

ADA 129747

**Report of  
Defense Science Board Task Force  
on  
CONTRACTOR FIELD SUPPORT  
DURING CRISES**



**October 1982**

**Office of the  
Under Secretary of Defense  
for Research & Engineering**

**Washington, D. C. 20301**

**DTIC**  
**S** **ELECTRONIC** **D**  
**JUN 23 1983**  
**A**

**DTIC FILE COPY**

This document has been approved  
for public release and sale; its  
distribution is unlimited.

**83 06 22 085**

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER NA	2. GOVT ACCESSION NO. AD-A129747	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Report of Defense Science Board Task Force, or Contractor Field Support During Crises		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) NA		6. PERFORMING ORG. REPORT NUMBER NA
9. PERFORMING ORGANIZATION NAME AND ADDRESS Defense Science Board, OUSDRE Room 3D1020, The Pentagon Washington, D.C. 20301		8. CONTRACT OR GRANT NUMBER(s) NA
11. CONTROLLING OFFICE NAME AND ADDRESS Same as Above		10. PROGRAM ELEMENT PROJECT TASK AREA & WORK UNIT NUMBER NA
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Same as Above		12. REPORT DATE October 1982
		13. NUMBER OF PAGES 45
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION CONTINUATION SCHEDULE NA
16. DISTRIBUTION STATEMENT (of this Report) OPEN DISTRIBUTION, PER OASD/PA		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) NA		
18. SUPPLEMENTARY NOTES NA		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

DD FORM 1473  
1 JAN 73

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT  
OF  
DEFENSE SCIENCE BOARD TASK FORCE  
ON  
CONTRACTOR FIELD SUPPORT DURING CRISES

OCTOBER 1982

OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH & ENGINEERING  
WASHINGTON, D.C. 20301

Accession For	
NTIS	<input checked="" type="checkbox"/>
DTIC	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
Distribution/	
Availability Codes	
Availability and/or	
Dist	Special
A	

This document has been approved  
for public release and sale; its  
distribution is unlimited.



DEFENSE SCIENCE  
BOARD

OFFICE OF THE SECRETARY OF DEFENSE  
WASHINGTON, D.C. 20301

15 October 1982

MEMORANDUM FOR SECRETARY OF DEFENSE  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF


THROUGH: UNDER SECRETARY OF DEFENSE FOR RESEARCH & ENGINEERING

SUBJECT: Defense Science Board Task Force on Retention of  
Contractor Civilians on Critical Jobs Overseas During  
Pending or Actual Hostilities

I am forwarding herewith the report of the Defense Science Board Task Force on Contractor Field Support requested by the Chairman, Joint Chiefs of Staff. This Task Force was chaired by Malcom R. Currie and consisted of a broad membership of high level personnel with a background in the defense industry and the military. Their report finds that the concern about the retention of contractor civilians is not historically based, but that conditions in Europe just prior to a war might well be different from those which existed before other wars. One of the civilians' major concerns is the lack of adequate plans to evacuate their dependents during crisis, when plans do exist for the evacuation of military dependents. Moreover, the Task Force found that the current billet designation of "mission essential" does not adequately reflect those billets that are in fact vital to the prosecution of an actual war. There are only a small number of critical billets (about 500) but they are not well identified. The report also finds that there appear to be a few Special Sensitive systems, usually under joint Service responsibility, the loss of which could be catastrophic. Recommendations contained in the report emphasize actions to protect those special systems.

↓ This report rejects military compulsion as a solution to retaining contractors and offers a series of affirmative actions which should cost little and give reasonable assurance of contractor retention. It recommends actions to be taken to identify the critical contractors and the special sensitive systems, and to provide urgent focus on those joint systems that have a potential for contractor problems during crisis or war (particularly WWMCCS.) A number of these actions are already underway.

↑ This report has been approved by the Defense Science Board and I commend your attention to the executive summary and Dr. Currie's cover letter to me.

  
Norman R. Augustine  
Chairman



OFFICE OF THE SECRETARY OF DEFENSE  
WASHINGTON, D.C. 20301

DEFENSE SCIENCE  
BOARD

27 September 1982

MEMORANDUM FOR THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Final Report of the Defense Science Board Task Force on Retention of Contractor Civilians on Critical Jobs Overseas during Pending or Actual Hostilities.

I am pleased to submit to you the Final Report of the Defense Science Board Task Force on the subject matter. The report contains findings, conclusions, and recommendations developed by the Task Force during its meetings on 21 October 1981 and 27 January 1982. Subsequent to these meetings, additional interviews and investigations were conducted by representatives of the Task Force with various military commands and agencies. The purpose of these additional investigations and interviews was to more fully develop facts and opinions provided to the Task Force during the initial meetings.

The Task Force found that contractor civilian technical personnel provide extremely important support for the operation and maintenance of many military systems overseas. Further, this support will increase with the deployment of the new generation of systems emerging from development during this decade; in fact, the Defense Science Board has recommended that this kind of support should be encouraged as the most effective way to achieve readiness and maturity with the new high performance systems. With this trend, the need for high confidence in the reliability of continuity of this support during periods of intense crisis and hostilities is evident.

The Task Force found two general types of military systems. The first type constitutes the great majority of weapon systems which are under the unambiguous control and responsibility of a single military service. For this class, all historic precedence provides very high confidence of adequate support for the continued operation of these systems during periods of crisis and actual war. There are, however, a number of management actions which can be taken both to enhance this confidence even further and, particularly, to provide military commanders with a sense of greater perceived confidence.

The second type of systems are those relatively few "extremely sensitive systems" whose loss, because of the unavailability of continued support, would be catastrophic. These tend to be in the C<sup>3</sup>/I area and often are joint-service responsibilities; WWMCCS is an example.

The report concludes that OSD efforts to provide assurance of continued support should be concentrated first of all on the military and civilian personnel who support/maintain/operate these "extremely sensitive systems." The report's primary recommendations are directed towards support for the sensitive systems. Additional recommendations, applicable to the support for all systems, are made to further the objective of providing confidence to the overseas commander that he will be able to discharge his assigned missions with the personnel resources available to him. All recommendations should be straightforward to implement, some requiring only a strong statement of policy.

The Task Force found that proposals under consideration within DOD which would make contractor civilian employees subject to the Uniform Code of Military Justice or other forms of military compulsion are impracticable in today's environment and would not be acceptable to industry and various branches of the military. The recommendations of this report are focused on affirmative actions which are well within DOD's present resources and authorities to implement. The recommendations therefore reject any solution which would entail military compulsion.

An oral presentation on the report was given at the meeting of the Defense Science Board at Colorado Springs in August 1982. I would like to express my appreciation for the excellent work of the members of the Task Force and the fine cooperation received from representatives of OSD and the military departments.



Malcolm R. Currie  
Chairman  
Task Force on Retention  
of Contractor Civilians

cc: E. G. Fubini  
w/o Attachment

# CONTENTS

	<u>Page</u>
Transmittal Memoranda . . . . .	iii
Executive Summary. . . . .	1
Findings . . . . .	2
Primary Recommendations. . . . .	4
I. Background. . . . .	7
II. Findings and Conclusions . . . . .	9
A. Use of Contractor Support Personnel . . . . .	9
B. Identification of Critical Job Assignments. . . . .	10
C. Planning for Attrition . . . . .	11
D. Historic Precedent - Future Conflicts . . . . .	13
E. Types of Systems . . . . .	15
F. Special Sensitive Systems . . . . .	17
G. Special Sensitive Systems - Joint Organizations . . . . .	19
H. Special Sensitive Systems - Conclusions. . . . .	21
III. Military Compulsion; Retention of Contractor Civilians . . . . .	21
A. Reserves . . . . .	23
B. Uniform Code of Military Justice . . . . .	23
C. Active Duty Commissions . . . . .	24
D. Individual's Agreement to Remain on Job. . . . .	24
E. Motivation . . . . .	26
F. Contractual Methods of Enhancing Retention. . . . .	27
G. Insurance in Hazardous Duty Areas. . . . .	30
IV. Recommendations . . . . .	31
Appendix A: Terms of Reference . . . . .	35
Appendix B. Task Force Membership . . . . .	37

## EXECUTIVE SUMMARY

The increasing dependence of the Armed Services on contractor civilian employees for the direct support of complex military systems deployed overseas has:

Heightened concerns that systems' effectiveness will be degraded or lost if contractor employees do not remain at their duty stations during periods of crisis or actual hostilities,

Prompted suggestions from the military services that contractor employees be made subject to some form of military compulsion in order to insure that they will remain at their assigned duty stations.

The suggestion that military compulsion be used to retain contractor civilian employees resulted in the Under Secretary of Defense for Research and Engineering constituting a Task Force of the Defense Science Board to address the following issues:

1. Conduct an independent assessment of the problem of insuring the continued support of contractor civilian employees doing critical jobs overseas.
2. What kind of military compulsion, if any, should be implemented to assure such support?
3. Will the various kinds of proposed military compulsion result in problems for industry?
4. Other than military compulsion, what practical solutions, acceptable to both the military and industry, should be implemented by DOD?



## FINDINGS

The Task Force found:

1. That there is no common understanding within DOD and the Military Services regarding the distinction between contractor employees who are considered mission essential and those employees who are critical to sustaining military operations.

2. Surveys conducted within DOD have designated more than 5,000 overseas contractor civilian employees as mission essential. Of these 5,000 mission essential employees, about 500 to 1,000 are critical for sustaining military operations.

3. Critical job assignments are concentrated in organizations operating command and control, communications, intelligence, surveillance, and related areas.

4. Efforts to enhance confidence in retention will be most effective if initially focused on these 500 to 1,000 critical employees.

5. Contractor employees have an outstanding record of reliability during crisis and actual combat. Reports of abandonment of duty stations in South Korea before and after the "tree cutting incident" are wrong and have not been supported by independent investigations.

6. The Military Services do not plan or acquire contractor support at a level sufficient to accommodate reasonable attrition.

7. Critical job assignments were defined as those for support of military systems whose loss would have a catastrophic affect on military capability. Such systems were designated by the Task Force as "special sensitive systems." Special sensitive systems are operated by both joint organizations and single Military departments.

8. "Special sensitive systems" under the unambiguous responsibility of a single Service, e.g., AWACS, have well-thought-out plans for support and operation during an emergency. Available evidence of contingency plans and back-up convinced the Task Force that operation of special sensitive systems under the responsibility of a single Service will be effectively maintained.

9. "Special sensitive systems" under the responsibility of a few joint organizations constitutes a special problem area which requires urgent DOD management attention. WWMCCS clearly falls in this category.

10. The various kinds of military compulsion which may be applied to contractor civilian employees are uniformly unacceptable to industry. Although some forms of compulsion pose less administrative burdens to DOD, none would be supported by the industrial community. Military compulsion is an impractical solution to the retention problem.

11. A number of straightforward management measures can be taken to alleviate the retention concerns of military commanders. These measures can be implemented by DOD within its existing resources and authorities.

PRIMARY RECOMMENDATIONS:

To increase confidence that contractor civilian employees will remain at their duty stations overseas during time of crisis or actual hostilities, the Task Force recommends the following actions be taken by the Department of Defense:

1. Reject military compulsion as a solution, but pursue contractual and other arrangements with contractors and their employees. These arrangements would include a "Statement of Intent" signed by the employee indicating the employee's understanding of the risks involved and the time and conditions during which the employee would be expected to remain. Concurrent with the employee signing the statement, the overseas commander would provide the employee with written assurances relating to evacuation of dependents, hazardous pay, and noncombatant identification.

2. Change the Defense Acquisition Regulations to include specific contractual guidelines and clauses appropriate for contracts relating to contractor civilian support. These guidelines should describe the "Statement of Intent" to be signed by the employee and the assurances to be provided to the employee by the overseas commander on behalf of the Government.

3. Overhaul the existing DOD Directives on contractor civilian support to bring them into line with current realities. The revised Directives should address the issue and assign responsibility for the motivation of contractor civilian employees and their loyalty to the organization to which they are attached.

4. Identify "special sensitive systems" and define and direct the extraordinary contingency planning and other actions required for their operation and support during crisis and/or actual hostilities.

5. For special sensitive systems under the responsibility of joint organizations the Under Secretary of Defense for Research and Engineering should establish a special and urgent focus on their support, modernization, replacement, and protection from physical vulnerability. The results of these efforts should be periodically reviewed at the level of Deputy Secretary of Defense.

## I. BACKGROUND

The complexities of modern military equipment deployed after World War II have caused DOD and the Military departments to rely increasingly on contractor civilian employees to perform jobs that are essential to the operation of military forces in peace and war. Reliance on contractor civilian employees will continue to grow with the deployment of new generations of high performance systems now in transition from development to production. This continuing and growing need for support by contractor civilian employees was the subject of a DSB 1981 Summer Study on Operational Readiness with High Performance Systems. The study addressed the management issue of fielding increasingly complex technologies while DOD lacks sufficient military manpower highly trained in new specialties, such as digital electronics, system analysis, and software maintenance. The study concluded that contractor civilian employees have become essential in the effective operation of many military systems and that because of a multiplicity of circumstances, particularly in the early deployment of complex new systems, DOD dependence on contractor civilian employees should and will steadily increase.

DOD's steadily increasing dependence upon contractor civilian employees for effective use of high performance military systems has heightened concerns regarding the ability of the Military departments to retain contractor civilian employees during periods of impending crisis or actual hostilities. These concerns have

been caused by a series of U. S. Court decisions which collectively hold that civilians accompanying the Armed Forces in the field are not subject to the Uniform Code of Military Justice prior to a formal declaration of war. Such civilians therefore cannot be compelled to remain at their overseas duty stations if they wish to leave during a period of impending crisis.

The retention of contractor civilian employees who support and maintain the WWMCCS overseas is of particular concern to the Joint Chiefs of Staff. Their desire to find a method which will provide high confidence in DOD's ability to retain contractor civilian employees for that system was a major factor leading to this study. The study was primarily directed towards identifying a solution, acceptable to both industry and the military, which would insure continued support of contractor civilians who perform critical jobs overseas. Although some consideration was given to the related problem of retention of DOD civilians, the study did not include DOD civilians since the solution of their retention is solely within the purview of DOD.

The Task Force conducted meetings in the Pentagon on 21 October 1981 and 27 January 1982. Presentations were made at those meetings by representatives of the Joint Chiefs of Staff; the Army, Navy, and Air Force; the National Security Agency; the European Command; and U. S. Forces, Korea. These presentations were followed by comprehensive discussions with the Task Force members. There were subsequent interviews between representatives

of the Task Force and the Defense Communications Agency, NORAD, and the Naval Electronics Systems Command. Additionally, the Task Force has engaged in extensive discussions with managers in various companies which, under contract to the Department of Defense or its Military departments, furnish contractor civilian support for military systems overseas.

## II. FINDINGS AND CONCLUSIONS

### A. Use of Contractor Support Personnel

Recent formal and informal surveys conducted in DOD, the Military departments, and EUCOM indicate that approximately 5,000 contractor civilian employees are considered to be "mission essential" for the worldwide support of military operations. The results of these surveys were reviewed by the Task Force because of their perceived relevance to this Report. The review conducted by the Task Force indicated that many of the job assignments, e.g., morticians, dietitians, described in the survey as "essential," could not reasonably be considered as "critical" within the terms of reference for this Task Force. It is apparent that the justification for many of the job assignments being described as mission essential is a reflection of skill scarcity, budget considerations, manpower ceilings, or a combination thereof, rather than criteria relating to sustaining military operations during an impending crisis or during actual hostilities. The Task Force review of these surveys was nonetheless a valuable contribution to this study because it illustrated the essential wide lack of

understanding about the number or identification of contractor civilian employees DOD needs to retain at overseas job assignments during a period of National emergency.

It is generally accepted that the number of contractor civilian personnel who perform jobs which are critical for sustaining military operations is but a small fraction of the total number of civilian personnel identified as "mission essential." For discussion purposes, the Task Force estimated that perhaps only on the order of 500 contractor personnel are critical for sustaining military operations, but the Task Force was unable to find documentation supporting its estimates. In fact, this number could possibly be considerably higher when special (classified) systems are taken into account. The plain fact is that truly critical job assignments have not been inventoried and that there is no specific office within DOD responsible for determining the number or identification of contractor civilian employees who have critical jobs. Actions directed towards increasing the confidence in the retention of contractor personnel who have critical jobs necessarily must start with a comprehensive understanding of the number of jobs of interest

B. Identification of Critical Job Assignments

The Task Force considers the timely identification of critical contractor civilians to be the first priority in the solution to the retention problem. Until it has been accomplished, it is difficult to consider how efforts to implement the other



recommendations can be focused so as to produce positive results with limited resources. Based upon the estimates made by the Task Force, it would appear that the number of truly critical contractor civilians is relatively small at this time and that the retention of that small number is a manageable task. Implementation of the Task Force recommendations should, therefore, not be either expensive or time-consuming. More importantly, the estimated small number of critical contractor civilians presently involved permits implementation and evaluation of the recommendations before having to implement, as has been suggested, more controversial or complex measures to the greatly increased population of critical contractor civilians which are anticipated to be needed by the Department of Defense in future years.

#### C. Planning for Attrition

The individuals responsible for the management of effective military organizations have a unique and well-recognized responsibility for staffing that organization at a level which takes into consideration anticipated attrition. The Task Force found little, if any, evidence of planning for any attrition which must be anticipated among critical contractor civilian employees. The Task Force believes that budget constraints and the policy of having direct support performed by organic resources has limited acquisition of contractor civilian employees to satisfy the bare staffing requirements to fulfill the operational need at the time of the acquisition. The Task Force concludes that budgeting for attrition needs to be

made an integral part of the planning for the staffing of critical contractor civilian employees. The number of personnel acquired for attrition need not be large if the recommendations discussed later in the Report are implemented in a positive and effective manner. Even if all of the recommendations of this study are successfully implemented, DOD should continue to budget for additional critical contractor civilian employees to replace those lost through attrition.

The distinction made by the Task Force between several hundred "critical" contractor civilian employees and of the order of 5,000 mission essential employees was for the sole purpose of scoping the size of the retention problem. We believe that the survey correctly describes the job assignments embracing many specialties which are hard to attract and retain in today's environment in the Military Services. The contractor civilian employees, mostly engineers and technicians, also provide continuity and important feedback to manufacturers which is absolutely essential to successfully evolving sophisticated equipments and to maintaining these equipments in a high state of operational readiness and effectiveness. We wish to emphasize this point. These contractor civilians are an essential and desirable component of DOD's capability. Realistically, the DOD and Military departments must continue to use contractor civilians to perform any of the job assignments listed in the survey. In fact, expansion of the use of contractor civilians was recommended specifically by the DSB Summer study

mentioned above in terms of both cost and effectiveness consideration.

D. Historic Precedent - Future Conflicts

Contractor civilian employees have a long history of dedicated support to the military units to which they are attached. There is no reliable evidence of abandonment of their assignments except as part of a planned withdrawal by the military. This long history includes the performance of vital technical assistance in direct support of combat units during World War II, Korea, Vietnam, and the Yom Kippur War in October 1973. Unfortunately, this fine record has been brought into question by unsubstantiated reports associated with the so-called "tree cutting" incident in Korea in August 1976. After that incident, there was a report in a study prepared for the Department of Defense that contractor civilians had abandoned their assignments because of concerns about their personal safety.

The Task Force looked into the facts underlying the reported abandonment and found no reliable evidence that U. S. civilians in critical positions actually left their jobs without authorization before or after the tree cutting incident. We discovered that in May 1981 the Office of Manpower, Reserve Affairs, and Logistics, OSD, reviewed the allegations made in the Study and concluded that it was simply repeating heresay without having so identified it. The authors of the Study had no factual evidence of the problems they reported. Consultations with numerous senior

officers stationed in Korea at the time confirmed that civilians remained at their jobs.

Pertinent portions of the May 1981 review are set out below:

"The Korean Tree Cutting Incident resulted in an obvious heightened degree of anxiety among the military and civilians assigned in country at the time. The civilian contractors maintaining the Hawk and I-Hawk batteries were particularly concerned for the well-being of their families. No provision in their employment contract with the government covered what responsibility the Army had for evacuation of dependents. Subsequent to the incident the Army circulated a survey among the civilian technicians asking who wanted to stay and who wanted to go. Approximately 50% said they would rather go. It appears that this survey and the result have been the basis for what has evolved as a totally false assumption that large numbers actually left Korea. Not one technician did."...

The Task Force likewise consulted numerous Pentagon officials, including 8th Army representatives, and found nothing to the contrary. It is true that the civilians were polled during the crisis and many indicated that they would like to leave. However, none did. Had a similar poll been taken among military personnel, who could say that the results would have been any different?

It would appear, therefore, that concern about retention of contractor civilians is not based on historic precedent, but rather on a perception of what may happen in a crisis or an actual conflict. Modern military conflict will involve new scenarios of suddenness and intense actions by enemy aggressors that will not permit the time for planning, training, and replacement as in the past. It is therefore necessary, despite unfounded allegations of civilians abandoning their jobs, to take measures now that will both enhance confidence in the retention of contractor personnel and increase their effectiveness in military operations.

#### E. Types of Systems

The Task Force looked at a number of systems in the three Services, various defense agencies, and joint organizations which are being directly supported by contractor personnel. The Task Force found, based upon testimony received during Task Force interviews, that the Services are generally satisfied with the support presently provided to systems under their direct control and feel relatively secure concerning the continuity of this support during periods of crisis or actual hostilities. A few Joint Service organizations, on the other hand, did not exhibit a similar confidence in their ability to retain contractor personnel. After examination of those few systems where there was low confidence in retention, the Task Force decided, for analysis purposes, that it would be convenient to separately identify two classes of systems.

The first class of systems comprises the bulk of the equipments and/or systems deployed overseas requiring contractor civilian employees for their direct or indirect support. Such support is acquired under the policies of DOD Directives 4151.1 (relating to maintenance of materiel) and 1130.2 (relating to engineering and technical services). The first Directive contemplates that the military will be self-sufficient insofar as possible in providing direct maintenance support for assigned weapons systems and equipments. The second Directive requires that contractor engineering and technical services will be acquired until the user is capable of maintaining and operating the equipment and systems without help from either the equipment manufacturer or DOD engineering and technical services specialists. Our review indicates that the level of contractor support for the first class of systems is higher and generally used longer than is permitted by either of the Directives mentioned above. We found that the support presently provided is reasonably adequate for the effective operation of this class of systems. The Military Services generally have a good balance between contractor personnel, DOD civilians, and military support personnel. The Services, based both on their own testimony as well as examination of specific systems, have realistic contingency plans and feel secure in their ability to continue to operate the systems during a period of impending crisis, although perhaps at a reduced rate. The Task Force concluded that with respect to this class of systems, while there are several

positive actions which can be taken to enhance support and increase confidence in retention, the continued effective use of these systems during a period of National emergency does not represent an ominous problem. The Task Force concluded that the possible support problems associated with this class of systems are amenable to solution by straightforward management actions which are incorporated in the Task Force recommendations.

F. Special Sensitive Systems

The second class of military systems consists of those systems, very few in number, that could not continue to operate without contractor support and whose function is absolutely critical to sustained military operations. For the purpose of this report, the Task Force has designated those systems as "special sensitive systems." If these special sensitive systems cease to function, their loss would have a severe or catastrophic impact on our military capability. This class of systems is generally in the command and control, communications, intelligence and surveillance, and related areas. WWMCCS is an example of a system which, if it ceased to function in forward areas overseas because of a lack of proper support, could catastrophically impact our military capability in a conventional conflict. The lack of effective operation of such special sensitive systems can be contrasted with degraded capability if, for example, all F-15 radars were not operated up to full capability or if all Patriot air defense systems were not fully operable.

The contrast between the catastrophic loss of capability in command and control systems as compared with degraded capability in particular weapon systems, does not imply that some level of degradation in particular weapon systems is acceptable or inevitable. The continued effective operation of such weapon systems as F-15 and Patriot must be insured. Policies and practices necessary for the retention of the civilians who support such weapon systems must be adopted and put into place as soon as possible. The Task Force believes, however, that the need to retain civilians on an extremely high-confidence level supporting and operating command and control systems is orders of magnitude greater. For that reason, the Task Force strongly urges that the recommendations of this Report be particularly concentrated in the area of C<sup>3</sup>/I systems.

Special sensitive systems under the command of a single Military Service include, for example, AWACS, BMEWS, and SURTASS. Each of these systems require significant numbers of contractor civilians for their effective support. Our review indicates that the specific Service responsible for these systems has well-thought-out plans for their support and operation during an emergency. The Services have either plans to replace contractor civilians with trained military personnel, have adequate contingency plans, or are convinced that support and operation of these systems during crises and hostilities will be effectively maintained. We doubt, however, whether the level or duration of contractor support is within the limitations of DOD Directives 4151.1 and 1130.2.



### G. Special Sensitive Systems - Joint Organizations

In contrast to the confident attitude the Military Services have on the continuity of support for their assigned special sensitive systems, the Task Force found that a few joint organizations are decidedly uneasy. This unease frequently finds expression in the concern for retention of contractor civilian employees. We think that such concerns are part of a larger, systemic problem unique to many special sensitive systems under joint organizations. We concluded that the area of special sensitive systems operated by joint organizations constitutes a special problem area which requires urgent DOD management attention. WWMCCS clearly falls in this category. Several other joint organization communications and computer network systems, although not reviewed to the same depth by the Task Force, appear to be similarly troubled and can be expected to require similar urgent management attention.

Although it is not squarely within the terms of reference for this study, the Task Force generally found that some special sensitive systems operated by joint organizations have, at least in the past, suffered from:

- (a) Inadequate contingency planning,
- (b) Overdependence on civilians for support and perhaps operation,
- (c) Inadequate logistics support arrangements, and
- (d) Physically vulnerable environments.

We found a pervasive dependence on civilian personnel for the support and operation of a few jointly managed systems. For example, about 40% of the personnel operating or supporting systems under the cognizance of the Defense Communications Agency are civilians. The remarkably high percentage of civilians in this area may in part be based upon the fact that the systems operated by such joint organizations do not belong to any particular Service and the Services are therefore reluctant to commit required funds, as well as the scarce highly skilled military personnel necessary for their effective autonomous operation.

Because fundamental concerns about retention recur with respect to a few jointly managed systems, the Task Force concluded that maximum payoff from the implementation of the recommendations contained in this Report will be obtained if corrective action is initially focused on that area. The Task Force has noted that a new Joint Program Manager (JPM) Office was very recently set up for the WWMCCS Information System Program. This is a very positive and much needed step. Information made available to the Task Force indicates that the Joint Program Manager, an Air Force general officer, has been designated to be the central focal point for command and control of all WWMCCS automatic data processing upgrading and modernization. We think that in addition to the responsibilities associated with upgrading and modernization of the ADP system, the JPM should also be given the budget authority to make necessary changes to integrate the total support system

for WWMCCS in a manner similar to the support systems used by the Military Service on its systems. A first priority in the support area for WWMCCS is providing the written assurances described below to the contractor civilian employees who now support that system.

#### H. Special Sensitive Systems - Conclusions

The Task Force found that weapon systems and C<sup>3</sup>/I systems under the clear responsibility and management of a single military department, even those which are extremely sensitive in terms of their possible failure, usually appear to be well-managed and supported. Although improvements are possible, and should be effected, in terms of measures which will enhance the retention of key contractor support personnel, the planning is reasonably well in hand and these systems do not, in the judgment of the Task Force, present a critical problem.

In contrast, several systems managed by joint organizations (e.g., JCS, DOD), outside the unambiguous responsibility of one of the Services, often suffer from inadequate support arrangements in terms of civilian personnel, logistical planning, contingency planning, and in management and budgeting. WWMCCS is the striking example of this and the Task Force concludes that WWMCCS requires urgent attention.

#### III. MILITARY COMPULSION; RETENTION OF CONTRACTOR CIVILIANS

Many military commanders believe that some form of military compulsion, e.g., court martial authority, is needed to insure retention of contractor civilian employees performing critical

jobs overseas in time of impending crisis. Interestingly, this was the approach used by the Polish Government, after the declaration of marshal law in December 1981, when that Government made its civilian fishermen working on trawlers in the Pacific Ocean subject to military discipline. The fishermen reported that "We can't strike or even disobey instructions without being subject to military punishment. The punishment varies according to the infraction and the most severe is the death penalty."

Fortunately, no responsible U. S. official has recommended a similar draconian approach with respect to U. S. contractor civilians. At the time this study began, four possible solutions to the retention problem had been identified within DOD and actions were then underway to evaluate/implement them. These possible solutions were, in the order of decreasing obligation on the part of civilian personnel:

1. Join the Selected Reserves;
2. Extend the Uniform Code of Military Justice to cover civilians upon a declaration of an emergency rather than a declaration of war, as it is now;
3. Have each civilian agree, in writing, to accept active duty commissioned officer, warrant officer, or non-commissioned officer status upon declaration of an emergency; and
4. Have each civilian sign a contractual statement agreeing to remain on the job.

The Task Force evaluated each of the above-described potential solutions. Its findings are as follows:

#### A. Reserves

Representatives of the Military departments strongly objected to the solution that contractor civilian employees be required to join the Selected Reserves. While there are no insurmountable legal impediments to changing the present regulations and status on Reserve personnel, the administrative difficulties associated with processing a large number of contractor civilian employees in and out of the Reserves are formidable. Other practical objections included the possibility that some contractor civilian employees already have a reserve commitment to a Military department other than the one to which they are attached overseas, minimum annual reserve training requirements, and age restrictions. Industry reaction to this proposed solution was decidedly unenthusiastic and in many cases strongly negative. Industry spokesmen said that their ability to recruit and retain employees capable of staffing critical jobs would be rapidly diminished if the prospective employee perceived a significant likelihood that at a future date he may be called to active duty.

#### B. Uniform Code of Military Justice

Extension of the Uniform Code of Military Justice to contractor civilian employees upon a declaration of emergency presents the same recruiting problem to industry as does the Reserve approach. Unlike the Reserve approach, however, it provides no offsetting benefits, i.e., Reserve pay, etc., to the employee. Moreover, this potential solution requires Congressional

action and Presidential approval. If it is assumed that such approval were eventually obtained, this approach would still be subject to a series of possible Constitutional objections in the U. S. Courts. The Task Force concluded that this potential solution is plainly impractical in today's environment. We suggest that further consideration of it be summarily discontinued.

C. Active Duty Commissions

Industry members of the Task Force were dubious whether an agreement signed by a civilian employee to accept commissioned/non-commissioned officer status was significantly different than the Reserve solution. It contains the same recruiting problems, but offers no offsetting benefits, e.g., Reserve pay, to the employee. Industry finds little in this type of an agreement which would induce employees to agree to sign it. In addition, industry believes that it would lose business by supporting this solution, since the contracts which it holds with the U. S. Government would be effectively partially terminated by convenience each time one of its employees was called to active duty.

D. Individual's Agreement to Remain on Job

Discussions with representatives of industry and overseas Unified Commands resulted in a positive conviction on the part of the Task Force that the problems of retention to a very large degree are amenable to normal management processes and appropriate changes in policy. There is no need to ask the Congress for extraordinary legislation imposing the Uniform Code of Military Justice on civilians. There is no need to put the Reserves in

a constant state of turmoil. And, there is no need to obtain agreements which would require civilians to accept active duty upon a declaration of National emergency.

The Task Force decided that the most direct method of dealing with the problem of retention is to determine what the contractor employees themselves say is necessary to make them willing to stay at their job assignments during a crisis. We found an almost universal theme among married contractor civilians was a deep concern for the safety and evacuation of their dependents. Unmarried contractor employees were less concerned about dependents, but stressed that provisions need be made for an increase in pay under hazardous conditions. Still others were deeply concerned that they would not have credentials identifying them as non-combatants. The Task Force has summarized below the kind of written assurances from the Government that contractor employees say would make them willing to stay. We have concluded that DOD should make these assurances at the earliest practicable date. Existing contracts with industry should be revised and the overseas commander should be charged with responsibility for implementation of the contractual assurances. Priority implementation must be given to those contractor employees who serve in critical jobs. The assurances, in decreasing order of importance, are:

1. Dependents will be evacuated with the same priority as military dependents.

2. Specified increase in their compensation will be given those who remain in areas which are declared hazardous,

3. Positive personal identification of their non-combatant status will be provided.

4. The Government and contractor employee will have

(a) a clear understanding of the time and conditions during which the employee would be expected to remain, and

(b) an understanding that the physical vulnerability of the location of the job has been reduced to the extent reasonably practicable.

If DOD provides the assurances described above, it would seem reasonable that the employee be asked to sign a clear "Statement of Intent" that he understands the risks involved and the conditions under which he would be expected to remain. Although such statements probably would not enable the Government to obtain a court injunction requiring specific performance, we believe the statement would serve to document the employee's understanding of the risks involved, help to achieve an even higher level of commitment, and persuade those few employees who may be inclined to depart to reconsider their proposed actions and to remain at their place of assignment. Equally important, such a signed Statement of Intent will, we believe, enhance the confidence of military commanders in the stability under stress of their important civilian contractor components.

#### E. Motivation

If the assurances above are individually provided to contractor employees in conjunction with a Statement of Intent,



the Task Force concludes that a high retention ratio will be achieved. In addition to the assurances, however, positive action needs be taken to indirectly motivate civilian employees to remain at hazardous locations and assignments in time of tension or hostilities. The Task Force believes that the percentage of civilian employees who remain will be roughly the same as the percentage of military personnel if positive action is taken to provide civilians with similar motivation. For that reason, the Task Force recommends that new initiatives be taken to insure that contractor civilian employees have, to the extent possible, a high degree of organizational identification and a thorough understanding of their individual contribution to mission effectiveness. Indeed, in cases where this is present, we found extremely high loyalty and high esprit de corps; a situation which by all previous experience will lead to absolute dependability in times of crisis or hostilities. Large changes are not needed. DOD must, however, overcome the widespread perception that contractor civilian employees are only hired hands and can be accorded second-class citizenship. These employees have been determined by DOD to be critical. DOD has the primary responsibility for their retention. A major portion of this responsibility will be discharged with maximum effectiveness and minimum cost if such contractor civilian employees are provided stature commensurate with their responsibility, and recognition, when appropriate.

F. Contractual Methods of Enhancing Retention

The Task Force reviewed various contractual methods which

have been used in the past to enhance retention of civilian employees. These included the arrangements used by the National Security Agency with its Government civilian employees and by the State Department in its contract with E-Systems for the operation of the Peace Treaty Verification System in the Sinai Desert.

The National Security Agency has successfully retained DOD civilians in sensitive and exposed overseas assignments for a number of years. This agency uses a condition of employment agreement and a declaration of intent agreement which provides a clear understanding to the employee of what to expect and what is expected of him. Despite many conflicts since 1962, when these agreements first were employed, there has been only one individual who has broken his agreement and left his overseas assignment. NSA is confident about its ability to retain its personnel and sees no need for extraordinary action to be taken in order to further strengthen its control. The agreements, described in this paragraph, are between DOD and its employees. They are, therefore, contractual in nature. We think that it is inappropriate for the Government to enter into direct contractual agreements with employees of an industrial contractor. We would suggest instead that when by DOD policy the overseas commander provides assurances to the contractor employee concerning dependents, etc., there should be a clear statement signed by the employee which indicates his understanding of the risks involved and which states the time and conditions during which the employee would be expected to remain.

The E-Systems contract with the U. S. State Department for support of the Sinai surveillance installation imposes contractual price/cost reductions on the company if a contractor employee leaves his duty station without permission prior to the agreed-upon 18 month period. Under these arrangements, the company is denied reimbursement of the 35% bonus which was to be paid to its employees at the end of 18 months and is responsible for the cost of the employee's return transportation. The company has implemented its agreements with the State Department by requiring its employees as a condition of employment, to agree to the bonus forfeiture and to pay his own return transportation expense. The Task Force concluded that contractual agreements of this nature are generally more effective than the Government directly obtaining from contractor civilians a written promise to remain on the job. We suggest that DOD consult with the State Department on this matter with a view towards the possible use of similar agreements with DOD contractors who have employees overseas who are performing critical jobs. We have concluded that agreements with the contractor, rather than contractor employees, will provide a viable remedy to DOD, will be enforceable by the contractor against the employee at the contractor's discretion, and will cause the contractor to take those steps, within his control, to assure that his employees will remain at their critical job assignments. The Task Force also concluded that a special section of the Defense Acquisition Regulations should be devoted to the subject of contractor civilian

support for military systems overseas. It should contain specific guidelines covering the matters of assurances, motivation and contractual arrangements, as described above. We are of the strong opinion that such action will be welcomed by industry, is badly needed, and will constitute a powerful force for insuring contractor personnel retention.

G. Insurance in Hazardous Duty Areas

Life Insurance and Accidental Death and Dismemberment (AD&D) Insurance are of great importance to contractor civilian employees; the availability of insurance in hazardous duty areas, along with safety of dependents, can constitute an important factor in assuring retention during periods of crisis or hostility.

The Task Force conducted a limited survey of industry with respect to insurance for employees in hazardous duty areas. There appears to be a wide difference in practices. For the most part, Group Life Insurance does not have exclusions for hazardous duty areas and, in the cases where additional premiums are required, the companies pay these premiums. However, for AD&D Insurance, in some cases it does not apply in hazardous duty areas; in some cases it does apply; in some cases it is not available and, when available, additional premiums are sometimes paid for by the company and sometimes by the employee.

Clearly, the specific arrangements are a part of the employee's contract with his employer. However, the Task Force believes that because of the importance of adequate insurance in

enhancing retention, the cost of such insurance to the contractor including premiums for hazardous duty areas should be an allowable cost in the contract with DOD. The Defense Acquisition Regulations should state this unambiguously.

Related to the private insurance coverage discussed above are the benefits provided under the War Risk Hazards Compensation Act. Under the Act, an employee or his dependents are under certain circumstances eligible for wages or other benefits in the event of capture, death, or disability. These Government benefits can be a significant factor in motivating contractor civilian employees to remain at their overseas duty stations during crisis or actual hostilities. Unfortunately, the benefits are largely unknown to contractors and their overseas employees. It would seem that appropriate vehicles for describing these benefits, thereby achieving maximum motivational improvement, could be included in the DAR section relating to contracts for civilian support and the written assurances to be provided by the overseas commander to the contractor employee.

#### IV. RECOMMENDATIONS

The first four recommendations of the Task Force relate to all civilian contractor personnel regardless of what class of system they are supporting. The Task Force believes that, properly implemented, and in view of all historical precedent, these will insure virtually complete confidence of retention during periods of tension and declared National emergency. The final three recommendations apply to the class of "specially sensitive systems"

discussed in this Report and to personnel performing critical jobs.

Recommendation No. 1

Reject military compulsion, either by requiring contractor civilians to join a Selected Reserve or by application of the UCMJ, as a means for insuring retention of these personnel during periods of crisis. Discontinue efforts towards legislative action relating to application of the Uniform Code of Military Justice for Civilians.

Recommendation No. 2

Re-examine DOD Policies as expressed in Directives 4151.1 (Use of Contractor and Government Resources for Maintenance of Materiel) and 1130.2 (Management and Control of Engineering and Technical Services) to make them more flexible in the use of contractor civilians and bring them in line with reality and with the recommendations of the DSB report "Operational Readiness with High Performance Systems," April 1982. The policy directives should also address the class of "special sensitive systems" and special actions, e.g., contingency planning, back-up personnel appropriate for their support during crisis and hostilities.

Action: USDRE

Recommendation No. 3

Change the Defense Acquisition Regulations to include a special section on contractual provisions to be included in contracts relating to support of military systems overseas. These provisions should include assurances on behalf of the Government relating to safety and evacuation of dependents, risk compensation, noncombatant status identification, and site vulnerability.

Concurrent with obtaining these assurances from the Government, the contractor employee would be expected to sign a Statement of Intent recognizing the risks involved and stating the time and conditions during which the employee would be expected to remain. This section of DAR should also authorize the use of agreements between the Government and its contractors relating to forfeiture of bonuses and liability for return transportation costs if the employee performing a critical job leaves without permission. The section should provide guidelines which would motivate contractors to use their best efforts to encourage their employees to remain at their station during periods of impending crisis or actual hostilities. The DAR should specifically allow employee insurance premiums for coverage in hazardous duty areas to be paid by the contractor and be included as an allowable expense in the contract.

Action: USDRE (DAR Council)

Recommendation No. 4:

Set forth an unambiguous and uniform DOD policy relating to the minimum status and privileges of contractor civilians so that the feeling of second-class citizenship will be eliminated. The policy should include directions relating to indirect motivation of contractor personnel to increase organizational identification and loyalty.

Action: MRA&L

Recommendation No. 5

Define and identify in DOD and each of the Services a list of "sensitive systems" in the context of this report and a detailed

inventory of contractor personnel in critical jobs supporting these systems.

Action: USDRE, Services, JCS

Recommendation No. 6

For these "special sensitive systems," define the extraordinary actions in terms of back-up military or civilian personnel, logistical planning, contingency planning, attrition planning which will insure the operation of these systems during impending and actual hostilities.

Action: USDRE & MRA&L

Recommendation No. 7

For sensitive Joint Service Systems (notably WWMCCS) provide a special and urgent focus for their support, modernization, replacement, and protection from physical vulnerability. Clear responsibility to this focus must be assigned (perhaps to a particular Service); tasks scheduled; progress measured; performance managed (this has been lacking in the past) and results periodically reviewed at the level of Deputy Secretary of Defense.

Action: USDRE





RESEARCH AND  
ENGINEERING

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

APPENDIX A:  
Terms of Reference

2 OCT 1981

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Defense Science Board Task Force: Retention of  
Contractor Civilians on Critical Jobs Overseas  
During Hostilities

You are requested to organize a Defense Science Board (DSB) Task Force to make recommendations on the most effective action(s) that can be taken to ensure that DoD contractor civilians, performing critical jobs overseas, will remain on those jobs during periods of impending or actual hostilities.

U.S. deployed military forces have become increasingly dependent upon contractor-supplied technical personnel to provide maintenance and other support. Many of these jobs are critical to the readiness of our Armed Forces. For example, it is estimated that the European WWMCCS would cease to operate within a week if contractor support personnel were not available. The trend toward increasing civilian contractor support, often by personnel accompanied by their families, is likely to continue over the next several years as the new generation of high performance military equipment, now in transition from development to production, is deployed. The special problem of retention of civilian personnel overseas during periods of crisis is a long-standing one whose resolution is made even more urgent by this trend.

At the urging of the JCS, the ASD(MRA&L) agreed to find a solution to the problem of ensuring the continued support of civilians, both DoD and contractor, doing critical jobs overseas. To date, four possible solutions to this problem have been identified and actions are under way to evaluate/implement them. These possible solutions are, in order of decreasing obligation on the part of the civilian personnel:

1. Join the Selected Reserves;
2. Extend the Uniform Code of Military Justice to cover civilians upon a declaration of an emergency rather than a declaration of war, as it is now;
3. Have each civilian agree, in writing, to accept active duty commissioned officer, warrant officer, or non-commissioned officer status upon declaration of an emergency; and

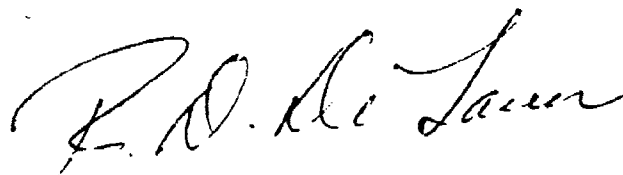
4. Have each civilian sign a contractual statement agreeing to remain on the job.

The status of affairs is: proposed legislation to implement item 2 is in coordination; a draft policy statement covering items 1, 3, and 4 for DoD civilians is also in coordination; and the DAR Council is working with industry to implement item 4 for contractor support.

The DSB Task Force should conduct an independent assessment of the problem and make recommendations for its resolution. Which of the above items should be implemented? It is clear that some kind of compromise solution may be required. For example, item 1 (above) is the most desirable from a military commander's viewpoint but possibly could pose problems for industry in its implementation. Are there other solutions that may be preferable to those listed above? How should they be implemented? What is their impact on the industrial base?

The goal is to evolve a workable solution that can be endorsed both by the Military Services and by industry.

The cognizant deputy for the Task Force will be Mr. William A. Long, Deputy Under Secretary of Defense for Research and Engineering (Acquisition Management). Dr. Malcolm R. Currie of Hughes Aircraft has agreed to serve as Chairman and the Executive Secretary will be Cdr. Edward J. Bano, Jr., Special Assistant to the Director, Contracts and Systems Acquisition, OUSDRE(AM). Dr. Paul J. Berenson, DSB Executive Officer, will be the DSB staff point of contact.



## APPENDIX B

### Panel Members Critical Overseas Civilians TASK FORCE

Dr. Malcom R. Currie - Chairman  
Senior Vice President and Group President  
Hughes Aircraft Company  
Bldg. 261, MS-N-10  
Canoga Park, California 91304  
(213) 702-3533

Mr. W. Ralph Clark  
Director of Washington Operations  
Grumman Aerospace  
Suite 2100  
1000 Wilson Boulevard  
Arlington, Virginia 22209  
(703) 525-2800

Mr. Robert R. Donaldson  
Vice President of Federal System Operation  
Honeywell Information Systems, Inc.  
7900 Westpark Drive  
McLean, Virginia 22102  
(703) 827-3694

Mr. Otto J. Glasser  
Vice President, International - Washington  
General Dynamics  
1745 Jefferson Davis Highway  
Arlington, Virginia 22202  
(703) 553-1218

Mr. Ralph A. Martin  
President, Raytheon Service Company  
2 Wayside Road  
Burlington, Massachusetts 01803  
(617) 272-9300, Extension 2331

Mr. Thomas L. Plain  
Director, Product Services  
McDonnell Aircraft Company  
P. O. Box 516  
St. Louis, Missouri 63166  
(314) 232-2084

Mr. Ralph H. Shapiro  
Manager of Field Service and Support Division  
Hughes Aircraft Company  
Bldg. A-1, MS 4C801  
P. O. Box 9399  
Long Beach, California 90810-0399  
(213) 513-3130

Mr. John C. F. Tillson  
Director, Manpower Management  
OASD(MRA&L)  
Room 3D970, The Pentagon  
Washington, D. C. 20301  
(202) 695-0626

Major D. R. Wright - Executive Secretary  
ODUSDRE(AM)  
Room 3D116, The Pentagon  
Washington, D. C. 20301  
(202) 697-8335

Mr. Robert P. Wiley  
Special Counsel to Chairman  
Hughes Aircraft Company  
Bldg. 262, MS C49  
Canoga Park, California 91304  
(213) 702-1352