UNITED STATES AIR FORCE
COMBAT AIRBORNE CRASH RESCUE FIREFIGHTERS
A NEW VISION FOR THE 21ST CENTURY

EXECUTIVE DEVELOPMENT

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Abstract

The Chief of Staff (CSAF), United States Air Force (USAF) General John J. Jumper wrote that the Air Force requires an Airborne Rapid Engineer Deployable Heavy Operations Repair Squadron, Engineers (RED HORSE) combat engineer capability to assess, prepare and establish contingency airbases in remote locations through airdrop, air-insertion, or air-delivery methods. (General John J. Jumper, Personal Communication, May 15, 2002)

The problem was that due to the USAF’s strategic warfare deliberate planning transformation and the shift of theater campaign objectives of our adversaries, there was no combat-ready USAF airborne crash rescue capability that could rapidly deploy with the RED HORSE Commander to support the Commander, Air Force Forces (COMAFFOR) or Area of Operation (AOR) Joint Force Commander. During recent conflicts, this limitation impacted theater air and ground operations and the COMAFFOR’s ability to achieve United States (US) and Coalition theater air and ground campaign objectives.

The purpose of this applied research project was to validate the need for an airborne crash rescue capability using unclassified federal legislation and Department of Defense (DOD) directives thereby improving the USAF’s ability to rapidly deploy an airborne crash rescue capability, with the RED HORSE squadrons, to prosecute the nation’s future air wars and to protect and defend the Constitution of the United States of America. This applied research project has investigated recent operational conflicts and humanitarian deployment taskings that required the use of an airborne crash rescue capability which in turn supported the CSAF’s initiative of developing an airborne RED HORSE combat engineer capability for the USAF.

This was an action research project supported by the evaluative research method. The following research questions were:

1. What are the unclassified federal legislation and DOD directives that validate the need for an airborne crash rescue capability?
2. What functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

3. Are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

The procedures included an extensive literature review and in-depth interviews with Lieutenant Colonel James D. Frishkorn Chief, Command Airborne RED HORSE Program, and Chief Master Sergeant Kevin J. Frayer, Command RED HORSE Program Chief Enlisted Manager.

The results found no unclassified legislation or DOD directive that specifically validated the need for an airborne crash rescue capability. However, unclassified directives required USAF forces be able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—space, sea, land, air, and information. Functions, mission essential tasks, manpower, and skills that would be required to provide a flexible capability are as follows: unit cohesiveness, sustainability to maintain unsupported for 72 hours, six airborne crash rescue staffing authorizations, training, equipping, and acquiring lighter equipment that was airborne certified. Potential strategic and operational benefits included: quickness, speed, agility, and information superiority.

The recommendations, based on this applied research project included (a) encourage the USAF to develop, fund, and implement a combat-ready airborne crash rescue capability, (b) development of a technical committee of functional experts from across the Air Force whose primary responsibilities are to: develop the vision, mission statement, strategic goals, and market the airborne capability to senior DOD and USAF personnel, (c) development of an aggressive marketing plan, (d) concentration on joint airborne training efforts, (e) development of a formal selection prescreening process, and (f) development annual self assessment plan.
Table of Contents

Abstract

Table of Contents

Introduction

Background and Significance

Literature Review

Procedures

Results

Discussion

Recommendations

References

Appendix A

Appendix B

Appendix C
Introduction

The Chief of Staff (CSAF), United States Air Force (USAF) General John J. Jumper wrote that the USAF requires an Airborne Rapid Engineer Deployable Heavy Operations Repair Squadron, Engineers (RED HORSE) combat engineer capability to assess, prepare and establish contingency airbases in remote locations through airdrop, air-insertion, or air-delivery methods. (General John J. Jumper, Personal Communication, May 15, 2002)

The problem is that due to the USAF’s strategic warfare deliberate planning transformation and the shift of theater campaign objectives of our adversaries, there is no combat-ready USAF airborne crash rescue capability that could rapidly deploy with an airborne RED HORSE squadron to support the Commander, Air Force Forces (COMAFFOR) or Area of Operation (AOR) Joint Force Commander. During recent conflicts, this limitation impacted theater air and ground operations and the COMAFFOR’s ability to achieve United States (US) and Coalition theater air and ground campaign objectives.

The purpose of this applied research project is to validate the need for an airborne crash rescue capability using unclassified federal legislation and Department of Defense (DOD) directives thereby improving the USAF’s ability to rapidly deploy an airborne crash rescue capability, with the RED HORSE squadrons, to prosecute the nation’s future air wars and to protect and defend the Constitution of the United States of America. This applied research project will investigate recent operational conflicts and humanitarian deployment taskings that required the use of an airborne crash rescue capability which in turn should support the CSAF’s initiative of developing an airborne RED HORSE combat engineer capability for the USAF.

This is an action research project supported by the evaluative research method. The following research questions will be addressed:
1. What are the unclassified federal legislation and DOD directives that validate the need for an airborne crash rescue capability?

2. What functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

3. Are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

Research consisted of in-depth review of applicable federal legislation, DOD, USAF, and Headquarters Air Combat Command directives, a document review of topics related to combat-ready airborne operations and capabilities, and interviews with the Headquarters Air Combat Command’s RED HORSE staff officer and Chief Enlisted Manager responsible for USAF’s airborne RED HORSE program management.
Background and Significance

The USAF is widely recognized at the world’s premier Air Force. According to Chief Master Sergeant Steven Cole, USAF Chief of Personnel, approximately 345,000 men and women are currently serving active duty service commitments in the USAF (Chief Master Sergeant Cole, Personal Communication, August 15, 2003). According to Chief Master Sergeant Joseph Rivera, Fire Protection Manager, Air Force Civil Engineer Support Agency, approximately 8000 men and women are servicing active duty service commitments in civil engineer related career fields (Chief Master Sergeant Rivera, Personal Communication, August 15, 2003. These career fields include: Fire and Emergency Services personnel, carpenters electricians, plumbers, heavy equipment operators, explosive ordinance, and Readiness personnel. According to Chief Master Sergeant Cal Glover, of the 8000 active duty civil engineers across the Air Force, 3300, or approximately 41 percent of the total active duty civil engineer authorizations are Fire and Emergency Services personnel (Chief Master Sergeant Carl Glover, Personal Communication Aug 15, 2003).

According to Air Force Pamphlet 36-2241 VI, looking back at the last ten years, the USAF has achieved and sustained air superiority in every military campaign and Military Operations Other Than War (MOOTH) (AFPAM 36-2241V1, p. 24). Although the USAF has achieved tremendous air victories, during past conflicts and humanitarian relief operations such as Operation DESSERT FOX, Operations DESERT STORM/SHEILD, Operation ALLIED FORCE and current operations such as Operation ENDURING FREEDOM and Operation IRAQI FREEDOM, the USAF had a requirement, but no airborne crash rescue capability to assess, prepare and establish contingency airbases in remote locations through airdrop, air-insertion, or air-delivery methods. According to Brigadier General Patrick Burns, The Civil Engineer, Headquarters Air Combat Command, during Operation IRAQI FREEDOM lessons learned, DOD Joint Force Commanders desired the use of strategic contingency airfields where US and Coalition Forces could not land aircraft due to
damaged airfield and infrastructure systems, increased hazards of unexploded ordnance, increased hazards of chemical or biological threats, or the abilities of our adversaries to construct airfield obstructions or blockages (General Patrick Burns, Personal Communication, Feb 18, 2003).

Recently, during the early stages of Operation ENDURING FREEDOM as well as current combat operations is support of Operation IRAQI FREEDOM, USAF warfare planners developed theater air campaign tactics and air tasking orders in the attempt to deny the use of these fully-operational airfields to our adversaries. As a result, US and Coalition air warfare planners drafted air tasking orders that generated combat aircraft sorties, tactical raids, and surgical air strikes to destroy and deny the use of these airfields to our adversaries. According to Lesson Learned Reviews of Operation IRAQI FREEDOM, air tasking orders, conducted by the US and Coalition aircraft, resulted in major damaged to airfield improved runway surfaces, damaged to airfield support operations and infrastructure, and significantly increased the potential threat for unexploded ordnance hazards (Operations IRAQI Freedom, 10-11).

According to Chief Master Sergeant Steven Lowell, Air Combat Command Fire Protection Superintendent, currently, USAF warfare planners, using the latest unmanned aerial vehicle technology, also observed that our adversaries were placing airfield obstructions such as unserviceable vehicles, boulders and wooden platforms on the airfield to deny US and Coalition forces the opportunity to use these strategic airfields in generating US and Coalition combat aircraft (Chief Master Sergeant Steven Lowell, Personal Communication, Feb 18, 2003).

Additionally, unexploded ordnance, explosive material, fire, nuclear, biological and chemical, and toxic industrial material hazards posed additional problems on the ground for deploying combat forces. Since the USAF did not have an airborne combat engineer capability to assess, prepare and establish contingency airbases in remote locations through airdrop, air-insertion, or air-delivery methods, the potential capture and use of these airfields by US and Coalition forces
was delayed or operationally unfeasible. This delay in offensive attack may have prolonged the war effort, degraded mission onsite surveillance, or increased the risk of ground forces to hostile enemy air and ground attacks.

In the future, if the need for an airborne crash rescue capability is not validated, developed, implemented, and properly funded, the effectiveness of any future air or ground war will be significantly impacted resulting in the delay or potential loss of air superiority. This loss in air superiority will result in increased risk for DOD and Coalition forces to hostile fire and enemy attack. In addition, validating the need for an airborne crash rescue capability should allow US and Coalition forces the ability to achieve theater campaign objectives quicker, cheaper and without the use of large combat ground forces.

Validating the need of an combat-ready airborne crash rescue capability will relate to one of the United States Fire Administration’s operational objectives to “reduce the loss of life from fire of firefighters” (NFA, 2002, p. II – 2). This objective would be achieved by a successful research project that could provide unclassified information to validate the need for an airborne capability which could provide the practical foundation or be modified to the operations at the National Fire Academy.

This applied research project also relates to the Executive Development course of the National Fire Academy’s Executive Fire Officer Program (EFO). One of the course requirements researched by chief officers and students in the EFO course relates to Service Quality/Marketing. In reviewing Unit 10 of the Executive Development Student Manual, the Terminal Objective of this section is “Given a conceptual understanding of Total Quality Management and service quality principles, the students will be able to evaluate services by their organization and develop strategies to improve organizational quality and service standards” (NFA, 1998c, p. SM 10-2). Validating the
need for an airborne crash rescue capability will be the key in meeting the CSAF’s initiative of an airborne RED HORSE combat engineer capability for the USAF.

Literature Review

A literature review was conducted to provide the practical foundation for this applied research project. The purpose of this literature review is to recognize the need for a rapidly deployable, combat-ready, airborne crash rescue capability and validate the need for this capability using unclassified federal legislation and Department of Defense (DOD) directives thereby improving the USAF’s ability to rapidly deploy an airborne crash rescue capability, with the RED HORSE squadrons, to prosecute the nation’s future air wars and to protect and defend the Constitution of the United States of America.

Literature sources from DOD, USAF and Headquarters Air Combat Command were selected and reviewed to provide a practical foundation from which to develop a comprehensive solution to the research problem. It should be noted that literature sources from the DOD included the review of operational and administrative directives from the Department of the Air Force, Department of the Army, Department of the Navy, and United States Marines. In establishing the legislative foundation to validate the need for an airborne crash rescue capability, these directives were relevant to the concept of the DOD’s overall strategic warfare deliberate planning methods and special operations capabilities. In addition, the literature review involved an evaluation of learning resource materials from the National Fire Academy’s Learning Resource Center, textbooks, and face-to-face interviews.

Three questions will be addressed within this literature review. First, what are the unclassified federal legislation and DOD directives that validate the need for an airborne crash rescue capability? Second, what functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions
and threat environments? Third, are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

Question number one addresses the unclassified federal legislation and DOD directives that validate the need for an airborne crash rescue capability. It is important to note that military warfare planners develop air forces necessary for the effective prosecution of war and MOOTH operations at the strategic level first, then focus their planning efforts in a sequential descending order such as theater, operational, tactical, and surgical air tasking orders. This sequential “building block approach” ensures the USAF and Coalition forces are organized, trained, and equipped to conduct prompt and sustained combat air and ground operations in a joint warfare environment allowing for better situational awareness, operator control, and greater flexibility between US services and Coalition Forces.

Using this building block approach in reviewing federal legislation, according to Air Force Pamphlet 36-2241V1, Promotion Fitness Examination, the National Security Act of 1947 was the first act legislated. The National Security Act established the DOD’s primary function--to maintain and employ the Armed Forces. The National Security Act created The Department of the Air Force as a key and essential element of the DOD. The National Security Act also established the primary mission of the USAF--to prepared, equipped, and trained to conduct the nation’s air wars and prepare airmen protect and defend the Constitution of the United States of America (AFPAM-2241V1, 2002, pp. 35-36). The National Security Act demonstrated the federal government's commitment to a responsive military deterrence as a national security option and challenged the Armed Forces to support and defend the Constitution and special interest of the US.

The second key legislation approved, according to Air Force Pamphlet 36-2241V1, was the Key West Agreement of 1948, revised in 1953 and again 1958. The Key West Agreement required the Secretary of Defense and the Joint Chiefs of Staff to establish general and specific functions for
each branch of the Armed Forces. One of the three general functions established by the Agreement requires the USAF to ensure, by timely and effective military action, the security of the United States, its possessions, and areas vital to its interest. A specific function of the Key West Agreement requires the USAF to prepare forces, equipment, and supplies for effective prosecution of war and MOOTH operations. Additionally, the Key West Agreement also requires the Air Force to organize, equip, and provide forces for joint amphibious, space, and airborne operations in coordination with the other military services, and to provide for their training in accordance with joint doctrine (AFPAM 36-2241V1, 2002, pp. 36-37).

Joint Vision 2020, demonstrated DOD’s strategic vision to combat warfare operations. Joint Vision 2020 suggests the nation will face a wide range of challenges and opportunities. In an environment with an uncertain rhythm, the Air Force must be prepared to maintain its strategic and nuclear vigilance while sustaining peacetime operations, ensuring preparations for major theater war, and conducting the training necessary to prepare each new generation of airmen to lead. Ensuring security and stability requires global vigilance, reach, and power—global vigilance to anticipate and deter threats, strategic reach to curb crises, and overwhelming power to prevail in conflicts to win America’s wars (Joint Vision 2020, 2002). Since the USAF is required to train and prepare the new generation of airmen to lead, it challenges future airmen to anticipate and deter threats and win America’s wars. It forces the next generation of airmen to learn from the past and prepare.

Air Force Department Document 1, *Air Force Doctrine* sets the USAF Vision Statement: *Global Vigilance, Reach, and Power. To defend the United States and protect its interests through air and space power* (AFDD, 2000). While AFDD 1 does not specifically mandate an airborne crash rescue capability, the directive justifies the need to defend the United States and provides the
ground work for implementing this future capability to protect its interest through air and space power.

USAF Lessons Learned Reviews during recent conflicts that include Operation DESSERT FOX, Operation DESERT STORM/SHELID, Operation ALLIED FORCE and current operations such as Operation ENDURING FREEDOM and Operation IRAQI FREEDOM, also provide source documents to validate the need for an airborne crash rescue capability. When directed, lesson learned reviews are drafted to collect both positive and negative special interest items. Recent lessons learned reviews have identified the lack of an airborne crash rescue capability and the limitations it put on the war planner.

Brigadier General Patrick Burns, The Civil Engineer, Headquarters Air Combat Command, identified USAF’s lack of an airborne crash rescue capability in recent conflicts and strongly recommended the immediate review of all potential airborne capabilities within the DOD (General Patrick Burns, Personal Communication, Jun 15, 2002).

The strategic purpose of assessment, preparation and establishment of contingency airbases in remote locations were identified as the top three strategic purposes that directly impact airborne crash rescue effectiveness. General Burns said “without an airborne RED HORSE capability, which includes crash rescue, the future war fighter will be limited to aerial surveillance and no capability to repair airfields at contingency locations. This will impact combat effectiveness” (General Patrick Burns, Personal Communication, Jun 15, 2002).

Question number two addresses the functions, mission essential tasks, manpower, and skills that would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments.

In 2002, DOD published Joint Publication 1, *Joint Warfare of the Armed Forces of the United States* which sets full-spectrum dominance as one of the four operational goals of the USAF.
Full-spectrum dominance is the ability of the USAF, operating unilaterally or in combination with multination and interagency partner, to defeat any adversary and control any situation across the full range of military operations. Full-spectrum dominance implies that the USAF forces are able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—space, sea, land, air, and information. (Joint Publication 1, 2002).

In order to meet the mission requirements of Joint Publication 1, the USAF must identify functions, mission essential tasks, manpower, and skill requirements that would be required to provide a flexible airborne crash rescue capability.

There are many elements that affect personnel management of airborne firefighters, many of which are similar to those that affect the other DOD military services. Listed below are some of the key and essential functions, mission essential tasks, manpower, and skill requirements established during a RED HORSE strategic planning conference conducted at Langley Air Force Base, Virginia in 2002. During the conference a technical committee consisting of functional managers from crash rescue, explosive ordnance, chemical/biological, and airborne RED HORSE program managers were chartered to draft essential functions, mission essential tasks, manpower, and skill requirements. Functional managers provided a resource of real-world leadership and operational experience due to the fact that many attendees recently deployed in support of Operation ENDURING FREEDOM and Operation IRAQI FREEDOM. It should also be noted that due to the dynamic process of warfare planning and the ability of our adversaries to change their tactics and strategies, there is no single essential element that would be considered mission critical and should take priority over other key and essential requirements. The entire process must be used synergistically or modified using a fact-based decision making process based on real-world
intelligence presented and conducted by trained professionals and approved by the COMAFFOR or AOR Joint Force Commander.

Key to any planning was addressed by Lieutenant Colonel Gary Chesley, Chief, Readiness Branch, Langley Air Force Base, Virginia. He told reporters of the Civil Engineer Quarterly Magazine, “the future of airborne firefighting is a continually evolving science. New fire protection technologies are constantly being developed and implemented throughout the USAF. The strategies of airborne firefighting, however, are not projected to change. The basic core values of protecting life, confining the fire and efforts to extinguish the fire will remain intact. Only the degree of ability and performance will change (Chesley, 2002, p.45). Lt Col Chesley’s main point focused on the need to protect lives and property, key elements to any fire ground operation. The technical committee published the following functions, mission essential tasks, manpower, and skill requirements while focusing their attention on the basic core values—protecting life and property in a combat environment.

Unit cohesiveness is a function that will impact airborne crash rescue capability. In a report, USAF Airborne Concept of Operations (CONOPS), unit cohesiveness is one of the essential ingredients that will make an airborne capability successful (USAF Airborne CONOPS, 2002). It is important to not only look at USAF needs and requirements, but DOD and Coalition capabilities and limitations. This team approach provides a sense of operational direction and establishes the formal chain of command. This report sites the need to rapidly deploy to a designated contingency location so that it can be inserted as an self sustained independent element to support a Joint Force Commander or be linked as part of a Joint task Force Group supporting the Global Strike Task Force (USAF Airborne CONOPS, 2002).

Airborne crash rescue personnel should be able to maintain unsupported operations for 72 hours before additional vehicle fuel, repair materials, food and water are required is also essential
function. Maintaining equipment and consumables is an essential function to combat mission readiness. Air Force Pamphlet 36-2241V1, *Promotion Fitness Examination*, provides clear and concise guidance on maintaining unsupported operations during training and real-world combat environments. It states, airmen who deploy in a hostile environment must be prepared to sustain combat operations and conserve consumables until properly relieved (AFPAM 36-2241V1, 2002, pg 104). Many contingency locations where airborne crash rescue personnel are expected to deploy are in hostile fire areas or in remote areas where the sustainment of forces may not be a viable option. Air Force Pamphlet 36-2241 also requires that combat ground forces must sustainment themselves using whatever means are available such as host-nation assets or on site resources, is important to long-term mission support operations (AFPAM 36-2241V1, 2002, pg 110).

Quick and responsive insertion of forces is a mission essential task that will affect the deployment of airborne forces. Poor insertion of forces and lack of coordination prior to deployment can cause frustration resulting in loss of combat effectiveness and potentially the loss of life. USAF Airborne CONOPS sites the need for deploying crash rescue personnel and their specialized equipment to a contingency location using multiple methods to include: airdrop from a C-130 (small frame cargo aircraft) or C-17 (medium frame cargo aircraft), or air-insert via helicopter, or air-delivered via standard airlift (USAF Airborne CONOPS, 2002).

Airborne teams should consist of six airborne crash rescue personnel as the baseline manpower requirement. To enhance performance and the team’s effectiveness, the USAF Airborne CONOPS postures a senior enlisted officer to be responsible for the team prior to and after deployments operations. In addition, it encourages the deployment of two six man teams as a viable options if personnel are injured in route to the contingency location (USAF Airborne CONOPS, 2002).
The technical committee identified that teams should be tasked, organized and equipped to provide initial operational capability for 14 days. At this time follow-on engineering forces may be required to take over sustainment operations while airborne crash rescue personnel and airborne RED HORSE personnel are redeployed and reconstituted to provide on-call capabilities that would include supporting additional COMAFFOR or the AOR Joint Force Commander’s airfield recovery operations.

Training and equipping existing fire and emergency services personnel as jump-capable and acquiring lighter equipment that is certified as air-droppable, air-insertable, or air-deliverable can be a factor that affects skills requirements. Brigadier General Patrick Burns, The Civil Engineer, Headquarters Air Combat Command General Burns said “the next generation firefighter must have the training, certification, and experience to deploy in a combat environment” (General Patrick Burns, Personal Communication, Jun 15, 2002).

It should be noted that airdrop is only recommended in target areas where the probable unexploded ordnance density and nuclear, biological, and chemical contamination is confirmed by the proper agency to be low to nonexistent. Airborne crash rescue candidates are expected to attend and complete specialized training through the Army Airborne Training School. USAF Airborne CONOPS requires the attentive program management and supervision of airborne training courses to ensure personnel are properly trained and certified.

The technical committee required that physical and mental fitness evaluations be completed prior to attending any airborne Army airborne training school. If airborne program management does not properly prescreening, airborne candidates, personnel could fail to complete the academic or physical fitness course curriculum.

The third question addresses the potential strategic and operational benefits of combat-ready airborne crash rescue capability. According to Chief Enlisted Manager, Chief Master Sergeant
Kevin McConnell, Moody Air Force Base, Valdosta, Georgia, the potential strategic and operations benefits of an airborne crash rescue capability is a cost effective force multiplier that has tremendous potential to impact future combat operations. Chief McConnell stated “quickness, speed, and agility should be the top three strategic and operational benefits that an airborne capability could provide in support of a Joint Force Commander” (Chief Master Sergeant Kevin McConnell, Personal Communication, Jun 15, 2003).

Chief Master Sergeant Darryl Stewart, Chief, Fire and Emergency Services, Moody Air Force Base, Valdosta, Georgia and senior military fire and emergency services advisor to the COMAFFOR during Operation ENDURING FREEDOM and Operation IRAQI FREEDOM took it a step further. In the Operation IRAQI FREEDOM Lessons Learned Review, Chief Stewart said “Assessment, preparation, and establishment of contingency locations by airborne crash rescue personnel could increase the USAF’s information superiority, survivability of ground forces, and prove critical during strategic planning efforts by top USAF and Coalition war planners. The USAF could develop an airborne capability that never before existed in previous operational conflicts. Focusing on the strategic and operational benefits will set the course of action for the future” (Chief Master Sergeant Darrel Stewart, Personal Communication, Jun 20, 2003).

Chief Stewart also provided the airborne crash rescue strategic and operational benefits could enhance the support of the Global Strike Task Force CONOPS: once F-22 and B-2 stealth roll back the enemy offensive threat and uncover basing structure, follow-on forces in the way of airborne RED HORSE personnel could deploy to an air base and fix damaged runways for continued offensive operations long before “deployment” in the sequence of actions. In addition, GeoReach GeoBase capabilities would allow airborne personnel the ability to establish a large amount of information on prospective sites thereby providing on site assessment to reach-back
commanders. Information superiority could be used to gain the competitive edge in warfare planning” (Chief Master Sergeant Darrel Stewart, Personal Communication, Jun 20, 2003).

Captain John Logan, Section Commander, Hulbert Field Air Force Base, Fort Walton Beach, Florida also provided additional information in identifying potential strategic and operational benefits. According to Capt Logan in the Civil Engineers magazine, air-drop, air-insert, or air-deliver of an engineer into a contingency location to assess and repair a damaged airfield could result in significant battlefield situational awareness resulting in greater combat projection capability for the USAF and Coalition Forces. Teams from crash rescue, explosive ordnance, and nuclear biological and chemical (NBC) forces could provide fire protection and aircrew extraction, explosive ordnance detection and disposal, and NBC surveillance to allow coalition forces to operate safely at these contingency locations. These capabilities would provide a tremendous force multiplier for the COMAFFOR and AOR Joint Force Commander (Captain John Logan, Personal Communication, Jun 18, 2003).

In summary, the literature review illustrates two key unclassified legislative directives and three key DOD directives that validate the need for an airborne crash rescue capability by requiring the USAF to be prepared, equipped and trained to fight the next war or MOOTH operation. Senior USAF leaders have identified USAF’s lack of an airborne crash rescue capability in recent conflicts and strongly recommended the immediate review of all potential airborne capability within the DOD. It was noted that the lack of an airborne capability has impacted the USAF’s ability to support of major theater wars or MOOTH operations. Across the DOD, a common understanding of a strategic purpose of assessment, preparation and establishment of contingency airbases in remote locations were identified as the top three strategic purposes that impact future airborne combat effectiveness.
A technical committee consisting of functional experts identified essential functions, mission essential tasks, manpower, and skills that would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments. These may serve as a template to provide war planners a common understanding of what would be required if an airborne capability was established.

Finally, key and essential leaders, experienced due to participation in recent operations, identified potential strategic and operational benefits of combat-ready airborne crash rescue capability. These benefits could provide the basic foundation to market the airborne capability to DOD and USAF senior leaders.

Procedures

This is an action research project supported by the evaluative research method to validate the need for an airborne crash rescue capability using unclassified federal legislation and DOD directives thereby improving the USAF’s ability to rapidly deploy an airborne crash rescue capability, with the RED HORSE squadrons, to prosecute the nation’s future air wars and to protect and defend the Constitution of the United States of America. The topic was decided on after investigating recent operational lessons learn reviews identified the need for an airborne capability in support of Operation ENDURING FREEDOM and Operation IRAQI FREEDOM.

The research began by conducting a comprehensive literature review. Literature sources from DOD, USAF and Headquarters Air Combat Command were identified and reviewed to provide the baseline standard from which to develop a fact-based solution to the research problem. It should be noted that literature sources from the DOD included the review of operational directives from the Department of the Air Force, Department of the Army, Department of the Navy, and United States Marines. In establishing the practical foundation of an airborne crash rescue capability, these directives were relevant to the concept of the Department of Defense’s overall
strategic warfare deliberate planning methods and special operations capabilities. The literature review involved an evaluation of learning resource materials, textbooks, fire service trade journals and newspapers, applied research projects on related topics, and textbooks obtained from the National Fire Academy’s Learning Resource Center in July, 2003. Some research materials used in this applied research project were obtained through the Military Library inter-library loan service. The literature review also commenced during the International Fire Chief’s Conference at the Dallas Convention Center, Dallas, Texas in August, 2003. In addition, extensive electronic search of Fire Engineering, Fire Chief’s, and Firehouse Magazine web sites were conducted.

Chief Master Sergeant Darryl Stewart, Chief, Fire and Emergency Services, Moody Air Force Base, Valdosta, Georgia and senior military fire and emergency services advisor to the COMAFFOR during Operation ENDURING FREEDOM and Operation IRAQI FREEDOM, provided background information on the potential strategic and operations benefits of an airborne crash rescue capability.

Chief Master Sergeant Kevin McConnell, Chief, Security Forces Squadron, Moody Air Force Base, Valdosta, Georgia, provided background information on the potential strategic and operations benefits of an airborne crash rescue capability.

Captain John Logan, Section Officer, Hulbert Field, Fort Walton Beach, Florida provided background information on the potential strategic and operations benefits of an airborne crash rescue capability.

Lieutenant Colonel Gary Chesley, Chief, Readiness Branch, Langley Air Force Base, Virginia provided background information on fire protection basic core values.

The author conducted a face-to-face interviews to supplement support material for this applied research project. An interview was conducted with Chief Enlisted Manager, Chief Master Sergeant Kevin Frayer. Chief Frayer was selected for his extensive background and experience as
the senior enlisted officer responsible for USAF’s Airborne RED HORSE program management. In addition, Lieutenant Colonel James Frishkorn, Chief, Command Airborne RED HORSE Program was also selected for his extensive background and experience as the Headquarters Air Combat Command staff officer in charge of Command airborne program management. Both military program managers were asked the following five interview questions:

1. What is your position as a member of ACC Staff?

2. What are the potential strategic requirements for the development of an airborne crash rescue capability?

3. What are the functions, mission essential tasks, manpower, and skill requirements necessary to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

4. What are the strategic and operational benefits of combat-ready airborne crash rescue capability?

5. Does the Department of Defense (DOD) have a service component that is staffed, funded, and organizationally structured to support the CSAF’s initiative of an airborne RED HORSE combat engineer capability?

In order to make a fact-based recommendation, legislation, standards, periodicals and relevant data were reviewed, analyzed and incorporated as appropriate.

Limitations and Assumptions

Due to the length of DOD’s deliberate planning process, the author was limited to published DOD, USAF, and Headquarters Air Combat Command directives. Due to recent world conflicts, the potential threats from North Korea, Iran, Syria and other potentially hostile countries, and the shift of theater campaign objectives of our adversaries, new directives have not been published for operational use. This could impact the airborne crash rescue capability development
for the functions, mission essential tasks, manpower, and skill requirements. Due to the six month
time limitation placed on the EFO course work and limitation of available historical research,
source documents were limited to the past two years. These restrictions may have caused the author
of this report to omit lessons learned from past conflicts. Due to national security reasons and the
need for information protection, research was limited to the review of unclassified documents,
intelligence, and face-to-face interviews. As a result, these limitations may have altered the scope
of this applied research project.

In addition, DOD warfare deliberate planning is not an exact science. USAF’s strategic
warfare deliberate planning methods are only as good as the executive planners and the accurately
of their classified and unclassified intelligence information. It is assumed that the USAF executive
planners are trained and certified in warfare planning and the intelligence they use to create war
plans is accurate and timely. It is assumed that all interviewed subjects provided accurate and
factual information. In addition, it is assumed that all resources reviewed for this projected were
produced with objectivity and unbiased research.

Information was limited to Major Command level sources. The author was unable to obtain
General Officer (4-Star) vision or strategic direction. This may have limited information sources
resulting in potential procedural modifications, a redirection of strategic planning efforts or a
change in assumptions.

The USAF has never had an airborne combat capability so there was not database of statistics
from which to gather facts for statistical trend analyses. Reviewed source documents and
interviews were conducted mainly from military published directions or military personnel. This
may have caused some bias in this applied research paper.
Definition of terms

Rapid Engineer Deployable Heavy Operations Repair Squadron, Engineers – Three squadrons of personnel that are postured to provide commanders a rapidly deployable engineer and support capability.

Airdrop – The ability to drop equipment, manpower, and vehicles via parachute or special delivery systems.

Air Combat Command – Headquarters at Langley Air Force Base, Virginia is the primary provider of air combat forces. The flying mission operates fighters (F-16, F-15, FA-22), bombers (B-1, B-2, B-52), reconnaissance (VC-25, C-130), battle management, and rescue (UH-60) and theater aircraft (C-12, C-21). As the force provider, Air Combat Command organizes trains, equips, and maintains combat-ready forces for rapid deployment and employment while ensuring strategic air defense forces are ready to meet the challenges of peacetime air sovereignty and wartime air defense. Air Combat Command provides nuclear forces.

Air-delivery – The ability to delivery equipment, manpower, and vehicles by line-haul using special transportation systems.

Air-insertion – The ability to insert equipment, manpower, and vehicles by fixed wing or helicopter insertion.

Coalition Force – A force composed of military elements of nations that have formed a temporary alliance for specific purpose

Commander, Air Force Forces – Derives authority from the Joint Force Commander, has the authority to exercise operational control, assign missions, directs coordination among subordinate commanders, redirects and organize forces to ensure unity of effort in the accomplishment of the overall mission.
Global Strike Task Force – A strike force comprised of large, medium, and small-frame aircraft, personnel, and support equipment whose primary mission is to provide airlift and transportation to support the Joint Force Commander.

GeoReach – The ability to provide global position technology and survey equipment capabilities to assess airfield and contingency locations.

Joint Forces Commander – A combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over joint forces.

Joint Tasked Force – A force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint forces commander.

Major Command – Represents a major Air Force subdivision having a specific portion of the Air Force mission. Each Major Command is subordinate to Headquarters USAF.

Military Operations Other Than War – Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war.

Operation ALLIED FORCE – A period between 24 March 1999 – 10 June 1999 where the United States deployed forces in support of forces in Serbia to accept North Atlantic Treaty Organization terms for ending the conflict in Kosovo.

Operation DESERT SHIELD – A period between 7 August 1990 – 16 January 1991 where the United States deployed its forces to guard against further Iraqi aggression in the Southwest Asia region and to prepare to expel the Iraqi Army from Kuwait.

Operation DESERT STORM – A period between 17 January 1991 – 28 February 1991 where the United States set about putting together a coalition of nations to expel Iraq from Kuwait. The
primary purpose was to use all necessary means to implement United Nations Security Resolution 660 which required Iraq to get out of Kuwait.

Operation ENDURING FREEDOM – A period between 11 Sep 01 to present where the United States deployed forces to Afghanistan and surrounding countries. The Operation served a twofold purpose: a humanitarian airlift to the oppressed people of Afghanistan and to conduct military actions to root out terrorist and their supporters.

Operations IRAQI FREEDOM – Present operations in Iraq to remove present governmental infrastructure.

Squadron – The basic unit of the Air Force. A squadron may be either a mission unit, such as an operational flying squadron, or a functional unit, such as a civil engineer, security forces, or transportation squadron. Squadrons vary in size according to responsibility have approximately 50 to 750 personnel assigned.

Results

The results for this applied research project were complied using four sources. The first source was an extensive document review of unclassified federal legislation and DOD directives that provided the practical foundation to validate the need for an airborne crash rescue capability. The second source included articles from experts in the field of fire and emergency services and airborne capabilities. The third was a face-to-face interview with Chief Enlisted Manager, Chief Master Sergeant Kevin Frayer who is the Command RED HORSE Program Chief Enlisted Manager responsible for the Airborne RED HORSE program management at Langley AFB, VA. The last source was a face-to-face interview with Lieutenant Colonel Frishkorn, who is the Chief, Command Airborne RED HORSE Program and responsible for the Command’s airborne program management.

The answers to the research questions are as follows:
1. What are the unclassified federal legislation and DOD directives that validate the need for an airborne crash rescue capability?

Two key unclassified legislative directives, The National Security Act of 1947 and The Key West Agreement of 1948, and three key DOD directives, Joint Vision 2020, Air Force Department Document 1, and Lesson Learned Reviews from recent conflicts, were reviewed to validate the need for an airborne crash rescue capability by requiring the USAF to be prepared, equipped and trained to fight the next war or MOOTH operation. The literature review found that no unclassified legislation or DOD directive specifically validated the need, in administrative form, for an airborne crash rescue capability. However, unclassified legislation and DOD directives requires USAF forces be able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—space, sea, land, air, and information.

The final conclusions were made for Research Question One:

A) Use Joint Vision 2020 as the primary supporting directive to validate the need for an airborne crash rescue capability in the DOD.

B) Use Air Force Department Document 1 as a source directive to validate the need for an airborne crash rescue capability in the USAF.

2. What functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

A technical committee consisting of functional experts drafted the following functions, mission essential tasks, manpower, and skills that would be required to provide a flexible capability. There are as follows:
Unit cohesiveness was an essential function that would impact airborne crash rescue capability.

Sustainability to maintain unsupported for 72 hours was an essential function.

Quick and responsive insertion of forces was a mission essential task that would affect the deployment of airborne forces.

Six airborne crash rescue personnel, with a senior enlisted officer in charge, was the baseline manpower requirement for team development.

Training, equipping, and acquiring lighter equipment that was certified as air-droppable, air-insertable, or air-deliverable would affect skills requirements.

The final conclusions were made for Research Question Two:

A) Functions, mission essential tasks, manpower, and skills were drafted from a technical committee consisting of functional managers with years of experience. The committee drafted a comprehensive template to design an airborne crash rescue capability. This will result in a comprehensive template and serve as a source document to validate the need for an airborne capability.

b) Results show the USAF could adopt and implement the technical committee’s functions, mission essential tasks, manpower, and skills using existing personnel and infrastructure within fiscal budgetary controls and without degrading mission effectiveness.

3. Are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

Since the airborne capability does not exist, the results from the following personnel are based on their 20 plus years of experience, formal training, and time spent on researching airborne crash rescue capabilities. The inputs provided by Chief Enlisted Manager, Chief Master Sergeant Kevin McConnell, Moody Air Force Base, Valdosta, Georgia and Chief Master Sergeant Darryl
Stewart, Chief, Fire and Emergency Services, Moody Air Force Base, Valdosta, Georgia, basically centered on mission focus which result in precision engagement and agile combat support. Chief McConnell identified quickness, speed, and agility as the top three strategic and operational benefits resulting in rapid mobility and air superiority for the deployed commanders at a contingency location. Chief Stewart focused on information superiority which results in the USAF and Coalition force having better situational and operational awareness.

The following conclusions were made from the interviews for question 3. It should be noted that since the USAF does not have an airborne capability, research material is limited and a pool of USAF airborne experts is very small. However, the inputs and comments provided by the interviewees were critical to the outcome of this applied research project. The interview results with Lieutenant Colonel James D. Frishkorn, Chief, Command RED HORSE Program and CMSgt Kevin J. Frayer, Command RED HORSE Program Chief Enlisted Manger provided valuable insight and yielded the same basic results in their views of the future airborne vision and mission objectives.

Both personnel validated the need for an airborne capability within the USAF and provided additional guidance which resulted in greater marketability of future airborne initiatives. An Airborne Crash Rescue Concept of Operations (CONOPS) is included in the Appendix C. The development of the Airborne CONOPS was a result of the need to standardize operating procedure an to ensure consistency with other functional RED HORSE specialties. The results from both federal and military administrative directives and interviews provided the baseline to develop this CONOPS. Due the dynamic war environment and the abilities of our adversaries, the CONOPS should serve as a template to build an airborne program.
Discussion

In comparing the literature review and the results from the interviews conducted for this applied research project, there are several related characteristics focusing on mission readiness and the need for the USAF to prepare for future wars or MOOTWs. The mission of the USAF will always continue to evolve based on homeland defense risk mitigation postures, upgrades in surveillance and intelligence electronic systems, upgrades in technologies and equipment systems, and the abilities of our adversaries to adapt to the USAF’s offensive strategy. However, according to Air Force Pamphlet 36-2241V1, the National Security Act of 1947, is the primary source directive which requires the USAF--to prepared, equipped, and trained to conduct the nation’s air wars and prepare airmen protect and defend the Constitution of the United States of America (AFPAM-2241V1, 2002, pp. 35-36). Lieutenant Colonel Gary Chesley concurs with the USAF evolution processes when he said “the future of airborne firefighting is a continually evolving science. New fire protection technologies are constantly being developed and implemented throughout the USAF” (Chesley, 2002). Lesson Learned Reviews from recent conflicts also identifies the lack of an airborne crash rescue capability and may result in the shifting of capabilities, resources, or strategic visions.. The author has witnessed the tremendous transformation of capabilities-based strategies with regards to getting the USAF ready for the future. The USAF is an innovative, adaptive force. Airmen challenge themselves after every mission and after every day. This kind of continuing innovation over time leads to dramatic improvement and sustained efforts to improve. Technological innovations will continue to be accompanied by innovations in doctrine, organization, training, and equipping USAF forces. Theses innovations will prepare airmen to conduct and sustain decisive operations in future wars and MOOTWs.
Information found while completing this applied research project indicates that no unclassified legislation or DOD directive specifically validates the need, in administrative form, for an airborne crash rescue capability. However, DOD published Joint Publication 1, requires the USAF forces to be able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—space, sea, land, air, and information (AFPAM). General Burns advocates the use of tailored forces when he identifies the USAF’s lack of an airborne crash rescue capability in recent conflicts and strongly recommended the immediate review of all potential airborne capabilities within the DOD. (Joint Publication 1, 2002). This strategic vision is also shared by Lieutenant Colonel Frishkorn when he said “preparations to ensure follow-on forces have the right tools and equipment once they deploy into a combat environment is essential to the airborne capability (Frishkorn, 2003).

According to Air Force Pamphlet 36-2241V1, the Key West Agreement of 1948, requires the Air Force to organize, equip, and provide forces for joint amphibious, space, and airborne operations in coordination with the other military services, and to provide for their training in accordance with joint doctrine (AFPAM 36-2241V1, 2002, pp. 36-37). DOD directives provides the vision to prepare, train, and equip for future war while learning from the lessons learned from past conflicts (Joint Vision, 2020; Air Force Department Document 1, 2002; USAF Lessons Learned Reviews, 2003). The author believes that the distinct capabilities of an airborne crash rescue capability would be incomplete without looking at the relationship with DOD directives. These directives guide the course of actions of the USAF. Each of these directives complements and reinforces each other. The aggregate of these three directives, along with their interaction with information superiority and innovation, allows the USAF to dominate a operations from humanitarian assistance to full scale high intensity conflicts.
Currently, the USAF does not have an airborne crash rescue capability and requires other services to assume the airborne mission. The author concluded that the lack of an USAF airborne capability impacted the combat effectiveness of not just the USAF, but the DOD as well as our Coalition Forces. General Burns supports this position by commenting that “the lack of an airborne, which includes crash rescue, the future war fighter will be limited to aerial surveillance and no capability to repair airfields at contingency locations. This will impact combat effectiveness” General Patrick Burns, Personal Communication, Jun 15, 2002).

In addition, recent lessons learned reviews from past conflicts have identified the lack of an airborne crash rescue capability and the limitations it put on the war planner. The author further concludes that lack of an airborne capability has resulted in unnecessary delays and impacted USAF mission readiness. This lack of capability limits the USAF’s full potential to support the COMAFFOR or AOR Joint Force Commander.

The strategic purpose of assessment, preparation and establishment of contingency airbases in remote locations is identified as the top three strategic purposes that directly impact airborne crash rescue effectiveness. The literature review and interviews conducted by the author clearly identifies a common understanding on the strategic purposes of a potential airborne capability. Lieutenant Colonel Frishkorn agreed with General Burns’ direction and strategic purposes of assessment, preparation and establishment of contingency airbases is the right approach (Frishkorn 2003). The author agrees that this building block approach ensures consistency throughout the entire airborne process. The strategic purposes are built upon foundations of comprehensive doctrines, distinctive capabilities, and historical capabilities-based research. These purposes will be tested rigorously through experimentation to determine which have practical applications worthy of development. Finally, they are coordinated by senior USAF military and civilian leaders and validated by top DOD civilian personnel. The literature review and interviews provided a common
understanding and provides the groundwork for future consideration, implementation, and evaluation.

As a result of the interviews conducted with Lieutenant Colonel James D. Frishkorn and Chief Master Sergeant Kevin J. Frayer, it was discovered that the functions, mission essential tasks, manpower, and skills necessary to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments could be adopted using existing USAF resources and within fiscal budgetary constraints. They both provided strategic and operational benefits of an airborne crash rescue capability which could turn rapidly deploy, with an airborne RED HORSE squadron, a capability that could support the COMAFFOR or AOR Joint Force Commander (Frishkorn, Fraher, 2003). The author believes the ultimate goal of the USAF is to accomplish the objectives as directed by the President. The ability of the USAF to operate unilaterally or in combination with Coalition Forces depends on the functions, mission essential tasks, manpower, and skills necessary to provide a flexible capability. Both strategic and operational benefits provide commanders with unmatched speed agility to achieve operational objectives quickly and decisively. The success of these benefits and the ability their ability to affect combat effectiveness depends on in-depth analysis to identify and reduce inconsistencies. The results of these interviews provide a common understanding and suggest that the capability could be adopted using existing resources and within budget constraints. The author also believes that existing resources and within budget constraints are two key issues that could be used to market the airborne crash rescue capability as a viable option to senior USAF military and civilian personnel.

Other potential strategic and operations benefits were also identified by other seasoned military personnel. According to Chief Master Sergeant Kevin, potential strategic and operations benefits of an airborne crash rescue capability are a cost effective force multiplier that has tremendous potential to impact future combat operations. In addition, Chief Master Sergeant Darryl
Stewart, suggested that increased airborne capability may affect the USAF’s information superiority, survivability of ground forces, and prove critical during strategic planning. The author feels it would be beneficial for the USAF to consider these cost benefits as supporting evidence in the need to validate the need for an airborne crash rescue capability.

Lieutenant Colonel Gary Chesley, also provide fresh look at the potential for an airborne capability. Since the future of airborne firefighting is a continually evolving science, new technologies are constantly being developed and implemented. The basic core values of protecting life, confining the fire and efforts to extinguish the fire will remain intact. Only the degree of ability and performance will change (Chesley, 2003). The author agrees with these sound fundamental guidelines and believes that with the implementation of an airborne crash rescue capability, the USAF may attract, retain, and promote more qualified men and women in the USAF. This fresh look would also enhance the programs survivability, continuity, and increase situation awareness of younger airmen and result in better trained, better educated, more physically fit airmen serving in the USAF.

Organizational implications, if validation of an airborne crash rescue capability is not support, will not significantly degrade the USAF mission. The author believes that regardless of peacetime or in a combat environment, the men and women of the USAF are taught to be innovated and solve problems using whatever means and resources are available. America’s Air Force is focused on air and space domain as its primary mission strategy. Precision engagement, dominant maneuver, and agile combat support capabilities are impacted by the lack of an airborne capability. This lack of capability has shown that it impacts the missions and functions of other DOD services and Coalition Forces. When duty calls, lack of an airborne crash rescue capability will not prevent the USAF from meeting its operational objectives nor significantly degrade the camaraderie the USAF shares with our DOD services or Coalition Forces.
Recommendations

As a result of this applied research project, the following recommendations for the future are addressed:

The USAF must develop, fund, and implement a combat-ready airborne crash rescue capability that could rapidly deploy with the RED HORSE Commander to support the COMAFFOR or AOR Joint Force Commander.

The USAF should formalize the establishment of a technical committee consisting of functional experts from across the Air Force. The committee would be required to develop the vision, mission statement, strategic goals, and market the airborne capability to senior DOD and USAF personnel. In addition, the committee would be chartered to complete all necessary tasks to establish an airborne capability from cradle to grave.

The USAF should develop an aggressive marketing plan to educate DOD and USAF senior military and civilian personnel. Using lessons learned reviews from recent conflicts as a practical foundation, the marketing plan should utilized both classified and unclassified media outlets as a way to educate military and civilian personnel on the importance of an airborne capability as a viable alternative in future war or MOOTH planning efforts. The marketing plan should raise situational awareness, and, hopefully, result in a change in DOD doctrine, philosophy, and strategic planning.

The USAF should continue to concentrate airborne capabilities based training efforts in the joint environment arena. Since the USAF will face the challenge of mastering multifaceted conditions due to the physical and technical training required to become airborne certified, the USAF should develop a cross-flow communication network primarily with the United States Army. Initially, the demands of funding, training and equipping airborne forces will place a premium on limited resources—manpower, time, funding. Establishing a cross-flow communication network
would standardize joint force capabilities, increase combat effectiveness, and significantly reduce cost expenditures.

The USAF should develop a formal selection process for prescreening airborne candidates. The process should include the candidate passing academic, physical fitness, psychological, and medical screening qualification standards as the prerequisite before they applying for formal selection. Prescreening will increase the chances of selecting the best candidate for the airborne position. Proper coordination between functional areas will result in a comprehensive prescreening process.

The USAF should develop and adopt an airborne quality control self assessment plan to ensure adherence to fiscal and regulatory consensus standards. Annually, or as required, Fire Chiefs would be required to complete, and submit for review, the self assessment plan. This would provide Command-level oversight and ensure local airborne program management meets or exceeds current national consensus standards, as well as, federal, state, and local regulatory requirements. In addition, it would ensure the airborne capability remains lighter, leaner, faster, cheaper, and more lethal from previous generations.

The USAF should partner with commercial enterprises and attend national and international trade shows, such as the International Fire Chief’s Conference, to explore the latest technological advancements in equipment and technical support systems. This cross-flow of information would provide commercial enterprises the opportunity to display and market the latest advances in commercial technology and provide Fire Chiefs the ability to identify shortfalls in current market capabilities. It would also educate Fire Chiefs on future opportunities and capabilities that could provide Fire Chiefs the ability to justify funding sources to incorporate the latest advances in airborne research.
References


National Fire Academy. (2002, June). *Executive fire officer program operational policies and procedures applied research guidelines*. Emmitsburg, MD: Author
APPENDIX A

Applied Research Project
National Fire Academy’s Executive Officer Program

Project Title: United States Air Force Combat Airborne Crash Rescue Firefighters, A New Vision for the 21ST Century

Summary of Interview: Lieutenant Colonel James D. Frishkorn (USAF)
Chief, Command RED HORSE Program

Date: 15 Sep 2003

Location: HQ Air Combat Command
129 Andrews St. Suite 102
Langley Air Force Base, VA
Bldg 662

1. What is your position as a member of ACC Staff?
   - I am the Headquarters Air Combat Command’s senior ranking Air Force officer responsible for the Command’s RED HORSE program management. I’m responsible for airborne program develop to include staffing and equipment procurement. I currently oversea a fifteen million dollar annual budget and provide indirect support to three squadrons consisting of 404 military civil engineer personnel.
   - Lieutenant Colonel Frishkorn has 20+ year military experience.

2. What do you think are the unclassified strategic purposes for the development of an airborne crash rescue capability?
   - In my opinion, Gen Burns’ direction and strategic purposes of assessment, preparation and establishment of contingency airbases is the right approach. This building block approach ensures consistency throughout the entire airborne process. On the ground assessment by qualified airborne personnel ensures you can deploy in the right capability and number of personnel. Preparations to ensure follow-on forces have the right tools and equipment once they deploy into a combat environment. And establishment of military personnel for long
term operations. These three key but essential phases play a significant role in the USAF combat capability.

3. What functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

- There are many items that airborne RED HORSE engineers could provide:
  -- Short to long term sustainment depending on the availability of fixed or rotary wing aircraft and the threat potential at the contingency location. It is assumed that airborne crash rescue personnel would be able to maintain unsupported operations for 72 hours. Depending on operational conditions and environmental assessments, time would potentially be alternated to the mission objectives.
  -- Contract officers could be deployed to support potential Airborne RED HORSE Engineer Officers. This would potentially limit processing time for contract warrants and expedite engineering material and equipment procurement in austere deployed environments.
  -- Supporting forces would organize under a preset command structure. Airborne RED HORSE Flights and supporting forces are organized and equipped to provide initial operational capability for 14 days while follow-on forces would arrive to reconstitute airborne forces.

4. Are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

- Rapid deployment capability
- Rapid utilization of strategic airfields necessary for combat sortie generation
- Flexibility in air superiority
- Limited deployment cost

- Real time information and onsite assessment using the latest technologies

5. Does the Department of Defense (DOD) have a service component that is staffed, funded, and organizationally structured to support the CSAF’s initiative of an airborne RED HORSE combat engineer capability?

- No. As of now, no airborne capabilities of this kind exist in the DOD. The Army and Marines have an airborne capability but their organizational requirements and mission statements are not designed for USAF contingency operations. The Army and Marines have a role in the early stages of perimeter security but they don’t have the ability to sustain USAF mission task requirements. Due to current world events, the USAF is working with the Army and Marines to create a seamless operation thus allowing DOD and coalition forces the ability to operate safely at a deployed location.
APPENDIX B
Applied Research Project
National Fire Academy’s Executive Officer Program

Project Title: United States Air Force Combat Airborne Crash Rescue Firefighters, A New Vision for the 21st Century

Summary of Interview: Chief Master Sergeant Kevin J. Frayer (USAF)
Command RED HORSE Program Chief Enlisted Manager

Date: 1 Aug 2003

Location: HQ Air Combat Command
129 Andrews St. Suite 102
Langley Air Force Base, VA
(Bldg 662)

1. What is your position as a member of ACC Staff?

- I am the Headquarters Air Combat Command’s senior ranking enlisted officer responsible for management and oversight for the airborne RED HORSE program. I’m responsible for program implementation, procurement of equipment and all training programs associated with the airborne program. I provide guidance to explosive ordnance, readiness and crash rescue personnel as well as provide senior leadership with current updates concerning airborne shortfalls.

- Chief Frayer has 20+ year military experience.

2. What do you think are the unclassified strategic purposes for the development of an airborne crash rescue capability?

- Airborne is the next generation capability the USAF must have to win and reduce the loss of life. The capability must be light, lean, and able to deploy within 24-hours. Personnel must be extensively trained and equipped to fight in any environment. The strategic purpose for the development of an airborne capability focuses on three strategic purposes (assessment, preparation,
and establishment of contingency airfields) and the capabilities it provides to the USAF. The airborne capability should fit nicely with the Air Force’s Vision.

3. What functions, mission essential tasks, manpower, and skills would be required to provide a flexible capability to adapt to various known and unknown airfield conditions and threat environments?

- There are many items that airborne RED HORSE engineers can provide:
  -- The ability to deploy as a rear echelon to other tactical combat forces.
  -- The capability can be inserted as an independent element to support a TCC or be linked as part of a CRG supporting the GSTF.
  -- Airborne RED HORSE combat engineer equipment can be inserted at a location using multiple methods to include: airdrop from C-130 or C-17 aircraft, air-insert via helicopter, or air-delivered via standard airlift.
- At this time follow-on engineering forces are required to take over sustainment operations while Airborne RED HORSE Flights and supporting units are redeployed and reconstituted to provide on-call capabilities supporting additional COMAFFOR airfield recovery operations

4. Are there any potential strategic and operational benefits of combat-ready airborne crash rescue capability?

- Cheaper cost and reduced footprint
- Better utilization of forces
- Greater ability to achieve United States (US) and Coalition theater campaign objectives

5. Does the Department of Defense (DOD) have an organizational structure that is staffed, funded, and organizationally structured to support the CSAF’s initiative of an airborne RED HORSE combat engineer capability?
- No. Although the United States Army has a combat engineer capability, the Army does not provide this airborne capability to the USAF. In addition, the Army is not staffed, trained, nor funded to support USAF contingencies in the theater of operation. If the airfield in question is not secure, the Army will secure the perimeter until the threat is reduce to an acceptable level. Once secured, the airborne RED HORSE, with airborne crash rescue personnel, will assume command and assess, prepare and establish contingency airbases for the COMAFFOR.
Air Force Airborne Crash Rescue
Concept of Operations

Chief Master Sergeant Timothy J. Seigal, Sr.
Headquarters Air Combat
15 Sep 2003

FOR TRAINING ONLY
NOT FOR IMPLEMENTATION
Section 1 – Introduction: Basic Concept

1.1 This basic concept of operations (CONOPS) provides operational guidance for Air Force Airborne Crash Rescue Team. Airborne Crash Rescue Teams will augment unique RED HORSE Airborne Engineers. This force will be rapidly deployable and capable of self-sustained operations for a minimum of 72 hours provided there is a potable water source. Firefighters will be nationally certified and trained to support low threat combat operations involving short-term (2-days) bare base or forward operating locations, or other major theater war missions at contingency operating locations, aerial ports, en route bases, or critical stateside bases where the threat environment is moderate to low. Airborne Crash Rescue Teams will be lightweight, mobile, and expected to provide limited fire protection and rescue services.

1.2 Airborne Crash Rescue Team services include: limited 24-hour coverage for an Aircraft Rescue Fire Fighting Vehicle in support of a single small frame aircraft or helicopter operation; limited 24-hour aircrew crash rescue; emergency medical technician level of care and patient stabilization to all deployed combat troops; on-site assessment of fire protection capabilities and limitations thus providing real-world assessment of existing airfield and equipment operations; and provide technical advice and recommendations to reach-back commanders on future fire protection and emergency services requirements and capabilities using on-site resources.

1.3 Airborne Crash Rescue Teams will be inserted into the target location via specialized delivery methods to include air dropping and air insert. Airborne and air insert methods are reserved when no other access options are available. Air insert insertion includes rappelling as well as helicopter landing.

1.4 Airborne Crash Rescue Teams will not capture territory or other military objectives and are not capable of performing forcible entry. This capability will operate in areas secured by other U.S. or
coalition forces or open areas not held by hostile forces. Forcible entry is reserved for U.S. Army and Marine forces.

Section 2 – Purpose and Objective

2.1 Purpose: This CONOPS provides for the Commander of Air Forces (COMAFFOR) the available forces to perform limited small-frame aircraft fire suppression, aircrew rescue, and intermediate level medical operations in austere locations with limited access for the expansion of combat and support operations.

2.2 Objectives:

2.2.1. Establish an Air Force Airborne Crash Rescue capability to support COMAFFOR in contingency operations to achieve theater campaign objectives.

2.2.2. Identify the functions, mission essential tasks, manpower and skill requirements necessary to provide a flexible capability to adapt to various known and unknown locations and threat environments.

2.2.3. Provide a framework for determining equipment resources and manpower training requirements to achieve initial operating capability as soon as possible but not later than December 2002.

Section 3 – Assumptions

3.1. Deployment of this capability will be limited to medium and low threat environments when supported by ground combat forces.

3.2. The capability can be inserted as a whole or phased in echelons over a 4 hour period.

3.2.1. The capability can be linked to the 820th Contingency Response Group (CRG) through augmentation.

3.2.2. The capability can be linked to the Airborne RED HORSE through augmentation.
3.3. Airborne Crash Rescue equipment can be inserted at a location using a multiple methods to include: airdrop and air insert methods.

3.3.1. Airdrop operations are constrained by weight. Individual should not drop with more than 65 lbs on their person. Air bundles dropped should be limited to 100 lbs and may drift several miles from the intended target location.

3.3.2. Air insert operations are constrained by weight and distance restrictions due to helicopter capabilities. Weight and distance restrictions are approximately 25,000 lbs and 90 miles respectively.

3.4. Airborne Crash Rescue Teams will be able to maintain unsupported operations for a minimum of 72 hours before additional logistics support is required.

3.5. Airdrop is only recommended in target areas where the probable UXO density is confirmed to be low. When the target location is a high-density field, the Fire/Rescue Teams should be inserted into a safer area and should reach the target area by land movement.

3.6. Airborne Crash Rescue personnel should be inserted into target areas during daylight hours to perform basic-level UXO assessment and identification operations.

Section 4 – Mission Essential Tasking Listing (METL)

4.1. Mission Essential Tasking Listing for Airborne Crash Rescue Teams shall include, but not limited to the following: all standard Fire Protection METLS as outlined in the deployment tasking order.

Section 5 – Personnel

5.1. Firefighters identified to perform this special capability will have the necessary skills and training to be deployed by special insertion methods to include air drop and air insert. Firefighters identified will have skills required to complete all Fire Protection METL skills commensurate with
their grade and the special METL specifically required for Airborne Crash Rescue. Airborne Crash Rescue Teams will be structured using a modified 4F9FP Unit Type Code team concept.

5.1.1. The Airborne Crash Rescue Team would consist of six Fire Protection Specialists as listed below (rank substitution is not authorized). All firefighters will be emergency medical technicians (intermediate level):

1. Fire Protection Supervisor (3E771) (MSgt Core Position)
5. Fire Protection Firefighter (3E751) (SSgt Core Positions)

5.1.2 Firefighters identified to perform airborne duties will be excluded from normal AEF rotations and scheduled for a 120-day on-call rotating cycle.

5.1.3 Firefighters identified to perform airborne duties will be assigned an AFSC prefix/suffix designator that will selectively classify them as an Airborne Crash Rescue Team member. AFSC designators will classify firefighters for special duty and require firefighters to complete a minimum 3-year controlled tour after completion of all training and certification requirements.

Section 6 – Equipment

6.1. Primary Airborne Crash Rescue teams will be equipped with a modified, helicopter transportable (when fully loaded), 4 x 4 aircraft rescue firefighting vehicle. Vehicles must be equipped with enough crew positions to transport all four team members and be able to transport a single or dual agent fire suppression skid unit. The skid unit will be able to operate in extreme hot and cold weather conditions.

6.2. Airborne Crash Rescue Teams will deploy with an air transportable quick reaction kit. This kit will include a satellite telephone, two portable communication devices, hand tools, rescue saw, self-contained breathing apparatus (SCBA) units, fire protection clothing, and applicable support equipment. In order to reduce weight and size restrictions, the rescue saw, SCBA units and fire
protection clothing would be designed using the latest technological advances. All equipment items will be compartmentalized on the aircraft firefighting vehicle.

6.3. Team members will be individually equipped with personal gear, authorized weapon, and chemical protective clothing.

Section 7 – Execution

7.1. Two 6-man primary teams and one 6-man alternate team will be assigned at two ACC CONUS installations. Both locations would streamline command and control, allow for rapid response to different major theater of operations (PACAF/USAFE), and limit the manpower impact on the Fire Protection career field.

7.2. Airborne Crash Rescue Team installations will be scheduled in a two-phase deployment process. During Phase 1 (On Call Status), firefighters would be activated for a period of 120 days. During this period, firefighters would be subject to short notice deployment taskings. In order to meet mission and training requirements, on-call fire teams would be fully mission ready and equipped to respond within 24 hours. During Phase II (Non Call Status), firefighters would be to reconstituted and provided certification/proficiency training in preparation for the next on-call period. Upon completion of the 120-day duration, each installation would alternate on-call/non-call deployment phases. Once the 240-day cycle is completed, the entire process alternate back to the original scheduled process.

Section 8 – Supporting Forces

8.1. Airborne Crash Rescue will not require supporting forces for mission execution with the exception of security or combat forces when operating in areas with enemy or hostile activity.

Section 9 – Summary

Airborne Crash Rescue is a special capability to provided COMAFFOR the ability to provide limited fire/rescue and medical services to support RED HORSE elements in austere locations not
accessible by normal land movement. The primary mission capability will be to provide firefighting/rescue and emergency medical support and conduct an on-site assessment for potential future (follow-on) emergency service requirements.