RESCUE MISSION REPORT

August 1980

Holloway

#158

STATEMENT OF ADMIRAL J. L. HOLLOWAY, III, USN (Ret.)
CHAIRMAN, SPECIAL OPERATIONS REVIEW GROUP

At the outset, let me clarify that the document which you have received is not the verbatim report of the Special Operations Review Group. You have an unclassified version of a highly classified report which has been sanitized within the Organization of the Joint Chiefs of Staff.

However, this unclassified version is organized in exactly the same form as what was submitted by the Review Group, and involved only deletions of classified material and occasional word changes to retain continuity or protect sensitive operational subjects. There has been a careful -- and I think successful -- effort to provide the American public with the full sense of our deliberations and our findings. Those findings -- in fact, the entire Executive Summary, Conclusion, and Recommendation sections of the original classified report -- remain, in this public version, virtually intact as we submitted them.

Before I discuss the findings, let me give you some more background on the Review Group and its mission. We were chartered by the Joint Chiefs to do an essentially forward-looking, no-holds-barred assessment of the attempted rescue operation. Our purpose was to independently appraise the rescue attempt so we could recommend improvements in planning, organizing, coordinating, directing, and controlling any such operations in the future.

As for membership, our Group consisted of six flag and general officers representing all four Services. You'll find the complete biography of each member at Annex B in your document.

In combination, the Group possessed wide experience in military operations, and especially clandestine or special operations. Each obviously had a unique set of credentials, and each could focus his individual efforts accordingly. None had been associated in any way with the planning, preparation, or conduct of this particular operation. Nor had we known about it before the fact.

For the purposes of our review, we were cleared for the highest levels of classified, and given access to all sources of information and to any person within the Department of Defense.

This brings me to another point I wish to clarify. We were not chartered to produce a white paper examining the Iranian hostage crisis at the national level. Our focus was essentially within the Department of Defense and primarily on military issues. We reviewed all documents relating to the planning and execution of the mission, interviewed participants, examined the types of equipment used, and observed exercises typical of the kinds of operations conducted.

Our approach was to concentrate on those things that troubled us professionally about the mission -- areas in which there appeared to be weaknesses. Eventually we arrived at about two dozen issues which we considered significant. These are all listed and discussed in the Analysis section of the unclassified report.

I'd like to point out that not all of these 23 issues were criticisms per se. In some cases the Group concluded that with respect to the questions raised in an issue, there was no better way of handling the problem, or what was done had little if any influence on the outcome. However, since our purpose was to help identify lessons learned for future application, we included in our report all that we considered significant. Quite frankly, we were apprehensive that the critical tone which this resulted in could be misinterpreted as an indictment of the able and brave men who planned and executed this operation. As is stated in the Forwarding Section of the unclassified report, we encountered not a shred of evidence of culpable neglect or incompetence.

It was recognized at the outset that it might be difficult to reach a group consensus, either in the analysis or in the findings. So we agreed that minority positions would be included if necessary in our final report. In retrospect, I find it interesting that what we finally achieved represented the unanimous views of the members of the Group. There were no dissenting footnotes in what we conveyed to the Joint Chiefs!

Turning to our findings, let me quickly run over the more significant items. These are highlighted in the Executive Summary, and developed more fully in the Conclusions section.

The concept of a small clandestine operation was valid and consistent with national policy objectives. It offered the best chance of getting the hostages out alive and the least danger of starting a war with Iran.

The operation was feasible. It probably represented the plan with the best chance of success under the circumstances, and the decision to execute was justified.

The rescue mission was a high-risk operation. People and equipment were called on to perform at the upper limits of human capacity and equipment capability.

The first realistic capability to successfully accomplish the rescue of the hostages was reached at the end of March.

OPSEC was an overriding requirement for a successful operation. Success was totally dependent upon maintaining secrecy.

Command and control was excellent at the upper echelons, but became more tenuous and fragile at intermediate levels. Command relationships below the Commander, JTF, were not clearly emphasized in some cases and were susceptible to misunderstandings under pressure.

External resources adequately supported the JTF and were not a limiting factor.

Planning was adequate except for the number of backup helicopters and provisions for weather contingencies. A larger helicopter force and better provisions for weather penetration would have increased the probability of mission success.

Preparation for the mission was adequate except for the lack of a comprehensive, full-scale training exercise. Operational readiness of the force would have benefited from a full-dress rehearsal. Command and control weaknesses probably would have surfaced and been ironed out.

Two factors combined to directly cause the mission abort: unexpected helicopter failure rate and low-visibility flight conditions en route to Desert One.

These conclusions lead the Group to recommend that:

- a Counterterrorist Joint Task Force (CTJTF) be established as a field agency of the Joint Chiefs of Staff with permanently assigned staff personnel and certain assigned forces.

- the Joint Chiefs of Staff give careful consideration to the establishment of a Special Operations Advisory Panel, comprised of a group of carefully selected high-ranking officers (active and/or retired) who have career backgrounds in special operations or who have served at the CINC or JCS levels and who have maintained a current interest in special operations or defense policy matters.

Before closing, let me make a couple of very important points.

First, the group unanimously concluded that no one action or lack of action caused the operation to fail -- and conversely, no one of our identified alternatives or all the alternatives could have guaranteed success.

Second, as I mentioned earlier, we unanimously agreed that the people who commanded, planned, and executed the operation were the most competent and best qualified for the task of all available. There were none better.

In closing, I would ask that as you read this report, keep in mind its purposes and its context:

- it's a professional critique of the Iranian hostage rescue operation, addressed to the Joint Chiefs of Staff.

- by its very nature, any critique of this sort has to appear highly critical, since it can't allow any potential area of possible future improvement to go unquestioned.

- it's produced with the benefit of hindsight.

The facts are that in the conduct of the review, we have seen infinitely more to be proud of than to complain about. The American Servicemen who participated in this mission -- commanders, planners, crewmen, or troopers -- deserved to have a successful outcome. It was the ability, dedication, and enthusiasm of these individuals which made what everyone thought was impossible into something that should have been -- and came close to being -- a success.

We were often reminded as we deliberated that only the United States military, alone in the world, had the ability to accomplish what we set out to do. It was risky and we knew it, but it had a good chance of success. And I would close with this thought, which I hope remains true forever. America had the courage to try.

FOREWORD

In May 1980, the Joint Chiefs of Staff commissioned a Special Operations Review Group to conduct a broad examination of the planning, organization, coordination, direction, and control of the Iranian hostage rescue mission, as a basis for recommending improvement in these areas for the future.

The Review Group consisted of six senior military officers--three who had retired after distinguished careers, and three still on active duty. The broad military experience of the group gave it an appropriate perspective from which to conduct an appraisal. Details on the participants, the Terms of Reference they operated under, and their approach to the subject are contained in this document.

The Review Group has made its final report to the Joint Chiefs of Staff. Copies have been forwarded to the Secretary of Defense, as have the related, early recommendations of the Joint Chiefs. A highly classified report also has been transmitted to appropriate committees in the Congress.

Because it is important that as much detail as possible be made available to the American public, the Organization of the Joint Chiefs of Staff has conducted a declassification review to produce this version. The issues and findings have been retained in as close a form as possible to the original, classified version. In particular, the Executive Summary, Conclusions, and Recommendations remain virtually the same as in the original.

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FORWARDING STATEMENT

It is essential that the purpose of this report be clearly understood: it is a professional critique of the Iranian hostage rescue operation addressed to the Joint Chiefs of Staff. It is not, and should not be read as, an after-action summary, or as a white paper examining the Iranian hostage crisis at the national level. It is much too narrow and technical a report for this latter application. Except for some discussions, the review was confined to activities and persons within the Department of Defense. There was no attempt in this report to assess the events leading up to the seizure of the Embassy, the concurrent international political environment, or the ongoing efforts to secure the release of the hostages by negotiations or diplomatic means.

By its nature, therefore, this report will appear to be highly critical, more so probably than a wider review from a national perspective would deserve. But to be useful, a critique such as this must not allow any potential area of possible future improvement to go unquestioned. For this reason, a number of the issues analyzed which were evaluated as having no bearing on the success or failure of the actual mission are included in this report. The reason is that they might very well have an application for some future special operation conducted under different circumstances.

Further, it must be realized that much of the critical character of the discussions contained in the analysis is the product of hindsight. For example, the statistical evidence available to the planners of the operation may have been persuasive that eight helicopters were the best compromise between operations security and equipment redundancy, but an after-the-fact investigation is virtually obligated to assemble fresh data which will reveal why eight was too low a number.

The members of the review group are unanimous in the view that the issues treated in the analysis were valid concerns, and we believe that a full discussion of these issues was necessary to provide the rationale for our conclusions and support for the recommendations.

We are, nevertheless, apprehensive that the critical tone of our discussion could be misinterpreted as an indictment of the able and brave men who planned and executed this operation. We encountered not a shred of evidence of culpable neglect or incompetence.

The facts are that, in the conduct of this review, we have seen infinitely more to be proud of than to complain about. The American servicemen who participated in this mission--planner, crewman, or trooper--deserved to have a successful outcome. It was the ability, dedication, and enthusiasm of these people who made what everyone thought was an impossibility into what should have been a success.

Finally, we were often reminded that only the United States military, alone in the world, had the ability to accomplish what the United States planned to do. It was risky and we knew it, but it had a good chance of success and America had the courage to try.

EXECUTIVE SUMMARY

Purpose

The purpose of this review is to improve US counterterrorist (CT) capability through an independent appraisal of the hostage rescue mission, including a broad examination of its planning, organization, coordination, direction, and control. The scope of the study addresses the broader aspects of conceptual validity and operational feasibility; the planning environment, including operations security (OPSEC), policy guidance, and options available, adequacy of planning, resources, preparation, and support; and overall conduct of the executed portion of the mission.

Mission

Rescue mission planning was an ongoing process from 4 November 1979 through 23 April 1980. The planners were faced with a continually changing set of circumstances influenced mainly by the uncertain intentions of the hostages' captors and the vacillating positions of the evolving Iranian leadership. The remoteness of Tehran from available bases and the hostile nature of the country further complicated the development of a feasible operational concept and resulted in a relatively slow generation of force readiness.

Analysis

In analyzing the planning, training, and execution of the hostage rescue mission, the review group identified 23 discrete issues that were investigated in depth. Eleven were considered to be major issues, ones that had an identifiable influence on the outcome of the hostage rescue effort or that should receive the most careful consideration at all levels in planning for any future special operation.

Issues

The major issues, which underlie the subsequent conclusions, are listed below:

OPSEC.

Independent review of plans.

Organization, command and control.

Comprehensive readiness evaluation.

Size of the helicopter force.

Overall coordination of joint training.

Command and control at Desert One.

Centralized and integrated intelligence support external to the Joint Task Force (JTF).

Alternatives to the Desert One Site.

Handling the dust phenomenon.

C-130 pathfinders.

Specific Conclusions

The major issues provide the basis for the following specific conclusions:

The concept of a small clandestine operation was valid and consistent with national policy objectives. It offered the best chance of getting the hostages out alive and the least danger of starting a war with Iran.

The operation was feasible. It probably represented the plan with the best chance of success under the circumstances, and the decision to execute was justified.

The rescue mission was a high-risk operation. People and equipment were called on to perform at the upper limits of human capacity and equipment capability.

The first realistic capability to successfully accomplish the rescue of the hostages was reached at the end of March.

OPSEC was an overriding requirement for a successful operation. Success was totally dependent upon maintaining secrecy.

Command and control was excellent at the upper echelons, but became more tenuous and fragile at intermediate levels. Command relationships below the Commander, JTF, were not clearly emphasized in some cases and were susceptible to misunderstandings under pressure.

External resources adequately supported the JTF and were not a limiting factor.

Planning was adequate except for the number of backup helicopters and provisions for weather contingencies. A larger helicopter force and better provisions for weather penetration would have increased the probability of mission success.

Preparation for the mission was adequate except for the lack of a comprehensive, full-scale training exercise. Operational readiness of the force would have benefited from a full-dress rehearsal, and command and control weaknesses probably would have surfaced and been ironed out.

Two factors combined to directly cause the mission abort: Unexpected helicopter failure rate and low-visibility flight conditions en route to Desert One.

The siting of Desert One near a road Probably represented a higher risk than indicated by the JTF assessment.

General Conclusions

Although the specific conclusions cover a broad range of issues relating to the Terms of Reference, two fundamental concerns emerge in the review group's consensus which are related to most of the major issues:

The ad hoc nature of the organization and planning. By not utilizing an existing JTF organization, the Joint Chiefs of Staff had to start, literally, from the beginning to establish a JTF, create an organization, provide a staff, develop a plan, select the units, and train the force before the first mission capability could be attained. An existing JTF organization, even with a small staff and cadre units, would have provided an organization framework of professional expertise around which a larger tailored force organization could quickly coalesce.

OPSEC. Many things that, in the opinion of the review group, could have been done to enhance mission success were not done because of OPSEC considerations. The review group considers that most of these alternatives could have been incorporated without an adverse OPSEC impact had there been a more precise OPSEC plan selectively exercised and more closely integrated with an existing JTF organization.

Recommendations

These conclusions lead the group to recommend that:

A Counterterrorist Joint Task Force (CTJTF) be established as a field agency of the Joint Chiefs of Staff with permanently assigned staff personnel and certain assigned forces.

The Joint Chiefs of Staff give careful consideration to the establishment of a Special Operations Advisory Panel, comprised of a group of carefully selected high-ranking officers (active and/or retired) who have career backgrounds in special operations or who have served at the CINC or JCS levels and who have maintained a current interest in special operations or defense policy matters.

I. INTRODUCTION

The Special Operations Review Group was established by the Chairman, Joint Chiefs of Staff (CJCS), at the initiative of the Joint Chiefs of Staff (JCS), for the purpose of providing an independent review of the Iranian hostage rescue operation. The Joint Chiefs of Staff directed the review group to examine the operation in its broadest aspects, including conceptual validity; planning environment, to include policy considerations; and actual mission planning, training, and execution. The Terms of Reference, contained in Annex A, set forth the overall objective of developing recommendations for procedures and organization to be employed by the US Armed Forces in future special operations.

In order to assure an independent perspective, the membership of the group was constituted from persons not associated with the concept, planning, training, or execution phases of the Iranian rescue operation. Because the group's recommendations were required for development of an improved special operations capability in the immediate future, the group was formed with only experienced military officers. This avoided a long period of technical familiarization, as would be required in the case of civilian members. Additionally, the group's charter--to recommend military organization and procedures to the Joint Chiefs of Staff--made all-military membership particularly appropriate.

The membership of the group represented all four Services, and the combination of three recently retired and three active duty officers proved a desirable balance. The diverse background of the military officers reflected broad experience in planning and implementation of military operations throughout all echelons, including interactions with the National Command Authorities (NCA). The participation of retired officers should serve to deflect any allegations of the group's being influenced by the Joint Chiefs of Staff. The active duty officers brought to the group an in-depth operational experience and state-of-the-art technical familiarity with special operations, and also contributed essential insights into current Service policies and programs.

The members of the Special Operations Review Group are listed below (complete biographies are contained in Annex B):

<u>Admiral James L. Holloway III, US Navy (Ret.),</u>

<u>Chairman of the Special Operations Review Group</u>

Admiral Holloway, a Naval Aviator, retired as the Chief of Naval Operations in 1978 after 36 years of commissioned service which included combat duty in World War II, Korea,

and Vietnam. His service as Chief of Naval Operations and Acting Chairman, Joint Chiefs of Staff, provided familiarity with all levels of command and control, including National Security Council deliberations and Presidential decision making.

Lieutenant General Samuel V. Wilson, US Army (Ret.)

Lieutenant General Wilson, an airborne infantry officer with Special Forces and Ranger background, had combat experience with the World War II Office of Strategic Services and special operations in the China-Burma-India Theater. Lieutenant General Wilson's unique intelligence background stems from his assignments as the Deputy to the Director of Central Intelligence (DCI) from 1974 to 1976 and the Director, Defense Intelligence Agency (DIA), from 1976 to 1977.

Lieutenant General Leroy J. Manor, US Air Force (Ret.)

Lieutenant General Manor retired in 1978 after 36 years active service which included several command and staff assignments related to special operations and combat experience in World War II and Vietnam. He was Commander, US Air Force Special Operations Forces, responsible for unit and joint training of all USAF Special Operations Forces. During this assignment, he commanded the joint task force tasked to rescue prisoners of war from the Son Tay prisoner-of-war camp near Hanoi in North Vietnam on 20-21 November 1970. In his final active duty post as Chief of Staff, Pacific Command, he actively developed the command's plans for counterterrorism and supervised the staff role in counterterrorist (CT) exercises.

Major General James C. Smith, US Army

Major General Smith has served over 37 commissioned years in three wars, with special emphasis on command operations and training of armor, air cavalry, and aviation units. As a Master Aviator, he commanded (1976-1978) the Army Aviation Center at Fort Rucker, Alabama, where aviation doctrine and concept are developed. Major General Smith currently serves as the Army's Director of Training, Deputy Chief of Staff for Operations, Department of the Army.

Major General John L. Piotrowski, US Air Force

A pilot and electronic warfare (EW) officer with combat experience in special air warfare and tactical fighter operations, Major General Piotrowski served in the initial cadre of "Jungle Jim," the Air Force's counterinsurgency unit that was activated in April 1961 and that subsequently became the 1st Air Commando Wing. A graduate of the USAF

Fighter Weapons School, he participated in tactics development and weapons testing that included introduction of guided weapons into Southeast Asia. His present assignment is Deputy Commander for Air Defense, Tactical Air Command, Peterson AFB, Colorado.

Major General Alfred M. Gray, Jr., US Marine Corps

Major General Gray, a ground officer with command combat experience in infantry, artillery, communications, signals intelligence (SIGINT)/EW, reconnaissance, and special operations units, served in both Korea and and Vietnam. He served concurrently as Commanding Officer, 33d Marine Amphibious Unit/Commanding Officer, Regimental Landing Team 4/Deputy Commander, 9th Marine Amphibious Brigade, during the Southeast Asia evacuation operations and was the ground combat element commander during the Saigon extraction. Major General Gray's present assignment is Deputy for Development/Director, Development Center, for the Marine Corps Development and Education Command, Quantico, Virginia.

The group's approach to the review involved the following steps during the investigative phase:

The group reviewed all pertinent written documentation, including planning documents, training reports, mission debriefs, congressional testimony, media clips, press releases, technical analyses, and the after-action report.

The group then interviewed all principals involved in the planning and conduct of the operation. The group did not attempt to talk to every individual who participated, but did consult with everyone considered to have been in a position to contribute substantive testimony. Every person that any member of the group wished to interview was made available for that purpose.

The group traveled to selected DOD field organizations associated with the rescue mission. During these visits the group received command presentations and technical briefings and inspected unit equipment such as the RH-53D, CH-53D, and specially configured C-130 aircraft. The group observed night special operations exercises with Rangers, C-130s, and helicopters, using night vision devices. The group also received a number of live firing weapon demonstrations and observed Army personnel simulate the recovery of hostages from a hijacked aircraft and a terrorist-held building.

During the field command visits, extensive roundtable discussions with mission personnel of all grades, from commanders to sergeants, were held as a group, and useful insights as to personnel background, skill, motivation, and proficiency were attained.

In addition to those sessions which were conducted for the group, individual members made a number of visits outside the Pentagon to pursue their own avenues of investigation.

The group was authorized access to all levels of intelligence.

Because the group was chartered by the Joint Chiefs of Staff to whom its conclusions and recommendations would be specifically addressed, the majority of discussions were with military personnel, the organizations and procedures examined were within the National Military Command System, and the main part of the analyses and recommendations deal with matters internal to the Department of Defense.

The actual methodology employed by the group in the analytical phase was simple and straightforward. After the group had reviewed the written material, conducted interviews, and witnessed the capabilities of the forces, each member compiled a list of all items that troubled him. These points were consolidated into areas of concern and then isolated into specific issues. As the issues were identified, each was in turn analyzed.

First, the issue was described in a non-qualitative sense and then supported by the facts as the group was able to determine them. To present a balanced picture, the rationale of the JTF planners--as perceived by the group--was carefully explained.

The group then postulated an alternative solution and developed it in sufficient detail to establish its validity and feasibility. Those alternatives that turned out to be patently impractical or clearly inferior were eliminated from the list of issues. The issues were evaluated to determine net impact and to judge the degree to which the issue affected the outcome of the operation and whether the proposed solution would have enhanced the probability of mission success.

Using this deliberative process, the group attempted to reach unanimous positions or a group consensus. However, where unanimity was not achieved, separate views were accepted, to be noted either in the text of the analysis or through footnoting.

As the review process proceeded, the group identified the valid issues, prioritized them as to their importance, and categorized them in areas relating to the tasking of the Terms of Reference to form the group's conclusions. In the final analysis, it was found that those specific conclusions which should generate corrective action fell into two broad general areas, which in turn determined the group's recommendations.

II. CHRONOLOGY

Background.

By 29 November, force commanders began to gain confidence in their developing operational capability. CJCS approved a move of the helicopters to a US western desert training site, so that training could be conducted in a more realistic environment. OPSEC was observed, and the move was completed on 30 November without apparent detection.

On 30 November, the COMJTF training estimate was as follows: helicopter aircrew capability was judged to be fair, with considerable work remaining; C-130 aircrew status was judged to be mission capable, but with more training required in blacked-out landings; the ground rescue forces had rehearsed for two weeks and had procured and modified additional equipment; communications planning/developments were proceeding; no logistic restraints had surfaced from any units; weather and intelligence capabilities were improving.

By the end of November, the COMJTF overall assessment was that a force capability was beginning to emerge, but that major deficiencies in planning, intelligence, communications, and training were evident.

Initial Training in the Desert
30 November to 24 December 1979

On 1 December, the training missions were flown using the replacement helicopters. (NOTE: Those helicopters used for training in the earlier phase had been returned to owning units.)

During the period 9 December through 21 December, 153 hours were flown. Navigation and formation flying were stressed along with night landings under total blackout conditions.

On 18-19 December, the first integrated training was conducted. The exercises went poorly, with problems in night navigation encountered by the helicopters. At this time, COMJTF and planning staff recognized that pilots with increased experience in the type of mission profiles to be flown would be required. A major change in personnel took place; nine pilots were replaced.

The Palletized Inertial Navigation System (PINS) was provided to improve helicopter navigation capability, and pilots began training with this item.

By 27 December, refueling of helicopters from C-130s on the ground was surfaced as an alternative to air dropping fuel blivits; tentatively, an airfield in the objective area had been selected as a possible ground refueling site.

The ground rescue forces continued training at a secure training camp but did participate in the desert joint training effort.

By 18 December, communications arrangements and procedures to support the concept had been developed except for those of airborne elements and the ground rescue forces.

Representatives of USCINCEUR and CINCPAC arrived in December to participate in planning and coordination.

By mid-December, plans were set for another joint training period using representative forces.

During this training exercise, radio equipment was tested. Except for the helicopter detachment, all units redeployed back to their home stations.

On 22 December, two additional RH-53Ds were airlifted and embarked aboard NIMITZ for transit to the Indian Ocean. During this period, OMEGA navigation systems had been acquired, and preparations were made to install them on the eight mission RH-53Ds. One OMEGA system was installed in a training aircraft at the western US training site for crew training.

As of 24 December, the intelligence data base had continued to grow.

Christmas Break
24 December 1979 to 4 January 1980

Those units and individuals involved in training had been committed without break since early November. In order to sustain force effectiveness as well as maintain OPSEC, training units were authorized Christmas leave. Key commanders and planning staffs continued to work on all pertinent issues during the period.

Continued Training
4 January to 1 February 1980

On 4-5 January 1980, COMJTF conducted a planning and review conference.

On 5 January, the helicopter detachment resumed flying at the western US site to refine navigation procedures and techniques using the 10 helicopters available and using OMEGA and PINS navigation systems. (It had already been established that prior to takeoff, a forecast for visual meteorological conditions (VMC) on the mission track was required in order to execute the mission.)

During the 4-5 January conference, weather was highlighted as a crucial factor, so additional requirements for weather support were specified.

After several more planning conferences, mission requirements had grown to include additional personnel and equipment factors which drove up the size of the force. On 12 January, the fourth C-130 arrived to provide sufficient air-refuelable, foward-looking infrared (FLIR) equipped aircraft.

In mid-January, the required number of helicopters to arrive at the hideout was confirmed to be five, six at the refueling site, and seven for launch, for a total of eight aboard the carrier. (Note: As mentioned earlier, two additional RH-53Ds were to be put aboard NIMITZ.)

At this time, the operational readiness of the helicopters aboard KITTY HAWK came under closer scrutiny. To assure required flying time rates and appropriate supply levels, a JTF three-man team visited the carrier to conduct a review and engage in necessary discussions with key carrier personnel and helicopter unit members.

The JTF conducted another joint training exercise in mid-January in a new area, with long-range navigation flights similar to those planned for the mission. This event was productive, but it also identified many problems that required additional planning and training.

Problems were highlighted in the areas of OPSEC, weather, helicopter reliability, communications, refueling procedures, airfield security and control, and intelligence.

By this time, the JTF J-2, searching for an alternative to the airfield site, had found only one in-country area that was sufficiently isolated for the C-130s and the helicopters to rendezvous for refueling and loading of the ground rescue forces. Such a site, named Desert One, was considered to be a possible new solution to the helicopter refueling portion of the mission.

On 21 January, because of additional airlift capability required as the number of personnel increased, two more aircrews began to train with the C-130 crews. These two aircrews were considered mission capable in two weeks.

The Fourth Joint Training Exercise
1 to 16 February 1980

During the first week in February, a joint training exercise plan was conducted to evaluate progress made during the last two weeks in January. In spite of bad weather, task force elements in general showed improvement, but more work was also indicated in the areas of helicopter navigation and combat control. Needed now was more intelligence, additional training, and a plan to refuel the helicopters at Desert One.

By 8 February, following the postexercise conference, the commanders and planners for the first time had confidence that a capability existed for the rescue.

Desert One Plan
16 February to 12 April 1980

On 26-27 February, another JTF exercise was conducted for the purpose of sustaining mission capabilities, incorporating Combat Control Team expertise, and refining JTF communications. JTF confidence was further increased.

At this time, increased attention by the planners was being placed on two uncontrollable and pressing environmental factors that could cause major revision of the rescue plan: available hours of darkness and ambient temperatures. By 1 May, the number of hours between evening and morning nautical twilight would drop to nine hours and 16 minutes. Eight hours were required for the helicopter mission, with a one-hour contingency factor. By 10 May, prevailing temperatures of 30° C would increase density altitude and limit helicopter performance. With these conditions, additional helicopters and C-130s would be required. COMJTF also definitely concluded that not less than six mission-capable helicopters had to reach Desert One to insure mission continuation.

On 25-27 March, the last major JTF training exercise was conducted and was considered a success, with a recognized increase in confidence.

By 28 March, the hostage rescue mission had been brought to a seven-day response status. Additional deployment was stopped until 16 April, when additional loads commenced movement.

In late March, a second visit of three JTF personnel representing communications, operations, and maintenance visited NIMITZ to verify the readiness of the eight helicopters.

The JTF continued to look for a desert landing area at which the C-130s could refuel the helicopters.

By 7 April, COMJTF concluded that Desert One was suitable for the helicopter refueling operation.

As refueling requirements increased over time, a decision was made to transfer the refueling mission to specially configured C-130s which could carry more fuel, with pumps, hoses, and filter assemblies. The pilots who had previously trained for the mission were to fly these C-130s.

The Countdown
12 to 24 April 1980

On 12 April, CJCS instructed COMJTF to finalize planning for deployment of the force. COMJTF recommended Thursday, 24 April, based on many considerations, a primary one being moon illumination.

A series of interrelated but separate actions were initiated, one of the more significant being a training exercise to practice helicopter refueling using one C-130 aerial tanker and four helicopters on the desert as a final verification of this capability.

On 15-16 April, COMJTF conducted a two-day meeting in the Pentagon to review the plan with commanders, affirm command and control matters, evaluate force readiness, review contingencies, and make an overall assessment of mission success should it be executed on 24 April.

On 16 April, the Joint Chiefs of Staff approved the plan. That evening, the President approved the plan after he was briefed by COMJTF, Deputy COMJTF, and the commander of the ground rescue force. The President stated that deployment flow should proceed with 24 April as the planning date for execution. The NCA would direct COMJTF to execute, delay, or cancel the mission based on conditions existing at the time of decision.

Through the period 19-23 April, the forces deployed. By mid-afternoon on 24 April, the forces were in place and ready for execution.

Execution and Abort
24 and 25 April 1980

On the evening of 24 April, after 5-1/2 months of planning and training under very tight OPSEC, eight RH-53 helicopters took off from the aircraft carrier NIMITZ and began a journey of nearly 600 nautical miles at night and low altitude to a preselected refueling site, Desert One, in the desert. The C-130 element with the ground rescue forces was also in the execution phase on a different track and time schedule to Desert One. Approximately two hours after takeoff, the crew of Helicopter #6 received cockpit indications of an impending rotor blade failure; landed; verified the malfunction (an automatic abort situation); and abandoned their aircraft. The crew was picked by another helicopter, which then continued the mission individually.

Approximately one hour thereafter, the helicopter formation unexpectedly encountered a dust cloud of unknown size and density.

The helicopters broke out of the first area of suspended dust but, within an hour, entered a second, larger and denser area. While attempting to navigate through this second area with severely degraded visibility, a second helicopter (#5) experienced a failure of several critical navigation and flight instruments. Due to progressively deteriorating flight conditions that made safe flight extremely questionable, the helicopter pilot determined that it would be unwise to continue. He aborted the mission, reversed course, and recovered on NIMITZ. Eventually six of the original eight helicopters arrived at the refueling site in intervals between approximately 50 minutes and 85 minutes later than planned.

While en route, a third helicopter (#2) experienced a partial hydraulic failure, but the crew elected to continue to the refueling site believing repairs could be accomplished there. Upon landing, however, the crew and the helicopter unit commander determined that the helicopter could not be repaired. A hydraulic pump had failed due to a fluid leak, and no replacement pump was available. Even if a pump had been immediately available, there was insufficient time to change it, repair the cause of the leak,

service the system, and complete the next leg prior to daylight. The helicopter was unsafe to continue the mission unrepaired.

Earlier, it had been determined that a minimum of six operational helicopters would be required at the refueling site to continue the mission. Since at this point there were only five operational, the on-scene commander advised COMJTF by radio of the situation, and he in turn communicated to Washington the status of the force and his intention to abort the operation and return to launch base. The President concurred in the decision that the mission could not continue, and preparations began for withdrawal of the five operational helicopters, the C-130s, and the rescue force.

While repositioning one helicopter to permit another to top off his fuel tanks for the return flight, the first helicopter collided with one of the refueling C-130s. Both aircraft were immediately engulfed in flames in which eight crew members died and five other members of the team were injured. Since the C-130 was loaded with members of the rescue force awaiting extraction, even greater injury and loss of life were avoided only by swift and disciplined evacuation of the burning aircraft. Shortly afterwards, ammunition aboard both aircraft began to explode. Several helicopters were struck by shrapnel from the explosion and/or the burning ammunition, and at least one and possibly more were rendered nonflyable. At this point, with time and fuel running out for the C-130s, the decision was made to transfer all helicopter crews to the remaining C-130s and to depart the area.

III. ANALYSIS OF ISSUES

The findings of this chapter are central to the entire work of the Special Operations Review Group. The process of identifying, defining, and evaluating the key issues is the basis of analysis from which the conclusions and recommendations flow.

The group's charter was not to find fault or to place blame; it was, as stated in the Terms of Reference, to make "evaluations and specific recommendations ... on the key aspects of planning and execution," insuring that the broader aspects of operation were addressed. Yet, a broader perspective can be derived only from a full understanding of the mission, a mission that did not achieve its defined objective. By definition, the issues raised in this chapter are those decisions or actions that may be questioned because, in the opinion of the review group, alternatives available might have increased the probability that the mission could continue or decreased the risks to mission success.

While the review group has attempted to maintain a constructive outlook, it has been critical where and when its collective judgment dictated. While the group believes these criticisms valid and necessary to the conclusions reached and recommendations made, no judgment of the able men who planned this mission or the brave professionals who executed it is intended nor should be inferred.

The men charged with planning the rescue operation in November 1979 faced certain basic factors in the overall situation that must be appreciated in order that the analyses which follow are kept in proper perspective:

A forcible rescue was very much a contingency plan, only to be implemented if all other alternatives failed.

On the other hand, a sense of urgency was impressed on COMJTF and his staff at the very outset: that an immediate operation could be required.

All planning and preparation required maximum OPSEC because the sine qua non of the concept was to place the ground rescue force at their final assault position with total surprise.

Those overriding and, at times, conflicting realities were central to some of the early decisions regarding the selection of a JTF staff, holding the JCS CONPLAN in abeyance, and the compartmentalization of various preparatory functions.

Training for the Iran hostage rescue operation was a many-faceted and complex task that was necessarily accomplished concurrently with mission planning. It was controlled by the dictates

of a constantly evolving plan. The training program was affected by the development of new intelligence during the entire period from inception to execution of the mission. It was essential that the training program remain sensitive and responsive to changing requirements. The task of mission execution required extraordinary command orchestration of widely separated actions by various force elements. Components of the force launched from different locations, each coping with unique local departure situations that demanded exact adherence to a time schedule to assure effective force integration. Timely decisions had to be made to compensate for unplanned contingencies. The great emphasis on OPSEC, although vital to mission success, severely limited the communications necessary to coordinate the operation, particularly in handling unforeseen contingencies.

The review group determined that there were 23 issues which deserved full analysis. In the initial listing for analysis, these issues are arranged in an order beginning with the most general and conceptual to the most specific and operational. The order implies no prioritization as to importance, nor was there any attempt to list the issues in chronological order. While key areas such as planning criteria, organization, adequacy of forces, training support, and command and control were dealt with in this approach, many of the issues transcend one particular area. The analytical method employed by the review group attempted to correlate its analysis with its charter--to provide positive alternatives and to draw from them lessons of principles that may be used in the future. Each analysis raises the issue, recapitulates the actual occurrence as determined by the group, and outlines the group's understanding of the JTF rationale where applicable for its choice. The review group then explains its alternative in more detail and assesses the implications of the alternative, both positive and negative. Each analysis concludes with a review group evaluation, including the group's judgment of the issue's importance. Was the issue of paramount importance to managing mission risk? Was it of some importance in increasing the probability of success? Was it of marginal value in terms of lessons learned?

One final note of caution is appropriate. The Special Operations Review Group unanimously concluded that no one action or lack of action caused the operation to fail and that no one alternative or all the alternatives could have guaranteed its success. It was by its nature a high-risk mission that involved the possibility of failure. The object of the following issue analysis was, with the benefit of hindsight, to identify areas in which risk might have been better managed.

ISSUE 1: OPSEC

Event. Critical concern for OPSEC at all levels tended to dominate every aspect of mission planning, training, and execution. From the outset, task force members were imbued with the absolute need for total secrecy. Planning was strictly compartmentalized; plans review was performed largely by those involved in the planning process; individuals were generally restricted to that information they actually required to play their particular roles. There were pressures clearly felt by all involved to keep the force small in order to decrease the risk of detection. In some instances, personnel on the periphery of the JTF's activities deduced what was afoot, but to the credit of such individuals they appear to have kept their conjectures to themselves. In short, strictest adherence to OPSEC guidelines seems to have been maintained from the very outset of mission inception up to the accident following the mission abort at Desert One.

JTF Rationale. The underlying reasons for such heavy emphasis on OPSEC were well understood throughout the JTF. Surprise was the sine qua non for mission success, and complete security was essential to attain surprise.

Alternative. This was, perhaps, the group's most difficult judgment: Did a seemingly nondiscriminating overemphasis on OPSEC exclude certain activities and provisions that could have materially enhanced the probability of mission success? On balance and in retrospect, the group concluded that slightly greater selectivity and flexibility in the OPSEC arena, particularly within the JTF, could have been beneficial in operational terms without necessarily sacrificing security. In planning, a separate plans review element would have provided a useful testing mechanism before going forward for policy-level approvals; in joint training and evaluation, units from different Service components could have been integrated with greater frequency and for longer periods, especially when such activities were handled in the context of thoughtfully conceived cover stories; in execution, slightly easing several OPSEC restrictions to air operations. These examples are illustrative and do not exclude several other possible excursions from what the JTF actually did or refrained from doing because of OPSEC considerations.

Implications. Basically, the group's alternative would have slightly reduced OPSEC restrictions in selected areas, implying incrementally improved force posture and enhanced potential effectiveness at the cost of some increased probability of operational compromise. Admittedly, it cannot be predicted at what point in easing security restrictions secrecy could have been breached, which in turn might have resulted in canceling the mission. What is known and therefore should be underscored is the fact that the level of security practiced by the JTF did preserve secrecy.

Evaluation. The question of too much or too little OPSEC was easily the most controversial issue, and the group's differences with actual JTF OPSEC practices epitomize the advantage of hindsight.

ISSUE 2: Organization, command and control, and the applicability of existing JCS plans

Event. When the hostage seizure incident occurred in Iran on 4 November 1979, a small planning cell, working in the Organization of the Joint Chiefs of Staff (OJCS) area, and augmented by two officers from the ground rescue force, began to formulate concepts for military options as directed by the CJCS. The planning group received intelligence support within a week, although the full array of intelligence capabilities were not integrated for over a month.

During this early period, the organizational and planning framework of an existing JCS CONPLAN was not adopted, although some of its provisions were incorporated. These included utilization of intelligence assets and selection of the ground rescue force. Other major areas of endeavor, such as task organization planning, integration of concurrent planning by subordinate units, and determination of support and requirements, were compartmentalized and reliant upon ad hoc arrangements.

When COMJTF received his tasking on 12 November 1979, the rescue planning cell became the nucleus JTF staff. A CINCREDCOM joint table of distribution was the basis for JTF headquarters manpower requirements.

A USAF general officer was appointed special consultant to COMJTF because of experience and knowledge gained during a recent tour of duty in Iran.

Training began immediately. Concurrently, conceptual plans were developed by the JTF staff and reviewed by the CJCS. On 19 November 1979, COMJTF recommended a helicopter option as having the greatest potential for success.

The helicopter detachment (pilots and aircrewmen) was initially formed from Navy and Marine resources. As operational requirements increased, additional pilots and crewmen were provided from other locations. Special mission training was moved to the western United States for a more realistic desert environment. On 9 December 1979, a new helicopter detachment commander was assigned and a vigorous training program was instituted to attain the special mission capabilities required. No overall naval component commander or provisional squadron command/staff capability was provided.

The senior Marine officer involved in the operation was assigned to the Office of the CJCS and, while not officially designated a member of the JTF staff, became involved in mission planning and execution. At the direction of the Director for Operations, Joint Staff, he reviewed the early November helicopter planning, examined the aircrew selection against special mission requirements, arranged

for the assignment of more experienced pilots, assessed the helicopter force training effort, and planned the movement of the unit to the western United States desert training site. During this period, it was implied that this officer was in charge of the helicopter force during the preparation phase, and he believed this to be so. However, COMJTF may have thought differently, and it was evident throughout the first two months of training that much (if not all) of the COMJTF direction of effort concerning helicopter preparation and special mission capability training was done through the general officer who was thought to be the consultant on Iran. In mid-January 1980, the role of the senior Marine had evolved into that of overall helicopter force leader, since no other designation had been made, and, at his request, he began to attend the COMJTF planning meetings.

Early in the planning, a senior USAF officer with special operations experience was assigned as Deputy COMJTF/Air Component Commander. His role evolved into the task of supervising and coordinating the C-130 training. Just prior to mission execution, he was assigned as "on scene" commander at Desert One, responsible for supervising the refueling operations.

The decision process during planning and the command and control organization during execution of the Iran hostage rescue mission afforded clear lines of authority from the President to the appropriate echelon. From COMJTF downward, command channels were less well defined in some areas and only implied in others.

During the training phase, command channels provided for dissemination of guidance to individual elements of the force from COMJTF. Each element was provided only those portions of the plan considered essential for its particular purpose. Because of the stringent OPSEC requirements, compartmentalization was considered necessary. The rigid compartmentalization during the early stages is considered to have been a deterrent to training and readiness progress. Clearly, during the final stages of preparation, all element leaders should have been thoroughly familiar with the overall plan. This could have enhanced greater integration of all elements of the force.

Informally, the senior Marine was advisor to COMJTF regarding helicopter operations. Additionally, he supervised helicopter training, although not formally in the chain of command. The helicopter flight leader/detachment commander was made responsible for unit flight proficiency to achieve a special mission capability requiring flight regimes never achieved by any helicopter force in the world (and to do it as soon as possible). Further, as detachment commander, he was responsible for the total performance and welfare of his men, but not provided adequate staff or administrative support.

Early-on, the designated Deputy COMJTF/Air Force Component Commander role involved the task of supervising and coordinating the C-130

training. The C-130 elements were directly under individual squadron commanders. Just prior to execution, he was designated "on scene" commander Desert One, implying a command, control and communications (C^3) capability to exercise command. This capability was not fully provided. A general officer served primarily as a consultant on Iran from late November 1979 to mid-February 1980. He spent considerable time during this period at the western United States training site monitoring helicopter and other air training. On 12 April 1980, he was designated the Deputy COMJTF.

The ground force chain of command was simplified in that the Army elements reported directly to COMJTF, who was also the Ground Component Commander.

JTF Rationale. OPSEC was the overriding consideration in every aspect of mission planning, training, deployment, and execution because of the absolute requirement to reach the Embassy compound undetected. OPSEC, coupled with the dynamic planning process and development of special mission capabilities, drove COMJTF to the techniques adopted for this organization, planning, and preparation by the JTF.

Alternative. The requirements for stringent OPSEC are clearly recognized. Nevertheless, it is considered essential that there be a balance between rigid compartmentalization, to include secrecy through informal or *ad hoc* arrangements, on the one hand and sound organization, planning, and preparation efforts on the other.

The JCS Crisis Action System (CAS) provides guidance for the conduct of planning for the use of military forces during emergency or time-sensitive situations. When the hostage seizure occurred in Iran, the group would have implemented existing JCS procedures intended to provide the Joint Chiefs of Staff, Services, commanders of unified and specified commands, and other agencies information with which to develop recommendations to the NCA pertaining to military courses of action.

An existing JCS CONPLAN provides the NCA with a wide range of options for utilizing military forces for rapid emergency actions to counter terrorism directed against US interests, citizens, and/or property in other nations. The plan does not abrogate those responsibilities found in plans or tasking currently in effect, but rather provides the conceptual basis for an additional capability. Supporting plans have been prepared by the commanders of unified commands.

The group's alternative for organization, command, and control would have used the stable, existing framework of the relevant JCS CONPLAN to organize, plan, train, and execute the mission, as well as to provide the mandatory OPSEC.

Prolonged ad hoc arrangements often result in tasking from different sources and can cause confusion at the operating level. These situational arrangements may hinder preparation and can impact adversely on overall cohesion of effort. The review group's alternative would strive for a better balance between more appropriate disclosure policy, particularly at the Service Chief/CINC level, to enhance the organizing, equipping, and training of forces.

Further, basic JCS CONPLAN methodologies and/or existing unified/specified command procedures make full provisions for compartmentalization. OPSEC can be, and has been, preserved when appropriate steps are taken. Thus, the entire preparation phase could have been accelerated and overall readiness enhanced.

Implications. On the positive side, the group's alternative would have led to a "quicker start" in the preparation phase. Additionally, task organization and force planning would have been enhanced and command relationships clarified. These in turn would have led to more effective command and control at all levels. On the negative side, the group alternative would have increased the number of people involved and, therefore, increased the OPSEC risk.

Evaluation. The potential for increased capability and readiness must be weighed against possible OPSEC risk. Although it is not possible to measure the outcome of the proposed alternative in terms of mission success, it is believed that application of an existing JCS CONPLAN and JCS/Service doctrinal precepts could have improved the organization, planning, and preparation of the force through unity of command and cohesion of effort. That, in turn, would have led to more effective command and control and enhanced overall JTF readiness.

ISSUE 3: Centralized and integrated intelligence support external to the JTF

Event. COMJTF, his staff, and subordinate commanders were fully aware that successful mission accomplishment would critically depend on precise and timely intelligence and, moreover, that intelligence would tend to drive the operation from conception to execution. The JTF fortunately had a professionally capable intelligence officer to assume the role of J-2 from the beginning. In addition, each of the Service force components--with the exception of the helicopter contingent--already had staff intelligence officers heading up small intelligence staff sections. The helicopter contingent was provided intelligence support from the JTF J-2 section. In the JTF headquarters itself, the intelligence section remained small throughout the period, beginning with one officer on 4 November and increasing to four in the course of planning.

Nonetheless, for an operation of the scope and complexity of the Iranian mission, a significant augmentation of existing intelligence capabilities was mandatory. This augmentation tended to evolve over time and in somewhat piecemeal fashion as planning got under way and as intelligence needs grew. External agency liaison officers were attached directly to COMJTF's staff in the early days, and working arrangements were set up by the JTF J-2 with points of contact within several Service and other DoD agencies. Eventually, these points of contact or interfaces with outside staffs and agencies were widened from one to several individuals, and the number of personnel beyond the interface (requirements officers, analysts, photo interpreters, and other specialists involved in providing specific intelligence) increased accordingly as the volume of work reached higher levels. In some ways, however, certain elements of the Intelligence Community seemed slow in harnessing themselves initially for the tasks at hand.

Strict adherence to OPSEC criteria was maintained throughout. Most of the intelligence officers from staffs and agencies outside the JTF were not fully briefed and cleared for the operation at the outset of planning, although those individuals working JTF-related intelligence requirements on a continuing basis eventually were able to deduce for themselves in essence what was being planned. Some of these officers felt that their initial effectiveness may have been impaired somewhat by not being told more about the true nature of the operation from the beginning.

Most intelligence requirements were formulated by the JTF J-2 in anticipation of JTF needs. Service component requirements came in from the field by message or hard copy courier delivery. Collection requirements to national agencies were usually handled on a face-to-face basis with the liaison representatives, occasionally by secure phone or classified message. Responses were normaly by message or other hard copy form and, on occasion, by secure phone.

National agency reports came directly into the JTF from the originating agency--in some cases, directly to one of the Service component forces. The heavy emphasis placed on getting responses to requirements as quickly as possible at times resulted in raw or only partially evaluated reports going directly to planners. When this occurred, intelligence analysts working a specific subject covered by an incoming raw report might become aware of the report's existence only some days after it had been in the hands of JTF planners. By the time the operation was launched, intelligence support was adequate.

Alternative. The group believes that Intelligence Community assets and resources could have been pulled together more quickly and effectively than was actually the case. A preferred approach would have been to task the Director, DIA, to establish a small and highly select interagency Intelligence Task Force (ITF) in direct support of the JTF from the moment of operational conception. COMJTF would have retained his small intelligence section as an internal element of the JTF; the ITF would have been located externally and would have worked closely and continuously with the JTF J-2. The latter would be COMJTF's close-in intelligence staff officer; the ITF chairman would be his external senior intelligence advisor. ITF members would have been cleared and security briefed at the outset regarding the details of the contemplated operation.

Implications. The proposed arrangement would have the advantage of harnessing selected elements of the US Intelligence Community and bringing them together as an integrated intelligence supporting mechanism on extremely short notice. Fragmentation of responsibility for intelligence support would be avoided, as the Director, DIA, in his role as J-2 to the Joint Chiefs of Staff, would be clearly charged with overall supervision and given the necessary authority. Coordination of intelligence activities would be simplified by the designation of a single focal point for intelligence matters--the chairman of the ITF. This individual and/or the DIA Director exercising his direct access to the CJCS would be in a position to relieve COMJTF of intelligence management concerns, freeing him to concentrate his attention in other areas.

Evaluation. Initial difficulties in the intelligence support arena had been largely overcome by the time the operation was launched. Implementation of the alternative approach to intelligence support for operations of this nature in the future could greatly facilitate achievement of acceptable readiness and forward deployment of forces in situations where time is a critical factor.

This brief summary of intelligence support for the hostage rescue mission could serve as a possible departure point for a more detailed and comprehensive "in-house" review by the Intelligence Community, designed to discern and document procedures and arrangements to more effectively support future operations.

ISSUE 4: Independent review of plans

Event. Early in the process of planning for the hostage rescue mission, consideration was given to establishing a small group of individuals with credible experience in special operations to act as consultants and review the plan as it developed. Overriding OPSEC concerns and the perceived need to limit as sharply as possible the number of personnel privy to the contemplated operation led to a conscious decision not to form such an element. As a consequence, planners--in effect--reviewed and critiqued their own product for feasibility and soundness as they went along. It is clear that COMJTF was fully aware of the potential disadvantages inherent in this approach and that he took steps to offset and compensate for this organizational defect. For example, each component part of the plan that could be checked and tested on the ground was painstakingly reviewed through training exercises to the extent possible. In this connection it must be noted that on the three occasions when the Joint Chiefs of Staff were briefed on the status and content of the plan, there had been no intervening "scrub-down" or "murder board" of the planning product. Further, for the same OPSEC reasons, the Joint Chiefs of Staff were acting in essence as their own action officers and were denying themselves the staffing support they normally enjoy when reviewing plans of a less sensitive nature. In sum, this meant that the hostage rescue plan was never subjected to rigorous testing and evaluation by qualified, independent observers and monitors short of the Joint Chiefs of Staff themselves.

JTF Rationale. As indicated above, the driving concern to preserve complete OPSEC led to a conscious judgment that avoiding a possible security compromise of a sensitive operation was--on balance--more important than effecting a conceivably minor improvement in the planning effort.

Alternative. The Special Operations Review Group, on the other hand, inclines to the view that the inclusion of several additional individuals, properly qualified to handle the plans review function on a continuing basis, would have facilitated the planning process without necessarily degrading security. The key would have been the careful selection of individuals for this role. They could have come from the active or retired rolls and might well have included individuals with a nonmilitary background; e.g., a retired senior CIA professional with extensive special operations experience. This small subordinate cell would have been closeted separately from the JTF planners and used as required by the Joint Chiefs of Staff to subject components of the plan to critical review, to include periodic "worst-case" analyses.

Implications. The implications of the group's alternative in the planning area can be simply stated: On the positive side, it would probably have contributed to a more thoroughly tested and carefully

evaluated final plan--indeed, some of the issues now being addressed by the review group might have arisen in sharper focus during the actual planning phase. For instance, to the best of the review group's knowledge, no final plan for the rescue operations was ever published prior to mission execution. A written plan to supplement oral briefings to the Joint Chiefs of Staff would have provided them a document to study and review in the privacy of their own offices, which might have sharpened their understanding of details and led to more incisive questions in subsequent discussions. A properly constituted review group might well have suggested publication of the completed plan, with tight controls and later changes added as necessary, to facilitate an effective review.

On the negative side of the group's alternative, exposure of additional individuals to the plan might have increased the risk of security leaks, inadvertent or otherwise.

Evaluation. Finally, is the issue of existence or nonexistence of a plans review element vital? Could such a unit have contributed materially to the success of the mission? In the review group's judgment, there is little doubt regarding its potential value: a comprehensive and continuing review capability impacts directly on almost all other issues. Such a plans review element could have played an important balancing role in the dynamic planning process that evolved, conceivably making a critical contribution to ultimate mission accomplishment.

ISSUE 5: Comprehensive readiness evaluation

Event. Training was planned and conducted on a highly decentralized basis within an informal component command structure that does not appear to have been clearly established. Individual and unit training was conducted and evaluated throughout the period at widely separated locations, throughout the United States. Combined training of JTF elements was conducted at various desert sites that simulated conditions expected in Iran. Thoroughly integrated training exercises of the entire JTF for the final plan were not conducted, although joint training of all plan segments was conducted by portions of the component forces in conjunction with their respective roles and tasks. Readiness evaluation was based upon observation of the training and exercises and overall assessment of the situation. COMJTF decentralized command supervision of training and evaluation, in part through the use of various advisors individually observing segments of the continuously evolving concept and plans.

JTF Rationale. Several considerations militated against thorough, integrated rehearsals and a more direct command role for COMJTF. The dynamic situation required some mission capability from mid-December 1979 to 24 April 1980. The overall situation, including intelligence and JTF assessment of various unit readiness progress, continuously changed, demanding modifications of concept and subsequent plans, including the roles played by various components. Finally, the primacy of OPSEC considerations led COMJTF to decide that regular integration of training and readiness evaluations was undesirable.

Alternative. The review group would have integrated air, ground, and naval elements throughout the preparation phase to conduct combined training as early and as often as possible. Moreover, integrated training and readiness evaluation for the entire JTF would include specialists and supporting forces, where practical. Individuals, task-oriented groups, and the force itself would drill until every aspect of the raid became an automatic process.

Implications. Thorough, integrated rehearsals would have developed precision and speed in execution, increased interunit coordination, suggested necessary changes, and resolved problem areas. Such integration would have made a major contribution in assessing the impact of plan modifications and evolving roles for individual components. The group's alternative would have facilitated a more searching assessment of the concept of operations and scheme of maneuver and, of course, a more comprehensive assessment of JTF readiness to execute. The negative implications of the alternative are implicit in the JTF rationale--that such an integrative effort would have endangered OPSEC. Moreover, the dynamic situation and compressed timeframes made such a system extremely difficult to establish. However, the difficulty of integrating training while preserving OPSEC must be measured against the contribution of that effort to mission success.

Evaluation. The criticality of this issue was difficult to assess as only a portion of the plan was executed prior to abort. Nevertheless, the review group concluded that integrated training and rehearsals reduce risk and enhance the probability of success in this or any other special operation.

ISSUE 6: Overall coordination of joint training

Event. The overall joint training supervision function was retained at JTF level in the Pentagon. At the western US site, coordination and supervision were performed in part by two officers who were advisers to COMJTF yet retained responsibilities related to their primary office of assignment outside the JTF. Neither was responsible for the overall management of joint training activities. Tasking for joint training was accomplished by messages issued by the JTF J-3 from the JTF headquarters in the Pentagon. Principals from the JTF staff proceeded to the western US training site to observe and supervise the directed events. Onsite support was handled individually by force elements in many instances or arranged by the JTF staff. It was related by force participants that C-130 and helicopter crews did not brief or critique jointly prior to and after every joint training exercise. Briefings and critiques were generally conducted at the respective locations of force elements. Critique results were provided to JTF headquarters by secure telephone, by teletype, or in some instances by personal contact. An example is the C-130 participation, where in some cases the crews did not land at the western US training site for joint face-to-face critiques, but flew back to their home base and submitted critique items. There was limited opportunity for face-to-face exchange of views and problem solving that would have enhanced accomplishment of training objectives; e.g., more training on communications equipment and procedures to assure effective force integration. COMJTF conducted post-exercise conferences for the commander and staff a few days following training exercises. These proved very beneficial in determining procedural and equipment problems and areas needing training emphasis.

JTF Rationale. The dynamic nature of the mission concept resulting from new intelligence inputs, availability of support bases for the actual mission, testing of various helicopter refuel procedures, and JTF assessment of unit readiness militated against shifting joint training responsibility to the field. Training exercises were observed personally by COMJTF or his representative. Creating an additional staff element was not considered necessary.

Alternative. Recognizing that COMJTF had the overall responsibility for training, the myriad other important activities related to concept development, planning, and extensive coordination would indicate the need for assignment of an officer and small staff to be in charge of the very important function of joint training at the western US training site. The group would have designated the Deputy Commander of the JTF and made him responsible for coordinating joint training activities, including but not limited to training schedules, operational and administrative support, and outside support. He would have made arrangements for joint mission briefings and critiques. He would have submitted progress reports to COMJTF periodically, as appropriate. He could have taken prompt actions to correct

deficiencies to the extent possible as they arose. Coordination of training site support would have assured equitable allocation of available assets and contributed positively to morale and overall training progress. Participant interviews indicated a need for better supply and administrative support and more responsive tactical and intelligence briefings. The review group recognizes that joint doctrine assigns the Service component commanders unit training and support responsibilities; however, for this mission, forces were so interdependent that complete force integration was essential.

Implications. The group would have relieved COMJTF of the burden of day-to-day supervision of training. It would have provided a central point of contact at the training site for each element of the force, as well as for COMJTF and members of the JTF staff. It is believed that the achievement of the training objectives would have been enhanced by an individual responsible for early identification of deficiencies followed by prompt corrective actions. Additional personnel would have been required, but perhaps not more than three or four.

Evaluation. It cannot be stated categorically that adoption of the review group's alternative would have made the difference between mission success or failure. However, centralization of overall joint training responsibility and coordination would have enhanced force readiness and is recommended for future JTF operations involving joint training at a site geographically separated from the JTF headquarters.

ISSUE 7: Alterations in JTF composition

Event. From interviews with key JTF personnel and from detailed review of after-action reports and documents, it has become clear that significant planning and training problems were created by the continuing changes in the overall political situation surrounding the plight of the hostages. The immediate objective in November was to field a capability quickly for an emergency rescue attempt. Shortly after the first of the year, as a credible rescue capability began to emerge, the emphasis shifted to contemplation of a more deliberate operation at a time and under conditions more conducive to the exercise of US initiative.

In November, as the US Embassy in Tehran was being seized, the question of how to insert and subsequently recover the ground rescue force from a hostile environment arose immediately and became the most vexing difficulty COMJTF would face.

The initial airlift requirement for the ground rescue force was approximately 80 personnel, and early training involved the number of aircraft needed to meet that requirement. Over time, however, the size of the force gradually increased, contributing to a corresponding increase in the number of helicopters from four to six, to seven, and ultimately to eight, including spares. Positioning the helicopters forward on NIMITZ well in advance of the actual operation was a delicate and time-consuming move, and the failure to fix the size and composition of the assault force at an early point, or at a minimum establish a troop lift ceiling, led to late juggling in the number of helicopters. This appeared to have exacerbated a problem that, even in early planning stages, was considered the most critical link in the entire operation.

JTF Rationale. The obvious JTF rationale for such incremental changes in force structure was to provide as finely tailored a capability as possible at the point of attack. Minor corrections and additions as planning progressed and further experience was gained from training and rehearsals were considered necessary improvements and appropriate responses to the dynamics of the situation. Further, to a large extent, intelligence drove the operation from the outset, and intelligence developments caused modifications in the operational concept.

Alternative. Nonetheless, as can be inferred from the discussion above, it would have been desirable to fix the airlift requirement at a certain ceiling well in advance of launch date and hold to that ceiling for planning purposes unless a compelling case could have been made that a given increase was indeed vital to insure mission accomplishment. For example, the ground rescue force could have been given a troop lift ceiling in early January, to have remained constant for planning purposes from that point on. It would have been preferable that such a limit be established in January vice the ongoing fluctuations that occurred.

Implications. Adoption of the group's course of action would have facilitated greater precision in rehearsals, a more finely tuned final plan with fewer last-minute changes, and a clearer and more carefully computed airlift requirement further in advance of launch date than was the case in the actual operation.

In this particular case, it was virtually impossible for COMJTF to fix a firm date because the rescue effort was essentially a response, not an initiative. Fixing a date and force structure may have been highly desirable; it may not have been possible to adhere to such planning, especially when the terminal situation is dictated by the enemy.

Further, too rigid planning could have had the effect of reducing the JTF's flexibility to respond to last-minute changes in the situation, be they diplomatic, operational, or enemy initiated.

Evaluation. A commander is always tempted to make any adjustments possible to improve his posture up to the point when the battle is joined. The review group would simply counsel that, particularly in future undertakings of a special operations nature, such late changes be made with some trepidation and extraordinary care.

ISSUE 8: Risk assessment of hostile SIGINT capabilities

Event. Analysis of operational communications planning, training, and execution, coupled with detailed interviews with key personnel, underscored JTF understanding of the need for COMSEC, particularly transmission security. The principles of signals security (SIGSEC) were vital, well understood by the JTF, and provided for in the instructions utilized by the force. However, it was clear that threat understanding and resultant radio procedures varied among units and probably resulted from a combination of knowledge, training, experience, and mind-set.

The helicopter unit commander and his plane commanders maintained strict radio silence during extreme operational difficulties in maintaining integrity and control. Additionally, the commander of #5 was not told--nor did he ask--about the weather at Desert One. The receipt of this information by the commander of Helicopter #5 could have caused him to proceed on the mission.

JTF Rationale. The JTF rationale concerning SIGSEC/COMSEC policy was driven by the requirement for total OPSEC--from initiation of planning to final assault positions--and by the assessment of the SIGSEC situation.

Alternative. The group's alternative would insure a comprehensive assessment and detailed understanding of threat capabilities by every member of the force, to include impacts and consequences.

Implications. The group's alternative would have insured, insofar as possible, that all personnel thoroughly understood the COMSEC requirements and consequences. Further, it appeared that command and control through selected use of radio communications could well have resulted in a more favorable execution of the movement to Desert One. On the other hand, total radio silence or the strictest of procedures always enhances OPSEC.

Evaluation. It is difficult to determine if the overall posture at Desert One at abort decision point would have been enhanced by additional command and control communications at critical points. Commanders and key personnel have many things to consider in time of stress and uncertainty. Nevertheless, the group would urge comprehensive analysis, assessment, and training in matters of SIGSEC operations and planning.

ISSUE 9: Abort criteria

Event. During the approximately 600-nm flight from the carrier to Desert One, the helicopter force unexpectedly encountered visibility conditions that precluded VMC flight. The condition was caused by two separate areas of suspended dust of unknown magnitude. This condition occurred approximately three hours after takeoff. Flight integrity was lost. The helicopters broke out of the first area but soon entered the second area, which was of even greater density. The helicopter flight flew in instrument meteorological conditions (IMC) for approximately two hours. The restricted visibility ended at a point approximately 50 nm from destination. The minimum visibility conditions for the operational requirements of the mission were not defined or tested.

Two helicopters, including the leading helicopter, turned to exit the first area of dust and landed. The leader, using a special radio that afforded minimum chance of intercept, called COMJTF and told him what the flight had encountered. The radio call could not be heard by other members of the flight. In response to query by COMJTF, the leader indicated he thought that it was possible to continue the mission despite the dust. He was directed to continue. One aircraft, Helicopter #5, at the time not in visual contact with other aircraft, aborted short of destination and returned to NIMITZ a few minutes before he would have exited the dust condition. He based his abort decision on instrument malfunctions exacerbated by the visibility conditions. The crew commander indicated later that he would have continued had he known that restricted visibility conditions did not prevail at destination. His failure to arrive at Desert One proved critical in that one additional mission-capable aircraft would have permitted the entire mission to continue. The flight leader was not informed of #5's decision to abort. Strict radio silence inhibited exchange of essential information within the helicopter flight when unexpected contingencies arose.

The visibility conditions caused the helicopters to be as much as 85 minutes late at Desert One. This in itself could have been a cause for mission abort based on total hours of darkness remaining for the next phase.

JTF Rationale. There was a tendency to feel that an abort decision could best be made by the element leader based on his experience and professional knowledge. Moreover, the helicopter flight leader believed that no more precise abort criteria were necessary for his individual flight members. The absence of positive communications procedures reflected the primacy of OPSEC in all mission planning. The helicopter crews demonstrated a strong dedication toward mission accomplishment by their reluctance to abort under unusually difficult conditions.

Alternative. In the absence of comprehensive weather penetration procedures, the group would have established firm weather criteria for mission abort. The helicopter flight leader could have retained control by use of visual signals to the extent possible and by use of radio when necessary, OPSEC notwithstanding. He would have made abort decisions based on established criteria and circumstances and would have aborted the entire flight if helicopter assets fell below minimum requirements to proceed to next phase of the mission. In addition to the weather criteria, others based on an acceptable degree of punctuality were necessary to assure timely arrival of a minimum number of helicopters at Desert One. An absolute minimum of six were required for the next phase, and prudence would dictate arrival of at least seven.

Directly related to sound abort criteria is a procedure to assure that communications equipment is functional. In strict radio silence, an aircrew could be completely unaware that a radio had ceased functioning. A procedure for periodic blind radio transmissions would have served as an equipment check for all net members.

Implications. The negative implications of the group's alternative include the possibility that severely restrictive abort criteria could have limited individual initiative and the success orientation necessary to mission success. On the positive side, the review group's method would have provided positive management of mission assets.

Evaluation. Positive abort procedures could have enhanced the capability of the helicopter flight leader to maintain flight integrity and control. Likewise, COMJTF would have been better informed regarding the status of the helicopter force as the mission progressed toward Desert One. His ability to make a well-informed decision could have been enhanced. However, it cannot be stated categorically that adoption of the group's alternative would have assured success beyond Desert One. Even though six helicopters and seven crews arrived at the intended destination under the difficult conditions that prevailed, they proved insufficient to proceed further. If all six helicopters had been mission capable, the delayed takeoff for the next phase could well have jeopardized success and resulted in a more serious situation. The national significance of this operation demanded adoption of, and adherence to, extraordinary procedures designed to deal with relatively remote contingencies.

ISSUE 10: The use of other helicopters

Event. Initial study of the Iranian situation and forces available quickly led to the belief that a rescue attempt would require heavy-lift, long-range helicopters. On 19 November 1979, the CJCS approved development of a plan using helicopters. The RH-53D was selected after an in-depth review of available helicopter resources and their inherent capabilities.

JTF Rationale. Primary criteria for selection included range, payload, and ability to be positioned rapidly; i.e., airliftable. Other major considerations were suitability of candidate helicopters to carrier operations and OPSEC. Primary candidates for the rescue mission were the CH-46, CH-47, CH-53, RH-53, and HH-53 military helicopters. All were C-5 airliftable, but range and payload considerations favored the -53 series. Of the latter, the RH-53D provided the best combination of range, payload, and shipboard compatibility.

Alternative. Selection of the RH-53D for all the reasons was correct. However, it has been contended that specially configured HH-53 helicopters should have been favorably considered as primary replacements. On the other hand, these specially equipped helicopters were just coming off the production line, only a handful of pilots were proficient in flying them and operating their sophisticated systems, and they carry less payload than the RH-53D. In addition, reliability and maintainability of such a sophisticated system was doubtful at this early stage of its introduction.

Implications. On the positive side, specially equipped helicopters would have markedly improved ability. Considering that at the time there was no practical alternatives to launching the helicopter force from a carrier, the negative implications of the group's alternative are the deciding factor. An HH-53 helicopter will not fit into a carrier elevator or below decks without removal of its rotor blades--a procedure not recommended for daily operations. The option of leaving helicopters on deck is virtually infeasible because of the corrosive atmosphere; difficulty of maintenance; impact on carrier operations; and, above all, OPSEC. Logistic support of a relatively new and exotic weapon system would be further complicated by the additional delays in shipboard resupply.

Evaluation. During the planning process, the RH-53D emerged as the only helicopter with the full combination of operational capabilities upon which a feasible rescue plan could be structured.

ISSUE 11: Helicopter force size

Event. Approximately two weeks after US Embassy personnel in Iran were taken hostage, six RH-53D SEA STALLION helicopters were delivered to the carrier KITTY HAWK, and eventually transferred to the carrier NIMITZ when she arrived on station. These six, augmented by two more brought in on NIMITZ, launched on 24 April in support of the rescue operation. The mission was aborted on the morning of 25 April because the number of RH-53D helicopters available to proceed was less than required.

JTF Rationale. As planning for the rescue progressed, the number of helicopters perceived necessary to execute the mission grew from four, to six, to seven, and eventually to eight. These incremental increases were the result of unforeseen growth in the force believed necessary to achieve an acceptable probability of success in assaulting the Embassy and freeing the hostages. In addition, more helicopters were required to compensate for the lift capability lost because of seasonal temperature increases in the objective areas.

The JTF decision on helicopter requirements was based on the collective professional judgment of highly experienced helicopter pilots participating in rescue mission planning. A risk analysis based on fleet-wide RH-53D statistical data for an 18-month period from 1 July 1978 to 31 December 1979 seemed to support the planners' conclusion that eight RH-53D helicopters aboard NIMITZ provided an acceptable degree of risk. Moreover, the always-primary OPSEC concern apparently influenced the planners' rationale, driving them to seek minimum practical force levels. In hindsight, it is clear that the eight helicopters put aboard NIMITZ provided adequate redundancy to airlift the initial assault force. However, as personnel and equipment grew in response to evolving intelligence, the minimum airlift requirement at Desert One increased.

Alternative. The review group concluded that additional helicopters and crews would have reduced the risk of abort due to mechanical failure, were operationally feasible, and could have been made available until quite late in the planning evolution. An unconstrained planner would more than likely have initially required at least 10 helicopters under JTF combat rules, 11 under the most likely case, and up to 12 using peacetime historical data. NIMITZ was capable of onloading a few more helicopters with little or no impact on other missions. Aircrew availability did not limit the force. By reducing the contingency margin, fuel available at Desert One was sufficient to accommodate at least 10 helicopters. In sum, aside from OPSEC, no operational or logistic factor prohibited launching 11 from NIMITZ and continuing beyond the halfway point to Desert One with 10 helicopters.

Implications. The negative implications of this alternative includes abandoning more helicopters in Iran, an increased threat to OPSEC

generated by additional aircraft, and a reduction in contingency fuel at Desert One. On the positive side, the group's alternative would have decreased the probability that the number of mission-capable helicopters would fall below the required minimum.

Evaluation. The number of mission-capable helicopters available at Desert One was critical to allowing the mission to proceed. It is too simplistic to suggest that adding more helicopters would have reduced the likelihood of the mission aborting due to mechanical failure. The problematic advantages of an increased helicopter force must be balanced against the increased threat posed to OPSEC throughout the continuum of training, deployment, and execution and the reduced contingency fuel reserve at Desert One. In retrospect, it appears that on balance an increase in the helicopter force was warranted; however, such an increase could not itself guarantee success.

ISSUE 12: Alternate helicopter pilots

Event. At the outset, with the fate of the hostages unknown and unpredictable, an immediate capability to mount a possible rescue attempt was mandatory. Although a residue of similar capability from the Vietnam conflict existed, it was not intact; therefore, it was expedient to select an integral unit proficient in the RH-53D and carrier operations. To bolster the unit's night assault capability, Navy pilots were paired with Marine Corps pilots versed in assault missions. In this crew configuration, training progress was viewed as unsatisfactory by COMJTF. As a result, pilots progressing slowly were released in late December 1979, and USN/USMC pilots known to have demonstrated capabilities more akin to the mission were recruited. Training in preparation for the rescue progressed more rapidly with the revised crews, and no further wholesale aircrew changes were made or contemplated.

JTF Rationale. The need to be ready at any moment precluded a smooth program designed to achieve a specific capability by 24 April 1980. The requirement to be ready when windows of opportunity opened resulted not in one five-month training program, but several discrete two- or three-week programs--shingled, one overlapping the other.

Alternative. During this period, USAF pilot resources included 114 qualified H-53 pilots, instructors, and flight examiners. Of these, 96 were current in long-range flight and aerial refueling. In addition, there were another 86 former H-53 qualified pilots identified, most of whom had fairly recent Special Operations Forces (SOF) or rescue experience. These USAF pilots, more experienced in the mission profiles envisioned for the rescue operation, would have probably progressed more rapidly than pilots proficient in the basic weapons systems but trained in a markedly different role. USAF pilots, as well as those from other Services, with training and operational experience closely related to the rescue mission profile could have been identified and made available. The real question to be addressed is: is transition to a new and highly complex mission in the same aircraft more or less difficult for an experienced pilot to master than transition to an aircraft variant in the same mission? Mastering a new, difficult, and complex mission requires a pilot to acquire and hone new skills and, more importantly, a new mind-set. Transitioning from an HH- or CH-53 to an RH-53 requires only learning a few new flight parameters and slightly altering already established procedures, something every experienced pilot has done several times. This point is not new. Experience gained in Project "Jungle Jim" (circa 1961) illustrated that learning new and vastly different complex mission skills is far more difficult than transitioning to an aircraft of similar design and performance characteristics.

Implications. Teaming carefully selected pilots of all Services, with a heavy weight on USAF SOF/rescue and USMC assault experience, would most likely have produced the most competent crews at an earlier date. However, introduction of large numbers of USAF pilots would have complicated the OPSEC problem in training and aboard the carrier.

Evaluation. Should a rescue mission have been attempted in the early days after the Embassy seizure, it is probable that a complement of selected pilots with extensive or current assault and rescue experience would have been more effective. However, there is nothing to suggest that any other combination of aircrews could or would have performed the mission better than those who flew it on 24 April 1980. While this issue was not crucial to the mission, it does indicate the importance of designating an operational helicopter unit responsible for maintaining mission capability in this area.

ISSUE 13: Established helicopter unit

Event. Selection of the RH-53D helicopter for the rescue mission naturally led to selection of an RH-53D squadron as the unit to perform the mission.

JTF Rationale. The JTF selected a minesweeping helicopter squadron as the most expedient solution when it became evident the RH-53D was the helicopter to use.

Alternative. The group would marry up the appropriate helicopters and their maintenance capability with an operational unit compatible with mission requirements. When it was clear that RH-53D helicopters were required, selection of a USMC assault squadron would have facilitated training and in constructing a credible OPSEC cover story. If necessary, highly qualified pilots from other Services could have augmented the Marine squadron to bolster its capability. The main point is that the squadron's institutional structure would be preserved; e.g., training, tactics, and standardization. Personnel performing and experienced in these functions would greatly enhance the unit's ability to smoothly transition into its new role. Perhaps one of the key squadron staff functions referenced above would have perceived the Blade Inspection Method (BIM)-associated abort experienced during training as a major potential cause of abort during the mission and pursued the facts as the review group did. (See Issue 17.) Armed with knowledge of the circumstances surrounding BIM failures, the pilots of Helicopter #6 could have reached a more informed decision on the risk associated with continuing.

Evaluation. It is believed the preservation of an established squadron's inherent unit cohesion could have facilitated training, enhanced information flow, and increased aircrew knowledge, all of which could lead to a more integrated unit operation. It cannot be demonstrated nor is it suggested that these factors would have altered the outcome. However, they would have enhanced training and more likely increased the chance of success.

ISSUE 14: Handling the dust phenomenon

Event. There was serious and justifiable concern with the ability to accurately forecast weather along planned low-level routes to Desert One. Therefore, the JTF had to develop a catalog of weather phenomena that could likely occur in Iran and the ability to accurately and reliably forecast their occurrence. Difficulty of accurate weather prediction was compounded by the need to accurately forecast Iranian weather that could meet required minimums for a 40-hour period to accommodate the planned two-night operation. Diplomatic initiative, moon phase, and other "windows" exacerbated the problem. The JTF weather team researched and identified hazardous weather that aircrews could encounter in Iran. Among these was the phenomenon of suspended dust actually encountered along a 200-nm stretch of the helicopter route. Information extracted from the National Intelligence Survey (NIS 33, 34 - Iran and Afghanistan) July 1970 was available to the JTF in December 1979 and was eventually included in the OPLAN weather annex. A table in this annex indicated, by location and month, the frequency of suspended-dust occurrences. Helicopter pilots, however, were surprised when they encountered the dust, were unprepared to accurately assess its impact on their flight, and stated that they were not advised of the phenomenon. C-130 pilots were also unaware of the possibility of encountering suspended dust.

JTF Rationale. The AWS team was assigned to the JTF J-2 section and did not have direct contact with the helicopter and C-130 aircrews. Weather information was passed through an intelligence officer to the pilots on regular visits to the training sites. However, pilots with extensive C-130 and H-53 experience on the JTF J-5 section had direct access to AWS personnel. Information flow to the mission pilots was filtered as a result of organizational structure. The traditional relationship between pilots and weather forecasters was severed. This was done to enhance OPSEC.

Alternative. The question to be addressed is not where the fault lay for the lack of aircrew knowledge but, more importantly, what should be done in future situations where there exists a paucity of weather information and the price of failure is high. Air Weather Service meteorologists can be denied information in several ways: (1) a closed society does not release information, (2) the phenomenon is so infrequent that it had never before been observed in recorded history (e.g., Mount St. Helen's ash), or (3) the area of interest is so sparsely populated that although the phenomenon occurs frequently, and perhaps predictably, it is not observed by "civilized" inhabitants and therefore not recorded. The suspended dust encountered along the helicopter route falls more appropriately into the third category. If they were fully aware of the high degree of uncertainty associated with limited data and the attendant risk, mission planners should have more aggressively pursued options that reduced this uncertainty to a

manageable and acceptable degree. One cannot build a data base overnight; it takes years of observations to accurately and reliably predict weather patterns. Therefore, active measures could have been pursued. Of equal importance, the interplay of meteorologist and operator is the process that most often surfaces the questions that need to be answered--the uncertainties that size risk. In this regard, the AWS team had little or no direct interface with the mission pilots--they were both exclusively compartmented. By and large, an intelligence officer passed weather information to the pilots. Operators were placed in a receive only mode--forecasters and weather researchers received no direct feedback. The group would have required direct interface between mission pilots and their supporting weather team.

Implications. The negative aspects of the review group's alternative impact on OPSEC and administrative procedures. The AWS officer would have had to make frequent trips to the training sites for direct interface, or a second weather officer could have been temporarily assigned to the western United States training site with the aircrews. It is unlikely that either of these alternatives would have compromised OPSEC. On the other hand, there is no assurance that face-to-face interaction would have surfaced the dust phenomenon or made pilots more aware. However, the group believes that direct interface between mission pilots and air weather officers would have increased the likelihood of foreknowledge of the suspended dust phenomenon, that informed planners would have more aggressively pursued alternative approaches to reduce and manage this uncertainty, and that pilots encountering the suspended dust would have been better prepared.

Evaluation. The potential for increased awareness of weather phenomenon through better interface with the AWS team on the planning staff must be weighed against the possible OPSEC risk. While it is unlikely that direct interface between AWS personnel and mission pilots could have altered the outcome on the night of 24 April, it is possible that helicopter pilots would have gained insight into the dust phenomenon and might well have made a better informed decision when they encountered it. For example, a decision to abort would have preserved the option to launch the mission at a later time. The larger issue for future consideration is the need for planners to be more sensitive to areas of great uncertainty that could impact significantly on the planned operation and, where possible, to reduce these uncertainties. Yet weather was an uncertain factor, which would lead to the conclusion that the chances for successful helicopter ingress would have been enhanced by any and all means which would have improved the helicopters' (and their crews') capabilities to penetrate adverse weather.

ISSUE 15: Weather reconnaissance

Event. There was serious and justifiable concern about the ability to accurately forecast weather along planned routes to Desert One and the extraction site and less concern about forecast accuracy for Tehran because of the availability of weather predictions for major international airports. Forecasting difficulty was compounded by the need to predict acceptable weather for a two-day period. Accordingly, an AWS team was formed to gather data on Iran. It was tasked to forecast Iranian weather on a regular basis, and its predictions were checked for accuracy and reliability by comparing them with weather photos of the forecasted period. Over time, the team's ability to forecast with accuracy and reliability was validated by the JTF. Primary interest was focused on visibility, hazards to flight such as storms, ambient light and winds for navigation, and timing. Satellite imagery was extremely useful but incapable of revealing the presence of low-level clouds or other restrictions to visibility hidden beneath an overcast and was of limited value at night. Nevertheless, there was evidently sufficient confidence in the forecaster's ability to predict VMC and the frequency of VMC so that alternative means to VFR flight procedures were not pursued. The weather forecast for the night of 24 April did not predict reduced visibility over extended distances of the helicopter route. Uninformed and unprepared to cope with the extremely low visibilities encountered, the leader paused, the flight became separated, Helicopter #5 aborted, and all helicopters reaching Desert One were appreciably late.

JTF Rationale. The JTF believed that the probability of VMC for the helicopter ingress was reasonably high, and that the AWS team could accurately forecast the en route weather. Therefore, the helicopter ingress would be accomplished by visual navigation using night vision goggles. If the helicopters encountered weather that could not safely be penetrated using visual navigation with night vision goggles, the flight--and mission--would be aborted. The use of a weather reconnaissance aircraft had the disadvantage of being one more sortie over the helicopter route that could arouse attention. This risk to OPSEC was considered to override any advantage to be gained, in view of what appeared to be a simple and straightforward approach to handling weather contingencies.

Alternative. COMJTF and his air component staff had the means to obtain more timely and accurate weather data. Weather reconnaissance is a proven and often used means of accurately determining weather along flight routes with a paucity of weather reporting stations and high risk of incomplete knowledge. In hindsight, a weather reconnaissance C-130 would have encountered the dust phenomenon in advance of the helicopters and assessed its magnitude and impact before the helicopters would have to penetrate the area of reduced visibility. It is purely conjecture at this point, but full knowledge of what the helicopters would encounter, balanced

against their planning and training for VMC flight, may have caused COMJTF to order an abort. Although useful in a macro sense, satellite weather imagery often has proven to be neither accurate nor timely enough to meet operational requirements on a high-risk mission. It is therefore believed that information provided by a C-130 weather reconnaissance of the RH-53D route could have reduced the risk margin.

Implications. On the negative side, the C-130 would have been one more sortie overflying the helicopter route and could have alerted ground watchers so that the helicopter flight would have been visually detected. On the positive side, weather reconnaissance could have provided COMJTF with more accurate and timely information on which to base a decision on whether or not to abort that night and try again within the available window.

Evaluation. Weather reconnaissance along the exact helicopter route would have provided COMJTF with precise information on the prevailing weather, and influenced a decision to continue at that juncture or to wait for more favorable conditions. The group considered that provisions for handling weather contingencies could and should have been enhanced. The weather reconnaissance was one option that cost nothing in additional aircraft, fuel, or crew requirements, although there were OPSEC considerations.

ISSUE 16: C-130 pathfinders

Event. During flight from respective launch points to Desert One, the C-130s made landfall in the same general vicinity and at approximately the same time as the helicopters. The helicopter force was much more austerely prepared for long-range, low-level night navigation. Their crews did not include navigators, and the aircraft were not equipped with TFR or FLIR. They were equipped with the PINS and OMEGA systems. The crews had received only limited training and expressed low confidence in the equipment and their ability to employ it. The primary method of navigation for the helicopters was dead reckoning using NVGs to terrain follow.

There was serious and justifiable concern about the ability to accurately forecast weather along planned low-level routes to Desert One and the extraction site. There was understandably somewhat less concern about forecast accuracy for Tehran because weather predictions for major international airports were readily available. Moreover, the route from the coastal penetration to Desert One was over sparsely populated desert. Forecasting difficulty was compounded by the need to predict the weather for a two-day period. Accordingly, a weather team was formed to gather data on Iran. It was tasked to forecast Iranian weather on a regular basis. The predictions were checked for accuracy and reliability. Over time, the team's ability to forecast with accuracy and reliability was validated to the JTF's satisfaction. Primary interest was focused on visibility and hazards to flight such as storms, ambient light and winds for navigation, and timing. Satellite imagery was useful but incapable of revealing the presence of low-level clouds hidden beneath a higher level and was of limited value at night. There was evidently sufficient confidence in the forecaster's ability to predict VMC and the frequency of VMC that alternative means to VFR flight were not pursued. The weather forecast for the night of 24 April did not predict reduced visibility over extended distances of the helicopter route. Uninformed and therefore not well prepared to cope with the extremely low visibilities encountered, the leader paused, the flight became separated, Helicopter #5 aborted, and all helicopters reaching Desert One were appreciably late.

JTF Rationale. With limitations of the navigation equipment available in the RH-53D, the JTF gained confidence in the ability of helicopter crews to navigate over long distance at night under VMC using NVGs during the training phase in the western United States. The JTF was comfortable that the weather would not be a limiting factor for mission success because of the predicted high frequency of VMC along the helicopter route. Use of a C-130 pathfinder for the helicopters was not considered because of the confidence in the high probability of VMC weather and because of the feeling that the use of a C-130 pathfinder would be therefore unnecessarily complicating, especially with the wide difference in operating airspeeds.

Alternative. The alternative plan would provide for a C-130/helicopter rendezvous at or just after landfall.

C-130 aircraft are capable of flying at speeds compatible with RH-53D helicopters and acting as pathfinders for them.

Implications. Using C-130s as pathfinders from the point of entry into Iran to Desert One would have increased their fuel consumption. Increased C-130 fuel consumption would be somewhat compensated for by a greater assurance that the helicopters would arrive and arrive on time, thus requiring shorter ground times for C-130s and helicopters.

Evaluation. C-130 pathfinders for the RH-53Ds would have increased the probability of all flyable helicopters arriving at Desert One regardless of unforeseen weather along the route short of a major storm. In retrospect, pathfinders would most likely have enabled Helicopter #5 to reach Desert One and the mission to proceed. Moreover, pathfinders might have averted the fuel situation that arose due to late arriving helicopters. In addition, if existing weather along the route had been of such severity to make it prudent to discontinue the mission, pathfinders could have contributed to a better informed early decision, preserving the option to delay by one or more days.

ISSUE 17: Helicopter aborts

Event. Eight mission-capable RH-53D helicopters departed NIMITZ on the evening of 24 April 1980. Of these eight, only five arrived at Desert One capable of proceeding. One helicopter aborted in the Iranian desert short of Desert One, another turned back for loss of instruments due to electrical failure, and a third RH-53D aborted at Desert One as the result of a hydraulic leak that in turn failed a primary hydraulic pump. Because only five helicopters were available to proceed against a firm minimum requirement of six, the rescue mission was aborted. Accordingly, a post-mission analysis of the aborts was warranted.

JTF Rationale. Helicopter #6, the first abort, experienced a BIM indication approximately two hours into the flight. RH-53 rotor blade spars are pressurized with nitrogen, and the spar's ability to retain the nitrogen under pressure is an indication of spar integrity. A BIM warning indicates possible loss of nitrogen pressure in the blade but does not necessarily indicate that the pressure loss is the result of a crack in the spar. Nitrogen pressure loss can result from a leaky filler valve, a defective seal on the spar extrusion, or a crack in the spar that can ultimately result in rotor blade failure. The crew of #6 made a precautionary landing in the desert to investigate, verified the cockpit indication with the BIM indicator on the rotor blade, and based on normal operating procedures elected to abandon the helicopter. With regard to spar failures, the CH/HH-53 helicopter family has experienced 31 spar cracks, three of which have resulted in crashes. However, the RH-53D, equipped with an improved cockpit detection system, has not experienced a spar crack. To date, 210 RH-53 blades have been returned to Naval Air Rework Facility (NARF) for various inspections and repairs--43 of these were for BIM indications. All 210 RH-53D rotor blades inspected demonstrated spar integrity. Why this is true is unknown, but the fact remains that in 38,216 RH-53D flying-hours (229,296 blade-hours) logged through December 1979 not one crack has been found in an RH-53D rotor blade spar. Moreover, an H-53 blade fatigue failure analysis conducted by Sikorsky in 1974 revealed that rotor blades with cracked spars would retain structural integrity for up to 79 flight hours from crack initiation. The time from crack initiation to spar failure is a function of airspeed, as indicated below.

FORWARD SPEED	TIME FROM CRACK INITIATION TO SPAR SEPARATION
100 KTS	79.27 HRS
120 KTS	27.47 HRS
130 KTS	15.13 HRS
140 KTS	8.73 HRS
150 KTS	5.63 HRS
160 KTS	3.33 HRS
170 KTS	2.43 HRS

NOTE: Based upon an aircraft maximum gross weight of 42,000 lb.

In 1974 as a result of the Sikorsky data, the US Air Force directed that the H-53 not be flown in excess of five hours beyond BIM indication at or below 130 KTS for more than two hours above 130 KTS.

Helicopter #5 aborted four hours into the mission and returned to NIMITZ because of failures to essential flight instruments that the pilots believed were critical to safely continuing the flight. At the abort point, #5 was within 25 minutes of exiting the dust cloud and about 55 minutes (110 nm) from Desert One. When the pilot was asked if he would have proceeded had he been fully aware that the dust cloud dissipated in 50 nm and the weather at Desert One was VMC, he said he probably would have.

The lead C-130 crew possessed essential information on Desert One weather and the dust cloud that was not passed to Helicopter #5. Based on the helicopter pilot's testimony, these data, had they been passed, could have altered his abort decision. Once at Desert One, Helicopter #5 could have continued in the VMC conditions existing and, moreover, would have had the opportunity to exchange equipment with the non-mission-capable helicopter.

Helicopter #2 aborted at Desert One because of a hydraulic pump failure resulting from fluid depletion through a cracked "B" nut. Failures of this type usually result in metal contamination throughout the hydraulic system. Correcting the malfunction required replacing pump filters and thorough flushing of the system. The extensive maintenance required to repair a hydraulic pump malfunction justified the decision to not take a spare hydraulic pump along.

Alternative. In light of the circumstances surrounding helicopter aborts that led ultimately to the overall mission abort, it is apparent that the pilot of helicopter #5 lacked certain knowledge vital to reaching an informed decision to proceed or abort. Uncertainty regarding Iranian radar coverage and the dust phenomenon (see Issues 14 and 18) played important roles in Helicopter #5's decision to return to the carrier. However, the major factor in his abort decision was lack of readily available information on weather conditions further en route and at Desert One. Information on the number of mission-capable helicopters at Desert One or still en route also could have influenced his decision and should have been made known. Failure to pass this vital information back to the carrier and support bases and rebroadcast it via secure HF was the result of a very restrictive communications doctrine related to the overriding concern for OPSEC. However, there were ways to pass the information to C-130s and helicopters en route that would have small likelihood of compromising the mission.

A BIM indication was a likely occurrence on the mission and had been experienced in training. BIM indications and other likely malfunctions should have been identified and researched in detail and information provided aircrews as part of their mission preparation.

Implications. The negative aspects of the proposed alternative are relatively insignificant. It is somewhat doubtful that secure retransmissions would have compromised OPSEC. In the positive vein, the proposed alternative would have provided for a covered and secure flow of vital information to the rescue force while en route to Desert One.

Evaluation. When considering the conflict that often arises between OPSEC and operational requirements, a prudent planner of a clandestine high-risk venture should always be conservative. However, in the narrow scope of this issue, the group concludes that restricted communications flow within the task force denied information essential to reach informed decisions. The additional information might have prompted Helicopter #5 to continue on to Desert One. One more flyable helicopter would have enabled the mission to proceed.

ISSUE 18: The enemy radar threat

Event. This issue, while stated in generalized fashion, derives from a single, highly explicit event in which unevaluated data has passed directly to helicopter aircrews. This data and its implications contradicted the final conclusions of intelligence analysts.

Implications. There exists the possibility that some helicopter pilot judgments regarding altitude selection were affected by the informal report.

Evaluation. It would be inappropriate to fault COMJTF and his staff in this instance, as he learned of the informal report after the mission had been concluded, obviously much too late to take corrective action. Furthermore, six helicopters did arrive at Desert One, and the abort at that point cannot be related to any alleged enemy capability along the penetration route. What is illustrated by this event deserves reemphasis, however. All concerned should refer raw information reports to the appropriate intelligence staff representative for confirmation, denial, or other qualification before accepting the report as factual.

ISSUE 19: Helicopter Communications

Event. The helicopter force planned and trained to operate in complete radio silence. Intraflight communication, where possible, was to be done with light signals. The absence of radio communication indicated to the helicopter pilots that all was well and to continue the mission. Subsequently, when helicopter flight became separated in the dust cloud, each separate element lacked vital information. The lead helicopter did not know that #8 had successfully recovered the crew from #6 and continued nor that #6 had been abandoned in the desert. More importantly, after he reversed course in the dust and landed, the lead could not logically deduce either that the other helicopters had continued or that they had turned back to return to the carrier. He did not know when the flight had disintegrated. He could have assumed that they had become separated before he reversed course and unknowingly proceeded. Alternatively, they could have lost sight of him after turning and, mistaking his intentions, continued back to the carrier. Lastly, #5 might have elected to continue had he known that his arrival at Desert One would have allowed the mission to continue and that VMC existed at the rendezvous.

JTF Rationale. In concert with the view that OPSEC was critical to achieving surprise, every effort was made to keep radio transmissions to the absolute minimum.

Alternative. Capabilities existed to pass to the helicopter crews vital information that would have enabled them to make more informed judgments. On the night of 24 April, all information deemed vital to the helicopters could have been transmitted by NIMITZ.

Implications. Negative implications of the proposed alternative are relatively minor. Secure communications would not likely have compromised OPSEC. On the positive side, the proposed procedures would have enabled helicopter crews to be better informed while en route.

Evaluation. A system providing secure intelligence to the helicopter crews would have significantly enhanced the probability of the mission proceeding beyond Desert One. By his own statement, if the helicopter commander aboard #5 had been aware that the weather at Desert One was VMC, he would have continued.

ISSUE 20: Alternatives to the Desert One site

Event. Early in the hostage rescue planning, it became clear that a desert rendezvous in Iran to refuel helicopters and onload the assault force had many advantages. Accordingly, the JTF initiated a search for a suitable C-130 landing site. The site had to be located within a prescribed distance of Tehran; to have the necessary dimensions to land, park, and launch C-130s and RH-53Ds; and to satisfy a geological estimate of satisfactory bearing surface.

JTF Rationale. To succeed, the plan called for sufficient hours of nautical darkness with some moonlight, and temperatures that would enable the helicopters to lift the fuel, equipment, and assault force believed necessary to successfully execute the plan. The window where all these environmental factors overlapped closed in late spring. On the basis of the site assessment, the JTF anticipated that the force at Desert One would be observed by passing vehicles. They had a workable plan to handle personnel from these vehicles during the short period that secrecy had to be maintained, until the rescue force reached the hostages.

Alternative. The Desert One plan was feasible, but the risks of compromise along the road were high. The vehicles and helicopter abandoned along the road would more than likely draw attention to the scene and ultimately to the C-130 wheel ruts. As a result, COMJTF was on the horns of a dilemma: the risk of compromise was increased if the mission proceeded and was certain if the force withdrew. Clearly, another site away from roads would have markedly reduced compromising the rescue mission in its early phases.

Implications. The group's alternative depended on the identification of other suitable site(s) clear of roads and inhabited areas. Intelligence planners for the JTF had concluded none existed, and the group has no basis for believing that the search for alternative sites was anything less than thorough. A perfunctory review by the group did not confirm the availabilty of any alternative potential sites. Nevertheless, traffic on the road that bisected Desert One operations was almost certain, and there was the probability of abandoning a helicopter or other equipment.

Evaluation. Hostage rescue in a hostile environment carries great risk for the hostages and their liberators. Accordingly, the planners should take every precaution to reduce risk. A refueling site in the desert was an integral part of the only feasible rescue plan, and Desert One apparently had no suitable alternative in a remote location. Therefore, the JTF's solution appears to be the only reasonable one, but the group concludes that it probably carried more risk than the JTF had assessed.

ISSUE 21: Command and control at Desert One

Event. The first aircraft to arrive at Desert One, carrying the on-scene commander, Combat Control Team, and Road Watch Team, executed a missed approach to avoid a vehicle traveling along the highway adjacent to the desert strip. As the aircraft landed on its third approach, the Road Watch Team disembarked to take up blocking positions on the roadway approaches to Desert One. They each encountered traffic, one a bus with a driver and 43 passengers, the other a small fuel truck followed closely by a pickup truck. All three vehicles showed no signs of stopping when signaled. Shots were fired, which resulted in the bus stopping and the fuel truck set on fire. The fuel truck driver jumped out, raced back to the pickup, and escaped--44 Iranians on the bus were detained. This had all taken place rather rapidly--the operation was becoming more complex, but these contingencies had been foreseen and planned for. As the site filled up with C-130s, more than had been exercised at a western United States training area, it took on new and larger dimensions than had been experienced but was unfolding as planned. Then it became apparent the helicopters were late, but for reasons unknown at Desert One. As the helicopters started arriving in separate elements, concern increased that there would not be enough helicopters, fuel or time remaining to continue beyond Desert One. The setting in which all this took place was, at best, a difficult, but manageable one. The noise generated by 16 C-130 and 12 RH-53D engines made voice or radio communications difficult. Personnel moving about Desert One were shadowy, somewhat fuzzy figures, barely recognizable. Then came the unfortunate accident, when Helicopter #4 crashed into a C-130 while repositioning to allow another helicopter to take on more fuel for the return flight to NIMITZ.

As complex and difficult as the Desert One scenario was, it had not been fully rehearsed. A training exercise at the western training area conducted on 13-14 April with two C-130s and four H-53s was used to validate the Desert One concept. Perhaps because the scope and complexity of Desert One was not replicated in a full-dress rehearsal, the plan for this desert rendezvous was soft. There was no identifiable command post for the on-scene commander; a staff and runners were not anticipated; backup rescue radios were not available until the third C-130 arrived; and, lastly, key personnel and those with critical functions were not identified for ease of recognition. For example, when the Desert One on-scene commander's name surfaced during post-mission interviews with helicopter pilots, they stated that, in some cases, they did not know or recognize the authority of those giving orders at Desert One. In this regard, instructions to evacuate helicopters and board the C-130s had to be questioned to determine the identity of those giving the orders to establish their proper authority.

JTF Rationale. The overriding concern for OPSEC played heavily in the JTF's decision not to fully rehearse the Desert One scenario. Moreover, the JTF apparently believed that desert operations had been practiced sufficiently and that, although there were technical differences in the refueling, a full rehearsal was not justified. With regard to identification, members of the JTF, by their own testimony, were confident that personal recognition between the key players was adequate to facilitate command and control at Desert One.

Alternative. The review group concluded that the uncertainties of conducting a clandestine operation in a hostile environment argued for the strictest adherence to doctrinal command and control procedures. The on-scene and functional commanders, their alternates and personnel of every key function should have been designated with readily identifiable markings visible in artificial or natural light. This would have enabled everyone on the scene to easily identify and quickly seek out responsible authorities for guidance when contingencies arose and to immediately recognize the authority of those giving orders or directions.

The lack of effective command and control became evident when the helicopter flight leader did not arrive first at Desert One as scheduled. There was no way to quickly find out or locate who was in charge. When the on-scene commander happened to be away from his radio to consult with others, his radio operator broadcast that the RH-53 and the C-130 had collided. Unfortunately, the transmission was incomplete and no call sign was given. This resulted in several blind radio calls from support bases in an attempt to find out what had happened and where. These unnecessary transmissions blocked out other radio calls.

The on-scene commander's principal location should have been fixed and easily recognized. An alternate or second in command and runners to carry orders should have been available and identifiable. Armbands or some other easily recognizable device would have had to have been fabricated for the identification of key personnel and their agents. In addition, backup communications should have been carried on both the first and second C-130s to insure reliable and secure communications from Desert One as soon as possible. Lastly, although not central to the comand and control issue, a full-dress training exercise at a comparable desert training site could well have surfaced some of these problems (see Issue 5.)

Implications. The review group's alternative would have reduced confusion and accelerated information flow at Desert One. Equally important, it would have virtually eliminated the disconnects that surfaced when principals such as the helicopter flight commander arrived last and the Deputy Commander for Helicopter Forces aborted.

Evaluation. Although the proposed alternative would have smoothed Desert One operations, it would not have influenced the outcome. Nevertheless, it is a significant lesson learned for application to future operations.

ISSUE 22: Classified material safeguard

Event. In the event of mission abort at Desert One, JTF guidance called for pilots, crews, and radio operators to return their helicopter and material to NIMITZ, taking appropriate action to protect classified. The plan proved infeasible when one helicopter crashed into a C-130 resulting in fire, casualties, and an overall hazardous situation. The on-scene commander decided to withdraw the entire force by the remaining C-130 aircraft as soon as possible, leaving the five undamaged helicopters at Desert One. Two of the helicopters located in the southern refuel zone were properly sanitized of classified material by the individuals responsible. The other three helicopters were located in the northern refuel zone in close proximity (within 100-150 feet) to the crash and fire. Personnel responsible for the classified material in those helicopters attempted to return to them but were told to immediately board the C-130s to expedite withdrawal. Failure to sanitize the helicopters resulted in loss of classified material. There is no evidence or any indication that the on-scene commander was aware that classified material was being left behind.

JTF Rationale. JTF guidance, coupled with military SOP and training, appeared sufficient to provide for adequate protection of classified material. The decision by the Desert One on-scene commander to expedite withdrawal of personnel by the remaining C-130 aircraft was made in the interest of troop safety, to protect remaining assets, and to minimize risk of detection.

Alternative. The review group's alternative would have been to refine command and control procedures at Desert One to assure adherence to provisions of the JTF plan for handling of classified material (see Issue 21).

Implications. An attempt to return to the helicopters and to sanitize them could have cost additional lives, increased the risk of discovery and of damage to the escape aircraft, and delayed departure. However, the helicopters were not destroyed, there remained a requirement to protect classified material, and a period in excess of 20 minutes was available to sanitize the helicopters.

Evaluation. The loss of classified material had no direct impact on the success of this mission. However, such loss reflects unfavorably on the performance of the personnel involved. Their actions resulted in possible enemy exploitation of sensitive material, including its use for propaganda ends.

ISSUE 23: Destruct devices on rescue mission helicopters

Event: Helicopter #6 developed mechanical problems en route to Desert One and landed in the desert short of destination. Ground personnel tasked with responsibility for helicopter destruction were not available. An unforseen accident and ensuing conflagration at Desert One prevented the on-scene commander from implementing the helicopter destruction plan because he perceived it to be too risky. As a result, five RH-53Ds were abandoned intact.

JTF Rationale. As planning proceeded, an option to destroy the helicopters in Iran, should a contingency situation warrant, was considered. This contingency called for individuals to place thermite grenades in the helicopters if their destruction was called for and then to detonate them. This option was never implemented at Desert One because of the perceived danger of exploding helicopters and ammunition to personnel and aircraft evacuating the site and to Iranians aboard a nearby bus.

Alternative. The review group believes it prudent to have detailed plans for contingency destruction of equipment in missions similar to the Iranian rescue. Providing the option for contingency destruction is most important when the equipment is to be abandoned in a hostile country. There is good reason to believe explosives, when properly installed, are no more dangerous to crew and passengers than the onboard fuel supply. Moreover, explosives for use in destroying the helicopters and breaching the Embassy had to be carried aboard several, if not all, helicopters to insure availability. Therefore, it is a moot point as to what explosives were carried onboard and where they were placed. On at least one previous rescue mission (Son Tay), explosives for helicopter self-destruction were placed onboard at the outset. The helicopter to be abandoned was fitted with explosives and detonators. Electrical initiators were placed apart from the explosives, and the electrical leads left disconnected. Aircrew members destroyed the helicopter, when necessary, by simply connecting the initiator to the explosives and activating a built-in timing device. With regard to aircrew reluctance to have similar devices to the ones used in the Son Tay raid aboard their helicopters, Iranian-mission aircrews interviewed stated that this procedure was acceptable to them. Moreover, they admitted that most explosives were less of a danger than other hazardous material carried on-board mission helicopters; e.g., fuel.

Equipping rescue mission helicopters with easily removable, separated, and disconnected explosive devices and initiators should not have jeopardized safety and would have enhanced the ability to destroy helicopters at any point in the mission.

Implications. Negative implications of the group's proposal are nil. Aircrews would have had to have been trained to connect and

operate the destruct devices planned for use in their helicopters. There was ample time available at the western United States training site to accomplish this training. Flight safety would not have been compromised. On the positive side, the proposed alternative could have eliminated the requirement to have individuals present to handle the explosives, reduced response time, and provided the option to destroy helicopters at any point in the mission. Thus the group's alternative would have enabled Helicopter #6's crew to destroy their aircraft in the desert if called for and could have provided greater opportunity to destroy all helicopters abandoned at Desert One.

Evaluation. Equipping helicopters with destruct devices would not have altered the circumstances that ultimately led to aborting the rescue mission. However, the lack of destruct capability severely limited the Desert One on-scene commander's ability to execute destruction when an unforeseen contingency developed.

Summary of Major Issues

Of the 23 issues analyzed, 11 were considered to be major issues, ones that had an identifiable influence on the outcome of the hostage rescue effort or that should receive the most careful consideration at all levels in planning for any future special operation. While the other 12 issues are not accorded the same priority, they do reflect valuable lessons learned. To provide a reference for the subsequent conclusions, the 11 major issues are listed below:

- OPSEC.
- Independent review of plans.
- Organization, command and control, and the applicability of existing JCS plans.
- Comprehensive readiness evaluation.
- Size of the helicopter force.
- Overall coordination of joint training.
- Command and control at Desert One.
- Centralized and integrated intelligence support external to the JTF.
- Alternatives to the Desert One site.
- Handling the dust phenomenon.
- C-130 pathfinders.

IV. CONCLUSIONS

The conclusions drawn in this chapter derive from the determination of fact presented in Chapter II and the analysis of issues discussed in Chapter III.

SPECIFIC CONCLUSIONS

The concept of a small clandestine operation was valid and consistent with national policy objectives.

The review group concludes that the concept of a small, clandestine operation was sound. A larger, overt attempt would probably have resulted in the death of the hostages before they could be reached. It offered the best chance of getting the hostages out alive and the least danger of starting a war with Iran. Further, the large-scale military thrust required by an overt operation would have triggered early hostile reaction, possibly resulting in widespread Iranian casualties and giving strong credence to probable Iranian allegations that the rescue attempt was an act of war. Conversely, a small operation with Iranian casualties essentially limited to the act of freeing the hostages would have better supported the contention that it was a rescue, not a punitive raid.

The operation was feasible and probably represented the plan with the best chance of success at the time the mission was launched.

Despite all the complexities, the inherent difficulties, and the human and equipment performance required, the review group unanimously concludes that the risks were manageable, the overall probability of success good, and the operation feasible. Under these conditions, decision to execute was justified.

The plan for the unexecuted portion of the mission was soundly conceived and capable of successful execution. It appeared to be better than other alternatives--a realistic option with the best chance for success at the time of mission execution. Based upon the review group's visit with the ground rescue force and a comparison with the capabilities of CT forces of other nations, it appears that selection, training, and equipment of the ground rescue forces were excellent.

The group believes it virtually impossible to precisely appraise the remaining part of the operation and to measure probability of success. During that portion of the mission, the inevitability of hostile reaction would have become a major factor. The dynamics inherent in a recovery of the type envisioned would have produced a level of complexity that makes the study of probabilities essentially a matter of conjecture.

The rescue mission was a high-risk operation.

The mission had to be considered high risk because people and equipment were called upon to perform at the upper limits of human capacity and equipment capability. There was little margin to compensate for mistakes or plain bad luck.

Furthermore, possible measures to reduce the high risk factor could conceivably introduce new elements of risk. For example, the JTF considered that adding more helicopters and crews to improve the chances of having more helicopters available en route would result in an unnecessary increase in the OPSEC risk. A delay in execution for additional training could increase the risk.

The first realistic capability to successfully accomplish the rescue of the hostages was reached at the end of March.

Confidence in the probability of mission success grew after the final training exercise in the western United States. With the possible exception of several items of communications equipment, essentially all mechanical means used in the rescue operation--helicopters, aircraft, and special equipment--were available on 4 November 1979.

OPSEC was an overriding requirement for a successful operation.

Rescue depended upon surprising the captors in the Embassy compound before the hostages could be harmed. If this surprise could not be achieved, the mission would fail--either canceled or aborted, with high probability of the hostages being removed or executed. Further, recognizing the importance of the element of surprise, the group is reluctant to criticize, even constructively, the OPSEC standards for being too strict, as secrecy was successfully preserved until after withdrawal of the aircraft from Iran.

Nevertheless, throughout the planning and execution phases, decisions were made and actions taken or not taken because of OPSEC that the group believed could have been done differently. Furthermore, most, if not all, of the suggested alternatives could have been implemented without an adverse OPSEC impact had there been a more precise OPSEC plan developed early after the formation of the JTF organization and with specific responsibilities assigned.

Command and control was excellent at the upper echelons, but became more tenuous and fragile at the intermediate levels.

The command and control arrangements at the higher echelons from the NCA through the Joint Chiefs of Staff to COMJTF were ideal. Further down the operational chain, command relationships were less well defined and not as well understood.

External resources adequately supported the JTF and were not a limiting factor.

The effectiveness of the special supply system for the helicopters was commendable, especially considering the problems imposed by OPSEC.

Planning was adequate except for the number of backup helicopters and the provisions for weather contingencies.

More helicopters aboard NIMITZ would have increased the chances of the required number of "Up" helicopters being available at each stage of the operation. Additional RH-53Ds with crews could have been deployed to NIMITZ without crowding or impacting other mission requirements of the carrier and without a reduction in OPSEC. The use of C-130 aircraft to lead the RH-53D flight to Desert One would have decreased the probability of a mission abort due to weather. C-130 pathfinders and spare RH-53Ds could have been added to the mission without requiring additional fuel at Desert One.

Preparation for the mission was adequate except for the lack of comprehensive, full-scale training.

OPSEC considerations mitigated against such a rehearsal and, while the review group recognized the inherent risk in bringing all of the forces together in the western US training site, the possible security disadvantages of such a rehearsal seem to be outweighed by the advantages to be gained:

> Increasing familiarity of element leaders with one another, both during the operation and in the ensuing debriefing critique.
>
> Exposing the command and control relationships to the pressures of a full-scale combination of airplanes, helicopters, troops, and vehicles, maneuvering in the crowded parking area under the confusing conditions of noise, dust, and darkness.

Two factors combined to directly cause the mission abort: Unexpected helicopter failure rate, and low visibility flight conditions en route to Desert One.

If the dust phenomenon had not occurred, Helicopter #5 would have arrived at Desert One, or if one more helicopter had remained up, six would have arrived at Desert One despite the dust.

There were alternatives available that would have reduced the probability of an abort due to these factors, and they have been discussed in detail in terms of planning and preparation.

The siting of Desert One near a road probably represented a higher risk than indicated by the JTF assessment.

The intrusion of the Iranian vehicles at Desert One significantly increased the chances of the Iranians' identifying the intent and timing of the operation. Although there was a workable plan to handle the bus passengers, the burned-out truck, empty bus, and abandoned heavy-lift helicopter near a well-traveled road could have resulted in early discovery by Iranian authorities. The group, however, realizes that the location may have been the best available.

GENERAL CONCLUSIONS

Although the specific conclusions cover a broad range of issues relating to the Terms of Reference, two fundamental concerns emerge in the review group's consensus which are related to most of the major issues:

The ad hoc nature of the organization and planning is related to most of the major issues and underlies the group's conclusions.

By not utilizing an existing JTF organization, the Joint Chiefs of Staff had to start, literally, from the beginning to establish a JTF, find a commander, create an organization, provide a staff, develop a plan, select the units, and train the forces before attaining even the most rudimentary mission readiness.

An existing JTF organization, even with a small staff and only cadre units assigned, would have provided an organizational framework of professional expertise around which a larger tailored force organization could quickly coalesce.

The important point is that the infrastructure would have existed--the trusted agents, the built-in OPSEC, the secure communications. At a minimum, COMJTF would have had a running start and could have devoted more hours to plans, operations, and tactics rather than to administration and logistics.

Operations Security

Many things, which in the opinion of the review group could have been done to enhance mission success, were not done because of strict OPSEC considerations. The review group considers that most of these alternatives could have been incorporated without an adverse OPSEC impact had there been a more precise OPSEC plan. A carefully structured JTF organization would have inherently provided an OPSEC environment within which a selective process could have allowed a wider initial disclosure policy--still a very stringent need-to-know policy--but based upon selective disclosure rather than minimum disclosure.

V. RECOMMENDATIONS

RECOMMENDATION. It is recommended that a Counterterrorist Joint Task Force (CTJTF) be established as a field agency of the Joint Chiefs of Staff with permanently assigned staff personnel and certain assigned forces.

Mission. The CTJTF, as directed by the NCA, through the Joint Chiefs of Staff, would plan, train for, and conduct operations to counter terrorist activities directed against US interests, citizens, and/or property outside the United States.

Concept. The CTJTF would be designed to provide the NCA with a range of options utilizing US military forces in countering terrorist acts. Such forces might range from a small force of highly specialized personnel to a larger joint force.

Relationships. The Commander, CTJTF (COMCTJTF), would be responsible directly to the Joint Chiefs of Staff (JCS). The CTJTF staff should be filled with individuals of all four Services, selected on the basis of their specialized capabilities in the field of special operations of various types.

Forces. The organic forces permanently assigned to the JTF should be small and limited to those which have a unique capability in special operations.

RECOMMENDATION. It is recommended that the Joint Chiefs of Staff give careful consideration to the establishment of a Special Operations Advisory Panel, comprised of a group of carefully selected high-ranking officers (active and/or retired) who have career backgrounds in special operations or who have served at the CINC or JCS levels and who have maintained a current interest in special operations or defense policy matters.

The purpose of the panel would be to review highly classified special operations planning to provide an independent assessment function, which might otherwise be lacking due to the absence of the echelons of Service staff planners who normally review and critique JCS planning of a less sensitive nature.

For example, the panel might consist of five to seven members, with a chairman and members representing the Army, Navy, Air Force, and Marine Corps, appointed to fixed terms not to exceed three years. Members of the panel would maintain current security clearances and meet at least annually for update briefings.

When planning is initiated in response to a crisis, several members of the panel, depending upon individual qualifications and availability on short notice, would be organized to provide independent

review. In this capacity, the panel members would not participate in the actual planning. Their function would be to provide the Joint Chiefs of Staff with the most objective, independent review possible.

Initial terms of service for panel members should be for one, two or three years, so that wholesale turnovers will not occur. Subsequent appointments should be for not more than three years. The purpose of such a policy would be to keep a fresh viewpoint and to insure that panel members have recent experience with Service conditions and emerging technologies.

ANNEX A

TERMS OF REFERENCE

I. Purpose: An independent appraisal of the hostage rescue mission will be a valuable foundation for improving future US counterterrorist capability. Therefore, an experienced and authoritative group not associated with the mission will conduct a broad examination of the planning, organization, coordination, direction, and control of the mission as a basis for recommending improvements in these areas for any such future operations.

II. Composition: This review group will consist of senior individuals with broad military experience, including acknowledged expertise in the area of clandestine/special operations. The group will be composed of both active duty and non-active duty officers representing experience gained in all four military Services.

III. Scope: The review group will not attempt to duplicate the detailed after-action report being prepared under the auspices of the Joint Chiefs of Staff. Rather, it will address the broader aspects of (a) conceptual validity and operational feasibilty; (b) planning environment, to include operational security constraints, policy guidance, and options available; (c) adequacy of planning, resources, preparation, and support; and (d) overall conduct of the executed portion of the mission. The major focus will be on improvements that should be made in any aspect of future counterterrorist planning and other special operations of a similar nature.

IV. Review Guidelines: The group will be granted access to pre- and post-mission documentation. Discussions may also be arranged with appropriate individuals as necessary in order to complement information contained in such documentation. Evaluations and specific recommendations should be made on the key aspects of planning and execution including, but not limited to, the following areas:

a. Planning criteria and guidance.

b. JTF organization (internal arrangements, channels for receiving and disseminating policy guidance, lateral coordination).

c. Forces (adequacy, composition, equipment, performance).

d. Training (frequency, realism, integration, readiness).

e. Support (intelligence, maintenance, materiel, weather, etc.) from Services and other Agencies.

f. Command and control (unity of command, coordination, communications).

V. Reporting: The group will submit a report of their findings and recommendations to the Joint Chiefs of Staff by 1 July 1980.

VI. Support: The Director, Joint Staff, will assure access to required personnel and documentation. He will also arrange for necessary administrative and technical support in accordance with applicable laws and directives.

ANNEX B

BIOGRAPHIES
OF
THE SPECIAL OPERATIONS REVIEW GROUP

TAB A	Admiral James L. Holloway III United States Navy (Ret.)
TAB B	Lieutenant General Samuel V. Wilson United States Army (Ret.)
TAB C	Lieutenant General Leroy J. Manor United States Air Force (Ret.)
TAB D	Major General James C. Smith United States Army
TAB E	Major General John L. Piotrowski United States Air Force
TAB F	Major General Alfred M. Gray, Jr. United States Marine Corps

TAB A

ADMIRAL JAMES L. HOLLOWAY III
UNITED STATES NAVY (RET)

Admiral James L. Holloway III became the 20th Chief of Naval Operations on 1 July 1974, and served in this capacity until his retirement from the Navy on 1 July 1978.

Admiral Holloway has had broad experience in command of major fleet units during combat operations, and an extensive background in Navy program planning and management, as well as a long and distinguished career in naval aviation. He is also the first nuclear power-trained officer to have risen to the Navy's top uniformed position. His principal assignments have included command of the nuclear aircraft carrier USS ENTERPRISE, command of an aircraft carrier task force, Deputy Commander in Chief Atlantic and U.S. Atlantic Fleet, Commander of the U.S. Seventh Fleet during the Vietnam War, and Vice Chief of Naval Operations.

Following graduation from the U.S. Naval Academy in June 1942 as a member of the accelerated World War II class of '43, Ensign Holloway served on destroyers in both the Atlantic and Pacific theaters. As gunnery officer of USS BENNION (DD-662), he participated in the capture of Saipan, the Southern Palau Islands and Tinian, the Leyte landings and in the Battle of Surigao Straits, the last major engagement between two surface fleets. For service while aboard BENNION, he was awarded the Bronze Star Medal and the Navy Commendation Medal, each with Combat "V".

After the war, he underwent flight training and was designated a Naval Aviator in January 1946. He flew Curtiss "Hell Divers" from the carrier USS KEARSARGE, served as a instructor in the air training command and on the staff of the Chief of Naval Air Basic Training in Pensacola, Florida.

Next, Lieutenant Commander Holloway transitioned to jet fighters and deployed for two tours of combat duty in Korea aboard the carriers USS VALLEY FORGE and USS BOXER. For his action in combat he was awarded the Distinguished Flying Cross and three Air Medals.

More significant aviation duty came in August 1958 when, as Commanding Officer of Attack Squadron EIGHTY-THREE, Commander Holloway participated with the U.S. Sixth Fleet in the Lebanon landings. Transiting the Suez Canal in the carrier USS ESSEX, his A-4 "Skyhawk" squadron became a part of the Seventh Fleet during the Quemoy-Matsu crisis in October 1958.

Two tours of duty in Washington, D.C., began in January 1959, first as Executive Assistant to the Deputy Chief of Naval Operations for Air and then as a student at the National War College (Class of 1962).

In July 1962, Captain Holloway took command of the seaplane tender USS SALISBURY SOUND, which was serving as flagship of Commander Patrol Force, U.S. Seventh Fleet.

After instruction in the nuclear reactor program under Admiral Hyman G. Rickover, Captain Holloway became Commanding Officer of USS ENTERPRISE, the Navy's first nuclear powered carrier, in July 1965. He commanded her for two full combat tours in the Vietnam conflict, during which ENTERPRISE was awarded the Navy Unit Commendation and won the coveted "E" award for ranking first in battle efficiency among attack carriers in the Pacific Fleet. For his leadership, Captain Holloway received the US Legion of Merit and was personally decorated by General Thieu, President of the Republic of Vietnam.

In May 1966, at the age of 44, Captain Holloway was selected for promotion to Rear Admiral. He reported to Washington the following year for duty in the office of the Chief of Naval Operations where he established and served as Program Coordinator of the Nuclear Attack Carrier Program in addition to duty as Director of the Strike Warfare Division. It was in this latter assignment that he originated the CV (multipurpose carrier) concept which is now being imnplemented in the fleet. In this concept, the carrier's complement of tactical, strike, or anti-submarine aircraft is tailored to the particular task or mission assigned and the anticipated threat in its operating area. For his service as Director, Strike Warfare, he was awarded the Navy's Distinguished Service Medal.

In August 1970, Rear Admiral Holloway took over as Commander Carrier Division Six and, while embarked in the carrier USS SARATOGA, he directed Sixth Fleet carrier operations in the eastern Mediterranean during the Jordanian crisis in the fall of 1970. He was awarded a second Distinguished Service Medal for his performance of duty.

Following promotion to Vice Admiral and duty as Deputy Commander in Chief Atlantic and U.S. Atlantic Fleet, he returned to command at sea in May 1972 as Commander, U.S. Seventh Fleet. For directing Seventh Fleet operations in the Vietnam War, and particularly the highly successful Navy air operations, from May 1972 to August 1973, and the strategically important mine warfare operations in North Vietnam, Vice Admiral Holloway was awarded his third Distinguished Service Medal.

On 1 September 1973, he was promoted to Admiral and became Vice Chief of Naval Operations, the post he held until assuming the Navy's top uniformed position on 1 July 1974.

Admiral Holloway was born in Charleston, South Carolina, on February 23, 1922, the son of Admiral James L. Holloway, Jr., U.S. Navy (Retired) and the late Jean Hagood Holloway. He is married to the former Dabney Rawlings, the daughter of Rear Admiral Norborne L. Rawlings (Retired) and Mrs. Rawlings of Washington, D.C. The Holloways have two daughters, Lucy Holloway Lyon and Jane Meredith Holloway.

TAB B

LIEUTENANT GENERAL SAMUEL V. WILSON
UNITED STATES ARMY (RET)

Lieutenant General Samuel V. Wilson served as the Director, Defense Intelligence Agency from May 1976 until his retirement from the Army on 1 September 1977.

General Wilson has had extensive experience in unconventional warfare and special operations planning and execution, and has a broad background in both the intelligence field and in international affairs. He enlisted in the Army in June 1940 and served as a platoon sergeant with the 116th Infantry, 29th Division. Following OCS graduation, he was commissioned a 2nd Lieutenant in the United States Army on 17 August 1942, and assigned to the Infantry School as an instructor in small unit and guerrilla tactics. Subsequently he joined the para-military ranks of the OSS and then participated in extensive behind-the-lines combat in the China-Burma-India Theater as an intelligence and reconnaissance officer and later rifle company commander in the 5307th Composite Unit (Provisional) ("Merrill's Marauders").

Following World War II, Captain Wilson taught military leadership at the Infantry School for two years, and from there entered the Army's four-year Foreign Area Specialist Training Program (Russian), graduating in the summer of 1951. He has lived, studied, and traveled extensively throughout the Soviet Union and Eastern Europe.

Throughout the period from 1951 to 1958, Major Wilson served in a variety of special operations and intelligence assignments, including a three-year operational tour with the Central Intelligence Agency. In 1959, Lieutenant Colonel Wilson became Director of Instruction of the Army's Special Warfare School at Fort Bragg, North Carolina. He commanded a unit of 7th Special Forces Group (Airborne) at Fort Bragg in 1961 before being called later in that year to appointment as Deputy Assistant to the Secretary of Defense for Special Operations, a capacity in which he served until 1963. Extensive staff and command duties in the counterinsurgency area followed, and he served as Army component commander in a number of joint airborne exercises.

He was accorded the personal rank of Minister in the US Foreign Service in 1966 while serving as the U.S. Mission Coordinator in Vietnam. He commanded the 6th Special Forces Group (Airborne)

from 1967 to 1968, and was Special Assistant to the Commanding General, U.S. Army JFK Center for Special Warfare at Fort Bragg, North Carolina, between 1968 and 1969. He served subsequently as Director, Military Assistance School, and as the Assistant Commandant of the Army Institute for Military Assistance at Fort Bragg. In 1970, General Wilson became Assistant Division Commander, 82nd Airborne Division, where he served until February 1971. He was then assigned as the US Defense Attache/US Army Attache, Moscow, USSR, where he served until March 1973. Thereafter followed duty with the Defense Intelligence Agency, first as Deputy Director for Estimates and then as Deputy Director for Attache Affairs. In September 1974, he was appointed to the post of Deputy Director, Central Intelligence for the Intelligence Community, Washington, D.C., where he served until his assignment in May 1976 as Director of the Defense Intelligence Agency.

General Wilson's military decorations and awards include the Distinguished Service Cross, Defense Distinguished Service Medal, Army Distinguished Service Medal with two Oak Leaf Clusters, National Intelligence Distinguished Service Medal, CIA Distinguished Intelligence Medal, Silver Star with Oak Leaf Cluster, Legion of Merit with Oak Leaf Cluster, Bronze Star Medal for Valor with Oak Leaf Cluster, Meritorious Service Medal, Joint Services Commendation Medal, Army Commendation Medal with Oak Leaf Cluster, Combat Infantryman Badge, and Master Parachutist Badge.

He is a graduate of the Army's Infantry School (Advanced Course), the Army's Command and General Staff College, and the Air War College and was awarded an honorary Doctor of Laws degree in 1979 from Hampden-Sydney College in Virginia.

General Wilson was born in Prince Edward County, Virginia, on September 23, 1923. He is married to the former Frances Brenda Downing of Lee County, Alabama. The Wilson's have four children: Samuel V., Jr. (a US Army Major), Susan V., Jackson B., and David J.M.

He was promoted to the grade of Lieutenant General on 4 October 1974.

TAB C

LIEUTENANT GENERAL LEROY J. MANOR
UNITED STATES AIR FORCE (RET)

Lieutenant General LeRoy J. Manor served as the Chief of Staff, US Pacific Command, from 12 October 1976 until his retirement from the Air Force on 1 July 1978. Following retirement, he represented the Joint Chiefs of Staff and CINCPAC as senior military negotiator and advisor to the US Ambassador to the Philippines for the Military Bases Agreement (MBA). Amendments to the MBA were agreed upon and signed subsequently by both Governments.

Born in Morrisonville, N.Y., on February 21, 1921, General Manor graduated in 1937 from Cadyville High School, Cadyville, N.Y., and then received his Teacher's Certificate from New York State Normal School in 1940. General Manor entered aviation cadet training in November 1942 and received his pilot wings and commission upon graduation in August 1943.

During World War II, he flew 72 combat missions as a P-47 pilot with the 358th Fighter Group in Europe, and was later assigned to the 100th Fighter Wing, also in Europe.

In September 1945, General Manor was assigned as a pilot at the Air Proving Grounds, Fla. He attended New York University during 1946-47 and received a bachelor of science degree in education. For the next six years, General Manor was an instructor, first at Tactical Air School, Tyndall Air Force Base; next at the newly formed Squadron Officer School, Maxwell Air Force Base; and last at the Air-Ground Operations School, Southern Pines, N.C.

From September 1953 to June 1955, General Manor was a staff officer with the 6th Allied Tactical Air Force (NATO) at Izmir, Turkey. He returned in July 1955 to assume command of the 2242d Air Reserve Flying Center at Selfridge Air Force Base, Mich.

General Manor entered the Armed Forces Staff College in July 1958. Upon graduation he was assigned to the 27th Tactical Fighter Wing, Cannon Air Force Base, New Mexico, and commanded the 481st Tactical Fighter Squadron.

In July 1960, General Manor transferred to Headquarters, United States Air Forces in Europe, where he was Chief, Tactical Evaluation Division, until July 1963, when he entered the Industrial College of the Armed Forces.

In June 1964, General Manor was assigned to Headquarters US Air Force in the Office of the Deputy Chief of Staff, Plans and Operations, where he served successively in the Directorate of Operations as Chief, Plans and Capabilities Branch; Chief, Analysis of Southeast Asia Operations Study Group; and as Chief, Operations Review Group.

In May 1968, he assumed command of the 37th Tactical Fighter Wing in the Republic of Vietnam where he completed 275 combat missions in North and South Vietnam. In June 1969, he was named Commander of the 835th Air Division at McDonnell Air Force Base, Kansas.

General Manor became Commander of the US Air Force Special Operations Force in February 1970. From August 8, 1970, to November 21, 1970, he additionally served as Commander of a joint task force whose mission was to search for and rescue United States military personnel held as prisoners of war at Son Tay, North Vietnam.

In February 1971, General Manor became Deputy Director for Operations/Special Assistant for Counterinsurgency and Special Activities, Joint Staff at Washington, D.C. He was transferred to the Philippines in February 1973 to become Vice Commander, 13th Air Force, Pacific Air Forces, at Clark Air Base. He was 13th Air Force Commander from October 1973 until October 1976, when assigned duty as Chief of Staff, Pacific Command.

General Manor is a command pilot with more than 6,500 flying hours. His military decorations and awards include the Distinguished Service Medal with 3 Oak Leaf Clusters; Legion of Merit with one Oak Leaf Cluster; Distinguished Flying Cross with one Oak Leaf Cluster; Air Medal with 25 Oak Leaf Clusters; Air Force Commendation Medal with one Oak Leaf Cluster; Purple Heart; Air Force Outstanding Unit Award Ribbon; Republic of Vietnam Distinguished Service Order, 2d Class; Republic of Vietnam Armed Forces Honor Medal; Republic of Korea Order of Military Merit; Republic of Vietnam Gallantry Cross with palm; Republic of Philippines Legion of Honor; and Republic of Vietnam Campaign Medal.

General Manor and his wife, the former Dolores H. Brookes of Schenectady, N.Y., have three children, Alan, Mary, and Dean.

He was promoted to the grade of lieutenant general on November 1, 1976, with same date of rank.

TAB D

MAJOR GENERAL JAMES C. SMITH
UNITED STATES ARMY

Major General James C. Smith is the Director of Training, Office of the Deputy Chief of Staff for Operations and Plans, US Army.

General Smith was born in the 6th US Cavalry Regiment, Fort Oglethorpe, Catoosa County, Georgia, on 5 September 1923 and graduated from Chattanooga City High School, Chatanooga, Tennessee, in 1941. He attended North Georgia College, Dahlonega, Georgia, for six months and then withdrew to enlist in the Army on 30 June 1942.

General Smith has had broad combat experience encompassing infantry, armor, air cavalry, and airmobile units. He enlisted in the Army on 30 June 1942 and rose to the rank of sergeant before attending Officer Candidate School at the Cavalry School, Fort Riley, Kansas. Commissioned a 2nd lieutenant on 14 January 1943, he saw combat with Third Army in Europe as a platoon leader in the 28th Cavalry Reconnaissance Squadron. As a result of serious wounds, he was evacuated to England in 1945. He qualified as a liaison pilot in November 1946, and then returned to Europe as an Air Observation Pilot in his former combat unit. He completed helicopter flight training in 1952, and was subsequently assigned to the Light Aviation Section, X Corps, in Korea. He has been at the forefront in the development of Army air mobility and served several tours in Vietnam with air cavalry and airmobile units.

General Smith's command experience is equally impressive. Beginning in October 1945, he commanded an assault gun/tank unit at the Cavalry School, Fort Riley, Kansas; in 1949, command of Company I, 3rd Battalion, 14th Armored Cavalry; in 1950, command of Company D, 1st Medium Tank Battalion, Fort Hood, Texas; in 1955, command of the 3rd Combat Aviation Company, Fort Benning, Georgia; in 1962, command of the 2nd Reconnaissance Squadron, 11th Armored Cavalry; in 1966, command of the Support Command, 1st Air Cavalry Division (Airmobile), command of the 1st Squadron, 9th Cavalry, 1st Air Cavalry Division (Airmobile), and command of the 1st Brigade, 1st Cavalry Division (Airmobile); in 1970, Commanding General, US Army Flight Training Center, Fort Stewart, Georgia; in 1971, Commanding General, 1st Cavalry Division (TRICAP); in 1973, Commanding General, US Army Readiness Region V, Fort Sheridan, Illinois; and in 1976, Commander, US Army Aviation Center and Fort Rucker, Alabama.

General Smith has attended the U.S. Army Command and General Staff College, the U.S. Army War College, and the University of Omaha where he earned the Bachelor of General Education Degree in 1961.

General Smith is a Master Army Aviator whose military decorations and awards include the Distinguished Service Medal, Silver Star with Oak Leaf Cluster, Legion of Merit with Oak Leaf Cluster, Distinguished Flying Cross with three Oak Leaf Clusters, Bronze Star with Oak Leaf Cluster, Air Medal with 63 Oak Leaf Clusters, Army Commendation Medal with "V" Device, Purple Heart with two Oak Leaf Clusters, Vietnamese Cross of Gallantry with Palm, Vietnamese Cross of Gallantry with Silver Star, Presidential Unit Citation (Korea), Presidential Unit Citation (Vietnam), four Overseas Bars, National Defense Service Medal with Oak Leaf Cluster, European, African, Middle Eastern Campaign Medal, World War II Victory Medal, Army of Occupation (Germany) Medal, Korean Service Medal with two Stars, United Nations Service Medal, American Campaign Medal, Vietnamese Service Medal, Vietnamese Campaign Medal, Combat Infantryman Badge, Master Army Aviator Badge and Parachutist Badge.

General Smith is married to the former Doris June Lewis of Homestead, Florida, and has seven children.

Major General Smith was promoted to his present grade on 10 March 1971, and assumed his current military assignment in December 1978.

TAB E

MAJOR GENERAL JOHN L. PIOTROWSKI
UNITED STATES AIR FORCE

Major General John L. Piotrowski is deputy commander for air defense, Tactical Air Command, Peterson Air Force Base, Colo.

General Piotrowski was born February 17, 1934, in Detroit and graduated from Henry Ford Trade School, Dearborn, Mich., in 1951. He attended Arizona State University and Florida State University and graduated from the University of Nebraska at Omaha in 1965 with a bachelor of science degree. He did postgraduate work at the University of Southern California and Auburn University and attended the program for management development at Harvard University. He completed Air Command and Staff College, Maxwell Air Force Base, Ala., in 1965; Armed Forces Staff College Norfolk, Va., in August 1968; and Royal Air Force College of Air Warfare at Royal Air Force Station Manby, England, in July 1971.

General Piotrowski enlisted in the US Air Force in September 1952. After basic training at Lackland Air Force Base, Texas, he was assigned to Keesler Air Force Base, Miss., as a student in basic electronics and ground radar.

In July 1953, General Piotrowski transferred to Harlingen Air Force Base, Texas, for navigator training in the aviation cadet program. After graduating with honors, he was commissioned a 2nd lieutenant in August 1954 and returned to Keesler Air Force Base for advanced training in electronic countermeasures. In January 1955, he received the electronic warfare rating and was assigned to the 67th Tactical Reconnaissance Wing in Korea and Japan as an electronic warfare officer and RB-26 navigator.

He returned in May 1957 for pilot training at Marana Air Base, Ariz.; Bainbridge Air Base, Ga.; and Bryan Air Force Base, Texas. He then attended F-86F aircraft advanced gunnery training at Williams Air Force Base, Ariz. Following graduation, he was assigned as armament and electronics maintenance officer at Williams and later at Luke Air Force Base, Ariz. In May 1961, he moved to Eglin Air Force Auxiliary Field 9, Fla., and joined the initial cadre of Project "Jungle Jim," which became the 1st Air Commando Wing. He was assigned in Southeast Asia from 1961 to 1963 as a munitions maintenance officer and T-28/B-26 combat aircrew member.

In August 1965, General Piotrowski transferred to the US Air Force Fighter Weapons School at Nellis Air Force Base, Nev., and served as an F-4 instructor pilot, chief of academics, and project officer for the US Air Force operational test and evaluation of the WALLEYE missile program.

Following graduation from the Armed Forces Staff College in August 1968, he was assigned to Headquarters, US Air Force, Washington, D.C., as an action officer under the deputy director of plans for force development.

From December 1970 to July 1971, he attended the Royal Air Force College of Air Warfare. He was then assigned to Bitburg Air Base, Germany, as Deputy Commander for Operations, 36th Tactical Fighter Wing. In January 1972, he assumed command of the 40th Tactical Group, Aviano Air Base, Italy.

In April 1974, General Piotrowski became chief of the US Air Force Six-Man Group, directly responsible to the Chief of Staff. He became Vice Commander of the Keesler Technical Training Center, Keesler Air Force Base, in March 1975.

In July 1976 General Piotrowski, assumed command of the 552nd Airborne Warning and Control Wing, Tinker Air Force Base, where he introduced the E-3A Sentry Airborne Warning and Control System aircraft as an operational Air Force weapon system. He assumed his present duties in September 1979.

General Piotrowski is a command pilot with more than 100 combat missions and 210 combat flying hours. His military decorations and awards include the Distinguished Service Medal, Legion of Merit, Meritorious Service Medal with two Oak Leaf Clusters, Air Medal with two Oak Leaf Clusters, Air Force Commendation Medal with one Oak Leaf Cluster, Presidential Unit Citation emblem and the Air Force Outstanding Unit Award ribbon with three Oak Leaf Clusters. He received the Eugene M. Zuckert Management Award for 1979 in December 1979.

He was promoted to major general November 1, 1978, with date of rank July 1, 1975.

General Piotrowski is married to the former Sheila Dee Fredrickson of Racine, Wis. They have one daughter, Denise Lynn, and two sons, Scott Lee and Jon Dee.

TAB F

MAJOR GENERAL ALFRED M. GRAY, JR.
UNITED STATES MARINE CORPS

Major General Alfred M. Gray is the Deputy for Development/ Director, Development Center, Marine Corps Development and Education Command, Quantico, Va. His responsibilities include the development of new doctrine, tactics, techniques, and equipment for landing forces in amphibious operations.

General Gray was born June 22, 1928, and hails from Point Pleasant Beach, N.J. He enlisted in the Marine Corps in 1950 and served overseas with the Amphibious Reconnaissance Platoon, Fleet Marine Force, Pacific, attaining the rank of sergeant. He was commissioned a 2nd lieutenant on April 9, 1952.

After joining the 1st Marine Division in Korea, he served a tour as an artillery officer with the 2d Battalion, 11th Marines, and a subsequent tour as an infantry officer with the 1st Battalion, Seventh Marines.

Returning to the United States in December 1954, General Gray was assigned to the Eighth Marines, 2d Marine Division, at Camp Lejeune, N.C., until August 1955, when he attended the Communications Officers School at Quantico. He was promoted to captain in July 1955. From April 1956 until May 1961, General Gray served overseas in special operations command billets in the Pacific and the Far East.

In May 1961, General Gray was assigned to Headquarters, Marine Corps, Washington, D.C., for duty as special operations and plans officer, G-2 Division. During this tour, he saw service in Guantanamo Bay, Cuba, and in Vietnam where he commanded a composite force which became the first Marine ground unit to conduct independent operations in Vietnam. He was promoted to major in February 1963.

General Gray joined the 12th Marines, 3d Marine Division, in Vietnam in October 1965, serving concurrently as Regimental Communications Officer, Regimental S-3 Officer, and Artillery Aerial Observer. In April 1967, he was assigned command of the Composite Artillery Battalion and the US Free World Forces at Gio Linh. In September 1967, he was reassigned to the III Marine Amphibious Force in DaNang, where he commanded Marine SIGINT/EW elements throughout I Corps. He was promoted to lieutenant colonel in October 1967.

In February 1968, he returned to Washington, D.C., for duty with the Defense Special Projects Group as Chief, Intelligence and Operations Division. During the period June through September 1969, General Gray returned to Vietnam in conjunction with surveillance and reconnaissance matters in the I Corps Area.

Returning to Quantico in October 1969, he was assigned duty as Chief, Intelligence and Reconnaissance Division, at the Development Center, until August 1970. He attended the Command and Staff College and then joined the 2nd Marine Division at Camp Lejeune in June 1971, where he assumed command of the 1st Battalion, Second Marines, and Battalion Landing Team (BLT) 1/2. The BLT was deployed to the Mediterranean in September 1971, as part of the 34th Marine Amphibious Unit, and returned to the US in March 1972. General Gray commanded the Second Marines from April through December 1972, when he was reassigned as Assistant Chief of Staff, G-3, 2nd Marine Division. He was promoted to colonel in August 1972.

General Gray attended the Army War College, Carlisle Barracks, Pennsylvania, from August 1973 to June 1974, and upon graduation, was assigned to the 3rd Marine Division on Okinawa, as Commanding Officer, Fourth Marines, and Camp Commander, Camp Hansen. He later served as CO, 33rd MAU/CO, RLT-4/DepCdr, 9th MAB, during the Southeast Asia evacuation operations.

Reassigned to HQMC in August 1975, he was assigned duty as Deputy Director, Training and Education Division, Manpower Department. He was advanced to brigadier general on March 24, 1976, and presided over a special study group on the Marine Corps Reserve until June 11, 1976, when he was assigned duties as Commanding General, Landing Force Training Command, Atlantic, and Commanding General, 4th Marine Amphibious Brigade. In this later capacity, he commanded four major Marine air ground task force operations, conducted on both flanks of NATO. As CTF 403, his command responsibilities included units from seven NATO nations. Under CJTF 122 at CINCLANT, he was CTF 125 and COMMARFOR for CINCLANT contingency plans and joint exercises.

General Gray was advanced to his present grade with a date of rank of 1 April 1976, and assumed his current assignment at Quantico in October 1978.

STATEMENT OF ADMIRAL J. L. HOLLOWAY, III, USN (Ret.)
CHAIRMAN, SPECIAL OPERATIONS REVIEW GROUP

At the outset, let me clarify that the document which you have received is not the verbatim report of the Special Operations Review Group. You have an unclassified version of a highly classified report which has been sanitized within the Organization of the Joint Chiefs of Staff.

However, this unclassified version is organized in exactly the same form as what was submitted by the Review Group, and involved only deletions of classified material and occasional word changes to retain continuity or protect sensitive operational subjects. There has been a careful -- and I think successful -- effort to provide the American public with the full sense of our deliberations and our findings. Those findings -- in fact, the entire Executive Summary, Conclusion, and Recommendation sections of the original classified report -- remain, in this public version, virtually intact as we submitted them.

Before I discuss the findings, let me give you some more background on the Review Group and its mission. We were chartered by the Joint Chiefs to do an essentially forward-looking, no-holds-barred assessment of the attempted rescue operation. Our purpose was to independently appraise the rescue attempt so we could recommend improvements in planning, organizing, coordinating, directing, and controlling any such operations in the future.

As for membership, our Group consisted of six flag and general officers representing all four Services. You'll find the complete biography of each member at Annex B in your document.

In combination, the Group possessed wide experience in military operations, and especially clandestine or special operations. Each obviously had a unique set of credentials, and each could focus his individual efforts accordingly. None had been associated in any way with the planning, preparation, or conduct of this particular operation. Nor had we known about it before the fact.

For the purposes of our review, we were cleared for the highest levels of classified, and given access to all sources of information and to any person within the Department of Defense.

This brings me to another point I wish to clarify. We were not chartered to produce a white paper examining the Iranian hostage crisis at the national level. Our focus was essentially within the Department of Defense and primarily on military issues. We reviewed all documents relating to the planning and execution of the mission, interviewed participants, examined the types of equipment used, and observed exercises typical of the kinds of operations conducted.

Our approach was to concentrate on those things that troubled us professionally about the mission -- areas in which there appeared to be weaknesses. Eventually we arrived at about two dozen issues which we considered significant. These are all listed and discussed in the Analysis section of the unclassified report.

I'd like to point out that not all of these 23 issues were criticisms per se. In some cases the Group concluded that with respect to the questions raised in an issue, there was no better way of handling the problem, or what was done had little if any influence on the outcome. However, since our purpose was to help identify lessons learned for future application, we included in our report all that we considered significant. Quite frankly, we were apprehensive that the critical tone which this resulted in could be misinterpreted as an indictment of the able and brave men who planned and executed this operation. As is stated in the Forwarding Section of the unclassified report, we encountered not a shred of evidence of culpable neglect or incompetence.

It was recognized at the outset that it might be difficult to reach a group consensus, either in the analysis or in the findings. So we agreed that minority positions would be included if necessary in our final report. In retrospect, I find it interesting that what we finally achieved represented the unanimous views of the members of the Group. There were no dissenting footnotes in what we conveyed to the Joint Chiefs!

Turning to our findings, let me quickly run over the more significant items. These are highlighted in the Executive Summary, and developed more fully in the Conclusions section.

The concept of a small clandestine operation was valid and consistent with national policy objectives. It offered the best chance of getting the hostages out alive and the least danger of starting a war with Iran.

The operation was feasible. It probably represented the plan with the best chance of success under the circumstances, and the decision to execute was justified.

The rescue mission was a high-risk operation. People and equipment were called on to perform at the upper limits of human capacity and equipment capability.

The first realistic capability to successfully accomplish the rescue of the hostages was reached at the end of March.

OPSEC was an overriding requirement for a successful operation. Success was totally dependent upon maintaining secrecy.

Command and control was excellent at the upper echelons, but became more tenuous and fragile at intermediate levels. Command relationships below the Commander, JTF, were not clearly emphasized in some cases and were susceptible to misunderstandings under pressure.

External resources adequately supported the JTF and were not a limiting factor.

Planning was adequate except for the number of backup helicopters and provisions for weather contingencies. A larger helicopter force and better provisions for weather penetration would have increased the probability of mission success.

Preparation for the mission was adequate except for the lack of a comprehensive, full-scale training exercise. Operational readiness of the force would have benefited from a full-dress rehearsal. Command and control weaknesses probably would have surfaced and been ironed out.

Two factors combined to directly cause the mission abort: unexpected helicopter failure rate and low-visibility flight conditions en route to Desert One.

These conclusions lead the Group to recommend that:

- a Counterterrorist Joint Task Force (CTJTF) be established as a field agency of the Joint Chiefs of Staff with permanently assigned staff personnel and certain assigned forces.

- the Joint Chiefs of Staff give careful consideration to the establishment of a Special Operations Advisory Panel, comprised of a group of carefully selected high-ranking officers (active and/or retired) who have career backgrounds in special operations or who have served at the CINC or JCS levels and who have maintained a current interest in special operations or defense policy matters.

Before closing, let me make a couple of very important points.

First, the group unanimously concluded that no one action or lack of action caused the operation to fail -- and conversely, no one of our identified alternatives or all the alternatives could have guaranteed success.

Second, as I mentioned earlier, we unanimously agreed that the people who commanded, planned, and executed the operation were the most competent and best qualified for the task of all available. There were none better.

In closing, I would ask that as you read this report, keep in mind its purposes and its context:

- it's a professional critique of the Iranian hostage rescue operation, addressed to the Joint Chiefs of Staff.

- by its very nature, any critique of this sort has to appear highly critical, since it can't allow any potential area of possible future improvement to go unquestioned.

- it's produced with the benefit of hindsight.

The facts are that in the conduct of the review, we have seen infinitely more to be proud of than to complain about. The American Servicemen who participated in this mission -- commanders, planners, crewmen, or troopers -- deserved to have a successful outcome. It was the ability, dedication, and enthusiasm of these individuals which made what everyone thought was impossible into something that should have been -- and came close to being -- a success.

We were often reminded as we deliberated that only the United States military, alone in the world, had the ability to accomplish what we set out to do. It was risky and we knew it, but it had a good chance of success. And I would close with this thought, which I hope remains true forever. America had the courage to try.