BY ORDER OF THE COMMANDER
JOINT BASE ANDREWS

JOINT BASE ANDREWS INSTRUCTION 21-105

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Maintenance

CRASHED, DAMAGED OR DISABLED AIRCRAFT RECOVERY (CDDAR) PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This operating instruction (OI) establishes responsibilities and procedures for the recovery of aircraft involved in a ground or air incident/accident on or off base and ensures adequate coverage 24 hours a day, 7 days a week. This instruction is written in accordance with (IAW) AFPD 21-1, *Air and Space Maintenance*, AFI 21-101, *Aircraft and Equipment Maintenance Management* and AFI 21-101 AMC Supplement 1¸ *Aircraft and Equipment Maintenance Management.* This OI will be utilized in conjunction with other agency policies and all applicable Technical Orders (TOs) pertaining to the disabled aircraft. It applies to all JBA organizations and personnel that maintain aircraft, aircraft systems, equipment, support equipment, and components regardless of AFSC. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847 from the field through Major Command (MAJCOM) publications/forms managers. 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 with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**.

Chapter 1

GENERAL CDDAR PROGRAM INFORMATION

1.1. General.

1.1.1. AFI 10-2501, Technical Order 00-80C-1, Technical Order 00-20-1, AFI 21-101, and all AFI 21-101 MAJCOM supplements are the overarching governing directives. Tenant units will be responsible to their HHQ AFI 21-101 Supplement to ensure CDDAR compliance. This publication provides supplemental guidance for aircraft recovery/removal in the event of crash/disabled aircraft at JBA. The CDDAR program is designed to recover a crashed, damaged or disabled aircraft in a minimum amount of time, with consideration given to the requirements of opening runways for operational use, preventing secondary damage to the aircraft, and preserving evidence for mishap or accident investigation. Refer to Joint Base Andrews IEMP 10-2 for related response requirements. The CDDAR program applies to all host and tenant organizations on Joint Base Andrews (JBA) with the following considerations:

1.1.1.1. The requirement to reopen the runway for operational use.

1.1.1.2. Prevention of unnecessary secondary damage.

1.1.1.3. Preservation of evidence for accident and safety investigation.

1.1.1.4. Safety of personnel involved with initial response and recovery operations.

1.1.1.4.1. WARNING: Incidents involving all transient aircraft with hazardous materials and/or a composite structure may cause serious injury or death to those in contact with it. The mishap Aircraft owning unit will be contacted to determine composite material risks and requirements for Personal Protective Equipment (PPE). The Bioenvironmental Engineering Flight (779 AMDS/SGPB 240-857-3380), located at Joint Base Andrews, will also validate PPE requirements and determine health hazards/risks on-site. For emergencies during off-duty hours, contact the Command Post for the on-call Bioenvironmental technician.

1.1.1.5. Only required vehicles and personnel will respond to aircraft emergencies (with Ultra High Frequency (UHF) and Very High Frequency (VHF) radios if available). Responding vehicle operators must be certified to drive on the JBA airfield and possess a valid JBA airfield driver's license. Vehicles will position themselves behind responding crash vehicles and not impede movement or vision. In addition, only authorized agencies approved by the JBA Fire Chief may possess, operate and communicate radio traffic using the crash net. Personnel not required to respond will clear the area not to interfere with emergency operations. If necessary, the Senior Fire Official (SFO) or Incident Commander (IC) will direct the Security Forces to clear the area of non-essential personnel.

1.1.1.6. During initial response to an aircraft emergency, the Fire Chief or Senior Fire Official (SFO) is the Incident Commander (IC) and will determine if the aircraft is safe prior to releasing the aircraft for maintenance, recovery, or safety investigation (if required). IAW Technical Order 00-80C-1, 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. Until the aircraft has been released by the IC, no personnel will approach the aircraft without direction from the IC. All vehicles, except Fire Emergency Services vehicles, will remain clear of the aircraft. This does not prohibit essential vehicles (such as tow vehicles) from positioning themselves nearby for immediate use. The IC must release the aircraft or direct specific actions before any vehicles, other than a Fire Emergency Services vehicle, approach the aircraft. This restriction does not prevent emergency actions prior to Fire Emergency Services arrival.

1.1.1.7. All response vehicles (except Fire Emergency Services) and nonessential vehicles will remain clear of emergency aircraft until Fire Emergency Services and crash recovery actions are complete.

1.1.1.8. Rapid Removal of Aircraft on a Runway or Taxiway. During normal flying periods, disabled aircraft will be removed as quickly and safely as possible after touchdown.

1.1.1.9. Damaged aircraft will be removed as soon as possible depending on structural condition, equipment requirements, etc. Damaged aircraft will be removed from the runway in a minimum time period consistent with the following:

1.1.1.9.1. Personnel safety.

1.1.1.9.2. Prevention of unnecessary secondary damage.

1.1.1.9.3. Preservation of evidence for accident and safety investigation.

1.1.1.10. On-Base and Off-Base Accident Procedures:

1.1.1.10.1. All on-base and off-base accidents will be coordinated with JBA IEMP 10-2.

1.1.1.10.2. On-base procedures will be IAW JBA IEMP 10-2, Annex A, Appendix 2, Tab A.

1.1.1.10.3. Off-base procedures will be IAW JBA IEMP 10-2, Annex A, Appendix 2, Tab B.

1.1.1.10.4. Under no circumstances will personnel or equipment be dispatched off-base if it jeopardizes the mission of the on-base recovery operation without the approval of the 11WG/CC or designated representative.

1.1.1.11. In the event an aerospace vehicle is damaged or destroyed, the nearest base with the necessary repair or reclamation capability takes possession. The time of possession change is the time of landing or crash.

1.1.1.11.1. Possession does not change if the parent organization does the repair, reclamation or termination.

1.1.1.11.2. AVDO (Aerospace Vehicle Distribution Officer) must initiate the proper station location code and possession purpose identifier changes. (Ref AFI 21-103 section 2.11.3.2).

1.2. Terms Defined IAW TO 00-80C-1.

1.2.1. Crashed Aircraft: An aircraft unable to return to designated or alternate field or missed landing resulting in major or total destruction of the aircraft.

1.2.2. Damaged Aircraft: An aircraft that cannot be moved under its own power or supported by its undercarriage without sustaining secondary damage.

1.2.3. Disabled: An aircraft that cannot or should not be moved under its own power, but can be towed using its own undercarriage.

Chapter 2

ORGANIZATIONAL RESPONSIBILITIES

2.1. General.

2.1.1. IAW AFI 21-101 AMC Sup 1, Section 14.10.5.4, the installation wing commander will implement policy, plans and agreements to ensure compliance with established recovery programs.

2.2. 11 WG/CC.

2.2.1. Is the installation commander for JBA.

2.2.2. The 11 WG/CC has delegated the JBA CDDAR Program Management to the 89th Airlift Wing (89 AW) and tenant units with a flying mission at JBA.

2.2.3. Will ensure that AFI 10-2501, *Air Force Emergency Management Program Planning and Operation*, is adhered to for all emergency actions.

2.3. 89 AW/CC.

2.3.1. The 89 AW/CC will oversee implementation of CDDAR policy, plans and agreements to ensure successful execution of the JBA CDDAR program.

2.4. 89 MXG/CC.

2.4.1. Establish and maintain CDDAR capability.

2.4.2. Ensure sufficient equipment is available.

2.4.3. Approve waivers for CDDAR team member training.

2.4.4. Direct recovery/removal operations once IC releases the aircraft. Note: PAG/CC is primary authority for recovery/removal operations of PAG aircraft.

2.4.5. Ensure a suitable CDDAR program is established by the VIPSAM maintenance contractor and the program executed IAW all applicable USAF AFIs, TOs and the contract PWS.

2.4.6. Ensure Mutual Aid Agreements (MAAs) are established, as directed in AFI 32-2001, *Fire Emergency Services Program*, with all flying units assigned to JBA. Note: Ensure Memorandums of Understanding and Memorandums of Agreement (MOU/MOAs) are developed IAW AFI 25-201, *Support Agreement Procedures*.

2.5. 89 MXG VIPSAM Contract Maintenance.

2.5.1. Maintain overall responsibility for recovery of host/tenant crashed/disabled aircraft, on base and off base IAW T.O. 00-80C-1.

2.5.2. Provide CDDAR support for all tenant units assigned to JBA.

2.5.3. Maintain capability to provide and support recovery operations for all base assigned aircraft, to include tenant unit aircraft.

2.5.4. Manage government furnished weather proof storage for all recovery equipment.

2.5.5. Perform off-station (within a 50 nautical mile radius of JBA-NAFW) crash, damaged, or disabled aircraft recovery (CDDAR) for 89th Airlift Wing aircraft, 11th Wing aircraft, and any other aircraft receiving host base support. Contractor may be required to respond to the incident commander.

2.5.6. Lease or purchase specialized equipment and vehicles to support CDDAR effort. This will only be done with the approval of the Functional Area Commander and the Contracting Officer.

2.5.7. Draft Mutual Aid Agreements (MAAs) with JBA flying units as directed in AFI 32-2001, *Fire Emergency Services Program*. Note: Memorandums of Understanding and Memorandums of Agreement (MOU/MOAs) will be developed IAW AFI 25-201, *Support Agreement Procedures*.

2.5.8. Provide a Transient Alert "follow me" escort to crash recovery detail, when requested, if crossing an active runway and or taxiway is required to reach recovery site.

2.6. 89 MXG VIPSAM Contract Maintenance Manager.

2.6.1. Ensure the CDDAR instruction provides for a coordinated response to CDDAR situations by aircraft maintenance personnel, fire protection, and other essential base agencies.

2.7. 89 MXG Aircraft Contract Maintenance, Director of Maintenance.

2.7.1. Ensure personnel are adequately trained to prevent injury to personnel, further damage to aircraft, equipment or other resources.

2.7.2. Review support agreements to assess limits of internal unit capability and coordinate with tenants for resources beyond what is possessed.

2.7.3. Appoint a CDDAR Program Manager.

2.7.4. Designate CDDAR Team Chiefs.

2.7.5. Brief 89 MXG/CC on status of CDDAR equipment quarterly, or whenever status changes.

2.7.6. The CDDAR Program Manager serves as the single entry point of contact for external agencies queries regarding CDDAR program coordination.

2.7.7. Establish and maintain a CDDAR team IAW Contract Performance Work Statement to execute CDDAR requirements.

2.7.8. Ensure CDDAR Program Manager, Team Chiefs and CDDAR team members remain trained and proficient on CDDAR duties via the SCR and CAMS.

2.7.9. Manage and direct CDDAR duties IAW AFI 21-101, AFI 21- 101_AMCSUP_1, T.O. 00-80C-1 relating to CDDAR duties.

2.7.10. Select personnel that will be trained in basic CDDAR operations and function as the core group of personnel from CDDAR response efforts for JBA assigned aircraft.

2.7.11. Select personnel to serve as CDDAR augmentees, as required.

2.7.12. Ensure all personnel are cognizant of hazards associated with aircraft (i.e. composite materials, hydrazine systems, etc.) outlined in TO 00-80C-1.

2.7.13. Ensure inspections are performed IAW TO 00-20-1, TO 00-80C-1, and AFI 21-101 to ensure serviceability of CDDAR equipment. Inspections will be tracked using CAMS.

2.8. 89 MXG VIPSAM Contract Maintenance CDDAR Program Manager.

2.8.1. Be ready to respond to a mishap with the CDDAR team and/or execute CDDAR operations with little to no notice at all times to include off-shift hours.

2.8.2. Develop initial and annual CDDAR training plan and establish local training program.

2.8.3. Review SAs and base disaster response plans quarterly. Provide inputs for changes as required.

2.8.4. Immediately brief the 89 MXG/CC of equipment shortages/serviceability that precludes effective CDDAR support.

2.8.5. Ensure team members are assigned and trained to support CDDAR operations. This includes:

2.8.5.1. Basic equipment operation.

2.8.5.2. CDDAR hazardous material and unique characteristic familiarization training for JBA-assigned aircraft (e.g., F-16 hydrazine systems, C-130 ballast depleted uranium, aircraft composite materials, etc.) and for transient aircraft that routinely transit JBA. This training will be documented.

2.8.5.3. Availability and proper use of PPE as determined by the technical data.

2.8.6. Ensure special qualifications for personnel are identified and documented. Identify individual team member qualifications for specific equipment operations (e.g. towing, jacking, support equipment, special purpose vehicle).

2.8.7. Maintain a list of all CDDAR tools and equipment.

2.8.8. Ensure tools and SE are adequate for recovery (i.e. bags, slings, manifolds, tow bars, dunnage/shoring, etc.) and are serviceable and available. Ensure the tools and SE is inspected quarterly for serviceability.

2.8.9. Plan annual JBA CDDAR training events in conjunction with JBA MARE exercises. Coordinate one annual training event to coincide with other similar activities such as MAREs to ensure seamless interface with the JBA Incident Response program, ensuring exercise of the CDDAR recovery process prior to ENDEX. Coordinate training with the 89 MXG/CC, 89 AW/SE, 89 AW/XP, and Secret Service offices as well as all CDDAR supported tenant unit maintenance activities.

2.8.10. Coordinate with 89 MXG VIPSAM Contract QA Weight & Balance manager whenever aircraft weight and center of gravity (CG) conditions are unknown.

2.8.11. Be prepared to deploy crash and recovery personnel and equipment for JBA aircraft within 60 minutes of notification.

2.8.12. IAW TO 00-80C-1, coordinate with 11th Civil Engineering Squadron Readiness and Emergency Management Flight, the Emergency Management Working Group and other units as applicable to develop, modify, and implement plans, checklists, instructions and agreements concerning CDDAR operations.

2.8.13. Be familiar with CDDAR, Emergency Management Plans, checklists, instructions and agreements and understand how they impact the CDDAR team and aircraft recoveries.

2.8.14. Develop the Aircraft Recovery Plan (ARP) IAW TO 00-80C-1. See Attachment 5 for ARP minimum requirements.

2.8.15. Recommend Aircraft Recovery Strategy (ARS) to the IC during CDDAR events.

2.8.16. The CDDAR Team Chief and team members' duty positions are outlined below:

2.8.16.1. The CDDAR Team Chief supports the maintenance recovery process IAW T.O. 00-80C-1, assigns various tasks and identifies necessary equipment for a safe recovery operation with CDDAR members.

2.8.16.2. The Assistant CDDAR Team Chief helps the team chief make critical decisions with aircraft recovery. The selection of this position is by qualification and expertise on the specific MDS of the aircraft. Tenant units with flying missions shall be requested to fill this position whenever their aircraft is involved in a CDDAR event.

2.8.16.3. The Sam 4 Production Supervisor recalls Contractor CDDAR Team Chief when notified by the 89 MOC. The CDDAR Team Chief will in turn contact other CDDAR members and supporting agencies needed to execute the recovery operation.

2.8.16.4. The CDDAR Team Chief ensures crash recovery trailer contents are secure for transport, delivers crash trailers to mishap site and maintains tool accountability throughout the mishap. The CDDAR Team Chief ensures delivery of sub-located equipment. He/She coordinates with base agencies to acquire vehicles and expedite the delivery of equipment not stored in the crash trailers.

2.8.17. Assist in the development of a mishap site clean-up plan.

2.8.18. Inspect and document inspections of equipment as required on AFTO Form 244 IAW TO 00-20-1. Ensure all lifting bags are inspected, cleaned, powdered and repaired IAW applicable lifting technical data or manufacture data.

2.8.19. Review all Air Force, MAJCOM and base instructions, functional checklists, base support agreements and base disaster response plans related or pertaining to the local CDDAR program, at least annually.

2.8.20. Identify deficiencies in CDDAR plans, checklists, instructions and agreements. Address these deficiencies, using established change processes.

2.8.21. Ensure local CDDAR procedures, when developed or changed, are coordinated with the Fire Emergency Services, Safety, Civil Engineering, Emergency Management, Explosive Ordnance Disposal, Security Forces, Bioenvironmental Engineering, Airfield Manager, and other on and off-base agencies as required.

2.8.22. Will develop procedures to recall CDDAR team members during non-duty hours.

2.8.23. Assist 11 CONS in coordinating long-term agreements to facilitate obtaining CDDAR equipment and material that may not be available through base resources. Such agreements may include, but are not limited to, obtaining cranes, heavy equipment, dollies, jacks and tow vehicles. The CDDAR Team Chief is responsible for identifying such requirements.

2.8.24. Maintain CDDAR trailer and equipment.

2.8.25. Develop and maintain initial CDDAR response checklist and aircraft removal checklist to protect personnel, aircraft, and equipment. NOTE: Templates may be found in TO 00-80C-1.

2.8.26. Develop and maintain procedures to obtain equipment through lateral or contract sources if not organically possessed.

2.8.27. Establish and maintain a continuity book for the CDDAR program IAW TO 00-80C-1. See Attachments 6.

2.9. 11 WG Command Post.

2.9.1. Implement the appropriate check sheet and coordinate with the following agencies for 89 MXG VIPSAM Contractor CDDAR response/support:

2.9.1.1. 89 MXG Maintenance Operations Center (MOC).

2.9.1.2. 11th CES Readiness and Emergency Management Flight (11 CES/CEX).

2.9.1.3. 89 Wing Safety (89 AW/SE).

2.9.1.4. 779 MDG.

2.9.1.5. 779 MDG Bioenvironmental Flight (779 AMDS/SGPB.

2.9.1.6. 11th Security Forces Squadron (11 SFS).

2.9.1.7. Airfield Management (89 OSS/OSAA).

2.9.1.8. 11th Logistics Readiness Squadron Vehicle Operations (11 LRS).

2.9.1.9. 11th Contracting Squadron (11 CONS).

2.9.1.10. 11th Force Support Squadron (11 FSS).

2.9.1.11. Explosive Ordnance Disposal Flight (11 CES/CED).

2.9.1.12. JBA Fire Emergency Services (11 CES/CEF).

2.9.1.13. Additional on/off Base Agencies as required.

2.9.1.14. Coordinate with the Emergency Operations Center (EOC), if directed.

2.9.2. In the event of a crashed/disabled aircraft, JBA IEMP 10-2 Aircraft Mishap Response will be initiated by the 11 WG CP. Once directed, 89 MOC will initiate Major Aircraft Accident/Incident Check Sheet along with the 11 WG CP and then notify SAM 4 Production Supervisor on duty to assemble the CDDAR Team.

2.9.3. Maintain a copy of the current CDDAR Team recall roster.

2.9.4. Coordinate the needs of the CDDAR Team via radio after they have been activated. All requirements will be coordinated with the IC or Fire Chief while at the mishap site.

2.10. 89 MXG Maintenance Operations Center (MOC) Senior Coordinator.

2.10.1. Notify 89 MXG Aircraft Contractor SAM 4 Production Supervisor.

2.10.2. Notify 89 MXG/CC.

2.10.3. Notify 89 MXG Aircraft Maintenance Contractor Quality Assurance Office.

2.10.4. Notify 89 MXG/COR.

2.10.5. Notify the MXG/CD, MXG/CCC, and MXG/MXM that a CDDAR event is underway.

2.10.6. Clear one radio net for exclusive use by the recovery team to expedite the recovery operation.

2.10.7. Ensure radio communication is maintained with the designated maintenance representative in case additional personnel and or equipment are required.

2.10.8. In the event that an aircraft being recovered requires the movement of cargo by way of normal or alternate means, contact the 89 APS duty officer for offload.

2.10.9. Ensure on-duty 89 MXG Aircraft Maintenance Contractor Flight-line Production Supervisor (SAM-4) is notified of all JBA IFEs and is prepared to respond as directed.

2.11. 89 OSS/OSAA (Airfield Management).

2.11.1. Relay all information received from Primary Crash Alarm System (PCAS) via the Secondary Crash Net (SCN). If notified of an emergency other than by the PCAS, the SCN will be activated and will notify the Air Traffic Control Tower (ATCT).

2.11.2. Initiate completion of applicable Quick Reaction Checklists (QRCs).

2.11.3. Respond to all in-flight emergencies and ground emergencies impacting airfield operations except those involving hydrazine. Initiate completion of the hydrazine response QRC if hydrazine is involved.

2.11.4. If notified the aircraft will engage the barrier arresting system, notify Barrier Maintenance.

2.11.5. Determine and inform ATCT of airfield condition and take action to close the runway or affected taxiways.

2.11.6. Make a visual inspection of the runway and affected taxiways for airfield damage or foreign objects. Request Civil Engineering assistance as necessary.

2.11.7. Ensure the runway is clear of all vehicles, equipment, and personnel. Advise the ATCT and IC, when runway operations can be resumed.

2.11.8. Notify ATCT to divert to alternate runway as necessary.

2.12. 89 AW/SE.

2.12.1. Monitor, assess, and advise on response to aircraft emergencies. Will make provisions to recall a representative for non-duty hours.

2.12.2. Initiate mishap investigation and reporting as required by AFI 91-204, *Safety Investigations and Reports*, and forms an Interim Safety Board with the owning unit as well as transient unit.

2.12.3. Give guidance for Preservation of Evidence for the ISB or SIB.

2.13. 89 AW/XP.

2.13.1. Develop a plan for conducting periodic table top exercises to discuss possible responses to a variety of scenarios, assess personnel capabilities, exercise checklists, validity of phone numbers, etc. These exercises will mirror other installation major accident response exercises.

2.13.2. Develop an Incident Action Plan (IAP) for the IC to use during CDDAR operations. Information regarding to the IAP can be found in AFMAN 10-2502. See Attachment 4 for an example.

2.13.3. Incorporate a CDDAR scenario into a minimum of one JBA MARE per year.

2.13.4. Provide MXG Contractor with all Support Agreements, MOA or MOU agreements which include CDDAR support services and any changed agreements thereafter.

2.14. 89 APS will:

2.14.1. Provide detailed cargo manifest with complete descriptions of any explosives or hazardous materials to IC or others as directed. This includes sourcing manifests for transient inbound crashed/disabled aircraft from the owning unit. Will make provisions to recall a representative for non-duty hours.

2.15. 779 MDG/CC.

2.15.1. Ensure ambulance service responds to a position as directed by the IC with an ambulance and personnel necessary to provide emergency medical care.

2.15.2. Responds with an in-flight emergency/mishap medical team, including a flight surgeon that will dispatch to the scene, for mishap and/or aircrew/passenger physiological events. Once cleared by the IC, medical responders will ensure the affected personnel are examined and cared for. Medics shall coordinate with 89 AW/SE to ensure medical evaluation covers needed for mishap classifications.

2.16. 779 MDG Bioenvironmental Flight (BEF).

2.16.1. Assess health risks, identify occupational, environmental, and radiological hazards, determine training and PPE (for government civilians and active duty members) requirements and communicate risks to IC and appropriate individuals at or near the mishap scene. The BEF will also make provisions to recall a representative for non-duty hours.

2.16.2. Evaluate the scene for potential health hazards and will provide assessments to the IC.

2.16.3. Maintain surveillance of site conditions and provide updates to the IC and CDDAR Team Chief.

2.16.4. Work with the IC, 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief and 11 SFS in determining the peripheral area. The Peripheral area should be more than 25 feet away from damaged composite parts, depending on environmental conditions. (Ref TO 00-105E-9, Chapter 3).

2.16.5. Monitor the mishap site for hazardous material exposures and advise the IC.

2.16.6. Brief IC and response personnel on all potential hazards. Specify proper PPE (including respiratory protection) as required based on health risk assessment to appropriate

individuals. BE will ensure compliance with 29 CFR 1910.134, *Respiratory Protection*, as individuals are identified.

2.16.7. Monitor environmental conditions at site during recovery and advise CDDAR team chief of any recommended changes to PPE.

2.16.8. Complete Occupational and Environmental Health (OEH) risk assessments and provide occupational health related protective recommendations and communicates risk to appropriate individuals IAW AFI 48-145.

2.16.9. Determine the need for monitoring personnel, Contamination Control Station (CCS) procedures, and contamination control requirements with Emergency Management Flight as required.

2.17. 11 CES.

2.17.1. Provide manpower and equipment necessary to support the recovery mission as directed by the IC and 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief. Assist in providing access to crash site and assist in site setup in accordance with JBA IEMP 10-2. Will make provisions to recall a representative for non-duty hours.

2.17.2. Coordinate delivery of heavy machinery and qualified equipment operators as requested by the CDDAR Team Chief and IC.

2.17.3. Procure and deliver necessary supplies needed for the recovery/removal operation (i.e. dunnage, plywood, planking etc.).

2.17.4. Complete a grid survey of the area and identify the location of aircraft parts and remains when directed by the IC and/or the SIB president.

2.17.5. Direct activities during surface preparation, road building, etc. prior to and during recovery operations.

2.17.6. Maintain a listing of activity-owned equipment required to facilitate pre-recovery planning.

2.17.7. 11CES/CED:

2.17.7.1. Respond to airfield emergencies to render safe ordnance and aircraft during in-flight and ground emergencies or crash situations per AFI 32-3001 *Explosive Ordnance Disposal (EOD).*

2.17.7.2. Assign EOD Team Leader who will direct the use and performance of EOD TTPS's by EOD team members.

2.17.7.3. Whenever system experts are available, EOD personnel should consult, coordinate, and work together with these specialists while ensuring their safety.

2.18. 11 CONS.

2.18.1. Procure needed supplies and coordinate with the IC and CDDAR Team Chief for availability and delivery of all emergency requests. Will make provisions to recall a representative for non-duty hours.

2.18.2. Develop long-term agreements to obtain access to equipment and material that may not be available through base resources. Such agreements may include, but are not limited

to, obtaining cranes, heavy equipment, dollies, jacks and tow vehicles. The CDDAR Team Chief is responsible for identifying all such requirements.

2.19. 11 LRS.

2.19.1. Maintain process to recall a representative during non-duty hours.

2.19.2. Provide on-scene fuel servicing of recovery support equipment, (i.e. AGE and heavy equipment), and, provide fuel sample/analysis of aircraft fuel IAW TO 42B-1-1 para 4.10 and AFI 23-201 para 7.20.

2.19.3. Provide vehicle maintenance support for government-owned vehicles/vehicular equipment during fuel spill clean-up or CDDAR operations when requested by the IC.

2.19.4. Authorize special equipment account for containment and clean up equipment required by JBA IEMP 10-2.

2.19.5. Provide defuel vehicle when requested.

2.20. 11 FSS.

2.20.1. Provide billeting, meals, ice, water, etc. and any other services as deemed necessary by the IC.

2.20.2. Make provisions to recall a representative for non-duty hours.

2.21. 11 CPTS.

2.21.1. Establish a fund site to procure needed equipment and supplies necessary to execute CDDAR recovery operations.

2.21.2. Will make provisions to recall a representative for non-duty hours.

2.22. 11 SFS.

2.22.1. Respond to emergencies with sufficient personnel and vehicles to provide initial security for a crash site or damaged aircraft and to secure/control classified equipment as requested by IC.

2.22.2. Follow directions given by IC to limit access and secure aircraft or crash site.

2.22.3. Establish a cordon area and ECP (entry/exit control point) in conjunction with the Fire Chief, BEF and IC. The cordon size may expand as the situation warrants. (Ref: TO 00-105E-9, Chapter 3.).

2.22.4. When required, request the cooperation of police and civil defense authorities to handle extraordinary circumstances that may develop with an off-installation aircraft mishap.

2.22.5. Adhere to Posse Comitatus Act during off-base mishap responses.

2.23. 11 WG/JA.

2.23.1. Provide legal advice to the IC. Legal support shall include but is not limited to, the following actions:

2.23.1.1. Advise the IC on necessary steps to preserve accident or safety investigation evidence.

2.23.1.2. Determine legal jurisdiction and recommend to the IC the need to establish a National Defense Area (NDA).

2.23.2. Determine affected property owners and obtain right of entry onto private land as necessary.

2.23.3. Assess the situation to determine potential third party claims and assess the need to establish a temporary claims office. Establish a temporary claims office as circumstances dictate.

2.23.3.1. Photograph and inspect damage to private property as soon as practical with permission and coordination of the Safety Investigation Board.

2.23.4. Provide immediate legal services to personnel involved in accident/incident.

2.23.5. Review and approve MAAs before finalization and implementation.

2.23.6. Be prepared to represent the government for an off-base aircraft mishap.

2.23.7. Will make provisions to recall a representative for non-duty hours.

2.24. Tenant Units with flying missions.

2.24.1. Coordinate with 89 MXG CDDAR team and participate in exercises, training and equipment inventories.

2.24.2. Review SAs to help assess limits of internal unit capabilities and coordinate with the 89 MXG Aircraft Maintenance Contractor for resources over and above those organically possessed.

2.24.3. Ensure personnel are prepared to assist and provide expertise in CDDAR situations. As a minimum, ensure personnel are trained on procedures for responding to more common incidents that would require CDDAR, e.g. blown/flat tires, aircraft departing prepared surfaces, and major fuel spills.

2.24.4. Assist 89 MXG Aircraft Maintenance Contractor recovery operations. Tenant shall provide:

2.24.4.1. Technical Expertise.

2.24.4.2. Technical Data.

2.24.4.3. MDS-unique tools/special equipment.

2.24.4.4. Airframe/system familiarization.

2.24.4.5. Manpower/augmentation as needed.

2.24.4.6. Qualified CDDAR Team members for tenant unit MDS. At least one tenant unit member shall be CDDAR qualified and he/she shall fulfill the Assistant CDDAR Team Chief duties during recovery operations on tenant unit owned aircraft.

2.24.5. Identify vehicles and recovery SE in a local directive to ensure 24-hour availability and report capabilities to 89 MXG/CC and CDDAR Program Manager.

2.24.6. Develop procedures to recall CDDAR team members during non-duty hours to provide CDDAR recovery operations assistance.

2.24.7. Tenant unit CDDAR Team members shall be under the tactical control (TACON) of the 89MXG VIPSAM Contractor CDDAR Team Chief during CDDAR recovery operations.

Chapter 3

CDDAR TEAM QUALIFICATIONS AND SPECIALTY REQUIREMENTS

3.1. General.

3.1.1. All CDDAR team members and tenant unit CDDAR personnel must be qualified in basic CDDAR operations (except augmentees).

3.2. CDDAR Qualifications.

3.2.1. Basic CDDAR qualifications include aircraft towing, tire removal/change, aircraft jacking, aircraft defuel, GOX/LOX de-servicing.

3.2.2. CDDAR qualifications shall be recorded in employee personnel training records and entered into applicable MIS, for all CDDAR team members, 89 MXG VIPSAM Contractor and tenant units.

3.3. Training Requirements.

3.3.1. All recovery team members must receive initial training comprised of both academic and hands-on training/exercises. Training shall include actual lifting of an aircraft. Personnel used to augment real-world recoveries do not require CDDAR specific training. CDDAR training will be developed and provided through an AETC formal training course.

3.3.2. Aircraft lift training is considered advanced CDDAR operations. If training with owned aircraft, units may position lifting bags and equipment, but will only inflate bags so the bags mate to the aircraft. Extreme caution will be used to prevent damage to the aircraft or equipment. Under no circumstances will units attempt to lift an active aircraft off the ground.

3.3.3. All recovery team members must receive annual training compromised of both academic and hands-on training/exercises. Hands-on training includes aircraft lifting exercises using a unit owned aircraft or Ground Instructional Training Aircraft (GITA). Do not use operational aircraft for actual aircraft lifts in a training environment. If units have no available training assets, consider participating with other organizations possessing training assets. If no assets are available suitable for these exercises, units demonstrate capability by completing all steps but stopping short of actually lifting an operational aircraft. Ensure all training is documented in applicable MIS.

3.3.4. CDDAR team chiefs must complete an actual aircraft lift every 3 years. This requirement can be accomplished via real-world recovery events, the AETC formal training course, or lifting a GITA.

3.3.5. The owning unit MXG/CC or equivalent may waive training requirements as circumstances dictate. Waivers must not be used in lieu of training if training is available. Units must make every effort to schedule personnel consistent with this requirement.

3.4. Specialty Requirements.

3.4.1. There are a number of aircraft recovery tasks (e.g. defueling, towing, jacking, servicing, etc.) which require detailed knowledge of specific aircraft systems and components and their operational function(s). Given the requirements to recover aircraft as

quickly as possible and without causing secondary damage, the CDDAR team must include personnel with sufficient technical knowledge and crash recovery knowledge to rapidly execute the aircraft recovery. CDDAR Team Chiefs will ensure CDDAR team members meet the minimum Air Force Maintenance Specialty requirements specified by TO 00-80C-1. The actual number of CDDAR Team members used to execute an aircraft recovery operation will depend on the situation and circumstances of the crashed, damaged or disabled aircraft being recovered. CDDAR teams shall be robust enough to accommodate multiple shifts and long duration recovery efforts. CDDAR teams may also include augmentee personnel from specialties not listed in TO 00-80C-1.

Chapter 4

CDDAR VEHICLE/EQUIPMENT REQUIREMENTS.

4.1. General.

4.1.1. The owning unit 89 MXG/CC approves vehicle/equipment CDDAR requirements. CDDAR Program Manager shall identify vehicle/equipment requirements to 89 MXG/CC. Tenant units will identify available CDDAR vehicles and recovery SE in a local directive and provide availability, of each CDDAR designated vehicle/equipment items, (i.e. available 24/7) and contact information to secure CDDAR designated vehicles/equipment. Once published, a copy of this local directive shall be distributed to the 89 MXG CDDAR Program Manager. Units which possess an organic CDDAR capability shall have sufficient aircraft lifting equipment to accomplish a complete lift of their assigned MDS aircraft. (Exception: PAG is not required to have lifting equipment for VC-25 aircraft). This requirement can be met by any combination of lift bags, aircraft jacks, or aircraft slings. It is not necessary to maintain sufficient lift bags to lift an entire aircraft using only lift bags unless otherwise directed by an aircraft technical order.

4.2. Minimum Vehicle/SE requirements.

4.2.1. 11 CES provides:

4.2.1.1. All Terrain Forklift.

4.2.1.2. Bull dozer.

4.2.1.3. 20-50 ton crane.

4.2.1.4. Runway matting (steel, aluminum, fiberglass, or other applicable material) for removing aircraft from unprepared/soft ground surfaces.

4.2.2. 89 MXG provides:

4.2.2.1. Aircraft tow vehicle.

4.2.2.2. Light Carts.

4.2.2.3. Tow bars.

4.2.2.4. Air Bags.

4.2.2.5. Slings, belly bands, snatch cables, chains, etc.

4.2.2.6. Aircraft jacks.

4.2.2.7. Dunnage/shoring.

4.2.3. Tenant Units provide:

4.2.3.1. MDS SE the 89 MXG CDDAR Team may not possess (for example: KC-135 aircraft jacks, F-16 aircraft jacks).

Chapter 5

JBA DISASTER RESPONSE FORCE STRUCTURE

5.1. General.

5.1.1. In the event the 11 WG/CC has not already activated the JBA CAT for other response efforts, the 89 AW/CC, as the delegated CDDAR execution agent, may activate the JBA CAT or EOC IAW TO 00-80C-1 to manage the overall incident/accident response operation. Attachment 3 gives an illustration of CAT/EOC information flow.

5.2. Crisis Action Team (CAT).

5.2.1. If the JBA CAT is activated solely to support CDDAR operations, 89 AW/CC will serve as the CAT Director. The CAT will be the primary point of contact between responding installation and higher headquarters entities and all outside agencies.

5.2.2. The CAT, through the Command Post (CP), sends and receives information and requests which are pertinent to emergencies. When notification of a major accident is received, the CP activates the Installation Notification and Warning System (INWS), notifies all base organizations and notifies off-base agencies supported by the installation if required.

5.2.3. The CAT director will consider activating EOC, contacting affected senior leaders and recalling the DRF based on the CDDAR scenario at hand.

Chapter 6

CRASH/MISHAP RESPONSE CHRONOLOGICAL PROCEDURES

6.1. First Responders.

6.1.1. 11 WG CP notifies first responders (i.e. Fire Emergency Services, Emergency Medical Services, and 11 SFS).

6.1.1.1. During incidents, first responders proceed to the scene and secure the immediate incident area, establish Incident Command System (ICS), provide rescue and firefighting, identify and contain hazards, and provide patient care, triage, medical monitoring, transport, and decontamination procedures. See Attachment 2 for ICS model.

6.1.2. The IC assumes control of the aircraft recovery operations. Individuals will report to the IC before approaching or performing any actions on the aircraft.

6.2. Emergency Responders.

6.2.1. When requested by the IC, the 11 WG CP or JBA EOC (if activated) will notify remaining emergency responders.

6.2.2. Deploy to the accident scene after the first responders to expand C2 and perform support functions as directed by EOC Director.

6.2.3. Consists of additional firefighters, security forces, and emergency medical technicians, as well as Emergency Management (EM) personnel, EOD personnel, physicians, nurses, medical treatment providers at medical treatment facilities, public health officers, bioenvironmental engineering, and mortuary affairs personnel.

6.3. Specialized Teams.

6.3.1. When requested by the IC, the 11WG CP or JBA EOC activates/tasks the 89 MXG Aircraft Maintenance Contractor CDDAR team.

6.3.1.1. When tasked, the 89 MXG Aircraft Maintenance Contractor CDDAR Program Manager will deploy the essential personnel and equipment to mishap site. If required, the CDDAR Team Chief will contact tenant unit CDDAR teams for recovery operation assistance.

6.3.1.2. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will take direction from the IC and the ICS chain of command.

6.3.1.3. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief directs the recovery team and will use the following radio call signs on the primary crash net:

6.3.1.3.1. Recovery Team Chief (Recovery 1).

6.3.1.3.2. Assistant Recovery Team Chief (Recovery 2).

6.3.1.3.3. Recovery Tow Supervisor (Recovery 3).

6.3.1.3.4. Recovery Tow Team Driver (Recovery 4).

6.3.1.4. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will evaluate the situation, to include safety, aircraft damage, structural integrity, weight,

terrain and current weather conditions. Available time for reclamation operations will also be a consideration. Basic reclamation operations will be accomplished according to aircraft specific technical data whenever available.

6.3.2. When requested by the IC, JBA EOC recalls the on-call 89 AW/PA and 11 WG/PA photographers to videotape or photograph the crash site to give authorities an overview of the crash site.

6.3.2.1. Photograph and catalog any aircraft material before removal from crash site. If wreckage is interfering with essential mission activities or poses an extreme hazard, the installation commander in coordination with the ISB or SIB president may choose to remove/move wreckage.

6.3.3. After the IC releases the aircraft, the 89 MXG/CC will request Aircraft Maintenance Contractor to assume responsibility for the recovery/reclamation/removal process.

Chapter 7

CDDAR AIRCRAFT RECOVERY/RECLAMATION/REMOVAL

7.1. PROCEDURES.

7.1.1. Before recovery actions, the 89 MXG Aircraft Maintenance Contractor CDDAR Program Manager and/or CDDAR Team Chief will coordinate with the IC to evaluate the scene and consider the following factors:

7.1.1.1. Location and availability of necessary Personal Protective Equipment (PPE).

7.1.1.2. Check the surface under/around aircraft, wind direction/velocity, and location near any other elements that may compromise safety.

7.1.1.3. Verify no hydrazine leak exists. If suspected, only qualified personnel equipped with self-contained breathing apparatus (SCBA) will approach the aircraft to conduct evaluation. Containment and clean-up will be performed by a specialized Hydrazine Response Team.

7.1.1.3.1. Verify that the aircraft is safe to approach by inspecting the aircraft for stability and installing safety devices on the aircraft to the greatest extent possible.

7.1.1.3.2. Verify there are no hazardous fluid leaks (e.g., fuel, oil, hydraulic fluid, etc.). Notify IC if hazardous condition exists.

7.1.1.3.3. Verify that munitions are safe and no hazardous material/cargo condition exists. Notify IC if hazardous condition exists.

7.1.2. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief coordinates with the IC to ensure the aircraft is safe before any member approaches the aircraft. The IC, as part of this procedure, will have checked to ensure there are no hazardous leaks or hazardous situations such as hot brakes, etc.

7.1.3. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief distributes specific tasks to 89 MXG Aircraft Maintenance Contractor CDDAR team members and establishes an assembly point.

7.1.4. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will brief the IC and the 89 MXG Aircraft Maintenance Contractor CDDAR Team members, and, if appointed, the incident safety board (ISB) and/or Safety Investigation Board (SIB) president of the reclamation plan, benefits, limitations and anticipated hazards before beginning the recovery operation.

7.1.5. After situation assessment, the 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will conduct a safety briefing with all CDDAR team members. At a minimum, the safety briefing will include:

7.1.5.1. Aircraft condition.

7.1.5.2. Hazard awareness such as presence of running engines, arresting gear, barrier cables, sharp edges, flammable/toxic or noxious fluids, high temperatures, composite fibers, blood borne pathogens and hoisting dangers when applicable.

7.1.5.3. Team member duty assignments and responsibilities.

7.1.5.4. Need for continuous situational awareness and buddy-care.

7.1.5.5. CDDAR team members will take directions only from the IC and 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief.

7.1.5.6. Emphasize safety over speed.

7.1.5.7. Expected actions, timeline and end goal.

7.1.6. After accomplishment of the safety briefing, the recovery team will evaluate the aircraft and create an aircraft recovery plan. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will advise the IC and request concurrence.

7.1.7. 11 SFS will maintain an appropriate cordon around the mishap site during recovery operations. 11 SFS will receive personnel entry approval from the IC. If 11 SFS are not able to supply a physical cordon, the IC will direct all non-essential personnel to remain clear of the aircraft.

7.1.8. The 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief will accomplish recovery/reclamation/removal procedures IAW T.O. 00-80C-1 and any applicable aircraft technical data available.

7.1.9. Throughout the recovery/removal/reclamation operation, if explosive components or human remains are discovered, the reclamation will immediately cease.

7.1.9.1. EOD will render safe and remove all explosive or ejection components (i.e squibs, seat sequencers, catapults, or initiators).

7.1.9.2. Notify IC to dispatch/request BEF for known or suspected Chemical, Biological, Radiological, and Nuclear (CBRN) hazards such as depleted uranium, hazardous cargo, advanced composite materials, and hydrazine. *(Note: 113th Air National Guard has ultimate authority on all hydrazine spills on JBA.).*

7.1.9.3. Notify IC to dispatch/request Mortuary Affairs for recovery of human remains if found during the recovery/reclamation process.

Chapter 8

RESPONSE TO COMPOSITE MATERIALS

8.1. Initial Response to Composite Materials.

8.1.1. IC will direct the evacuation of all unprotected personnel away from the crash site. Only the FD with appropriate SCBA fire protection equipment is authorized near the mishap site.

8.1.2. IC will inform any potentially affected population to remain inside, shut all windows and doors, and turn off air handling/conditioning systems and await further guidance.

8.1.3. BEF conducts an initial survey and performs a health risk assessment to determine if air monitoring or sampling is warranted for CBRN materials. Air monitoring will continue through the recovery phases to evaluate airborne hazard potential if release is suspected.

8.1.4. Cordon site and establish single entry control point. Cordon determined by IC and the BEF, 11 SFS executes.

8.1.5. Fire Emergency Services assesses the incident, consults with aircraft and BEO representatives, and provides recommendations for recovery, storage, and disposal of composite material or other hazardous or contaminated materials.

8.1.6. IC coordinates with Air Traffic Control to limit and/or restrict all flights.

8.1.7. Responders and support personnel on scene will not eat, drink, chew gum, or use any tobacco products of any kind when operating within or near the cordoned area. The only exception is the provision of drinking water outside the cordon to compensate for heat stress. Personnel will be advised to wash their hands, face, and rinse off water containers prior to consumption.

8.1.8. All intended actions regarding composite materials will be briefed to the IC.

8.2. Composite Material Handling.

8.2.1. Purpose: This section contains basic response procedures for aircraft mishaps involving advanced aerospace materials in order to minimize the associated environmental, safety, and health hazards.

8.2.2. These guidelines are generic in nature and provide basic overview of procedures.

8.2.3. Several aircraft with composite materials frequent JBA, such as, C-17, F-15, F-16 and modern civilian transport aircraft. Use the specific aircraft technical order or consult the TO 00-105E-9 for composite hazards.

8.2.4. BEF will inform the IC and 89 MXG Aircraft Maintenance Contractor CDDAR Team Chief/members of specific hazards present and will advise on specific types of personal and respiratory protective equipment required for personnel entry into the scene. The 89 MXG Aircraft Maintenance Contractor CDDAR Team provides clean up and containment of advanced composite materials. These materials, when burned, are capable of emitting highly toxic vapor and airborne particles. Material emissions cause severe damage to the respiratory system. CDDAR Team Members will wear specialized protective clothing for this function.

8.2.5. Personal Protective Equipment (PPE) Required:

8.2.5.1. Burning or smoldering composites.

8.2.5.1.1. Self-Contained Breathing Apparatus (SCBA).

8.2.5.1.2. Full Protective Clothing (type of aircraft will determine which ensemble is required).

8.2.5.2. Broken, burnt or splintered composites (Crash Recovery Team members).

8.2.5.2.1. NIOSH-approved full-face respirator with N-100, R-100 or P-100 rated particulate cartridges.

8.2.5.2.2. Hooded, coated Tyvek suit with booties.

8.2.5.2.3. Nitrile rubber gloves (inner).

8.2.5.2.4. Leather work gloves (outer).

8.2.5.2.5. Steel Toe Boots.

8.2.5.3. Peripheral area composite exposure.

8.2.5.3.1. Airman Battle Uniform (ABU) or long sleeve work uniform.

8.2.5.3.2. Safety glasses with side shields or goggles.

8.3. Containment of Composite Materials.

8.3.1. The Composite Material Containment Team secures burned/mobile composite fragments and loose ash/particulate with plastic, firefighting agent, fixing material and/or a tent. The common fixing agent is an acrylic floor wax and water mixture. Consult with specific aircraft authorities and investigators before applying. Critical safety concerns and investigation concerns may override this use.

WILLIAM M. KNIGHT, Colonel, USAF
Commander, 11th Wing/Joint Base Andrews

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References:

AFPD 21-1, *Air and Space Maintenance,* 25 February 2003

AFI 91-204, *Safety Investigations Reports,* 24 September 2008

AFI 21-101 AMCSUP_1, *Aerospace Equipment Maintenance Management*, 14 February 2011

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 1 January 2012

AFI 32-3001, *Explosive Ordnance Disposal Program,* 2 June 2011

AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 August 2011

AFPAM 91-211, *USAF Guide to Aviation Safety Investigation*, 23 July 2001

JBA OPLAN 91-204, *Mishap Response Plan*, 15 April 2012

JBA IEMP 10-2, *Comprehensive Emergency Management Plan,*

T.O. 00-105E-9, *Aircraft Emergency Rescue Information*, 1 February 2006, Revision 11

T.O. 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*¸5 October 2011

T.O. 00-20-1 AMC SUP_1, *Aerospace Equipment Inspection, Documentation, Policies, and Procedures*, 14 August 2011

AFI 10-2501, *Air Force Emergency Management Program Planning and Operation*, 8 March 2013

AF 21-101, *Aircraft and Equipment Maintenance Management,* 26 July 2010

AF 847, *Recommendation for Change of Publication,* 22 September 2009

AFI 33-363, *Management of Records,* 1 March 2008

AFI 32-2001, *Fire Emergency (FES) Program,* 27 February 2014

AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures,* 18 October 2013

AFTO 244, *Industrial/Support Equipment Record,* 29 May 2013

29 CFR 1910.134, *Personal Protective Equipment - Respiratory Protection*

AFI 48-145, *Occupational and Environmental Health Program,* 15 September 2011

AFI 23-201, *Fuels Management,* 23 January 2012

Abbreviations and Acronyms

AGE—Aerospace Ground Equipment

APS—Aerial Port Squadron

AVDO—Aerospace Vehicle Distribution Officer

ATCT—Air Traffic Control Tower

BEF—Bio Environmental Flight

CONS—Contracting Squadron

CDDAR—Crashed-Damaged/Disabled Aircraft Recovery

EMP—Installation Emergency Management Plan

CES—Civil Engineering Squadron

CPTS—Comptroller Squadron

EOD—Explosive Ordinance Disposal

HQ AMC—Headquarters Air Mobility Command

IC—Incident Commander

LRS—Logistics Readiness Squadron

MAA—Mutual Aid Agreements

MDS—Mission Design Series

MOC—Maintenance Operations Center

MDG—Medical Group

MXG—Maintenance Group

MXG/CC—Maintenance Group Commander

PAG—Presidential Airlift Group

PLS—Presidential Logistics Squadron

PCAS—Primary Crash Alarm System

IC—On Scene Commander

PPE—Personal Protective Equipment

QRC—Quick Reaction Checklist

SCN—Secondary Crash Net

SFS—Security Forces Squadron

SIB—Safety Investigation Board

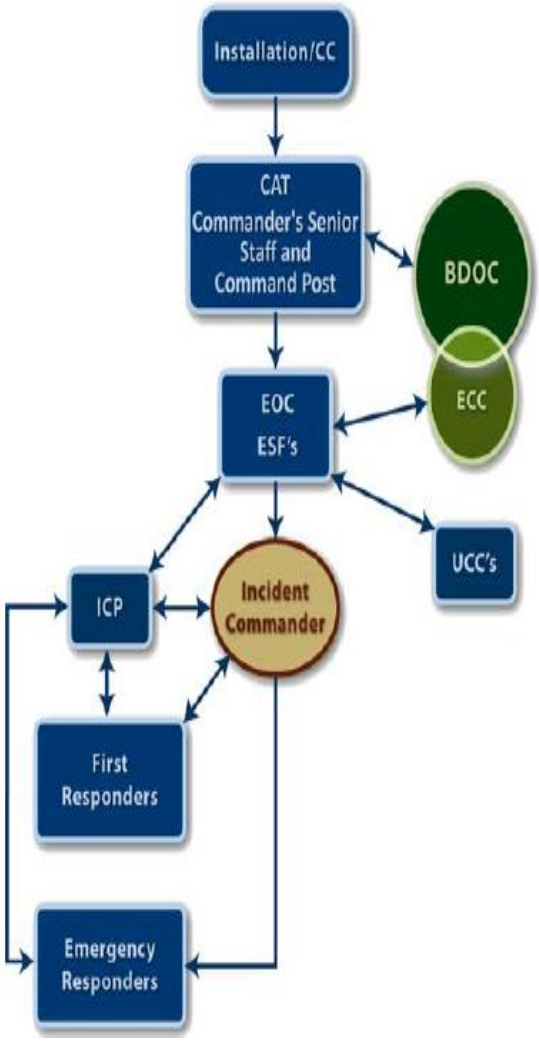
UCC—Unit Control Center

VIPSAM—Very Important Person Special Air Mission

Attachment 2

COMMAND AND CONTROL ELEMENTS FOR INCIDENT MANAGEMENT

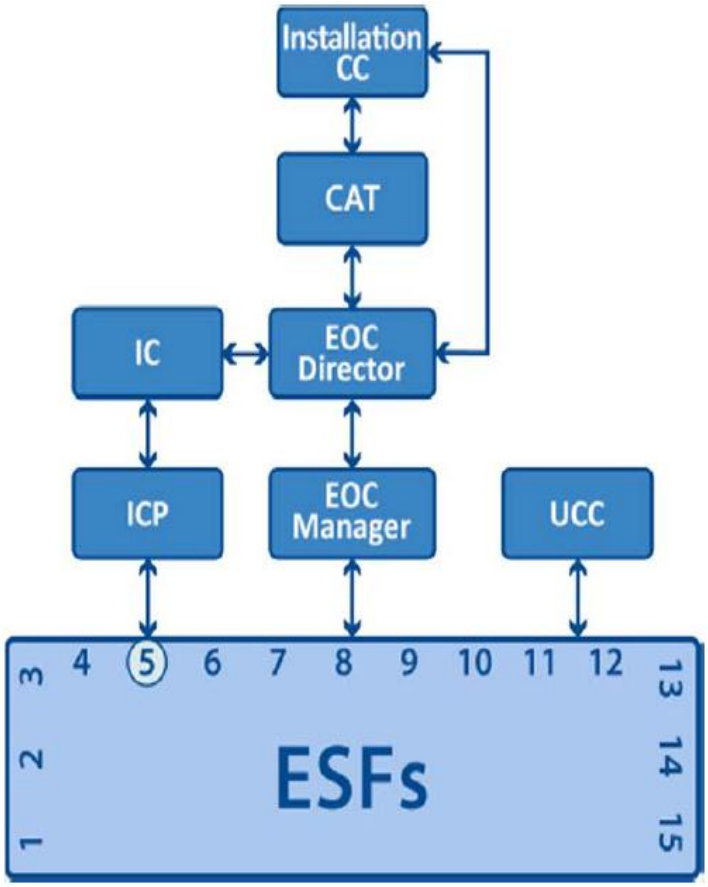
Figure A2.1. Command and Control Elements for Incident Management.



Attachment 3

EOC INFORMATION FLOW

Figure A3.1. EOC Information Flow.



Attachment 4

INCIDENT ACTION PLAN COMPONENTS

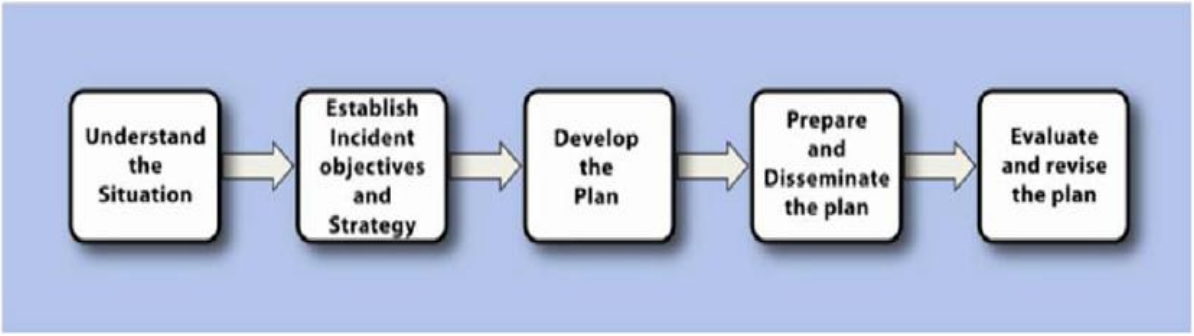
Figure A4.1. Incident Action Plan Components.

Common Components:	Normally Prepared By:
Incident Briefing	Incident Commander
Incident Objectives	Planning Section Chief
Organization List/Chart	Resources Unit
Assignment List	Resources Unit
Communications Plan	Communications Unit
Logistics Plan	Resources Unit
Medical Plan	Medical Unit
Incident Map	Situation Unit
Safety Plan	Safety Officer
Other Potential Components:	
Air Operations Summary	Air Operations
Aircraft Recovery Plan	**CDDAR Team Chief**
Traffic Plan	Ground Support Unit
Security Plan	Security Officer
Decontamination Plan	Technical Specialist
Waste Management or Disposal Plan	Technical Specialist
Demobilization Plan	Demobilization Unit

Attachment 5

PROCESS FOR DEVELOPING A RESPONSE PLAN

Figure A5.1. Process for Developing a Response Plan.



Attachment 6

LIST OF CONTINUITY FOLDER ITEMS

Figure A6.1. List of Continuity Folder Items.

Tab Letter	Continuity Folder Item	Page
Tab A	List of CDDAR Personnel	A-2
Tab B	Local CDDAR Instructions	A-3
Tab C	Record of Past CDDAR Exercises and Real World Events	A-16
Tab D	Memorandums of Agreement/Understanding and Contracts	A-17
Tab E	List of CDDAR Tools and Equipment	A-21
Tab F	Planning and Preparation Checklists	A-22
Tab G	Base and Local Area Maps	A-38
Tab H	Important Phone Numbers	A-40
Tab I	Record of CDDAR Team Qualifications	A-41
Tab J	Respirator Qualifications	A-42
Tab K	Equipment and Supplies Forecast	A-43
Tab L	Budget Forecast	A-46

Attachment 7

LIST OF PLANNING AND PREPARATION CHECKLIST.

Figure A7.1. List of Planning and Preparation Checklist.

Attachment 8

CDDAR PLANNING CHECKLIST

Figure A8.1. CDDAR Planning Checklist.

CDDAR Planning Checklist			
Incident Commander requested the aircraft be cleared of _____By _____hrs on_____date Need to prevent secondary damage is: high/medium/low			
Task	Item (Circle Specific Conditions)	X If Planning, Preparation, or Further Action is Required	Notes
Assess Aircraft Location	On Pavement Off Pavement; Limited space for equipment access Other		
Assess Aircraft Condition	NLG not usable MLG not usable Wheels not usable Odd Position, not level Not Upright Impact damage Fire Damage Other		
Assess Access Route	Paved Unpaved, will support recovery vehicles Unpaved, may need improvement Road Width_____ Width between obstructions____ Overhead Clearance_____ Maximum Incline_____		
Assess Recovery Route	Paved Unpaved, will support recovery vehicles Unpaved, may need improvement Road Width_____ Width between obstructions____ Overhead Clearance_____ Maximum incline_____		
Identify pre-recovery Actions	Defuel Unload Cargo Unload Munitions (EOD task) Other		

CDDAR Planning Checklist			
Incident Commander requested the aircraft be cleared of _____By _____hrs on_____date Need to prevent secondary damage is: high/medium/low			
Task	Item (Circle Specific Conditions)	X If Planning, Preparation, or Further Action is Required	Notes
Identify possible recovery actions	Replace wheel then tow Replace landing gear then tow Install wheel dolly and tow Air Bag Lift Crane Lift Transport via crane Transport via trailer Sled Other		
Coordinate plan with incident commander	Inform IC of recovery method chosen Inform IC of Limiting Factors Time limit Secondary damage Access Equipment availability Request more time for recovery		
Coordinate plan with other agencies, ensure it is executable	Accident Investigation Board Flight/Ground/Weapons Safety Fire Department Bioenvironmental Readiness EOD Security Airfield Management Base Transportation Other		
Finalize plan or choose alternate plan and coordinate again	Ensure all affected agencies are aware of your plan or changes to your plan		

Attachment 9

CDDAR PERSONNEL NEEDS CHECKLIST

Figure A9.1. CDDAR Personnel Needs Checklist.

CDDAR Preparation Checklist – Personnel Needs			
Personnel Needs	Item (Circle Possible Solutions)	X If Planning, Preparation, or Further Action is Required	Notes
Weather Forecast	Print 3-day forecast and attach to this document		
Potable Water			
Food			
Portable Latrine			
Heat	Shade (Canopy) Air Conditioner Tent Potable Water		
Rain	Canopy Tent Rain Gear		
Sun	Sunscreen Shade (Canopy/Tent)		
Cold	Winter clothing Heater Tent Hand Warmers		
Insects	Insect repellant Mosquito nets		
PPE	Cloth Coveralls Tyvek Coveralls Leather Gloves Nitrile Gloves Eye Protection Hearing Protection Respiratory Protection		
Other			

Attachment 10

CDDAR SITE PREPARATION CHECKLIST

Figure A10.1. CDDAR Site Preparation Checklist.

CDDAR Preparation Checklist – Site Preparation			
Site Preparation	Item (Circle Possible Solutions)	X If Planning, Preparation, or Further Action is Required	Notes
Weather Forecast	Review for likelihood of rain, snow, ice, winds		
Tree removal			
Power Line Removal			
CE evaluate load capacity of road and recovery site	Will rain degrade the load capacity? Access route Removal route Crane operating location Support for lifting bags Support for donnage Support for aircraft on landing gear Support for recovery vehicles		
Pollution control	Spill kit Catch Basin Berms Hazardous Waste Drums		
Other			
Other			

Attachment 11

AIRCRAFT PREPARATION CHECKLIST

Figure A11.1. Aircraft Preparation Checklist.

CDDAR Preparation Checklist – Aircraft Preparation			
Aircraft Preparation	Item (Circle All That Apply)	X If Planning, Preparation, or Further Action is Required	Notes
Obtain applicable technical orders			
Make Safe for Maintenance (see generic procedures at end of App A or use aircraft specific checklist)	UXO OBOGS/OBIGGS Egress Systems (e.g. ejection seat) Batteries Hydraulic/Pneudralic Systems Hydrazine		
Weight Reduction	Remove fuel Remove munitions Remove Cargo		
Determine Weight and Balance			
Deenergize/ Depressurize/ Remove	Batteries Hydraulic systems Pneumatic systems Fire suppression systems LOX converter		
Identify, Isolate, or remove toxic hazards	Hydrazine Burnt composites Radioactive material Other		
Confined Space Permit Required?			
Other			

Attachment 12

CDDAR EQUIPMENT CHECKLIST

Figure A12.1. CDDAR Equipment Checklist.

CDDAR Preparation Checklist – Equipment				
Category	Equipment (Circle All That Apply)	Size Make Model	X if Planning, Preparation, or Further Action is Required	Notes
Lifting	Crane			
	Aircraft Specific Sling			
	Fabric/Universal Sling			
	Air bags			
	Fork lift			
	Jacks			
	Shoring/Cribbing			
	Padding/Felt			
Moving	Wheel Dolly			
	Flat Bed Trailer			
	Tractor and Towbar			
	Winch			
	Padding			
	Sled			
Anchoring Tethering	Rope (Manila, Nylon, or Wire rope)			
	Adjusting Device			
	Tension Meter			
	Earth Anchors			
	Vehicle Anchors			
	Rigging Hardware			
Ground Reinforcing	Earth Grader			
	Earth Compactor			
	Gravel/Timber			
	Matting			
Communication	Radio			
	Telephone			
Other	Light Cart			
	Air Compressor			

Attachment 13

CDDAR DEBOGGING PLANNING CHECKLIST

Figure A13.1. CDDAR Debogging Planning Checklist.

CDDAR Debog Planning Checklist			
Task	Item (Circle if Applicable)	X If Action is Required	Notes
Stop or slow the sinking	Lower tire air pressure Transfer fuel Defuel Remove cargo Remove munitions Other		
Assess extent of bog	NLG sunk to_____ Rt MLG sunk to_____ Lt MLG sunk to_____		
Assess aircraft structural integrity	Good, ready to tow Damaged, replace gear Damaged, consult engineering		
Aircraft preparation	Safety landing gear Reduce weight Jack aircraft Bag lift aircraft Other		
Tow plan	(Note: transition NLG from soft ground to pavement on a shallow slope and straight on) Use winch Tow backward Tow forward, create ramp, then tow back Tow backward then turn before transition		
Ground preparation needed for aircraft movement	None Excavate Plywood or steel plate over timbers Plywood Compacted gravel Pierced steel planking Cargo pallets Rapid runway material Portable Roadway material Other		Width of path_____ Length of path_____
Additional preparation for NLG transition to pavement	None Create ramp (write desired materials here)		Width of ramp_____ Length of ramp___

CDDAR Debog Planning Checklist			
Task	**Item (Circle if Applicable)**	**X If Action is Required**	**Notes**
Ground preparation for Tow Vehicle	None Sand Other (write desired materials here)		Width of path_____ Length of path_____
Estimate towing force needed	Level pavement drawbar pull_____ Multiply by additions_____ Added resistance of soft ground_____ Estimated force on tow ropes_____		For each degree of incline, add X% For each inch of ground compaction under tire add x%
Tow rope	Quantity_____ Length_____		
Bridging material	Rope Chain Ground stakes (Quantity)_____ Other		Length of bridging material (Not the length of tow rope) _____
Tow Vehicles	Type_____ Quantity_____		

Attachment 14

IMPORTANT PHONE NUMBERS

Figure A14.1. Important Phone Numbers.

Agency	DSN	Commercial
Base Emergency Operations Center		
Command Post, this base		
Command Post, Nearby Military Installations		
Incident Commander (if appointed)*		
Airfield Manager		
Base Transportation		
Bioenvironmental		
Base Weather		
CE Roads and Pavement		
CE Readiness and Emergency Management Flight		
Explosive Ordnance Disposal (EOD)		
Fire Department		
Flight/Ground/Weapons Safety		
Maintenance Operation Center (MOC)		
MAJCOM CDDAR Manager		
Contracting Office		
Logistics Readiness Squadron		
Security Forces		
State Law Enforcement		
City Law Enforcement (at recovery site) *		
County Law Enforcement (at recovery site) *		
* Fill in after an incident.		