, *Air Force Lessons Learned Program*, the primary method for submitting observations and AARs is via AF-Joint Lessons Learned Information System (AF-JLLIS). Organizations or individuals should use this method whenever possible to submit individual lessons or AARs to their appropriate lessons learned office (normally the A9L for that MAJCOM or NAF), or direct to HAF/A9L where appropriate. After actions report summary template is available on the AF-JLLIS website. When submitted via AF-JLLIS, AARs go to AF/A9L who in turn forwards them to the appropriate level of the submitting organization's chain of command—the lessons learned process is not intended to be used to bypass the chain of command when submitting lessons.

4.1.5. Conduct Damage Assessments. Damage assessment may include aircraft and support equipment, munitions and other real property. When necessary based on circumstances a claims processing location may be required. Damage assessments are completed in two phases. The first phase is a rapid field assessment of the area affected. The second phase is a detailed scientific damage assessment of facilities and infrastructure. This section will only discuss the rapid field assessment during recovery actions.

4.1.5.1. Rapid Field Damage Assessment. A reliable rapid field damage assessment will increase the likelihood that recovery funds and other resources are properly prioritized and targeted. Damage assessment also provides policymakers with guidance for planning and implementing mitigation measures. The field-based assessment acts as ground-truth for larger more comprehensive assessments such as satellite-based assessments. The objective of rapid field damage assessments is to get a quick reliable overview of damage-related issues shown in Table 4.2.

Table 4.2. Rapid Field Damage Assessment Impact Issues.

What facilities have been damaged?
Is there damage to the environment?
What is the damage to utilities and other supportive infrastructure?
Are there impacts to livelihood because of the damage?
What role, if any, did pre-incident mitigation measures play in reducing the impact of the
incident, and under what circumstances and to what extent did this occur?

4.1.6. Develop and Implement the Recovery Plan. During the recovery phase, additional information is obtained and a recovery plan is developed and implemented. The recovery plan should provide detailed, incident-specific procedures for both short-term and long-term recovery. The EOC uses the CEMP 10-2 and an IAP to assist in developing a detailed recovery plan based on damage assessment information and priorities established by the

installation commander. The actions in **Table 4.3.**, must be accomplished before ending major accident and natural disaster operations involving AF resources.

Table 4.3. Actions Prior to Ending Disaster Operations.

Provide positive or negative confirmation of contamination.
Identify, account for, and recover all classified and hazardous materials.
Ensure representatives from all affected military and civil agencies complete necessary
observations.
Remove debris and restore the site.

4.1.7. Mishap Response Plan. The Installation Safety Office and the EM Flight works together IAW AFI 91-202, *The US Air Force Mishap Prevention Program*, AFI 91-204, *Safety Investigations and Reports*, and AFI 10-2501 to implement the Mishap Response Plan. The Mishap Response Plan complements the CEMP 10-2 and provides guidance for rapid response to all flight, weapons, and ground mishaps occurring within the installations area of responsibility. It is implemented at the conclusion of emergency response operations on-site as recovery actions take place. This plan ensures timely assembly of the interim safety board to preserve evidence, compile data, and protect "privileged" and "for official use only" information for the Air Force Safety Investigation and subsequent safety report.

4.1.8. Maintain Site Security. During the recovery phase following major accident or natural disaster, site security may be enforced by installation security forces the owner-user of the resources affected by the incident or, in many cases, a combination of both. Maintaining site or installation security after a natural disaster may be very difficult, depending on the extent of damage to facilities and resources. AFI 10-2501 identifies the roles and responsibilities of these agencies. AFI 31-101 identifies the policies and guidance in protecting installation resources. The installation CEMP 10-2 must identify any manpower and equipment shortfalls that would preclude installation personnel from adequately maintaining site security. Preparation before a natural disaster is the key to success. Those responsible for implementing AFI 10-2501; AFI 31-101; AFMAN 31-201, Volume 4, High Risk Response; and TTPs and those responsible for developing the CEMP 10-2 and Integrated Defense Plan must work together to obtain installation success.

4.1.9. Provide Assistance to Personnel. Providing assistance to military members, civilian employees, and their families is extremely important. Airmen will be better able to concentrate on mission recovery if they know their families' needs (medical, housing, legal, counseling, food, and clothing) are being met. The primary method of providing assistance is to activate an Emergency Family Assistance Control Center (EFACC). The EFACC will serve as the focal point for family assistance services. CEMP 10-2, Tab C, Appendix 7, Annex A, Family Assistance Checklist, provides guidelines for EFACC operations. The EFACC should operate in conjunction with the installation's EOC and appropriate ESFs.

4.2. Mission Continuation. The installation commander may direct or prioritize missionessential activities to continue during major accident or natural disaster response and recovery operations regardless of the threat posed. The importance of these missions should justify the increased risk to personnel and resources. The installation commander will use operational risk management tools to provide the decision-making basis upon which to allow critical missions to continue. Hazard areas must be identified. As a planned consequence, personnel will avoid those areas. In addition, this reduces the protective factor for others working in an uncontaminated area; personnel can initiate recovery actions to stabilize and continue the mission.

4.3. Defense Support of Civil Authorities (DSCA) in Recovery Operations. If a CAT receives a request for DSCA, then the notification of higher headquarters is completed as activities permit. Reporting will be accomplished in real time for all DSCA events and will include OPREP-3, SITREP and narrative statement, as directed in AFI 10-802 and AFI 10-206, *Operational Reporting.* Additionally, installation commanders will notify the Air Force National Security Emergency Preparedness office of immediate response requests IAW DOD Directive 3025.1, *Defense Support of Civil Authorities*, and DOD Directive 3025.15, *Military Assistance to Civil Authorities (MACA).* All requests for USAF resources must be validated by the lead federal agency first to be reimbursed for DSCA operations. In addition, the requests must comply with the legal and accounting requirements for loan, grant, or consumption of USAF resources for DSCA to ensure reimbursement under the Stafford Act. Military responders, who are called off-base for a response, must observe the jurisdictional rights of civilian authorities and private citizens.

4.4. Response Task Force Support (RTF). The DOD installation nearest to a nuclear or radiological weapons accident/incident will respond and perform emergency rescue and suppression activities, contain the incident hazards within their capabilities, secure and safeguard classified materials, provide initial detection for radiological hazards, perform emergency render safe procedures, and perform emergency withdraw, and maintain a federal presence until arrival of the RTF. The nearest DOD installation will coordinate efforts with FEMA. The guidance and authority to accomplish the response are contained in Attachment 1 of this manual, AFI 10-2501; DOD 3150.8-M, Nuclear Incident Response Procedures; ACC Plan 10-2, Continental United States (CONUS) Radiological Accident Response and Recovery Plan, or AFSPC Plan 10-1, ICBM Intercontinental Radiological Accident/Incident Response and Recovery Plan; AFMAN 91-221, Weapons Safety Investigations and Reports; AFMAN 91-222, Space Safety Investigations and Reports; AFMAN 91-223, Aviation Safety Investigations and Reports and AFMAN 91-224, Ground Safety Investigations and Reports. OCONUS response guidance includes the current SOFA, HN agreements, and supplementary guidance provided by MAJCOM and the DOS. Additional information and procedures are defined in Attachment 7 Nuclear Weapons Accident/Incident Response Flowchart, Attachment 8 Nuclear Weapons Incident On-Scene Setup, and Attachment 9 Nuclear Weapons Accident/Incident Recovery.

4.5. Joint Task Force (JTF) Support. Per Joint Publication 3-0, *Joint Operations*, "A JTF is a joint force that is constituted and so designated by the Secretary of Defense, a Combatant Commander (CCDR), a subordinate unified command commander, or an existing command JTF (CJTF) to accomplish missions with specific, limited objectives and which do not require overall centralized control of logistics. However, there may be situations where a CJTF may require directive authority for common support capabilities delegated by the CCDR..." Joint Publication 3-33, *Joint Task Force Headquarters*, identifies further support that may be required. The AF role in support will be directed from the Combatant Commander through the Air Component of that geographic combatant commander.

4.5.1. CONUS installations will also find further support requirements in United States Northern Command (USNORTHCOM) Contingency Plans (CONPLAN) located on the NORAD-USNORTHCOM SIPRNET Portal: CONPLAN 3500, *CBRNE Consequence*

Management Operations; CONPLAN 3501, *Defense Support of Civil Authorities;* and CONPLAN 3505, *USNORTHCOM Nuclear Incident Response Plan.* When directed by the President of the United States or the Secretary of Defense, USNORTHCOM will respond quickly and effectively to the requests of civil authorities to save lives, prevent human suffering, and mitigate great property damage. These plans provide military support IAW applicable DOD directives and policy in line with national strategic policy.

4.5.1.1. Established USNORTHCOM JTFs as identified in USNORTHCOM Antiterrorism Operations Order 05-01B (NC AT Operation Order 05-01B):

4.5.1.1.1. Joint Task Force Alaska (JTF-AK).

4.5.1.1.2. Joint Force Headquarters National Capital Region (JFHQ-NCR).

4.5.1.1.3. Joint Task Force North (JTF-N).

4.5.1.1.4. Joint Task Force Civil Support (JTF-CS).

4.5.1.2. JTF support requests will be handled through the Defense Coordinating Officer (DCO) assigned to the Joint Field Office (JFO). Possible support areas identified in the NRF for DOD that could include Air Force support are intelligence sharing, air operations, search and rescue and BSI.

Table 4.4. AF Installations Selected as FEMA BSI Lessons Learned.

Ensure approved DOD authorization is received at the installation before receiving FEMA recovery assets.

Establish a FEMA Memorandum of Agreement with the regional FEMA office and state emergency management agency prior to incidents for smooth coordination.

Establish FEMA incident management team installation access procedures.

Conduct a site survey to ensure a large staging area is identified to support hundreds of incoming FEMA resources.

Identify installation access requirements for FEMA assets.

Determine staging area access control procedures and boundary barriers/fences.

Plan for excessive vehicle traffic; provide alternate installation access points for use.

Be aware of civilian transport personnel carrying privately owned weapons, and develop a storage procedure for those weapons when the individuals are on the installation.

Plan for fuel use for installation supporting equipment and aircraft fuel for transport planes, helicopters, and possible Civil Air Patrol aircraft.

Develop a plan to feed, bed, and provide latrine access for individuals supporting the recovery operation. Develop a plan for capturing feeding and lodging cost.

Ensure sufficient numbers of heavy equipment operators are available for each apparatus assigned to the installation.

Ensure sufficient number of special transportation vehicle operators for each type of vehicle assigned to the installation.

Plan sand bag filling and delivery processes. Deliver sand bags to areas needing them vice having personnel come to the filling area. This drives the need for a consolidated list of buildings that traditionally suffer water damage.

Develop a plan for capturing costs associated with ambulance runs to assist FEMA workers.

4.5.1.2.1. An installation requiring additional DOD support, including Air Force support, will use the RFF process as outlined in AFMAN 10-2502. Installations will not arbitrarily send supporting forces unless the assisting installation falls within the authoritative jurisdiction for an Immediate Response. Lessons learned from 11 September 2001 and the Gulf of Mexico 2005 hurricane season enforced the need for all DSCA, civilian requests for assistance, and federal RFFs to be handled at the JTF, DCO, and JFO levels.

4.5.2. The NRF outlines DOD support to major accidents and natural disasters.

4.5.3. The installation CEMP 10-2 will identify immediate response forces for major accident and natural disaster. This immediate capability should include search and rescue, C2, health/medical, engineering, transportation, communications, and intelligence, surveillance, and reconnaissance capabilities.

4.6. Restoration. The restoration, in concert with mission continuation tasks, officially begins when the IC advises the EOC Director that the incident has been sufficiently controlled or terminated and the security of the situation is sufficient to begin restoration activity. Consequently, the EOC directs and coordinates recovery inspections and reports damage by using "quick looks" and detailed assessments.

4.6.1. Restoration decisions should focus installation resources on safety, preventing the further loss of combat power, maintaining or restoring installation integrity and security, restoring C2 over forces, restoring the primary mission, and supporting other forces.

4.6.2. Restoration capabilities include measures required to restore the force, units, facilities, and equipment to near-normal operating conditions after a major accident or natural disaster. These measures include decontamination operations, and the effective supply and sustainment of all response assets.

4.6.3. All restoration actions, in progress or intended, must be recorded and, be part of the recovery plan. From this record, several actions are enabled. Those actions include estimating repair costs and determining whether the repairs will be accomplished in-house or by contract; estimating recovery date and time; ascertaining assistance required (for example, Prime Base Engineer Emergency Forces (BEEF) and Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE)squadrons; and assessing the impact on the combat readiness status of installation mobility forces.

Chapter 5

MITIGATION

5.1. Mitigation Overview. The goal of mitigating actions is to reduce or eliminate risks or effects to personnel or property prior to, during and after an incident. Mitigation actions may be taken during all phases of incident management. These actions include: documenting information; accounting of expenses; tracking of events; after-action reporting; analyzing damage; implementing the recovery plan; documenting contamination; accounting for classified and hazardous materials; maintaining installation or site security; assisting personnel; providing response personnel stress debriefing; providing legal assistance for claims, witnesses, and victims; base populace actions; and issuing notifications and communications.

5.2. Preparing and Exercising Plans. Mitigation includes preparing and exercising critical elements of responses to major accidents and natural disasters. Exercises must include realistic scenarios to ensure installations are prepared for real-world responses. Exercises allow installations to develop procedures for personnel notification, recall and accountability, as well as resource protection and injury or damage reporting. Plans, such as the CEMP 10-2 and applicable checklists are validated through preparation and execution of exercises. AFI 10-2501 contains complete exercise requirements and scheduling information.

5.3. Hazard Analysis. A hazard analysis is a three-step decision-making process to collect and analyze information on potential major accidents and natural disasters. The information gathered provides a list of existing hazards and the risk posed to people, property, missions, and the environment. The information developed in a hazard analysis provides the basis for notification and reporting requirements, establishes planning priorities, and provides the documentation to support major accident and natural disaster planning and response efforts. AFMAN 10-2502 contains a detailed description of hazard analysis. The three steps in a hazard analysis are hazard identification, vulnerability analysis, and risk analysis.

5.3.1. Hazard Identification. The primary component in hazard analysis is to identify potential threats to the installation, its personnel, and its mission. This may be from the types of hazardous materials used or stored on the installation, type of weapons system assigned, the prevalent natural disaster threats, or even the geographic location and political environment.

5.3.2. Vulnerability Analysis. The next step after identifying the hazards is to determine who or what is at risk should an incident occur. A vulnerability analysis assesses the potential impact of a major accident or natural disaster on an installation. The vulnerability analysis identifies the areas on an installation that are vulnerable to hazards. It examines the size and type of population within the vulnerable area, property that might be damaged, and the environment that might be affected. A vulnerability analysis provides detailed information regarding available resources and is critical to the mission planning process. It also provides insight into the ability of the installation to mitigate threat situations. This insight allows the installation to develop procedures, acquire equipment, and take other actions to correct vulnerabilities before personnel, the mission, or properties are affected.

5.3.3. Risk Analysis. The final step in hazard analysis is assessing the likelihood of a major accident or natural disaster affecting the installation and the consequences that might result,

based on the estimated vulnerable areas identified during the vulnerability analysis. Risk analysis is based on the history of previous accidents or disasters at the installation, mathematical probability, and the best available information. A risk analysis allows installation leadership to compare and evaluate potential hazards or threats and set priorities on mitigation and resources.

5.4. Protection of Critical Facilities. An installation-specific critical facility is any facility that is of such extraordinary mission importance that if damaged or destroyed would have serious debilitating effects on the ability of the installation to function as opposed to only facilities that are identified as critical infrastructure on the CI program list. Critical facility protection is focused on assessing the risks, reducing the loss, and ensuring the survival of identified critical facilities.

5.4.1. Once critical facilities are identified, protective actions will prevent, remediate, or mitigate the threats resulting from a major accident or natural disaster. Protective actions are threat-specific and could include: changes in TTPs, adding redundancy, selection of another facility, isolation, hardening, and guarding.

5.4.2. Threat-specific physical protection is provided through passive defense and hardening mitigation. Permanent and expedient hardening methods increase physical protection for personnel, critical facilities, and infrastructure. The combination of physical protection measures and threat-specific TTPs enables commanders to minimize mission degradation and provide the most effective response and recovery following a major accident or natural incident.

5.4.3. Effective protection of critical facilities on an installation starts with the identification of those critical facilities. The facility prioritization listing in the Civil Engineer Contingency Response Plan see AFI 10-211, *Civil Engineer Contingency Response Plan* defines facilities that require protection. Identification of critical facilities on an installation during the mitigation phase must consider the following criteria defined in **Table 5.1**.

What missions are supported by the installation/wing/unit?
Which of these missions are considered critical?
Are there home station or deployed missions?
Have both primary and secondary missions and taskings been considered?
What are the installation's strengths, capabilities, and shortfalls? Make separate lists
and carefully note the limitations and shortfalls.
What supporting forces or outside agencies are available and what resources do they
have?
Are support agreements in place that outline responsibilities between agencies?
How long before supporting forces or outside agencies can be on-scene?
What are the most probable incidents and their worst possible impact?
What are the installation's priorities for protecting its resources?
What resources are protected, where are they, and who controls them?
What resources require additional levels of protection?
Have personnel, critical facilities (communications/transportation nodes), and asset
vulnerabilities (munitions, fuels, etc.) been considered?

Table 5.1. Critical Facilities Protection Cr	riteria.
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Chapter 6

INFORMATION COLLECTION, RECORDS, AND FORMS

6.1. Information Collections. No information collections are created by this publication.

6.2. Records. The program records created because of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AFRIMS RDS located at <u>https://www.my.af.mil/gcss-af61a/afrims/afrims/.</u>

6.3. Prescribed and Adopted Forms.

6.3.1. Prescribed Forms.

AF IMT 847, Recommendation for Change of Publication.

6.3.2. Adopted Forms.

ICS Form 214-CG.

PHILLIP M. BREEDLOVE, Lt Gen, USAF DCS/Operations, Plans and Requirements

Attachment 1

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Abbreviations and Acronyms

AAR—After Action Report ACC—Air Combat Command **AEF**—Air and Space Expeditionary Force AF—Air Force AFAARS—Air Force After Actions Report System **AFI**—Air Force Instruction **AFIMS**—Air Force Incident Management System AFMAN—Air Force Manual AFOSH—Air Force Occupational Safety and Health **AFOSI**— Air Force Office of Special Investigations **AFPD**—Air Force Policy Directive AFRAT—Air Force Radiation Assessment Team AFRIMS—Air Force Record Information Management System **AFSPC**—Air Force Space Command **ARG**—Accident Response Group **AT**—Antiterrorism **BCE**—Base Civil Engineer **BE**—Bioenvironmental Engineer

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BEEF—Base Engineer Emergency Force

BEPO—Base Emergency Preparedness Orientation

BSI—Base Support Installation

BW—Biological Weapon

C2—Command and Control

CAT—Crisis Action Team

CBRN-Chemical, Biological, Radiological, and Nuclear

CBRNE—Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives

CCDR— Combatant Commander

CE— Civil Engineer

CEMP—Comprehensive Emergency Management Plan

CFR—Code of Federal Regulations

CJTF—Combined Joint Task Force

COCOM—Combatant Commander, Command Authority

CONUS—Continental United States

COOP—Continuity of Operations

COP—Common Operational Picture

CP—Command Post

CRSP—Critical Render Safe Procedures

CST—Civil Support Team

CW—Chemical Weapon

DCO—Defense Coordinating Officer

DCS—Deputy Chief of Staff

DHS—Department of Homeland Security

DOD—Department of Defense

DOE—Department of Energy

DOS—Department of State

DRF—Disaster Response Force

DRU—Direct Reporting Unit

DSCA—Defense Support of Civil Authorities

DSF—Defense Support Force

DTRA—Defense Threat Reduction Agency

- ECC—Emergency Communications Center
- **ECP**—Entry Control Point
- EF-Enhanced Fujita
- EFACC—Emergency Family Assistance Control Center
- **EM**—Emergency Management
- **EMS**—Emergency Medical Services
- EOC—Emergency Operations Center
- EOD—Explosive Ordnance Disposal
- **EOP**—Emergency Operations Plans
- EPA—Environmental Protection Agency
- ESF—Emergency Support Function
- EST—Emergency Support Teams
- FBI-Federal Bureau of Investigation
- FEMA—Federal Emergency Management Agency
- FES—Fire Emergency Services
- FOA—Field Operating Agency
- FPCON—Force Protection Condition
- GSA—General Services Administration
- Hammer—ACE Hammer Adaptive Communications Element
- HAZMAT—Hazardous Materials
- **HN**—Host Nation
- HQ-Headquarters
- HSPD—Homeland Security Presidential Directive
- HURCON—Hurricane Condition
- IAP—Incident Action Plans
- IAW—In Accordance With
- IC—Incident Commander
- ICBM—Intercontinental Ballistic Missile
- ICP-Incident Command Post
- ICS—Incident Command System
- INWS—Installation Notification and Warning System
- IPE—Individual Protective Equipment

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- IPPD—In-Place Patient Decontamination
 JFO—Joint Field Office
 JNWPS—Joint Nuclear Weapon Publication System
 JP—Joint Publication
 JTF—CS—Joint Task Force Civil Support
 Km—Kilometer
- **Km/hr**—Kilometer Per Hour
- LDA—Line Detection Array
- MAA— Mutual Aid Agreement
- MAJCOM—Major Command
- **MNS**—Mass Notification System
- MPH—Miles Per Hour
- N/A—Not Applicable
- NARP—Nuclear Weapon Accident Response Procedures Manual
- NASA-National Aeronautics and Space Administration
- NDA—National Defense Area
- NEST—Nuclear Emergency Search Team
- NFPA—National Fire Protection Association
- NIMS—National Incident Management System
- NMCC—National Military Command Center
- NNSA—National Nuclear Security Administration
- **NRF**—National Response Framework
- NWAIR—Nuclear Weapon Accident/Incident Recovery
- NWS—National Weather Service
- **OCONUS**—Outside the Continental United States
- **OPREP**—Operational Report
- **OSHA**—Occupational Safety and Health Administration
- **OSI**—Office of Special Investigations
- PHEO—Public Health Emergency Officer
- **PIA**—Post Incident Analysis
- POD—Points of Distribution
- **PPE**—Personal Protective Equipment

RED HORSE—Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer

- RFF—Request for Forces
- ROC—Recovery Operations Chief
- **RSP**—Render Safe Procedures
- RTF—Response Task Force
- SF—Security Forces
- SFCC—Security Forces Control Center
- SITREP—Situation Report
- SJA—Staff Judge Advocate
- **SMR**—Senior Military Representative
- SOFA—Status-of-Forces Agreement
- SOP-Standard Operating Procedure
- SPC—Storm Prediction Center
- TCCOR—Tropical Cyclone Conditions of Readiness
- TCP—Traffic Control Point
- TEU—Technical Escort Unit
- TIC—Toxic Industrial Chemical
- TIM—Toxic Industrial Material
- TTP-Tactics, Techniques and Procedures
- UCC—Unit Control Center
- US—United States
- USAF—United States Air Force
- USC—United States Code
- USNORTHCOM—United States Northern Command
- WMP—War and Mobilization Plan

Terms

Air Force Emergency Management (EM) Program—The single, integrated Air Force program to coordinate and organize efforts to prepare for, prevent, respond to, recover from and mitigate the direct and indirect consequences of an emergency or attack. The primary missions of the Air Force EM program are to (1) save lives, (2) minimize the loss or degradation of resources and (3) continue, sustain and restore combat and combat support operational capability in an all-hazards physical threat environment at Air Force installations worldwide. The ancillary missions of the Air Force EM program are to support homeland security operations and to provide support to civil and host nation authorities IAW DOD directives and through the

appropriate Combatant Command. The Air Force EM program is managed by the Office of The Civil Engineer, Headquarters Air Force A7C.

Air Force Incident Management System (AFIMS)—A methodology designed to incorporate the requirements of HSPD-5, the NIMS, the NRP, and OSD guidance while preserving the unique military requirements of the expeditionary Air Force. AFIMS provides the Air Force with an incident management system that is consistent with the single, comprehensive approach to incident management. AFIMS provides the Air Force with the coordinating structures, processes, and protocols required to integrate its specific authorities into the collective framework of Federal departments and agencies for action to include mitigation, prevention, preparedness, response, and recovery activities. It includes a core set of concepts, principles, terminology, and technologies covering the incident command system, EOCs, incident command, training, identification and management of resources, qualification and certification, and the collection, tracking and reporting of incident information and incident resources. The AFIMS methodology is incorporated into current operating practices through revised instructions and manuals, training products, and exercise and evaluation tools.

Antiterrorism (AT)—Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include limited response and containment by local military forces.

Area of Responsibility—The geographical area associated with a combatant command within which a geographic combatant commander has authority to plan and conduct operations.

Awareness—The continual process of collecting, analyzing and disseminating intelligence, information and knowledge to allow organizations and individuals to anticipate requirements and to react effectively.

Base Support Installation (BSI)—A Department of Defense service or agency installation within the United States, its territories, or possessions tasked to serve as a base for military forces engaged in either homeland defense or defense support to civil authorities operations. Provides general support logistic and administrative support to military forces and the Federal Emergency Management Agency.

Broken Arrow—Flag word for a nuclear weapons accident. See entry for Nuclear Weapons Accident.

Civil Disturbance—Group acts of violence and disorder prejudicial to public law and order.

Code of Federal Regulations (CFR)—A codification of the general and permanent rules the executive departments and agencies of the Federal government publish in the Federal Register.

Cold Zone—This area contains the incident command post and such other support functions as are deemed necessary to control the incident. The zone encompassing the warm zone, used to carry out all other support functions of the incident. Workers in the cold zone are not required to wear personal protective clothing because the zone is considered safe. The incident command post and IC staging area and the triage or treatment area are located within the cold zone.

Command and Control (C2)—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. C2 functions are performed through an arrangement of personnel, equipment, communications, facilities and procedures employed by a commander in planning, directing, coordinating and controlling forces and operations in the accomplishment of the mission.

Command Post (CP)—A unit's or sub-unit's headquarters where the commander and the staff perform their activities. In combat, a unit or sub-unit's headquarters is often divided into echelons.

Common Operating Picture (COP)—A broad view of the overall situation as reflected by situation reports, aerial photography and other information or intelligence.

Contamination—1. The deposit, absorption or adsorption of radioactive material or of biological or chemical agents on or by structures, areas, personnel or objects. 2. (DOD only) Food or water made unfit for consumption by humans or animals because of the presence of environmental chemicals, radioactive elements, bacteria or organisms, the by-product of the growth of bacteria or organisms, the decomposing material (to include the food substance itself) or waste in the food or water.

Contamination Control Station—An area used at a nuclear weapons accident scene or HAZMAT incident site where contaminated clothing and equipment are removed and personnel and equipment are monitored and decontaminated.

Contingency—Emergency involving military forces caused by natural disasters, terrorists, subversives or by required military operations. Due to the uncertainty of the situation, contingencies require plans, rapid response and special procedures to ensure the safety and readiness of personnel, installations and equipment.

Continuity of Operations (COOP)—The degree or state of being continuous in the conduct of functions, tasks or duties necessary to accomplish a military action or mission in carrying out the national military strategy. It includes the functions and duties of the commander, as well as the supporting functions and duties performed by the staff and others acting under the authority and direction of the commander.

Control Zones—As defined in the Emergency Response Guidebook 2008, control zones are designated areas at dangerous goods incidents, based on safety and the degree of hazard. Many terms are used to describe control zones; however, in the ERG, these zones are defined as (1) Hot/exclusion (Red) restricted zone, (2) Warm contamination reduction (Yellow) limited access zone, and (3) Cold support (Green) clean zone. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472)

Conventional Weapon— A weapon that is not chemical, biological, radiological or nuclear.

Crisis Action Team—A staff formed by the commander to plan, direct, and coordinate forces in response to contingencies, crises, natural/manmade disasters, or wartime situations. The CAT develops courses of action and executes the commander's and higher headquarters directives. The composition and function of the CAT is largely mission or situation driven and therefore a MAJCOM or unit commander prerogative.

Critical Infrastructures—Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on national security, national economic security, national public health or safety or any combination of those matters.

Decontamination—The physical or chemical process of reducing and preventing the spread of contaminants from persons and equipment used at HAZMAT incident.

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Decontamination Corridor—The area usually located within the warm zone where decontamination procedures take place. (Also known as the contamination reduction corridor) (NFPA Standard 471)

Defense Support of Civil Authorities (DSCA)—Refers to DOD support, including Federal military forces, DOD civilians and DOD contractor personnel and DOD agencies and components, for domestic emergencies and for designated law enforcement and other activities.

Deployment—1. In naval usage, the change from a cruising approach or contact disposition to a disposition for battle. 2. The movement of forces within operational areas. 3. The positioning of forces into a formation for battle. 4. The relocation of forces and material to desired operational areas. Deployment encompasses all activities from origin or home station through destination, specifically including intra-continental United States, inter-theater and intra-theater movement legs, staging and holding areas.

Detection—In CBRNE environments, the act of locating CBRNE hazards by use of CBRNE detectors or monitoring or survey teams.

Disaster Response Force (DRF)—The USAF base level organization that responds to disasters or accidents, establishing C2 and supporting incident operations.

Dispersal—Relocation of forces for the purpose of increasing survivability.

DOD Resources—Military and civilian personnel, including National Guard members and Reservists of the Military Services, and facilities, equipment, supplies and services owned by, controlled by or under the jurisdiction of a DOD component.

Domestic Emergencies—Emergencies affecting the public welfare and occurring within the 50 States, District of Columbia, Commonwealth of Puerto Rico, US possessions and territories or any political subdivision thereof, as a result of enemy attack, insurrection, civil disturbance, earthquake, fire, flood or other public disasters or equivalent emergencies that endanger life and property or disrupt the usual process of government. The term domestic emergency includes any or all the emergency conditions defined below:

a. Civil defense emergency. A domestic emergency incident situation resulting from devastation created by an enemy attack and requiring emergency operations during and following that attack. It may be proclaimed by appropriate authority in anticipation of an attack.

b. Civil disturbances. Riots, acts of violence, insurrections, unlawful obstructions or assemblages or other disorders prejudicial to public law and order. The term civil disturbance includes all domestic conditions requiring or likely to require the use of Federal Armed Forces pursuant to the provisions of Chapter 15 of Title 10, USC.

c. Major incident. Any flood, fire, hurricane, tornado, earthquake or other catastrophe which, in the determination of the President, is or threatens to be of sufficient severity and magnitude to warrant incident assistance by the Federal Government under Public Law 606, 91st Congress (42 USC 58) to supplement the efforts and available resources of State and local governments in alleviating the damage, hardship or suffering caused thereby.

d. Natural Disaster. All domestic emergencies except those created as a result of enemy attack or civil disturbance.

Emergency Decontamination—The physical process of immediately reducing contamination of individuals in potentially life-threatening situations with or without the formal establishment of a decontamination corridor. (NFPA 471) **Note**: The EPA does not require runoff control when used to save lives or reduce injury. (EPA 550-F-00-009, July 2000)

Emergency Operations Plan (EOP)—A strategic, overall plan for managing the incident. It is developed by Emergency Management personnel (ESF #5) and is used within the Emergency Operations Center from initial notification through recovery operations.

Emergency Operations Center (EOC)—The physical location at which the coordination of information and resources to support attack response and incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines such as fire, security forces and medical services, by jurisdiction such as Federal, State, regional, county, city, tribal or a combination thereof.

Emergency Responders—The response elements of a DRF that deploy to the incident scene after the first responders to expand C2 and perform support functions. Emergency Responders include follow-on elements such as firefighters, security forces and emergency medical technicians, as well as Emergency Management personnel, EOD personnel, physicians, nurses, medical treatment providers at medical treatment facilities, public health officers, bioenvironmental engineering and mortuary affairs personnel. Not all emergency responders are first responders, but all first responders are emergency responders. Emergency responders are not assigned as augmentees or to additional duties that will conflict with their emergency duties. For purposes of AFIMS, EOD personnel are considered emergency responders but not first responders.

Emergency Support Function (ESF)—ESFs are groupings of capabilities into an organizational structure that provides the support, resources, program implementation and services that are most likely to be needed during an incident. ESFs also serve as the primary operational-level mechanism that provides support during an incident.

Evacuation—Organized, phased and supervised withdrawal, dispersal or removal of persons from dangerous or potentially dangerous areas, and their reception and care in safe areas.

Expeditionary Operation—An expeditionary operation is a military operation conducted by an armed force to accomplish a specific objective in a foreign country. The missions of military expeditions may vary widely. Examples of missions of military expeditions include providing humanitarian assistance in times of incident or disruption; establishing and keeping peace in a foreign country; protecting US citizens or commerce abroad; retaliating for an act of aggression by a foreign political group and destroying an enemy government by defeating its armed forces in combat.

Explosive Ordnance—All munitions containing explosives, nuclear fission or fusion materials and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms ammunition; all mines, torpedoes and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.

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Facility—A real property entity consisting of one or more of the following: a building, a structure, a utility system, pavement and underlying land.

Federal Emergency Management Agency (FEMA)—The Federal agency tasked to establish Federal policies for and coordinate civil defense and civil emergency planning, management, mitigation and assistance functions of Executive agencies.

First Responders—The DRF element that deploys immediately to the incident scene to provide initial C2, to save lives and to suppress and control hazards. Firefighters, law enforcement and security and key medical personnel provide the initial, immediate response to an incident. All first responders are emergency responders, but not all emergency responders are first Responders. First responders are not assigned as augmentees or to additional duties that will conflict with their emergency duties.

Force Protection—Actions taken to prevent or mitigate hostile actions against DOD personnel (including family members), resources, facilities and critical information. These actions conserve the force's fighting potential so it can be applied at the decisive time and place and incorporate the coordinated and synchronized offensive and defensive measures to enable the effective employment of the joint force while degrading opportunities for the enemy. Force Protection does not include actions to defeat the enemy or protect against accidents, weather or disease.

Hammer Adaptive Communications Element (Hammer ACE)— Air Force Hammer ACE consists of a rapid deployment team of technicians equipped with advanced technology communications equipment. This team can deploy within 3 hours of notification and can establish communications within 1 hour of arrival on-site. Current capabilities include a secure satellite system for voice communications, air-to-ground communications and a privacy feature hand-held radio network with repeater/base station for local communications. The secure satellite link can interface with DSN, commercial telephone systems through the ACC Reach Back, Force Level Technical Control facility at Langley AFB, VA. All Hammer ACE equipment is capable of being battery operated and enough batteries are deployed to sustain a 72-hour operation. A follow-on deployment (generators or additional batteries) is required to sustain operation beyond 72 hours.

Hazardous Material (HAZMAT)—Any material that is flammable, corrosive, an oxidizing agent, explosive, toxic, poisonous, etiological, radioactive, nuclear, unduly magnetic, a chemical agent, biological research material, compressed gases or any other material that, because of its quantity, properties or packaging, may endanger life or property.

Hazardous Material Incident—A situation in which a hazardous material is or may be released into the environment.

High-Yield Explosive (HE)—Any conventional weapon or device that is capable of a high order of destruction or disruption or of being used to kill or injure large numbers of people.

Homeland Security Presidential Directive-5 (HSPD-5)—A Presidential directive issued on February 28, 2003 and intended to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive NIMS.

Homeland Security—Active and passive measures taken to protect the area, population and infrastructure of the United States, its possessions and territories by deterring, defending against

and mitigating the effects of threats, disasters and attacks; supporting civil authorities in incident management; and helping to ensure the availability, integrity, survivability and adequacy of critical national assets.

Host Nation (HN)—A nation that receives the forces or supplies of allied nations, coalition partners or North Atlantic Treaty Organization forces to be located on, to operate in or to transit through its territory.

Hot Zone—The area immediately surrounding a HAZMAT incident, extending far enough to prevent adverse effects from HAZMAT releases to personnel outside the zone.

Identification—The determination of which CBRNE material or pathogen is present.

Incident—An occurrence or event, natural or human caused, that requires an emergency response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, wildland and urban fires, floods, HAZMAT spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, warrelated disasters, public health and medical emergencies and other occurrences requiring an emergency response.

Incident Action Plan (IAP)—An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods.

Incident Command Post (ICP)—The field location at which the primary tactical-level, onscene incident command functions are performed. The ICP may be collocated with the incident base or other incident facilities and is normally identified by a green rotating or flashing light.

Incident Commander (IC)—The command function is directed by the IC, who is the person in charge at the incident and who must be fully qualified to manage the response. Major responsibilities for the IC include: performing command activities, such as establishing command; protecting life and property; controlling personnel and equipment resources; maintaining accountability for responder and public safety, as well as for task accomplishment; establishing and maintaining an effective liaison with outside agencies and organizations, including the EOC, when it is activated.

Incident Command System (ICS)—ICS is the model tool for command, control and coordination of a response and provides a means to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing the incident and protecting life, property and the environment. ICS uses principles that have been proven to improve efficiency and effectiveness in a business setting and applies the principles to emergency response.

Individual Protective Equipment (IPE)— In chemical, biological, radiological or nuclear warfare, the personal clothing and equipment required to protect an individual from chemical, biological and radiological hazards and some nuclear.

Initial Actions—The actions taken by those responders first to arrive at an incident site.

Initial Detection—Procedures performed by emergency responders to determine the presence of HAZMAT. Initial detection is a field test using detection equipment to provide a reasonable basis for acceptance of the presence of hazards.

Initial Response—Resources initially committed to an incident.

In-place Patient Decontamination (IPPD)—The capability of a medical treatment facility to decontaminate patients arriving at the facility with potential contamination from a CBRN incident.

Installation Commander—The individual responsible for all operations performed by an installation.

Joint Force—A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments, operating under a single joint force commander.

Law Enforcement Agency—Any of a number of agencies (outside the DOD) chartered and empowered to enforce U.S. laws in the following jurisdictions: The United States, a State or political subdivision of the United States, a territory or possession of the United States or within the borders of a host nation.

Limiting Factor—A factor or condition that, either temporarily or permanently, impedes mission accomplishment. Illustrative examples are transportation network deficiencies, lack of in-place facilities, malpositioned forces or material, extreme climatic conditions, distance, transit or overflight rights or political conditions.

Local Emergency Planning Committee—A committee established by the State commission for each emergency planning district to plan and coordinate local emergency response actions.

Major Accident—An incident involving DOD materiel or DOD activities that is serious enough to warrant response by the installation DRF. It differs from the minor day-to-day emergencies and incidents that installation agencies typically handle.

Major Disaster—The Stafford Act defines any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm or drought) or, regardless of cause, any fire, flood or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major incident assistance under this act to supplement the efforts and available resources of States, local governments and incident relief organizations in alleviating the damage, loss, hardship or suffering caused thereby.

Mass Decontamination—The physical process of rapidly reducing or removing contaminants from multiple persons (victims and responders) in potentially life-threatening situations with or without the formal establishment of a decontamination corridor, also called mass casualty decontamination. **Note**: The EPA does not require runoff control when used to save lives or reduce injury.

Mitigation—Activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during or after an incident. Mitigation measures are often developed IAW lessons learned from prior incidents. Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts and analysis of hazard-related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses and the public on measures they can take to reduce loss and injury.

Monitoring—The process of sampling over time in order to identify changes in conditions.

Mutual Aid Agreement (MAA)—Written agreement between agencies, organizations or jurisdictions that they will assist one another on request by furnishing personnel, equipment or expertise in a specified manner. Reciprocal assistance by local government and an installation for emergency services under a prearranged plan. Mutual aid is synonymous with "mutual assistance", "outside aid", "memorandums of understanding", "memorandums of agreement", "letters of agreement", "cooperative assistant agreement", "intergovernmental compacts", or other similar agreements, written or verbal, that constitute an agreed reciprocal assistance plan for emergency services for sharing purposes. MAAs between entities are an effective means to obtain resources and should be developed whenever possible. MAAs should be in writing, be reviewed by legal counsel and be signed by a responsible official.

Mutual Support—That support which units render each other against any enemy, because of their assigned tasks, their position relative to each other and to the enemy and their inherent capabilities.

National Defense Area (NDA)—An area established on non-Federal lands located within the United States or its possessions or territories for the purpose of safeguarding classified defense information or protecting DOD equipment or material. Establishment of a national defense area temporarily places such non-Federal lands under the effective control of the DOD and results only from an emergency event. The senior DOD representative at the scene will define the boundary, mark it with a physical barrier and post warning signs. The landowner's consent and cooperation will be obtained whenever possible; however, military necessity will dictate the final decision regarding location, shape and size of the national defense area.

National Incident Management System (NIMS)—A system mandated by HSPD-5 that provides a consistent, nationwide approach for Federal, State, local and tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to and recover from domestic incidents, regardless of cause, size or complexity. To provide for interoperability and compatibility among Federal, State, local and tribal capabilities, the NIMS includes a core set of concepts, principles and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking and reporting of incident information and incident resources.

Natural Disaster—An emergency posing significant danger to life and property that results from a natural cause.

Nuclear Weapon Accident—(code term is BROKEN ARROW) An unexpected event involving nuclear weapons or nuclear components that results in any of the following:

a. Accidental or unauthorized launching, firing or use by US forces or US-supported Allied forces of a nuclear-capable weapons system.

- b. An accidental, unauthorized or unexplained nuclear detonation.
- c. Non-nuclear detonation or burning of a nuclear weapon or nuclear component.
- d. Radioactive contamination.
- e. Jettisoning of a nuclear weapon or nuclear component.
- f. Public hazard, actual or perceived.

Personal Protective Equipment (PPE)—Personal Protective Equipment (PPE) is equipment designed to protect individuals exposed to hazards from injury or illness in non-military unique occupational environments where OSHA or applicable AFOSH standards apply, including emergency response to CBRNE incidents in the United States.

Preparedness—The range of deliberate, critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process. Preparedness involves efforts at all levels of government and between government and private-sector and nongovernmental organizations to identify threats, determine vulnerabilities, and identify required resources. Within AFIMS, preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.

Prevention—Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation or quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

Protective Clothing—Clothing especially designed, fabricated, or treated to protect personnel against hazards caused by extreme changes in physical environment, dangerous working conditions, or enemy action.

Public Health Emergency Officer (PHEO)—The PHEO will be a Medical Corps officer with experience in preventive medicine or emergency response such as the assigned Chief of Aerospace Medicine or Chief of Medical Services. Every Installation Commander will designate, in writing, the installation PHEO and an alternate PHEO to provide EM recommendations (to include medical or public health recommendations) in response to public health emergencies.

Radiation—Alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other ionizing particles.

Radioactive Material—Material whose nuclei, because of their unstable nature, decay by emission of ionizing radiation. The radiation emitted may be alpha or beta particles, gamma or X-rays, or neutrons.

Recovery—The development, coordination and execution of service- and site-restoration plans for impacted communities and the reconstitution of government operations and services through individual, private-sector, nongovernmental and public assistance programs that: identify needs and define resources; provide housing and promote restoration; address long-term care and treatment of affected persons; implement additional measures for community restoration; incorporate mitigation measures and techniques, as feasible; evaluate the incident to identify lessons learned; and develop initiatives to mitigate the effects of future incidents.

Recovery Operations Chief— The Recovery Operations Chief must be a subject matter expert in the hazards or activities within the incident site. If it is a HAZMAT incident, the organization or individual that assumes control of the site must be knowledgeable of the hazards and recovery procedures. For example, initiating actions to contain the hazard and clean up the site to restore the area to its condition before the incident. The person in charge of that work should have an environmental engineering background and be familiar with HAZMAT clean-up requirements. If it is an aircraft incident, the recovery operations chief should be familiar with that aircraft or be a member of the interim aircraft mishap investigation team. The EOC Director should select the individual that will be in charge of the site.

Response—Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property and meet basic human needs. Response also includes the execution of emergency operations plans and of incident mitigation activities designed to limit the loss of life, personal injury, property damage and other unfavorable outcomes. As indicated by the situation, response activities include: applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into the nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation or quarantine; and specific law enforcement operations aimed at preempting, interdicting or disrupting illegal activity and apprehending actual perpetrators and bringing them to justice.

Response Task Force (RTF)—A DOD response force appropriately staffed, trained and equipped to coordinate actions necessary to control and recover from a radiological incident. The specific purpose of the RTF is to recover weapons and provide radiological incident assistance. RTFs are organized and maintained by those Combatant Commanders whose Component Commands have custody of nuclear weapons or radioactive nuclear weapon components. RTFs are not structured to respond to terrorist use of CBRNE or radiological dirty bombs.

Sampling—The process of collecting a representative amount of gas, liquid, solid or a characteristic of one of these, such as gamma or ph, to analyze.

Senior Military Representative— The installation commander can dispatch to, or the incident commander can request a senior military representative (SMR) at the incident site. The SMRs' primary purpose is to liaison with media and outside agencies during high visibility incidents or to support the incident commander. A SMR is not required at a vast majority of incidents. On scene, unless a transfer of Incident Command authority occurs, the existing IC maintains tactical control.

Special or Target Fire Hazards—Large structures with sizeable floor areas, multiple floors, or storage capacities that pose a significant hazard and represents a potentially large loss of life or property and damage to the environment.

Status-of-Forces Agreement (SOFA)—An agreement that defines the legal position of a visiting military force deployed in the territory of a friendly state. Agreements delineating the status of visiting military forces may be bilateral or multilateral. Provisions pertaining to the status of visiting forces may be set forth in a separate agreement, or they may form a part of a more comprehensive agreement. These provisions describe how the authorities of a visiting force may control members of that force and the amenability of the force or its members to the local law or to the authority of local officials. Also called SOFA. See also civil affairs agreement.
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Technical Decontamination—The physical or chemical process of deliberate decontamination to achieve a thorough cleansing and removal of contaminants from personnel and equipment. Also known as thorough or nine-step process decontamination. **Note:** Unlike gross or mass decontamination, EPA does require runoff control for this type of process.

Threat.—An indication of possible violence, harm or danger.

Toxic Industrial Chemicals (TIC)—Any chemicals manufactured, used, transported, or stored by industrial, medical, or commercial processes. For example: pesticides, petrochemicals, fertilizers, corrosives, or poisons.

Toxic Industrial Materials (TIM)—All toxic industrial materials (TIMs) manufactured, stored, transported, used in industrial or commercial processes. It includes toxic industrial chemicals, toxic industrial radiologicals, and toxic industrial biologicals. TIMs produce toxic impacts to personnel, materials, and infrastructure.

Vulnerability Assessment—A DOD, command or unit-level evaluation (assessment) to determine the vulnerability of terrorist attack to a installation, unit, exercise, port, ship, residence, facility or other site. Identifies areas of improvement to withstand, mitigate, or deter acts of violence or terrorism.

Vulnerability—A vulnerability may be defined as any of the following:

1. The susceptibility of a nation or military force to any action by any means through which its war potential or combat effectiveness may be reduced or its will to fight diminished.

2. The characteristics of a system that cause it to suffer a definite degradation (incapability to perform the designated mission) as a result of having been subjected to a certain level of effects in an unnatural (manmade) hostile environment.

3. In information operations, a weakness in information system security design, procedures, implementation or internal controls that could be exploited to gain unauthorized access to information systems.

Warm Zone—The area where personnel, equipment decontamination, and hot zone support takes place. It includes control points for the access corridor and thus assists in reducing the spread of contamination.

TYPICAL INCIDENT SITE SETUP





PROTECTIVE ACTIONS TO MINIMIZE EXPOSURE





PROTECTIVE ACTIONS TO AVOID FATALITIES





INCIDENT COMMANDER'S GUIDE TO FIRST AND EMERGENCY RESPONSE MISSIONS

Emergency Responders' Mission Number	Emergency Responders' Mission Description	CEF	EOD	CEX	SF	EMS	РН	BE
1	Establish Incident Command	\mathbf{P}^1	N/A	N/A	P^2	P ^{2,3}	P ^{2,3}	N/A
2	Develop Incident Site Layout	Р	N/A	N/A	Р	P^3	P^3	N/A
3	Develop Incident Action Plan	Р	N/A	S	Р	P ³	P^3	S
4	Establish Initial Isolation Perimeter (Cordon)	Р	S	S	Р	P^3	P^3	S
5	Establish Entry Control Point	Р	S	N/A	Р	P^3	P^3	N/A
6	Establish Staging Area	Р	Т	S	S	N/A	N/A	N/A
7	Conduct Staging Area Assessment	N/A	N/A	Р	N/A	N/A	N/A	S
8	Establish Staging Area Detection Grid	N/A	N/A	Р	N/A	N/A	N/A	S
9	Establish Hazard Control Zones	Р	N/A	S	N/A	N/A	P^3	Т
10	Initiate Rescue	Р	N/A	N/A	N/A	N/A	N/A	N/A
11	Initiate Public Protective Actions	Р	N/A	S	Р	N/A	N/A	N/A
12	Implement Casualty Management	S	N/A	N/A	N/A	Р	S	N/A
13	Establish Site Safety and Health Plan	Р	N/A	N/A	N/A	N/A	S	S
14	Conduct Hazard Identification	Р	Т	N/A	Т	N/A	S^1	S
15	Conduct Hazard Perimeter	Р	N/A	N/A	Т	N/A	S^1	S
16	Define Initial Isolation Perimeter (Cordon)	N/A	N/A	Р	N/A	N/A	S ³	N/A
17	Establish Detection Grid	N/A	N/A	Р	N/A	N/A	N/A	S
18	Conduct Initial Facility/Area Reconnaissance	S	N/A	Р	N/A	N/A	N/A	S
19	Determine Identification of Unknown Substances	N/A	N/A	Р	N/A	N/A	N/A	Р
20	Conduct Area	N/A	N/A	Р	N/A	N/A	N/A	S

Table A5.1. First and Emergency Responders' Missions.

Emergency Responders' Mission Number	Emergency Responders' Mission Description	CEF	EOD	CEX	SF	EMS	РН	BE
	Reconnaissance (Ground							
	Survey Assessment)							
21	Estimate Health Risk	N/A	N/A	N/A	N/A	N/A	Р	Р
22	Estimate Operational Risk	N/A	N/A	Р	N/A	N/A	N/A	S
23	Conduct Downwind Hazard Analysis	S	Т	Р	N/A	N/A	N/A	S
24	Develop Plume Modeling	S	N/A	Р	N/A	N/A	N/A	S
25	Quantify Hazards	S	N/A	N/A	N/A	N/A	N/A	Р
26	Reduce/Expand Isolation Perimeter (Cordon)	Р	Т	S	N/A	N/A	N/A	S
27	Maintain Site Security	N/A	N/A	S	Р	N/A	N/A	N/A
28	Conduct Epidemiological Investigation (EPI)	N/A	N/A	N/A	N/A	S	Р	S
29	Communicate Health Risks	N/A	N/A	N/A	N/A	S	Р	Р
30	Determine PPE/IPE	Р	Р	Р	S	N/A	N/A	Р
31	Provide Situational Awareness Reports	Р	S	Р	S	S	P^3	S
32	Establish Immunization/Pharmacy Points of Distribution	N/A	N/A	N/A	N/A	N/A	Р	N/A
33	Execute Render Safe Procedures	N/A	Р	N/A	N/A	N/A	N/A	N/A
34	Control Spill/Hazard	Р	N/a	N/A	N/A	N/A	N/A	S
35	Collect and Manage Evidence	S	N/A	Р	Р	N/A	S	S
36	Establish/Conduct Technical Decon	Р	N/A	Р	N/A	N/A	N/A	N/A
37	Establish/Conduct Emergency Decon	Р	N/A	S	N/A	N/A	N/A	N/A
38	Establish/Conduct Mass Populace Decon	Р	N/A	S	N/A	N/A	N/A	N/A
39	Establish/Operate Contamination Control Area	N/A	N/A	Р	N/A	N/A	N/A	N/A
40	Establish In-Place Patient Decon	N/A	N/A	N/A	N/A	S ³	S ³	N/A
41	Establish/Conduct Radiological Decon	N/A	N/A	Р	N/A	N/A	N/A	S
42	Complete Patient Disposition and	N/A	N/A	N/A	N/A	Р	S	N/A

Emergency Responders' Mission Number	Emergency Responders' Mission Description	CEF	EOD	CEX	SF	EMS	PH	BE
	Accountability							
43	Conduct Post Incident Analysis	Р	N/A	S	N/A	N/A	N/A	S
44	Transfer Command to Post-Emergency Response Operations	Р	N/A	N/A	Р	N/A	N/A	N/A
P- Primary: S- Secondary: NA- Not Applicable: T- Tertiary								

P= Primary; S= Secondary; NA= Not Applicable; T= Tertiary

Notes:

1. Fire Emergency Services will be the IC for incidents that involve more than two response agencies.

2. Incident commanders may come from Security Forces or Medical when the response can be handled with internal organic capability..

3. During a contagious disease outbreak or an incident limited to medical issues, medical (EMS or PHEO) may assume IC duties. Medical will operate the In-Place Patient Decontamination.

4. The capabilities are listed in sequential order but many are completed at the same time and other capabilities may be done at any time based on the requirements to respond to the incident.

SAMPLE INCIDENT COMMAND SYSTEM EVENT LOG

Table A6.1. ICS-G.

1. Incident Name	2. Operational Period	UNIT LOG					
	Date/Time)	ICS 214-CG					
	From: To:						
3. Unit Name/Designators	4. Unit Leader (Name a Position)	ind ICS					
5. Personnel Assigned							
NAME	ICS POSITION	HOME BASE					
6 Activity Log (Continue on Reven	(a)						
TIME MAJOR EVEN	TS						
7. Prepared by:	Date/Time						

1. Incident Name		2. Operational Perio	d	UNIT LOG			
		(Date/Time)		(CONT.)			
		From: To:		ÌCS 214-CG			
6. Activity Log (Continue on Reverse)							
TIME	MAJOR EVEN	rś					
				<u> </u>			
Prepared by:		Date/Ti	me:				

NUCLEAR WEAPONS ACCIDENT/INCIDENT RESPONSE FLOWCHART





NUCLEAR WEAPONS ACCIDENT ON-SCENE SETUP



Figure A8.1. Nuclear Weapons Accident On-Scene Setup.

NUCLEAR WEAPONS ACCIDENT/INCIDENT RECOVERY (NWAIR)

A9.1. Nuclear Weapon Accident/Incident Recovery (NWAIR) Operations. Department of Defense (DOD) 3150.8-M, *Nuclear Weapon Incident Response Procedures (NARP)*, provides the guidance and direction for NWAIR operations involving federal and civil agency response and recovery operations. This attachment summarizes the responsible agencies and their responsibilities during an NWAIR operation.

A9.2. Responsible Agencies and Responsibilities:

A9.2.1. DOD. Many DOD agencies will respond to a nuclear incident. DOD military agencies (Explosive Ordnance Disposal (EOD), Readiness and Emergency Management, Security Forces, Medical, Fire Emergency Services, etc.) will work in concert with several support functions having different and sometimes apparently conflicting goals and objectives. Military agencies must integrate into overall Department of Homeland Security (DHS) and DOD recovery operations. However, at no time will they compromise the safety of their teams or the personnel they escort downrange.

A9.2.2. Installation and Follow-on Response Forces. When a nuclear incident occurs and depending on the severity of the incident, a BROKEN ARROW may be declared. The closest capable unit will respond to stabilize the site. If the AF is the closest unit, the base will utilize the installation's DRF structure to fulfill tasks of the Defense Support Force (DSF). The DSF is a tailored force dispatched from the closest military installation by the National Military Command Center (NMCC) immediately upon notification of a nuclear weapons incident or nuclear /radiological incident. The DSF will assume military command of the incident site, provide security forces, set up a NDA if appropriate, and establish a working relationship with the civilian incident commander IAW the National Incident Management System (NIMS). Response agencies at all levels follow the guidance and procedures in DOD 3150.8-M and in their unit's established Comprehensive Emergency Management Plan 10-2. While the DSF is conducting initial response actions, the Response Task Force (RTF) will be formulated and dispatched to the incident site. The RTF is a DOD response force that is appropriately staffed, trained, and equipped to coordinate all actions necessary to control and recover from a nuclear incident. The specific purpose of the RTF is to recover weapons and provide radiological incident assistance. Combatant Commanders will be given operational control of the RTFs by the Chairman of the Joint Chiefs of Staff, via the NMCC, at an appropriate time in the response phase.

A9.2.3. AF Nuclear Weapons Center (708th Nuclear Systems Squadron). The AF Nuclear Weapons Center Directorate, Kirtland Air Force Base, New Mexico, manages the AF nuclear weapons program and advocates for specific functional needs (EOD, FES, etc.) to the Department of Energy (DOE), weapons labs, the Defense Nuclear Weapons School, Pantax, and the Defense Threat Reduction Agency (DTRA). The directorate also ensures AF EOD training; training equipment, publications, and other requirements for response to a nuclear weapons accident/incident are met. Additionally, the directorate coordinates on major nuclear weapons incident exercises to validate recovery procedures and coordinate interoperability with other services and the DOE.

A9.2.4. Joint DOD/DOE Functional Steering Group for Nuclear Matters. DOD and DOE direct functional steering groups for nuclear weapon matters such as incident or acciednt response by EOD, FES, and other agencies. The purpose is to provide a Joint DOD/DOE coordination and communications forum for the development of nuclear weapons publications, training, and exercises. The DTRA is the executive agent for DOD, and the National Nuclear Security Administration (NNSA) is the executive agent for DOE.

A9.2.5. Department of Homeland Security (DHS). The DHS is committed to helping first responders nationwide by ensuring that emergency response professionals are prepared, equipped, and trained for any situation and by bringing together information and resources to prepare for and respond to a terrorist attack, natural incident, or other large-scale emergency. The DHS developed the NIMS, which is the main directive for any response to a nuclear incident. It was developed so responders from different jurisdictions and disciplines can work together better when responding to natural disasters and emergencies, including acts of terrorism.

A9.2.6. Other Specialized Teams. Several specialized teams are available to support a nuclear accident/incident. DOD 3150.8-M lists and identifies the mission, capability, and deployment time-frame of these teams.

A9.2.6.1. Department of Energy (DOE) and NNSA Incident Response Group (ARG). The ARG is a DOE/NNSA asset comprised of technical and scientific experts with specialized equipment. The ARG includes a cadre of senior scientific advisors, weapons engineers and technicians, experts in nuclear safety and high-explosive safety, health physicists, radiation control technicians, industrial hygienists, physical scientists, packaging and transportation specialists, and other specialists from the DOE/NNSA weapons complex capable of responding to a nuclear accident/incident. The ARG maintains readiness to provide DOE technical assistance to peacetime accidents involving US nuclear weapons and components anywhere in the world.

A9.2.6.1.1. Team Composition. The DOE/NNSA ARG is comprised of 15 to 150 scientists, engineers, technicians, and health physics and safety professionals from the DOE/NNSA national laboratories and production facilities. All three national laboratories (Sandia, Los Alamos, and Lawrence Livermore) will provide weapons experts and scientists to assist EOD in developing recovery plans. However, military EOD personnel are responsible for the actual performance, supervision, and control of hands-on weapon recovery operations. **Note:** When soliciting advice, it is best to seek an agency that has actual experience with the issue at hand. Currently, no national laboratory personnel have had actual nuclear incident experience. Advice from these subject matter experts is usually based on theory, modeling, or exercise play and not on actual expertise. Concurrently, all EOD Joint Nuclear Weapon Publication System (JNWPS) publications are based on theory and known conditions.

A9.2.6.1.2. Responsibility. The ARG's emphasis is solely on US nuclear weapons accidents. Any action beyond Render Safe Procedures (RSP) on the nuclear weapon system or systems involved must be coordinated with the ARG and AF incident investigators. Planned deployment methods are listed in **Table A9.1**. **Note:** Prior to the ARG arriving on scene, EOD and incident commanders can "reach back" to DOE Home Teams through the NMCC if proper security protocols are followed. The NMCC is responsible for initial national-level command, control, and response of DOD resources and personnel until conditions have stabilized; at which time command and control will be transferred to the responsible Service operations center.

	DOE aviation for personnel and select			
Continental United States (CONUS)	equipment			
Continental United States (CONUS)	DOE over-the-road transport for			
	equipment.			
	DOE aircraft for advance element and			
Outside the Continental United States	equipment.			
(OCONUS)	DOD military aircraft for main and follow-			
	on element with equipment.			

 Table A9.1. Planned Deployment Method.

A9.2.6.1.3. Deployment of the ARG. The ARG will deploy in phases and standup the technical DOE/NNSA ARG Home Team. The purpose of the DOE/NNSA ARG Home Team is to provide specific warhead/bomb design engineers/specialists who can provide advice and recommendations to the weapon engineers in the field. In addition, the Home Team will perform Weapon Recovery Safety Evaluation Team responsibilities.

A9.2.6.2. Pantex Plant. Pantex provides packaging experts and the materials necessary to package full weapons and any nuclear, classified, or hazardous components. The plant provides prefabricated shipping containers and equipment to customize packaging on site.

A9.2.6.3. Additional DOE Agencies. DOE Nuclear Emergency Search Team (NEST) is the primary DOE response element for threat incidents involving improvised nuclear devices and lost or stolen weapons. NEST assets may be used by the ARG in an incident response. The NEST is comprised of technical specialists with equipment ready for dispatch on short notice. The NEST Pod is an air transportable package consisting of a small command post equipped with telephone and key units, very high frequency or frequency modulation commercial radios, secure voice, HF radio, and a slow-scan television system. The NEST Pod does not have an organic, long-haul transmission capability except for high frequency and requires commercial telephone lines and/or high-quality microwave, troposphere, or satellite systems to operate. DOE will also provide specialized teams, including senior leadership from Washington, departmental crises action teams, intermediate headquarters, logistics teams, and technical operations teams.

A9.2.6.4. Defense Threat Reduction Agency (DTRA). The DTRA assists in coordinating incident information and requests for assistance through the Joint Nuclear Incident Coordinating Center. Specialized Consequence Management Advisory Team and Medical Radiological Advisory Team help the Incident Commander assess and predict contamination and deal with medical effects. Their mission is to safeguard America and its allies from Weapons of Mass Destruction (WMD) by providing capabilities to reduce, eliminate, counter the threat, and mitigate its effects.

A9.3. Response Phases for Nuclear Weapons Accident/Incident Response (NWAIR). NWAIR operations are divided into two categories defined as the Defense Support

Force (DSF) and the Response Task Force (RTF). The nuclear incident response process is broken into five different phases in accordance with DOD 3150.8-M. These five phases overlap the responsibilities of the DSF actions with those associated/required during the RTF actions. Some, part, or all of the following steps for each phase may be employed. First and emergency responders arrive ahead of the RTF as part of the DSF.

A9.3.1. Phase I - Notification and Deployment of Emergency Responders. The notification and deployment phase of a nuclear weapon incident begins once the incident has occurred and voice reports are provided to the NMCC or the DOE HQ/EOC. This phase draws down as increasing numbers of response forces arrive on-site. Actions taken during this phase include notifying appropriate federal, state, and local authorities; ensuring coordination and communication between the DOD, the DOE/NNSA, and the two departments' sub-organizations; and executing logistics plans to deploy assets to the incident site. Notification procedures are listed in DOD 3150.8-M and are based on recognized reporting channels. However, depending on the circumstances of the incident, notification may come first from civilian responders or local populations who witnessed the incident. Emergency responders' actions begin when the unit is informed that a BROKEN ARROW, or other incident site has been requested. Emergency Responders will obtain all information required to respond, including weapon line numbers and entry control point (ECP) locations.

A9.3.2. Phase II - Initial Response. When the DSF agencies arrive on scene, they will establish command, control, and communications; report to the IC (FES or SFs); coordinate with other responders; verify safe standoff distances and make recommendations as required. The DSF teams responsible for the initial reconnaissance of the accident/incident site (EOD, Emergency Management, and Fire) will perform all preparations necessary to prepare the team prior to focusing attention on the downrange hazards. Operations conducted by the DSF upon arrival at the site are summarized below.

A9.3.2.1. Identification. All information gathered during the initial response will be used to identify positively the weapon(s) and hazardous components involved, if possible. This information will be used to update and adjust implemented safety measures (safe stand-off distances, upwind location of the ECP) and formulate an immediate neutralization plan if required (initial critical render safe procedures (CRSP) of any weapon systems on-site).

A9.3.2.2. Stabilization. The DSF will evaluate and analyze the incident situation and advise the DOD IC of the safest and most reliable means for stabilizing the weapon and all associated hazards. The DSF may be authorized by the DOD IC to perform CRSP if the responding EOD team has the available equipment and required capabilities. The DSF will not perform any procedures on the weapon until approved by the IC. CRSP may begin, if required, once the reconnaissance has been completed, but only those procedures outlined in JNWPS Manual 60-6, *Explosive Ordnance Disposal Procedures, Render Safe Procedures (RSP) for Nuclear Weapons,* may be accomplished. Once the site is stabilized by the DSF, no further action on the weapon will take place until the RTF and the ARG arrive on site.

A9.3.3. Phase III - Incident Site Consolidation. The arrival of the RTF marks the beginning of Phase III, Incident Site Consolidation. During consolidation, the incident site stabilizes

and transitions from DSF activities in Phases I and II to the deliberate response activities in Phase III. This phase is marked by the evolution of a large response capability at the incident site and the establishment of a robust federal coordination capability in the area of the incident. Activities in this phase include controlling contamination, continuing actions to minimize health and safety risks to the public and response personnel, solidifying incident site security, preparing for recovery of the nuclear weapon, and initiating site remediation planning.

A9.3.4. Phase IV - Weapons Recovery. The weapons recovery operation and disposition phase involves gaining access to the weapon(s), performance of any continued RSP by EOD, and diagnoses of weapon damage to determine or develop safe procedures for packaging and transporting the weapon(s). In a nuclear incident, all actions must be performed according to written procedures, which are approved by the ARG. There are five basic steps to weapons recovery presented in DOD 3150.8-M:

A9.3.4.1. Initial entry by the EOD RTF to determine the status and all associated hazards in the area.

A9.3.4.2. Location of weapons and weapon components using all reasonable efforts.

A9.3.4.3. Development and approval of the weapons recovery plan.

A9.3.4.4. Performance of all required RSP on the weapon.

A9.3.4.5. Performance of temporary storage, packaging, transport, and disposal of the weapon.

A9.3.5. Phase V - Site Remediation. Site remediation is the phase of the radiological cleanup phase of the nuclear incident response. The focus of this phase is the cleanup of contaminated materials, to include equipment, soil, or water, that occurred during the incident.

AIR FORCE VISUAL AID 10-2510, US AIR FORCE EMERGENCY NOTIFICATION SIGNALS

Figure A10.1. AFVA 10-2510.

U.S. AIR FORCE EMERGENCY NOTIFICATION SIGNALS							
CONDITION	IF YOU HEAR	THIS INDICATES	INDIVIDUAL ACTIONS				
DISASTER WARNING ^{1,3}	3-5 MINUTE STEADY TONE ON SIREN OR SIMILAR WARNING DEVICE OR VOICE ANNOUNCEMENT	A DISASTER/INCIDENT AFFECTING THE BASE IS IMMINENT OR IN PROGRESS EXAMPLES: Tornadoes, Flash Floods, Hazardous Material Releases, Wildfires	 BE AWARE, ENSURE ALL PERSONNEL ARE WARNED FOLLOW INSTRUCTIONS TO TAKE COVER, EVACUATE TO A SAFE LOCATION, OR SHELTER 				
ATTACK WARNING ^{1,2,3}	3-5 MINUTE WAVERING TONE ON SIREN OR SIMILAR WARNING DEVICE OR VOICE ANNOUNCEMENT	AN ATTACK/HOSTILE ACT IS IMMINENT OR IN PROGRESS EXAMPLES: Vehicle Bomb, Terrorist Release of Chemical, Biological, Radioactive Material	 BE ALERT, ENSURE ALL PERSONNEL ARE WARNED IMPLEMENT SECURITY MEASURES, AS APPROPRIATE FOLLOW INSTRUCTIONS TO TAKE COVER, EVACUATE TO A SAFE LOCATION, OR SHELTER 				
ALL CLEAR	VOICE ANNOUNCEMENT	THE IMMEDIATE DISASTER THREAT HAS ENDED OR THE ATTACK IS OVER	REMAIN ALERT FOR SECONDARY HAZARDS ACCOUNT FOR ALL PERSONNEL REPORT FIRES, INJURIES, AND HAZARDS				
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