BY ORDER OF THE COMMANDER
TRAVIS AIR FORCE BASE

TRAVIS AIR FORCE BASE
INSTRUCTION 21-108

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Maintenance

CRASHED, DAMAGED, OR DISABLED AIRCRAFT RECOVERY (CDDAR) PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Managing Aerospace Equipment Maintenance*, Base Operational Plan (OPLAN) 10-2, Air Force Manual (AFMAN) 32-4004, *Emergency Response Operations*, Air Force Instruction (AFI) 21-101 Air Mobility Command Supplement (AMCSUP) I, *Aerospace Equipment Maintenance Management*, Technical Order (T.O.) 00-105E-9, *Emergency Rescue Information*, AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, and the aircraft specific Dash-2 and Dash-3 series T.O.'s. This instruction establishes responsibilities, procedures, and operating instructions for crash damaged/disabled aircraft recovery (CDDAR) for both major and minor incidents in the Travis AFB area of responsibility to include all host, tenant, and transient aircraft. Annex A of the Comprehensive Emergency Management Plan (CEMP) 10-2 provides procedures and organizational responsibilities. All agencies involved with recovery operations will ensure compliance with this instruction to ensure a cooperative, coordinated response to CDDAR situations. It applies to all organizations/staff agencies under the direction of the 60th and 349th Maintenance Group Commanders (MXG/CC) and should be implemented in conjunction with AFI 91-204, *Safety Investigations and Reports*, and Air Force Pamphlet (AFPAM) 91-211, *USAF Guide to Aviation Safety Investigation*. Additionally, this document provides the basis of US Government requirements for Contractor Logistics Support agencies regarding CDDAR response. The Wing Safety Officer will make recommendations to the MXG/CC or higher for the enactment of impoundment procedures, within the scope of AFI 91-204 and applicable local operating instructions.

Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s 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/gcss-af61a/afrims/afrims**/. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This publication has been substantially revised and must be reviewed in its entirety. It has been restructured and rewritten to include: both the general procedures for any aircraft and specific instructions for assigned and tenant aircraft. It now integrates E-6B TACAMO, KC-10A, and C-17A CLS contractor concepts of operations into wing CDDAR support. Detailed attachments have been added to identify the sources of common and aircraft-specific equipment to ease annual reviews and consolidate the various tech data requirements of all four assigned air frames. These attachments will also ease implementation by serving as a pre-coordinated 'shopping list' of available materials and equipment items needed in crash recovery. This rewrite expands the role of the Maintenance Operations Center and further defines support required by outside agencies and leadership. New tenant unit procedures spell out joint operations relationships and exercise coordination. This OI has also been updated to reflect new AF Emergency Management terminology and organizational structures. Some common scenarios are added. In addition, training and safety requirements now reflect the new carbon epoxy materials encountered in C-17 aircraft.

1. Background/Urgency of Aircraft Removal.

1.1. A primary objective of the CDDAR program is to return the mishap runway(s) to operational status as soon as practical after a mishap. The Wing Commander will determine the degree of emergency and make a decision regarding the urgency with which the runway is cleared. This decision is dictated by evaluation of alert status, number of airborne or returning aircraft, available weather alternates, and other operational criteria.

1.2. The Wing Commander or designated representative determines and notifies the Emergency Operations Center (EOC) Director of removal conditions designated as:

1.2.1. Emergency. This condition requires immediate runway clearance at the risk of losing personnel, equipment, and evidence. Although rescue may be attempted, the runway must be cleared in 30 minutes or less.

1.2.2. Urgent. This condition requires runway clearance as soon as possible after completion of rescue, firefighting, and explosive ordinance disposal (EOD) operations. The runway will be cleared in less than 1 hour and 30 minutes, unless EOD consideration dictates otherwise, using techniques identified in applicable technical publications.

1.2.3. Routine. This condition allows sufficient time to use recovery techniques to minimize further damage to aircraft preserve evidence and precludes exposing personnel or equipment to danger.

1.3. During routine and urgent situations the Incident Commander (IC) is the final authority for determining when the mishap site is safe, and when the investigating authority and/or CDDAR team may approach the mishap site and/or conduct recovery operations.

1.4. Due to time constraints of "Emergency" or "Urgent" conditions, it may not be possible to use normal procedures. In this case, the IC will decide, in collaboration with the EOC and the CDDAR Team Chief, which removal methods are best and which first responder actions may or may not proceed.

1.5. Travis AFB has two active runways. If an aircraft crash-lands in the checkerboard area between the two, it may be necessary to clear the aircraft/wreckage as soon as possible to facilitate reactivation of at least one of the runways. If necessary, this action will be directed by Wing Commander in the Crisis Action Team (CAT).

2. Typical Sequence of Events.

2.1. Immediately after the incident, first responders operations proceed in accordance with CEMP 10-2 Annex A or local civilian response plans. This initiates the Response Phase of the plan.

2.2. The IC ensures initial rescue, firefighting, security and safeying of the aircraft is performed. No one other than first responders can enter the mishap area. The mishap scene must be determined safe by the IC prior to any investigation or CDDAR actions.

2.3. The incident aircraft and its equipment must not be disturbed or removed unless directed or released by the IC, ISB President/SIB President or Impoundment Official/MXG Representative. Control of the mishap scene remains with the IC until access control is granted to the Board President, Vice President or Impound Official/MXG Representative appointed by the Investigating Authority.

2.4. Under Emergency or Urgent removal conditions, the recovery/investigation phase may be postponed or waived by the Wing Commander.

2.5. While the initial response is in progress the CDDAR Team Chief along with the team members should plan and posture the equipment and materials required to recover the aircraft. If possible, one team member should use binoculars to monitor the mishap site from a safe distance approved by the IC.

2.6. When first-responder actions are complete, the Response Phase will end and the Recovery Phase, which includes investigation actions, will begin. The IC will then transfer access control of the mishap site over to the appointed Recovery Operations Chief (ROC). The ROC is normally an aircraft MX Officer or SNCO appointed by the EOC Director in consultation with the MXG/CC. The ROC will coordinate both the efforts of the Investigating Authority officials and the CDDAR Team Chief.

2.7. Emergency or Urgent removal conditions may bypass the deliberate recovery/investigation phase and dictate expedient ad-hoc planning and execution of CDDAR duties.

2.8. Under routine removal conditions, the Investigation Authority advises the ROC that control of the aircraft can be given to the CDDAR Team Chief or salvage teams to restore, reclaim or dispose of the aircraft when the investigation is complete.

2.9. During the beginning of the Recovery Phase and/or investigation, the EOC may continue to provide support to the ROC as needed, directed by the EOC Director. The EOC director and MXG/CC will collaborate and determine when the recovery efforts become routine support actions. At this point, the EOC and ROC will stand down and mishap support will be transferred to the designated MXG function.

3. References for Common Aircraft Recovery Incidents.

3.1. For more common incidents requiring CDDAR, such as blown tires, aircraft departing prepared surfaces, and major fuel spills refer to applicable technical data below.

3.1.1. For KC-10A, see T.O. 1C-10(K)A-2-7, *Lifting and Shoring*.

3.1.2. For C-17s, see T.O. 1C-17A-3-8, *Disabled Aircraft and Special Maintenance*.

3.1.3. For C-5, aircraft see T.O. 1C-5A-2-1, *Ground Handling and Servicing*.

3.1.4. For E-6B, aircraft see NAVAIR 00-80R-20, *US Navy Aircraft Crash and Salvage Operations Manual.*

3.1.5. For fuel spills, see T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/ Bonding*.

4. Aircraft Primary and Alternate Lifting Methods.

4.1. C-5A/B/C Galaxy Recovery:

4.1.1. See **Attachment 2** for a detailed list of equipment available for C-5 recovery.

4.1.2. The primary method of lifting the C-5 fuselage is by jacking IAW T.O. 1C-5A-2-1, **Paragraph 2-46.**

4.1.3. The primary emergency method of lifting the C-5 fuselage is by special jacking procedures IAW T.O. 1C-5A-2-1, **Paragraph** 5-10.

4.1.4. The secondary emergency method of fuselage lifting is by pneumatic bags IAW T.O. 1C-5A-2-1, Figure 5-6.

4.1.5. There is no provision for overhead lifting of a C-5 by heavy crane.

4.2. KC-10A Extender Recovery:

4.2.1. See **Attachment 3** for a detailed list of equipment available for KC-10A recovery.

4.2.2. The primary method of lifting the KC-10 fuselage is by jacking IAW T.O. 1C-10(K)A-2-7, 07-11-00.

4.2.3. The primary emergency method of lifting the KC-10 Fuselage is by jacking with specialized equipment IAW T.O. 1C-10(K)A-2-7, T. O. 07-30-07.

4.2.4. The secondary emergency method of lifting the KC-10 fuselage is by pneumatic bags IAW T.O. 1C-10(K)A-2-7, T.O. 07-30-07.

4.2.5. The tertiary emergency method of lifting the KC-10 fuselage is by overhead crane(s) IAW T.O. 1C-10(K)A-2-7, T.O.07-30-07.

4.3. C-17A Globemaster III Recovery.

CAUTION: Advanced Aerospace Materials such as carbon epoxy fibers (CF) act as irritants similar to fiberglass when present in moderate to heavy amounts. Personnel working with or around CF must be provided appropriate individual protective equipment. Eating, drinking, and smoking around CF are prohibited. Refer to **Appendix 4** to **Annex A** to 60 AMW CEMP 10-2, *Advanced Aerospace Materials Composite Materials Response* for appropriate actions.

4.3.1. See **Attachment** 4 for a detailed list of equipment available for C-17A recovery.

4.3.2. The primary method for lifting the C-17 is by fuselage jacking IAW T.O. 1C-17A-2-07JG-10-1.

4.3.3. The primary emergency method for lifting the C-17 is by jacking IAW T.O. 1C-17A-3-8, chapter 4.

4.3.4. The alternate emergency method for lifting the C-17 is by pneumatic bags IAW T.O. 1C-17A-3-8, chapter 3.

4.3.5. There is no provision for overhead lifting of a C-17 by heavy crane.

4.3.6. Refer to T.O. 1C-17A-2-09JG-10-1 and 1C-17A-3-8, chapter 5 before moving aircraft to ensure correct equipment and procedures are used.

4.4. E-6B Mercury Recovery:

4.4.1. See **Attachment** 5 for a detailed list of equipment required for E-6B recovery.

4.4.2. The primary emergency method of lifting the E-6 fuselage is by jacking IAW E-6B Recovery Manual NAVAIR 00-80R-20, **Appendix L.**

4.4.3. The secondary emergency method of lifting the E-6 fuselage is by pneumatic bags IAW E-6B Recovery Manual NAVAIR 00-80R-20, **Appendix L**.

4.4.4. The tertiary emergency method of lifting the E-6 fuselage is by overhead crane(s) IAW E-6B Recovery Manual NAVAIR 00-80R-20, **Appendix L**.

5. Coordinating External Assistance.

5.1. The CDDAR Team will fill requirements from CDDAR program equipment first. When requirements exceed possessed CDDAR program assets, requirements will be filled from base resources, then off-base resources. When *general* support resources or capability is needed, the CDDAR Team will coordinate as follows:

5.1.1. CDDAR Team Chief will make every effort to identify all support requirements to the IC during the rescue and recovery operations phase. Requirements identified after the aircraft has been released to the Investigation Authority will be identified to the MXG/CC through the chain of command.

5.1.2. All crash recovery support requirements will be forwarded to the Emergency Operations Center for base-level resourcing and accounting purposes.

5.1.3. The EOC will coordinate the transportation of base materials, equipment, and detailed personnel to the incident site.

5.1.4. The EOC will seek to satisfy materiel, equipment and personnel requirements from base resources.

5.1.4.1. Vehicles and support equipment are subject to recall and re-assignment to CDDAR operations.

5.1.4.2. Personnel detailed from base agencies will assist in loading the wreckage for its return to Travis Air Force Base or designated assembly point.

5.1.5. Assigned equipment and generally available base resources are listed by aircraft MDS in the **Attachment 2** thru **Attachment 5.**

5.1.6. Requirements not available through base resources will be forwarded to 60 CONS for procurement action. Known examples are identified in **Attachment 2** thru **Attachment 5**.

5.2. When *aircraft-specific* support exceeding available resources or capability is needed, the CDDAR Team will coordinate as follows:

5.2.1. For C-5A/B/C aircraft:

5.2.1.1. Request depot support via the System Program Office using existing channels found in T.O. 00-20-107.

5.2.2. For KC-10A aircraft:

5.2.2.1. Request support for technical/engineering expertise, aircraft-specific equipment, and/ or additional specialized manpower through the KC-10 Weapons System Liaison Officer (WSLO). The WSLO will forward the request to the KC-10 Administrative Contracting Officer for action.

5.2.3. For C-17A aircraft:

5.2.3.1. Notify Contractor Logistics Support (CLS) to obtain necessary support. Reference C-17A aircraft-specific equipment requirements in **Attachment** 4.

5.2.3.2. Submit Request for Engineering Disposition Instruction (REDI) processes for on-base resources or AFTO 107 for off-base resources.

5.2.4. For E-6B aircraft:

5.2.4.1. Reference E-6B aircraft specific equipment requirements in **Attachment** 5.

5.2.4.2. See next paragraph for detailed procedures.

6. Partner Unit Aircraft Recovery/USN Coordination.

6.1. When the incident aircraft involves a USN TACAMO E-6, the 60 AMW Command Post will immediately notify the USN Operations Control Center.

6.2. Due to the sensitive nature of the USN TACAMO mission, recovery efforts of the E-6 aircraft will be led by USN-appointed personnel. If mishap a occurs off-base the recovery effort must be first coordinated with civil authority. Civil authorities legally own the mishap site until it is formally and legally transferred to the DOD. This coordination is carried by the EOC and the CAT.

6.3. The USN Operations Control Center will advise the name and contact data of the appointed team leader to the USAF CDDAR Team Chief to coordinate efforts.

6.4. A joint USN Emergency Reclamation/USAF CDDAR Team will conduct an initial site survey to assess the aircraft situation.

6.5. If incident aircraft is configured with sensitive equipment, USN Emergency Reclamation Team actions to secure equipment will take precedence over aircraft recovery efforts. However; airframe recovery preparations and equipment reclamation may occur concurrently.

6.6. The USAF CDDAR team will provide all on-station assets available to the joint CDDAR team. Should general materiel and equipment listed on the attachments not be available on base, USN will provide the fund cite for 60 CONS operational contracting procurement.

6.7. The USN Operations Control Center will request and coordinate aircraft-specific equipment and expertise through the USN chain of command to USSTRATCOM Wing 1 headquarters, systems program office and/or contract logistics support channels.

6.8. USN Emergency Reclamation Team personnel will offer E-6 aircraft orientation training to USAF CDDAR team personnel upon request by the USAF CDDAR Team Chief.

6.9. USN Emergency Reclamation Team personnel will participate in coordinated USAF E-6 aircraft exercise scenarios if involving the E-6 aircraft.

6.10. The USN will appoint a USAF Exercise Evaluation Team liaison to coordinate and evaluate base-wide disaster exercises, specifically, aircraft recovery scenarios.

6.11. AMW/XP will solicit inputs for scenario development to include E-6 aircraft scenarios.

6.12. This instruction is mutually recognized as an MOU between the tenant and host organizations and details procedures listed under the Crash Recovery entry in the Inter Service Support Agreement between host and tenant organizations.

7. Transient Aircraft Support.

7.1. The 60/349 AMW will provide CDDAR general support to transient aircraft to include the Travis Aero Club. 60/349 MXS Aero Repair will respond and provide initial assessment of the scene and coordinate with the incident aircraft's owning unit through the 60/349 MXG for required expertise, personnel, and support equipment.

7.1.1. If the accident or incident involves an aircraft other than C-5, KC-10A, C-17A, or E-6B,Transient Alert and the Transient Alert Quality Assurance Representative will assist in providing the necessary technical expertise.

8. Specific Duties/Responsibilities.

8.1. The following section is divided in two parts. The first part describes actions and duties to posture the program before an aircraft incident (pre-execution), the second describes actions and duties that take place during and after an aircraft incident (execution).

8.2. Aircraft Incident Initial Notification and Response Responsibilities (EXECUTION).

8.2.1. Wing/CC or delegated representative will:

8.2.1.1. Determine removal condition/urgency as emergency, urgent or routine.

8.2.1.2. Consider on-base support capability when authorizing movement of CDDAR equipment off-base.

8.2.2. 60 MXG/CC or delegated representative will:

8.2.2.1. Upon notification, coordinate with Wing Flight Safety to determine classification and required level of incident investigation.

8.2.2.2. Consider impounding the incident aircraft IAW MXGOI 21-101.

8.2.2.3. Appoint an Impoundment Official(s), if the incident aircraft is impounded.

8.2.2.4. Identify and assign MXG representative(s) to EOC duty to coordinate support to the deployed CDDAR Team.

8.2.2.4.1. Determine the lead agency for aircraft recovery efforts between CDDAR Team Chief, Contract Logistics Support team chief, or assigned AMXS/tenant unit.

8.2.3. The Emergency Operation Center (EOC) will:

8.2.3.1. Stand up when directed by the ICC and establish lines of communication with the IC.

8.2.3.2. Through the MXG representative, direct MOC coordinators and/or base agencies to obtain the support requested by the IC.

8.2.3.3. Through the appropriate group representative, task squadrons/agencies identified as 'sources' in the attachments to provide identified equipment and services as requested by the CDDAR Team through the IC.

8.2.3.4. Ensure responding agencies, personnel and deliveries report to the IC at the designated staging area to positively control access to the site. The intent of this requirement is to preserve the evidence at the incident site for investigation purposes.

8.2.3.5. When necessary, the EOC staff will identify and secure a facility or area large enough to house the incident aircraft. Details will be assigned to secure the facility and allow only essential, authorized personnel access.

8.2.4. Maintenance Operations Center (MOC) will:

8.2.4.1. While the EOC is activated, the primary chain of support requests flows from on-site CDDAR Team Chief, to the IC/ROC, to the EOC, to the routine Command Post and/or MOC networks.

8.2.4.2. Broadcast information on appropriate nets when an aircraft has an in-flight emergency or ground incident. Advise all network radios of the nature of the mishap, provide type of aircraft, souls on board, location, amount of fuel on board, explosives on board, and known extent of aircraft damage.

8.2.4.3. Notify MXG/CC or delegated impound authority to obtain an impound decision, appointment of an Impoundment Official and/or designated MXG representative for potential base EOC duty.

8.2.4.4. When an impound is directed by the impound authority, execute procedures found in MXGOI 21-101.

8.2.4.5. Notify 60 LRS, Fuels Management to impound any fuel trucks used during ground refueling operations if the mishap aircraft is assigned or was serviced at Travis AFB.

8.2.4.6. Notify 60 LRS, Transportation Management, that vehicle and driver support indicated in this instruction may be required to transport personnel and/or equipment to the incident site. See attachments for potential requirements.

8.2.4.7. Notify 60th Maintenance Squadron (MXS), Aerospace Ground Equipment that air compressors, manifolds, light carts and other support indicated in this instruction may need to be transported to the incident site. See attachments for potential requirements.

8.2.4.8. Advise 60 APS ATOC Controller/Duty Officer that equipment may need to be marshaled for shipment to the incident site. See attachments for potential requirements.

8.2.4.9. Coordinate with Command Post to notify emergency response services to include fire department, wing safety, security forces, medical response team, explosive ordinance disposal (EOD), and transient alert (TA) upon request of the IC.

8.2.4.10. Designate one aircraft maintenance radio net as the primary maintenance recovery operation net and direct all personnel who are not directly involved in the recovery operation to switch to an alternate net.

8.2.4.11. Ensure radio traffic is held to essential transmissions during emergencies and enforce radio discipline during the recovery operation.

8.2.4.12. Notify 60 MXS Production Supervisor to alert Aero Repair section supervisors to identify personnel, review applicable tech data, and prepare the aircraft crash recovery trailer with necessary equipment.

8.2.4.13. Coordinate a tow vehicle, tow bar, and tow team to meet the aircraft from the appropriate AMXS, Transient Alert, or tenant unit to meet the aircraft.

8.2.4.14. Coordinate a maintenance response team from the appropriate AMXS, Transient Alert, or tenant unit to meet the aircraft.

8.2.4.15. Determine if incident aircraft is loaded with flares, munitions, or hazardous cargo and advise responding teams and Command Post.

8.2.4.16. Alert 60 MXS Production Supervisor if flare and/or munitions download is expected.

8.2.4.17. Notify Boeing CSFRs and WSLO when incident involves KC-10A aircraft.

8.2.4.18. Notify Boeing contract logistics support agency that potential support may be required when incident involves C-17A aircraft.

8.2.4.19. Notify Transient Alert if the incident involves an aircraft other than C-5, KC-10A, C-17A, or E-6B.

8.2.4.20. Coordinate staging of responders, including contract logistics support personnel, at the designated assembly point/staging area to await instructions from the CDDAR Team Chief, IC, or Investigating Authority.

8.2.5. The Impoundment Official/MXG Representative will:

8.2.5.1. Assume control of the incident aircraft when the aircraft/site is released by the IC or ROC.

8.2.5.2. With the assistance of the CDDAR Team Chief and 7-level structural repair technician/ advisor, evaluate the aircraft's condition.

8.2.5.3. Take special care to ensure flight data recorder information is secured and proper handling procedures are complied with IAW AFPAM 91-211, **paragraph 4.13.2**

8.2.5.4. Coordinate between the ISB/SIB President and the lead appointed agency to gain access to the aircraft for CDDAR operations.

8.2.5.5. Comply with guidance in MXGOI 21-101.

8.2.6. The CDDAR Team Chief will:

8.2.6.1. Wear a colored hard hat and reflective vest labeled "CDDAR Team Chief" for easy identification when performing CDDAR duties.

8.2.6.2. After cleared by the EOC and the IC, deploy to the mishap site for initial evaluation and report to the IC upon arrival at designated staging area. No initial evaluation and can take place until the IC declares the site fire safe. If mishap is of base, coordinate deployments with the EOC.

8.2.6.3. Assist in securing the area, if required. Except to rescue injured personnel, ensure nothing is to be moved or removed from the incident site without the expressed permission of the IC.

8.2.6.4. Ensure that cockpit voice and flight data recorders are de-energized as soon as practical. Shutdown systems and remove power to the aircraft IAW applicable tech data to preclude systems from overwriting critical mishap evidence. Consider obtaining approval to remove these recorders to prevent further damage.

8.2.6.5. Coordinate a site survey with the IC and applicable advisors prior to dispatching the entire CDDAR team.

8.2.6.6. Serve as the primary advisor to the IC on all CDDAR matters.

8.2.6.7. Advise the IC of the most prudent method of aircraft removal.

8.2.6.8. In coordination with the IC, identify equipment and material requirements (e.g., bulldozers, flatbed trucks, front-end loaders, cranes, fork lifts, dunnage, etc.) from, but not limited to, the attachments to this instruction.

8.2.6.9. Coordinate with the IC to establish a staging/assembly point where all essential follow-on personnel will meet and await instructions per AFIMS.

8.2.6.10. Relay assembly point information above to the MOC, CDDAR Team, tow team, maintenance response team, and responding aircraft contractor and/or maintenance vehicles.

8.2.6.11. Complete the worksheet at **Attachment** 6 to capture and report the exact location of aircraft, location of damage, and extent of damage, and other key data elements. Submit the worksheet to the EOC, Command Post and/or MOC.

8.2.6.12. Direct CDDAR team, tow team, maintenance response team, and responding aircraft CLS contractor and/or maintenance vehicles to the site when cleared to do so by the IC or Investigating Authority. Ensure all actions taken by these team members are coordinated through the IC or Investigating Authority.

8.2.6.13. If the aircraft lands with all gears down and wheels and tires intact, the CDDAR Team Chief will determine if the aircraft can be safely towed to a suitable parking location and consult with contract logistics support field reps/engineering reps before movement if necessary.

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

8.2.6.15. Ensure all CDDAR Team Members are briefed to defer media and other inquiries to the trained IC or base public affairs officer.

8.2.7. 60 MXS Aero Repair Section will:

8.2.7.1. Recall/assemble a recovery team by utilizing the CDDAR Program recall roster when notified of an actual or exercise recovery operation.

8.2.7.2. Designate a CDDAR Team with coordination of flight supervision and squadron maintenance supervision, if time permits.

8.2.7.3. Identify a second team with a team chief to sustain around-the-clock recovery operations, if necessary.

8.2.7.4. Ensure the team consists of personnel with special qualifications such as jacking manifold operator and a crane operator. A special qualifications listing will be maintained in the CDDAR program folder.

8.2.7.5. Make the CDDAR Team Chief available to consult with the Impoundment Official and/or MXG representative (with technical orders) for recovery planning purposes. The remaining crash recovery team will stand by at the assembly point with crash trailer equipment and maintain radio communication for further instructions from the CDDAR Team Chief.

8.2.8. The 60 MXS Structural Repair Section will :

8.2.8.1. Provide personnel and expertise on structural damage evaluation and repair options to the Impoundment Official and/or MXG representative and the CDDAR Team Chief. A selected individual will bring applicable technical orders to aid the mishap investigation team's maintenance officer and to evaluate structural damage. The individual will accompany the CDDAR Team Chief to advise the Impoundment Official and/or MXG representative.

8.2.9. The 60 MXS Aerospace Ground Equipment Flight will:

8.2.9.1. Deploy AGE equipment requested by IC through the EOC to a marshaling area for shipment.

8.2.9.2. Coordinate servicing of on-site equipment with the EOC, when required.

8.2.10. 60 MOS/60 MXS/60 AMXS/660 AMXS/860 AMXS will:

8.2.10.1. Provide and coordinate any additional specialist support to recover or secure the incident aircraft. They will work under supervision of the IG/CDDAR Team Chief.

8.2.10.2. Provide support equipment and qualified operators as needed/tasked by the Emergency Operations Center or chain of command.

8.2.10.3. Provide trained and qualified spill teams to assist the fire department in taking steps to mitigate environmental damage, i.e., contain firefighting agent and liquid runoff.

8.2.10.4. Provide tow team and maintenance response team, if incident aircraft is the same MDS as assigned.

8.2.11. 60 LRS/LGRV will:

8.2.11.1. Recall vehicles IAW established procedures and priorities as requested by the IC through the EOC.

8.2.11.2. Coordinate the allocation of on-base heavy equipment, i.e.; bulldozers, cranes and dump trucks to support the recovery effort.

8.2.11.3. Provide available tractor trailers and forklifts to transport CDDAR support equipment to the mishap site, as well as transport aircraft to the wreckage assembly point.

8.2.11.4. Provide maintenance support to Air Force heavy equipment participating in the recovery operation, as directed by the EOC or IC.

8.2.11.5. Transportation requirements beyond those provided by on-base assets will be requested by the IC through the EOC to 60 CONS.

8.2.12. 60 LRS/Fuels Management will:

8.2.12.1. Establish procedures to impound servicing vehicles if the incident aircraft is assigned or serviced at Travis AFB.

8.2.12.2. Deploy to the incident site with defueling trucks, operators and equipment as directed by the EOC if defueling is necessary.

8.2.12.3. Service on-site Air Force vehicles as directed by the EOC if refueling is necessary.

8.2.13. 60 CES will:

8.2.13.1. Provide available resources requested by the IC through the EOC, which may include the following:

8.2.13.2. Additional crane and operator support.

8.2.13.3. Technical and heavy equipment support to obtain access to and stabilize the terrain at the incident site, when required.

8.2.13.4. Coordination and delivery of common construction materials, (i.e.; gravel, steel plates, etc.) to provide stable footing for aircraft jacks or lifting trestles.

8.2.13.5. Submit unavailable material requirements through the EOC to 60 CONS for rapid procurement.

8.2.14. 60 CONS will:

8.2.14.1. Execute and award delivery orders for expeditious delivery of materials and equipment pre-identified in the attachments to this instruction.

8.2.14.2. Respond to EOC requests for additional requirements.

8.2.15. All Squadrons will:

8.2.15.1. Provide detail personnel, vehicles, and equipment as coordinated/tasked by the EOC.

8.2.15.2. Squadrons/agencies identified as ‘sources’ in the attachments will provide identified equipment, materials, and services as tasked by the Emergency Operations Center.

8.3. Program Management and Administration Responsibilities (PRE-EXECUTION)

8.3.1. 60 AMW/XP will:

8.3.1.1. Solicit inputs from the USN TACAMO detachment to include tenant aircraft participation in aircraft-related scenarios.

8.3.1.2. Solicit inputs from 60 MXS squadron-level supervision to include CDDAR program evaluation in the planning of aircraft-related exercise scenarios.

8.3.2. 60 MXG/CC will:

8.3.2.1. Ensure primary and alternate EOC MXG representatives are trained to perform their assigned duties.

8.3.3. 60 MOS/CC will:

8.3.3.1. Ensure 60 MOS/MOC prepares and maintains checklists to execute the guidance in this instruction.

8.3.3.2. Ensure this checklist is reviewed and updated on a Semi-annual basis.

8.3.4. 60 MXS/CC will:

8.3.4.1. Ensure a primary and alternate CDDAR Program Managers are appointed and trained.

8.3.4.2. Appoint CDDAR primary and alternate account custodians.

8.3.5. 60 CONS will:

8.3.5.1. Maintain source lists for equipment and material referenced in aircraft recovery technical data as listed in the attachments to this instruction.

8.3.5.2. Conduct market research at two-year intervals to refresh source lists above.

8.3.6. 60 MXS Fabrication Flight will:

8.3.6.1. Maintain respirator protection program qualified personnel for advance composite mishap response procedures outlined in T.O. 1C-17A-3-8 and **Appendix 4 to Annex A** of the 60 AMW CEMP 10-2, *Advanced Aerospace Materials Composite Materials Response*.

8.3.7. 60 MXS Aero Repair Section will:

8.3.7.1. Ensure adequate section personnel are assigned and trained in each position of the CDDAR team to ensure supportable 24-hr operations for an indefinite period of time.

8.3.7.2. Appoint a senior Aero Repair (A/R) section supervisor to be the primary CDDAR Program Manager.

8.3.7.3. Assign experienced Aero Repair (A/R) section supervisor(s) as primary CDDAR Team Chiefs.

8.3.7.4. Assign Aero Repair (A/R) section technicians CDDAR Team Member duties.

8.3.7.5. Ensure an adequate number of CDDAR personnel are respirator qualified. Maintain a respirator protection program for advance composite mishap response procedures as outlined in 1C-17A-3-8.

8.3.7.6. Ensure the readiness of CDDAR team personnel to deploy in support of C-5, KC-10 and C-17 aircraft CDDAR incidents as directed by AMC/XOCL.

8.3.7.7. Ensure that equipment is operated and inspected regularly to maintain serviceable condition.

8.3.7.8. Ensure all CDDAR trailer equipment is marked with permanent identification numbers.

8.3.7.9. Ensure one toolbox is available for the crash crew at all times.

8.3.7.10. Ensure CDDAR personnel are familiar with this instruction and other applicable internal checklists.

8.3.7.11. Appoint a CDDAR equipment custodian to ensure equipment authorizations are monitored and properly managed.

8.3.7.12. Maintain a 6-passenger, 4-wheel-drive pickup truck with fifth wheel trailer hitch as the crash recovery initial response trailer tow vehicle. It shall be equipped with a land/mobile radio.

8.3.7.13. Establish and maintain an initial response trailer to store initial response equipment, CDDAR Team PPE (gloves, hard hats, reflective belts/vests, composite material protective equipment, etc.), and other equipment deemed necessary by the CDDAR Team Chief.

8.3.8. The CDDAR Team Chief will:

8.3.9. Serve as the OPR for CDDAR matters.

8.3.9.1. Review and or update this instruction and its attachments every two years.

8.3.9.2. Maintain an equipment inventory list for the initial response trailer.

8.3.9.3. Inspect, inventory and document equipment inspections once a month in the CDDAR continuity book.

8.3.9.4. Ensure powered equipment will be operated and checked for proper servicing monthly.

8.3.9.5. Identify CDDAR training requirements to personnel within 90 days of arrival.

8.3.9.6. Assign CDDAR duties to task-qualified maintenance personnel within 180 days of arrival.

8.3.9.7. Ensure CDDAR trained personnel are identified as a Team Chief (TC) or Team Members (TM) on the Aero Repair section’s recall roster.

8.3.9.8. Identify and manage special equipment qualifications in a maintenance information system or locally developed spreadsheet.

8.3.9.9. Review and update training plans on an annual basis.

8.3.9.10. Coordinate exercises through Emergency Management office and 60 AMW Wing Plans to provide productive training.

8.3.9.11. Coordinate tenant unit participation in local training exercises.

8.3.9.12. Implement a realistic training program, consisting of academic and hands-on training. Actual and simulated training includes, but is not limited to:

8.3.9.12.1. Basic concepts of crash/disabled recovery procedures.

8.3.9.12.2. Safety precautions to include hazards associated with initial response, i.e., hazardous liquids, composite materials, carbon epoxy fibers, and potentially hazardous cargo.

8.3.9.12.3. Tower light signals and runway markings.

8.3.9.12.4. Aircraft lifting bag and control console operation.

8.3.9.12.5. Crash trailer equipment and location of secondary equipment.

8.3.9.13. Consult with Bio-environmental Engineering Flight to determine personnel health hazards, required training, and appropriate levels of personal protective equipment.

8.3.9.14. Maintain and submit Statement(s) of Work for CDDAR material and service requirements that must be sourced from off-base.

8.3.9.15. Pre-coordinate with base contracting when this instruction is reviewed to ensure ready availability and prompt execution.

8.3.9.16. Establish a CDDAR continuity book, containing at a minimum:

8.3.9.16.1. A training plan and materials.

8.3.9.16.2. Recall roster(s) and special qualifications.

8.3.9.16.3. Conduct inventory to identify the locations of all CDDAR equipment.

8.3.9.16.4. Statement(s) Of Work.

8.3.9.16.5. A list of applicable technical references.

8.3.9.16.6. Appointment letters and key correspondence.

8.3.9.16.7. Current equipment shortfalls, if any.

8.3.9.16.8. A current copy of this instruction.

9. Safety Precautions and Considerations Prior To Aircraft Movement. ***WARNING:*** Ensure that it is safe to approach the aircraft, all explosives, ejection seat cartridges, tires, fluids, flares, and munitions are de-armed, expended, or otherwise proclaimed safe by the fire department and Explosive Ordnance Disposal (EOD). EOD must be notified for further evaluation before an aircraft can be moved.

WARNING: Make sure the aircraft remains stable at all times and that personnel use extreme caution when working in and around a disabled aircraft. Before any ground handling activities take place on or around the aircraft, CDDAR personnel will ensure that it is properly stabilized to prevent movement or shifting. It may be necessary to moor the aircraft or stabilize it using air bags.

WARNING: Due to the many unknown factors of airframe condition immediately following a crash landing, do not attempt to use special equipment or procedures not included in the specific aircraft technical orders, or without approval of the specific airframe system manager/engineer.

The owning agency of any transient aircraft will be contacted for technical advice pertaining to the specific aircraft.

9.1. Damaged incident aircraft, or any parts, will not be moved until authorized and directed by the ISB/SIB President or the wing Flight Safety Officer. Any movement of the aircraft from the site will be under the direct supervision of the aircraft mishap investigation board member.

9.2. Safe and lighten the aircraft to the maximum extent possible by:

9.2.1. Grounding the aircraft.

9.2.2. Removing the aircraft batteries.

9.2.3. Completely defueling and purging the tank areas.

9.2.4. Contain and clean up any clean fuel or hydraulic oil leakage.

9.2.5. Removing all oxygen containers from the aircraft and bleed any oxygen from associated lines.

9.2.6. Downloading unnecessary equipment and cargo.

10. Off-base Crash Recovery Considerations.

10.1. In coordination with the civilian IC, the CDDAR Team Chief and CLS contractor initial response team will visit the site to review the situation to determine equipment requirements prior to dispatching the entire team.

10.2. Under no circumstances will personnel or equipment be dispatched off-base, if it jeopardizes the mission of on-base recovery operations, unless directed by the 60 AMW/CC or designated representative.

11. Equipment Requirements/Details.

11.1. The equipment listed in the attachments is essential for CDDAR operations and are based on requirements in applicable tech data manuals.

11.1.1. The listed equipment will not be moved to an off-base location without specific approval of the 60 AMW/CC or higher designated representative.

11.1.2. Aero Repair Section will notify 60 AMXS Support Flight if 60 MXS Aero Repair Section's 15-ton crane is inoperative. In such cases, 60 AMXS' 15-ton crane will be utilized as a back-up for crash recovery. Crash recovery will check the status of the 60 AMXS 15-ton crane daily while Aero Repair Section's 15-ton crane is inoperative. 60/349 CES will provide additional crane support, if required.

DWIGHT C. SONES, Colonel, USAF
Commander, 60 Air Mobility Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations, 24 Jan 2007*

AFI 13-204v1, *Functional Management of Airfield Operations, 1 Sept. 2010*

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

AFI 21-101 AMCSUP, MAF *Aircraft and Equipment Maintenance Management, 14 Feb 2011*

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting, 26 Jan 2012*

AFI 91-204, *Safety Investigations and Reports, 24 Sept 2008*

AFPAM 91-211, *USAF Guide to Aviation Safety Investigation, 26 July 2001*

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

60/349 MXGOI 21-101 *Aircraft and Equipment Maintenance Management, 29 April 2011*

NAVAIR 00-80R-20, *US Navy Aircraft Crash and Salvage Operations Manual*

TRAVISAFBI 13-101, *Aerodrome Procedures and Air Traffic Control*, Chapter 7, 17 April 2009

TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), 27 March 2012*

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding, 2 Aug 2012*

TO 1C-5A-2-1, *Ground Handling and Servicing, 15 Oct 2012*

TO 1C-10(K)A-2-7, *Lifting and Shoring, 1 March 2008*

TO 1C-17A-3-8, *Disabled Aircraft and Special Maintenance, 1 Sept 2012*

60 AMW CEMP 10-2, *Comprehensive Emergency Management Plan, 15 Dec 2007*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication.*

Prescribed Forms

None

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFIMS—Air Force Incident Management System

AFMAN—Air Force Manual

AFOSH—Air Force Consolidated Occupational Safety and Health

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

A/R—Aero Repair

CDDAR—Crash Damaged/Disabled Aircraft Recovery

CEMP—Comprehensive Emergency Management Plan

CF—Carbon Epoxy Fibers

CSFR—Contract Support Field Representatives

EET—Exercise Evaluation Team

EOC—Emergency Operation Center

EOD—Explosive Ordinance Disposal

IC—Incident Commander

ICC—Installation Control Center

IMT—Information Management Tool

ISB—Interim Safety Board

MAJCOM—Major Command

MOC—Maintenance Operations Center

MXG/CC—Maintenance Group Commanders

MXGOI—Maintenance Group Operating Instruction

MXS—Maintenance Squadron

OPR—Office of Primary Responsibility

QRC—Quick Reaction Checklist

REDI—Request for Engineering Disposition Instruction

RDS—Records Disposition Schedule

SIB—Safety Investigation Board

SIO—Single Member

SNCO—Senior Noncommissioned Officer

TA—Transient Alert

TC—Team Chief

TO—Technical Order

TM—Team Member

VQ-3—Fleet Air Reconnaissance Squadron Three

WSLO—Weapons System Liaison Officer

Terms

CDDAR Program Manager—Responsible for the overall CDDAR program's development, implementation, and management. Serves as the primary coordinator of CDDAR operations in garrison or deployed. May or may not deploy to the crash site.

CDDAR Team Chief—Single on-scene focal point for CDDAR operations, trained in CDDAR supervisory duties, and reports directly to the Incident Commander (IC). All CDDAR operations will be coordinated through this individual. A CDDAR Team Chief will be designated upon notification of a recovery operation.

CDDAR Team Member—Works directly for and report to the CDDAR Team Chief. These individuals must be trained as CDDAR Team Members. CDDAR Team Chief trained personnel may be utilized as team members during CDDAR operations.

Contractor Logistics Support (CLS)—may be local or deployed Contract Support Field Representatives (CSFRs/tech reps), engineers, or subcontractors provided under Contractor Logistics Support agreements.

Emergency Operations Center (EOC)—Air Force Incident Management System (AFIMS) organizational unit responsible for directing and coordinating support for the IC. Subordinate to the Installation Control Center (ICC) and is led by the MSG/CC.

Investigating Authority—The aircraft's assigned unit Flight Safety Office or, if delegated, Maintenance Group commander or representative. The level of investigating authority depends on the classification of the mishap and extent of damage (AF/MAJCOM Safety Investigation Board, Mishap Investigation Board, or local Aircraft Impoundment).

Impound Authority—Individual or agency authorized to impound and release aircraft by AFI 21-101, Chapter 9, and AMC Supplements.

Impoundment Official/MXG Representative—Officer or SNCO appointed by the Investigating Authority responsible for leading the investigation effort. If an investigation or impoundment is not warranted, the owning AMXS/tenant organization assumes the role of the on-site MXG Representative.

Incident Commander (IC)—Trained and certified first responder in command of the initial response phase at the mishap site. He or she reports to the EOC Director. All first responders report to the IC. If mishap is off-base, the same IC and EOC structure exists. The response is under civilian control until formally handed over to the Air Force IC.

Interim Safety Board (ISB)—Investigative team, formed in the early stages following a mishap, tasked with gathering factual data, identifying witnesses, and preserving evidence for use in subsequent safety investigation.

Maintenance Response Team—launch truck staffed with personnel qualified to perform aircraft-specific tasks, i.e. apply/remove power, secure CVR tapes, etc.

ROC—Recovery Operations Chief: Recovery Operations Chief must be a subject matter expert in the hazards or activities within the aircraft mishap site or be a member of the interim aircraft mishap investigation team. The ROC is normally an aircraft mx officer or SNCO

Safety Investigation Board (SIB)—Team formed to investigate a mishap; may be made up of a multiple members SIB or a single member (SIO).

Spill Team—Those presently tasked with MXG HazMat Spill Team duties on a rotational basis.

Tow Team—Fully equipped and staffed team to tow the incident aircraft. This includes vehicle, tow bar, equipment and qualified personnel.

USN TACAMO Unit—Refers to United States Navy detachment assigned to Travis AFB as a tenant unit. The detachment's official title is Fleet Air Reconnaissance Squadron Three (VQ-3), Detachment Travis.

USN Emergency Reclamation Team—VQ-3 Detachment Travis personnel trained to remove classified equipment and media from the E-6B TACAMO aircraft.

Attachment 2

C-5 AIRCRAFT-SPECIFIC REQUIRMENTS

ITEMS	QUANTITY	DESCRIPTION	PREFERENCE	POC	OPERATED BY	REFERENCE
JACKS - PREFERRED METHOD OF LIFTING						
AXEL JACKS NSN 1730-00-706-8014	6 REQUIRED 4 ON HAND	70-TON (USED WITH A SHORING BASE)	PRIMARY	60 MXS AGE DSN 837-5140 COMM (707) 424-5140	60 MXS AERO REPAIR	1C-5A-2-1 TABLE 2-11
CRASH RECOVERY JACKS 1730-80-TON-JACK	6	TELESCOPIC 37 IN. TO 140 IN. 80-TON HYDRAULIC JACK - NO SHORING	ALTERNATE			
POWER CART 1730-80-TON-JACK	6	HYDRAULIC RESERVOIR CART				
ATLAS COPCO, INC. AIR CARTS (LOCAL PURCHASE)	4	ATLAS COPCO, INC. LOW PRESSURE AIR CARTS	ALTERNATE			
NOSE GEAR JACK NSN 1730-80-516-2017	2	TRIPOD 6-FOOT FOLDING 30-TON HYDRAULIC JACK	ALTERNATE			
FUSELAGE JACK NSN 1730-01-060-9575	4	TRIPOD 6-FOOT FOLDING 60-TON HYDRAULIC JACK				
LIFTING BAG - SECOND PREFERENCE						
15 - TON LIFTING BAG NSN 5120-01-284-2611	32 REQUIRED 6 ON HAND FOR FULL LIFT	CAPACITY - 15 TONS HEIGHT - 120 IN. 70 IN. W X 80 IN. L WEIGHT - 312 LBS PER ASSY. OPERATING PRESSURE - 7 PSI	60 MXS AERO REPAIR SHOP DSN 837-2094 COMM (707) 424-2094		60 MXS AERO REPAIR	1C-5A-2-1 FIGURE 5-6
LIFTING WITH CRANES IS NOT APPLICABLE TO THIS MDS						
POSSIBLE SUPPORT EQUIPMENT REQUIRED						
TRUNNION SUPPORT BLOCK-MAIN LANDING GEAR	2 EA PER MLG 2 ON HAND	SUPPORTS TRUNNION OF COLLAPSED GEARS FOR TRANSPORT	60 MXS AERO REPAIR SHOP DSN 837-2094 COMM (707) 424-2094 LOCAL MANUFACTURE PER ILLUSTRATION 60 MXS FABRICATION FLIGHT		60 MXS AERO REPAIR	1C-5A-2-1 FIGURE 5-4
CENTER FUSELAGE SUPPORT FOR MAIN LANDING GEAR FAILURE	VARIABLE	CONNECTS MULTIPLE FLATBED TRAILERS TOGETHER FOR TOWING				1C-5A-2-1 FIGURE 5-7
40 TON FLATBED TRAILER + CONVERTER DOLLY	AS REQUIRED	AIRCRAFT MOVEMENT	60 CONTRACTING SQUADRON		PROVIDER WILL ASSIST	1C-5A-2-1 FIGURE 5-7
SHORING	AS REQUIRED	SUPPORT OF AIRCRAFT	60 CONTRACTING SQUADRON			
TOW TRACTORS	AS REQUIRED	AIRCRAFT MOVEMENT	60 AMXS			
15 TON CRANE	AS REQUIRED	COMPONENT REMOVAL	60 MXS AERO REPAIR SHOP DSN 837-2094 COMM (707) 424-2094			
FORK LIFT 10K ALL TERRAIN	AS REQUIRED	OFF LOAD CARGO/MOVE EQUIPMENT	60 LRS		OWNING UNIT	1C-5A-2-1 SEC. V
K LOADERS	AS REQUIRED	OFFLOAD CARGO	60 APS		OWNING UNIT	1C-5A-2-1 SEC. V
EARTH MOVING EQUIPMENT	AS REQUIRED	LEVEL OR DIG OUT AREA	60 CIVIL ENGINEERS		OWING UNIT	1C-5A-2-1 SEC. V
FUEL TRUCK	AS REQUIRED	OFFLOAD FUEL	60 LRS		OWNING UNIT	1C-5A-2-1 SEC. V
PORTABLE LIGHT CARTS	AS REQUIRED	ELECTRICITY/ILLUMINATION	60 MXS AGE DSN 837-5140 COMM (707) 424-5140			
60 MXS A/R		**THIS IS NOT AN ALL ENCOMPASSING LIST OF EQUIPMENT REQUIRED FOR CDDAR OPERATIONS. EVERY SITUATION IS UNIQUE AND MAY REQUIRE DIFFERENT ITEMS.**				
60 MXS AGE						
60 MXS FABRICATION						
60 CONTRACTING						
60 AMXS						

Attachment 3

KC-10A AIRCRAFT SPECIFIC REQUIREMENTS

ITEMS	QUANTITY	DESCRIPTION	PREFERENCE	POC	OPERATED BY	REFERENCE
JACKS - PREFERRED METHOD OF LIFTING						
CRASH RECOVERY JACKS 1730-80-TON JACK	3	TELESCOPIC 37 IN. TO 140 IN. 80-TON HYDRAULIC JACK - NO SHORING	PRIMARY	60 MXS AGE DSN 837-5140 COMM (707) 424-5140	60 MXS AERO REPAIR/BOEING CONTRACTED PERSONNEL	1C-10(K)A-2-7 07-30-10
POWER CART 1730-80-TON JACK	3	HYDRAULIC RESERVOIR CART				
ATLAS COPCO, INC. AIR CARTS (LOCAL PURCHASE)	4	ATLAS COPCO, INC. LOW PRESSURE AIR CARTS	PRIMARY	60 MXS AGE DSN 837-5140 COMM (707) 424-5140	60 MXS AERO REPAIR/BOEING CONTRACTED PERSONNEL	1C-10(K)A-2-7 07-30-10
NOSE JACK	1	TRIPOD 87 IN. 40-TON HYDRAULIC JACK	ALTERNATE	COMBS	60 MXS AERO REPAIR/BOEING CONTRACTED PERSONNEL	1C-10(K)A-2-7 07-30-10
FUSELAGE JACK	2	TRIPOD 140 IN. 120-TON HYDRAULIC JACK				
LIFTING BAG - SECOND PREFERENCE						
25-TON LIFTING BAG	6	CAPACITY - 25 TONS HEIGHT - 7 FT. 9 FT. W X 7 FT. L OPERATING PRESSURE - 7 PSI	COMBS/CLS		COMBS/CLS	1C-10(K)A-2-7 07-30-10
LIFTING WITH CRANES IS LAST RESORT ON THIS MDS						
100 TON HYDRAULIC CRANE	2	LIFT FROM TRUNNION ADAPTER	LAST RESORT	BIGGE CRANE & RIGGING CO. (510) 638-8100	EQUIPMENT PROVIDER	RECOVERY MANUAL DC-10
20 TON HYDRAULIC CRANE	2	LIFT FROM BELLY BAND SLING				
SPECIAL EQUIPMENT						
NOSE BELLY BAND ASSY.	1	PN OHME65B00002	COMBS/CLS		COMBS/CLS	RECOVERY MANUAL DC-10
MAIN LANDING GEAR TRUNNION ADAPTER	2	PN DZZ713-1-2				
JACKING ADAPTERS - WING AND NOSE	1 NOSE/2 WING	DZZ7053-1 / DZZ0012-501	COMBS MAINTAINED		60 MXS AERO REPAIR/BOEING CONTRACTED PERSONNEL	RECOVERY MANUAL DC-10
FITTING - HOIST AIRPLANE RECOVERY	2	DZZ173-1 & 2	COMBS MAINTAINED		BOEING CONTRACTED PERSONNEL	
POSSIBLE SUPPORT EQUIPMENT REQUIRED						
40 TON FLATBED TRAILER + CONVERTER DOLLY	AS REQUIRED	AIRCRAFT MOVEMENT	PERFORMANCE SPECIALTY TRAILERS (530)865-8277 PACWEST TRAILERS (916) 487-4483			
SHORING	AS REQUIRED	SUPPORT OF AIRCRAFT	STAGNER LUMBER COMPANCY (707) 425-0644 HILLSIDE DRILLING (510) 234-6532			
TOW TRACTORS	AS REQUIRED	AIRCRAFT MOVEMENT	660 AMXS			
15 TON CRANE	AS REQUIRED	COMPONENT REMOVAL	60 MXS AERO REPAIR SHOP DSN 837-2094 COMM (707) 424-2094			
FORK LIFT 10K ALL TERRAIN	AS REQUIRED	OFF LOAD CARGO/MOVE EQUIPMENT	60 LRS		OWNING UNIT	
K LOADERS	AS REQUIRED	OFFLOAD CARGO	60 APS		OWNING UNIT	
EARTH MOVING EQUIPMENT	AS REQUIRED	LEVEL OR DIG OUT AREA	60 CIVIL ENGINEERS		OWING UNIT	
FUEL TRUCK	AS REQUIRED	OFFLOAD FUEL	60 LRS		OWNING UNIT	
PORTABLE LIGHT CARTS	AS REQUIRED	ELECTRICITY/ILLUMINATION	60 MXS AGE DSN 837-5140 COMM (707) 424-5140			
COMBS/CLS						
60 CONTRACTING		**THIS IS NOT AN ALL ENCOMPASSING LIST OF EQUIPMENT REQUIRED FOR CDDAR OPERATIONS. EVERY SITUATION IS UNIQUE AND MAY REQUIRE DIFFERENT ITEMS.**				
60 MXS A/R						
60 MXS AGE						
660 AMXS						
COMBS						

Attachment 4

C-17 AIRCRAFT SPECIFIC REQUIREMENTS

ITEMS	QUANTITY	DESCRIPTION	PREFERENCE	POC	OPERATED BY	REFERENCE
JACKS - PREFERRED METHOD OF LIFTING						
FUSELAGE JACK NSN 1730-01-060-9575	6	TRIPOD 6-FOOT FOLDING 60-TON HYDRAULIC JACK	PRIMARY	60 MXS AGE DSN 837-5140 COMM (707) 424-5140	60 MXS AERO REPAIR	1C-17A-3-8 58-30-00
CRASH RECOVERY JACKS 1730-80-TON-JACK	6	TELESCOPIC 37 IN. TO 140 IN. 80-TON HYDRAULIC JACK	Alternate not Approved By Engineering Yet			
POWER CART 1730-80-TON-JACK	6	HYDRAULIC RESERVOIR CART	Alternate not Approved By Engineering Yet			
ATLAS COPCO, INC. AIR CARTS (LOCAL PURCHASE)	4	ATLAS COPCO, INC. LOW PRESSURE AIR CARTS	Alternate not Approved By Engineering Yet			
LIFTING BAG - SECOND PREFERENCE						
15 - TON LIFTING BAG NSN 5120-01-284-2611	16 REQUIRED 6 ON HAND	CAPACITY - 15 TONS HEIGHT - 120 IN. 70 IN. W X 80 IN. L WEIGHT - 312 LBS PER ASSY. OPERATING PRESSURE - 7 PSI	60 MXS AERO REPAIR SHOP DSN 837-2094 COMM (707) 424-2094		60 MXS AERO REPAIR	1C-17A-3-8 58-20-00
26-TON LIFTING BAG NSN 5120-01-285-5785	2 OR 4 REQUIRED PER CONFIGURATION 12 ON HAND	CAPACITY - 26 TONS HEIGHT - 120 IN. 80 IN. W X 100 IN. L WEIGHT - 415 LBS PER ASSY. OPERATING PRESSURE - 7 PSI				
LIFTING WITH CRANES IS NOT APPLICABLE TO THIS MDS						
SPECIAL EQUIPMENT FOR TETHERING						
AIRCRAFT CAN BE ANCHORED TO HEAVY VEHICLES INSTEAD OF GROUND ANCHORS SUCH AS TOW TRACTORS						
40 TON FLATBED TRAILER + CONVERTER DOLLY	AS REQUIRED	AIRCRAFT MOVEMENT	PERFORMANCE SPECIALTY TRAILERS (530) 865-8277 PAC WEST TRAILERS (916) 487-4483		PROVIDER WILL ASSIST	
GROUND ANCHOR	AS REQUIRED 4 ON HAND	PN10150AS	ALSO PART OF STATEMENT OF WORK FOR 60 CONTRACTING		60 MXS AERO REPAIR	1C-17A-3-8 58-30-00
CHAINS	AS REQUIRED	PN MIL-C-6458	ON AIRCRAFT			1C-17A-3-8 58-30-00
TENSIOMETER	20 ON HAND	PN TD5-10000	60 MXS AERO REPAIR SHOP DSN 837-2094 COMMERCIAL (707)424-2094		60 MXS AERO REPAIR	1C-17A-3-8 58-30-00
JACK PAD TETHERING ADAPTER	4 REQUIRED 4 ON HAND	PN 17G110817-1				
ENGINE PYLON TETHERING ADAPTER	2 REQUIRED 0 ON HAND	PN 17G010100-1				
POSSIBLE SUPPORT EQUIPMENT REQUIRED						
FORK LIFT 10K ALL TERRAIN	AS REQUIRED	OFF LOAD CARGO/MOVE EQUIPMENT	60 LRS			
K LOADERS	AS REQUIRED	OFFLOAD CARGO	60 APS			
EARTH MOVING EQUIPMENT	AS REQUIRED	LEVEL OR DIG OUT AREA	60 CIVIL ENGINEERS			
FUEL TRUCK	AS REQUIRED	OFFLOAD FUEL	60 LRS			
PORTABLE LIGHT CARTS	AS REQUIRED	ELECTRICITY/ILLUMINATION	60 MXS AGE DSN 837-5140 COMM (707) 424-5140			
SHORING	AS REQUIRED	SUPPORT OF AIRCRAFT	STAGNER LUMBER COMPANCY (707) 425-0644 HILLSIDE DRILLING (510) 234-6523			
60 MXS A/R		**THIS IS NOT AN ALL ENCOMPASSING LIST OF EQUIPMENT REQUIRED FOR CDDAR OPERATIONS. EVERY SITUATION IS UNIQUE AND MAY REQUIRE DIFFERENT ITEMS.**				
860 AMXS						
60 CONTRACTING						
60 MXS AGE						

Attachment 5

E-6B AIRCRAFT SPECIFIC REQUIREMENTS

ITEMS	QUANTITY	DESCRIPTION	PREFERENCE	POC	OPERATED BY	REFERENCE
JACKS - PREFERRED METHOD OF LIFTING						
MAIN LANDING GEAR JACK P/N 53J6268 TYPE B-4A	2	TRIPOD 6-FOOT FOLDING 30-TON HYDRAULIC JACK	PREFERRED METHOD	VQ-3 TRAVIS AFB DET OIC#(707)424-5185 MAINTENANCE # (707)424-3704/9	NAVY PERSONNEL WITH 60 MXS A/R	E-6B RECOVERY MANUAL NAVAIR 00-80R-20
AFT FUSELAGE JACK P/N 53J6268 TYPE B-4A	1	TRIPOD 10-FOOT FOLDING 30-TON HYDRAULIC JACK				
NOSE LANDING GEAR JACK P/N 53J6268 TYPE B-4A	1	TRIPOD 5-FOOT FOLDING 30-TON HYDRAULIC JACK				
FORWARD OF THE WING FILLET JACK P/N 53J6268 TYPE B-4A	2	TRIPOD 5-FOOT FOLDING 30-TON HYDRAULIC JACK				
LIFTING BAG - SECOND PREFERENCE						
F-2 LIFTING BAG / RESEARCHING IF 15 TON BAGS WILL WORK	8	CAPACITY - 12 TONS COLLAPSED HEIGHT - 6 IN. LIFTING HEIGHT OF BAG-6 FT WEIGHT - 135 LBS. OPERATING PRESSURE-3.5 PSI	ALTERNATE METHOD	60 MXS AERO REPAIR	NAVY PERSONNEL WITH 60 MXS A/R	E-6B RECOVERY MANUAL NAVAIR 00-80R-20
LIFTING WITH CRANES (AIRCRAFT GROSS WEIGHT OF 167,600 LBS)						
40-TON CRANE	2	MAIN LANDING GEAR TRUNNION	BIGGE CRANE & RIGGING CO. (510) 638-8100		PROVIDER WILL OPERATE	E-6B RECOVERY MANUAL NAVAIR 00-80R-20
20-TON CRANE	1	FUSELAGE STATION 360				
FUSELAGE LIFTING SLING ASSEMBLY P/N F70244-17	1	ATTACH WITH 20-TON CRANE	IMIRL LIST AT TRAVIS AFB	VQ-3 TRAVIS AFB DET	NAVY PERSONNEL	E-6B RECOVERY MANUAL NAVAIR 00-80R-20
SHORING SUPPLIES						
PLYWOOD	AS REQUIRED	3/4 IN. 4X8 FT. SHEETS	Hillside Drilling (510)234-6532			
TIMBERS	AS REQUIRED	6"X8"X8'				
POSSIBLE SUPPORT EQUIPMENT REQUIRED						
40 TON FLATBED TRAILER+CONVERTER DOLLY	AS REQUIRED	AIRCRAFT MOVEMENT	PERFORMANCE SPECIALTY TRAILERS (530) 865-8277 PAC WEST TRAILERS (916) 487-4483		PROVIDER WILL ASSIST	E-6B RECOVERY MANUAL NAVAIR 00-80R-20
SHORING	AS REQUIRED	SUPPORT OF AIRCRAFT	STAGNER LUMBER COMPANCY (707) 425-0644 HILLSIDE DRILLING (510) 234-6523			
TOW TRACTORS	AS REQUIRED	AIRCRAFT MOVEMENT	NAVY PERSONNEL			
15 TON CRANE	AS REQUIRED	COMPONENT REMOVAL	60 MXS AERO REPAIR SHOP DSN 837-2094 COMMERCIAL (707)424-2094			
FORK LIFT 10K ALL TERRAIN	AS REQUIRED	OFF LOAD CARGO/MOVE EQUIPMENT	60 LRS		OWNING UNIT	E-6B RECOVERY MANUAL
EARTH MOVING EQUIPMENT	AS REQUIRED	LEVEL OR DIG OUT AREA	60 CIVIL ENGINEERS		OWING UNIT	E-6B RECOVERY MANUAL
FUEL TRUCK	AS REQUIRED	OFFLOAD FUEL	60 LRS		OWNING UNIT	E-6B RECOVERY MANUAL
PORTABLE LIGHT CARTS	AS REQUIRED	ELECTRICITY/ILLUMINATION	60 MXS AGE DSN 837-5140 COMM (707) 424-5140			
60 MXS A/R		**THIS IS NOT AN ALL ENCOMPASSING LIST OF EQUIPMENT REQUIRED FOR CDDAR OPERATIONS. EVERY SITUATION IS UNIQUE AND MAY REQUIRE DIFFERENT ITEMS.**				
60 MXS AGE						
60 CONTRACTING						
NAVY DET						

Attachment 6

CDDAR INITIAL AIRCRAFT STATUS REPORT

(To be completed by CDDAR Supervisor)

A6.1. Type of aircraft:

A6.2. Tail number:

A6.3. Home station:

A6.4. Exact location of aircraft:

A6.4.1. On/Off base/Parking spot:

A6.4.2. On/Off runway:

A6.4.3. On/Off taxiway:

A6.4.4. Other:

A6.5. Surface condition where aircraft rests:

A6.5.1. Stressed (reinforced):

A6.5.2. Unstressed (hard but no concrete base):

A6.5.3. Dirt/gravel/etc.:

A6.5.4. Soil condition: _____Wet _____Dry

A6.5.5. Terrain: _____Sloped _____Flat

A6.6. Condition of airframe:

A6.6.1. Landing gear/tires:

A6.6.2. Fuselage:

A6.6.3. Flight control surfaces:

A6.6.4. Engines:

A6.6.5. Flight deck:

A6.6.6. Doors:

A6.6.7. Wings:

A6.6.8. Other:

A6.7. Cargo on board:

A6.8. **FLARES**:

A6.9. Fuel load (total):

1-Main:_____ 2-Main:_____ 3-Main:_____ 4-Main:_____
1-Aux:_____ 2-Aux:_____ 3-Aux:_____ 4-Aux:_____
1-Ext:_____ 2-Ext:_____ 3-Ext:_____ 4-Ext:_____