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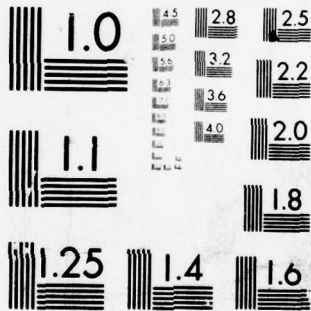
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CRISIS RELOCATION MANAGEMENT CONCEPTS
DERIVED FROM ANALYSIS OF HOST AREA REQUIREMENTS

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FINAL REPORT

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REGULATORY

10 Robert A. Harker
Allen E. Wilmore

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Final Report

CRISIS RELOCATION MANAGEMENT CONCEPTS
DERIVED FROM ANALYSES OF HOST AREA REQUIREMENTS

by

Robert A. Harker
Allen E. Wilmore

for

Federal Emergency Management Agency
Washington, D.C. 20472
Contract No. DCPA01-77-C-0235 *New*
FEMA Work Unit 2312-H

July 1979

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DETACHABLE SUMMARY

Scope of Research

The major objective of this research effort is to assist the Defense Civil Preparedness Agency (DCPA) in developing and testing crisis relocation management system concepts for host areas. DCPA crisis relocation planning guidance and supporting research documents were analyzed to determine organization and management objectives, purposes, policies and functions. Several tasks were involved:

- Organization principles and criteria were applied to emergency operations.
- Decision capability according to organization level was derived.
- General management problems resulting from population dispersal were explored on functional and jurisdictional bases.
- Management requirements for upgrading and constructing fallout shelters were reviewed in light of the structure of the construction industry.
- To reveal shortcomings, proposed crisis relocation organization modes were compared to requirements.
- Alternative management concepts were developed to alleviate the shortcomings at both regional and host-area levels of organization.
- Field workshop exercises were conducted to test, refine and modify the alternative management concepts.
- Results of the exercises were evaluated and have been incorporated in this final report.

Major Conclusions

- The President and state Governors would initiate crisis relocation only in extremely grave circumstances in light of its inherent costs, disruptions and losses. The duration of the crisis will be uncertain throughout its course. The relocation

stance should be organized so that it can be continued indefinitely.

- The logical hierarchy of decision control relates the scope of a decision to the level of management involved. The peacetime structure of vital business and government activities will continue into the crisis relocation period. Host areas represent the lowest echelon of the relocation management structure; hence, host-area management will depend on higher-echelon organization.
- In peacetime, almost all organizations and jurisdictions, both public and private, are largely self-sufficient, loosely-coordinated, and interact on a minimal basis in a competitive (marketplace) mode. They are relatively flexible and responsive to external change. It appears that it will be most effective and efficient to maintain existing organizational systems, except where compelling arguments of equity and national survival prevail.
- Crisis relocation involves reorganization of existing management structures. This requires judgement decisions on the feasibility and effectiveness of the proposed modifications. Of the criteria used to evaluate the effects of decentralization, competence, capacity, and communications are probably most important. The ultimate effect of crisis reorganization is to decentralize operating management into host areas and centralize decisionmaking management to the state level (or state/region level). This change shortens the chain of command and broadens the span of control. More knowledge and capacity, and clearer lines of authority and coordination are required.
- The dispersal of organizations (separation of personnel from operating communications, records and resources) during crisis relocation will severely disrupt traditional management systems. It will be necessary to have an effective means of feedback from local personnel to higher-level decisionmakers, so they can mobilize and allocate resources and coordinate activities. Rapid, efficient and authoritative promulgation of higher-level decisions will be vital to local operations. Decision making requires information clearinghouses (Emergency Operating Centers). The clearinghouse both centralizes intelligence to support informed decisions and authenticates promulgation of decisions.
- The number of demands and amount of information passed up from operating to control levels will

increase, as will the decisions and control passed down. Peacetime communication channels will be lengthened, intelligence systems will be disrupted, and existing "clearinghouses" to compile information and authenticate authority will be eliminated. Public information sources will be independent of local control and coordination. The implications of news will be subject to various interpretations. System reliability and confidence will decrease, and personnel will be faced with unfamiliar decisions.

- A very large burden is placed on federal and state governments to control and allocate resources, particularly if their organizations are relocated or dispersed. Guidance on the responsibility and control of interstate operations is sparse.
- Maintaining a structure with host population in residence and relocated population in public facilities requires a dual host-area distribution and allocation system, presumably controlled at the local level by host-area government. This could lead to the isolation of relocatees and an equivalent of "displaced persons" camps.
- The dispersal of risk-area emergency operating forces to act as "fillers" for host-area forces weakens potentially critical resources. In many cases, urban units are organized on a very sophisticated basis with specialized training, equipment, intelligence and communication resources adapted to the urban population. Separating risk-area personnel from their normal jurisdictions and organizations will tend to lessen capacity and create conflicts of authority at both the operating and the centralized coordination levels.
- It may be necessary for a public agency to assume the direction and control functions for public fallout shelter upgrading and construction. This would probably require a federal policy decision. To properly determine needs and allocate resources, the agency should have regional authority. The agency should also have sufficient authority to contract in the name of the federal or state government. The design and field construction functions could be controlled by major construction firms. They could subcontract to smaller general and specialized contractors.
- A viable concept for management during crisis relocation should include decentralization of higher-level management personnel to relocation areas; these personnel should have the authority to make, promul-

gate and implement decisions. They should be capable of communicating both intelligence up from and policy decisions down to local governments.

- The proposed host-area organization for direction and control implies a separation of emergency functions from general government functions. All host-area activities would be dedicated during crisis relocation. Direction and control tasks are obviously important to host-area operations, and can probably be accomplished adequately for internal county control. It should be recognized, however, that each of these tasks depends primarily on management decisions outside of the host areas. In peacetime, only law and order, fire, and health services are viable operations. Any extant local capabilities for the direction and control functions (except special EOC facilities) are normally controlled by the three services or by private organizations. Moreover, the three service chiefs usually report directly to the Commissioners, and have important professional ties to state and federal agencies. The proposed host-area organization seems to invite conflicts of authority.
- During the workshop exercises, emphasis was repeatedly placed on the need for federal or state anticipatory funding for equipment, supplies, and radiological protection before the relocation. Financial support during crisis relocation is assumed, but the necessary procedures and authorities are either unknown or misunderstood by local officials. They expect long lead times when ordering and installing materials and equipment. Emergency communications are generally cited as most critical and also inadequate. Local officials consider organization and implementation to depend on firm contracts, which require firm funding.
- There are numerous line and staff functions of county government, not represented in the proposed organization, which perform vital direction and control tasks. For example, administrative, legal, fiscal, personnel, and contracts activities are vital ingredients of government. The established line and staff organization would continue to direct and control activities during crisis relocation, and would accomplish the major coordination with outside activities. The EOC could provide centralized backup, coordination and communications during crisis relocation, and a contingency alternate site for postattack operations.

- Many local officials express open hostility to crisis relocation concepts. The general host area position is based on their desire to retain all peacetime political and economic prerogatives; this position is shared by others as well. Arguments that the host area should retain peacetime prerogatives rest on a number of observations, including the:

1. Political impossibility of planning to modify the existing local authority/responsibility structure;
2. Opposition to any risk-area authority in host areas;
3. Expectation of support from state or federal government to enforce police powers;
4. Expectation that risk-area personnel and resources will be available on call; and
5. Lack of understanding about and expressed opposition to relocation by organization, which would keep some risk-area management lines intact.

- The proposed host-area organization does not adequately recognize the functions of cities, towns and special districts (e.g., school, water and agriculture) which may be independent of and functionally dominate county government. Most private operations are subordinated under the emergency services, resources and supplies. Many, if not most, essential organizations are subject to line control by management outside the host counties; these conditions will lead to conflicts of authority.

- Many local officials doubt their ability to effectively manage operations and accept responsibilities under crisis relocation conditions. Host area personnel reinforce and emphasize the difficulties of dealing with relocatees. Current plans do not consider the incorporation of relocatees into host area activities, except possibly those relocatees belonging to churches or fraternal organizations and those with special skills. Local officials anticipate the following major problems:

1. Intractable conflicts with special relocatee groups;

2. Failure of relocatees to obey orders ("they should act as guests).
 3. Unavailability and inadequacy of fallout shelters, and the infeasibility of upgrading shelters or constructing expedient shelters because they lack materials, equipment and skills.
 4. Inadequate RADEF operations.
- The many levels of the proposed reception and care organization will preclude communication between citizens and host-area government. Though relocatees may not be in a position to resist, many host-area residents may not submit to the organization. This would result in social dichotomy and law enforcement problems. The reception and care organization would be superfluous for relocatees already in private residences.
 - Workshop participants generally agreed that the research conclusions were realistic and consistent with their knowledge and personal attitudes toward NCP planning. There were no arguments regarding the:
 1. Factual bases of the research;
 2. Vital need for improvements;
 3. Identified problem areas;
 4. Importance of subject area; and
 5. Need for coordinated efforts between host and target areas in preplanning the use of resources and personnel.

Major Recommendations

Because host-area management represents the operating level of crisis relocation organization, it depends on effective and efficient management at higher levels. Present overall organizational concepts appear to incorporate structural weaknesses, casting doubts on the effectiveness of the entire management system. Limited skills and capacities of host-area operating management preclude its ability to overcome the weaknesses. Jurisdictional constraints impede the transfer of external management into host-area organizations. To recommend alternative host-area management concepts, it is necessary to assume that viable and effective decisionmaking control organizations will evolve at higher levels.

A Relocation Area Operating Center (RAOC) could lessen the organization weaknesses imposed by crisis relocation:

- The nation would be divided into several hundred relocation areas based on existing risk/host conglomerate and economic/trading area definitions. Most of the relocation areas would include risk areas. The RAOC would be formed for each relocation area. There is precedent for such an organization in metropolitan area authorities and in regional private and government entities.
- The RAOC would be delegated authority to act for federal and state governments, and to coordinate private organizations in all matters internal to the relocation area. A particular responsibility would be the preparation and dissemination of public information. It could also be charged with responsibility for upgrading and constructing fallout shelters, and for coordinating RADEF operations. If the relocation area were wholly within a state, a state official might be in charge; if the area overlapped state boundaries, a federal official might be in charge.
- The RAOC staff would include representatives from all jurisdictions and each essential federal, state and industrial organization. (Many small organizations would be represented by a dominant company, or an association representative.) The representatives would coordinate intelligence and operations for jurisdictions on a functional basis. Operations would be managed from the usual headquarter sites. The higher-level decision structure would continue, with coordination by federal, regional and state EOC's.
- The RAOC should be sited to provide physical protection and communication capacity. (A separate study concerns the availability and capability of EOC's). Numerous existing state and regional organizations are based on geographic, economic, or political factors. Ideally, the RAOC location would be at the population and transportation centroid of the relocation area, outside of the risk area.
- Risk and host area operating units and organization structures would be maintained (not dispersed as "fillers" for host organizations), except for those functions (e.g., schools) whose clientele were completely dispersed. Host-area organizations would manage increased demand by expanding operations with selected personnel from the host and relocatee popu-

lation. This would be accomplished on a self-help, best-efforts, training-on-the-job basis. Specialized risk-area operating units would be dispatched, at host-area request and RAOC direction, to offer contingent support.

The field tests confirmed the general validity of the RAOC concept. However, the following factors should be considered:

1. Each area needs to be considered separately, and may involve many configurations.
2. The RAOC concept is consistent with DCPA EOC and communications planning, but these concepts may also need to be considered separately by area.
3. Significant questions remain about national conformity versus local and state laws, practices, and organizational structures.

An alternative host-area structure is recommended; it is based on minimizing host-area government responsibilities to keep them within local capabilities, and utilizing the expertise of individuals and organizations. Peacetime host-area activities should be retained, augmented by expanded staff when necessary. Two suborganizations would be added: Direction and Control, and Reception and Care. During crisis relocation, the EOC-based Direction and Control organization would play a backup and support role. Its primary purpose would be to provide a standby capability for transition to postattack operations. During crisis relocation, it would be staffed and equipped by the line operating departments. Responsibility for control of public fallout shelters and RADEF, intelligence, and public information would be at the regional level.

Reception and Care would be organized to control basic operating units in public facilities with 20 to 30 evacuees, and private residences with 10 to 20 evacuees. Units of this size (3 to 10 families) could be self-sufficient if normal business and government services were available. They would be self-organizing; they are competent to purchase, prepare and serve food or to find public eating places; to obtain police, fire, or medical help; to get to banks and jobs; and, in the case of private residences, to construct expedient fallout shelters. Maximum use of private residences should be encouraged because they are designed to bed and board people pleasantly and efficiently. An initial function of the Reception and Care organization would be to facilitate the placement of evacuees in facilities; it would also coordinate movement and handle the relatively few genuine welfare cases. A span of control of 20-30 subordinate units appears appropriate.

During the workshop exercises, some officials (particularly Region Five representatives) were reluctant to accept the concept that primary responsibility for RADEF and public fallout shelters should be shifted from local to RAOC control. Nevertheless, all the discussions dealt in some way with the inability of host areas to supply these services and facilities. Relations between the risk and host areas must be confronted and studied in order to better understand the degrees to which:

1. Activities and authorities of state and federal government and the private sector should be integrated;
2. Host areas can operate (or plan) independently; and
3. Planning should be in terms of anticipated postattack requirements.

It is clear that more thought and effort must be devoted to the roles of target cities and their relationship with the host areas. The present lack of coordination can be attributed to many factors. One major cause seems to be that target city officials, because of greater experience, manpower, resources, and sophisticated operations, might dominate host-area officials within their own communities. Although this subject was discussed at length (not always directly) in all the exercises, no agreement emerged on the proper course to take, or even on the need for more precise plans. Officials do recognize that the problem is vital, however, and that solutions will be difficult to find.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This final report describes the development of alternative host-area management concepts. DCPA crisis relocation planning guidance and supporting research documents were analyzed to determine organization and management objectives, purposes, policies, and duties. The following work was accomplished during the study: ↓ (OVER)		

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- Organization principles and criteria were applied to emergency operations;
- Levels of decision capability were defined;
- General management problems resulting from population dispersal were explored on functional and jurisdictional bases;
- Management requirements for upgrading and constructing fallout shelters were analyzed in light of the structure of the construction industry;
- Proposed crisis relocation organization modes were compared to requirements and shortcomings were documented;
- Alternative management concepts were developed to alleviate the shortcomings at both regional and host-area levels of organization;
- Field exercises were conducted to test, refine, and modify the alternative concepts; and
- Results of these exercises were evaluated, and have been incorporated into this final report.

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PREFACE

This is the final report for DCPA Contract Number DCPA01-77-C-0235. The work is part of a continuing research effort on crisis relocation by the Emergency Operations Systems Division, Research Directorate of the Defense Civil Preparedness Agency.

Robert A. Harker, the principal investigator, was responsible for the project design and its overall performance. Allen E. Wilmore contributed operations insights to the evaluations of organization alternatives, and was the moderator for the workshop exercises.

The Contracting Officer's Technical Representative, George C. Van den Berghe, and the Staff Director of the Emergency Operations System Division, James W. Kerr, directed conceptual development, provided input data, and critically reviewed research developments. Many members of DCPA's Research and Regional staffs provided valuable insights and assistance at the workshops. We particularly appreciate the fine participation of the NCP planners and state and local officials in the workshop discussions. The authors express their gratitude to all who assisted in this research endeavor.

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CRISIS RELOCATION MANAGEMENT CONCEPTS

DERIVED FROM ANALYSES OF

HOST AREA REQUIREMENTS

1. RESEARCH OBJECTIVES, SCOPE AND APPROACH

1.1 OBJECTIVES

This research project is a part of the Defense Civil Preparedness Agency (DCPA) continuing research program on advanced emergency operation concepts for nuclear civil preparedness and crisis relocation. The project is divided into two phases: Phase I is concerned the development of management concepts and directions for host areas, and Phase II with testing and refining these concepts and directions.

This report covers the research procedures, findings and recommendations developed under Contract No. DCPA01-77-C-0235. The general contract statement of work called for "a study of Host Area Program Coordination." Specific work and services (as modified) are:

1. "Phase I

- a) Investigate the problems encountered by relocatees in crisis relocation host areas to determine what difficulties and obstacles obstruct the integration of shelter upgrading operations with the measures of reception, care, information to the public, and other life sustaining activities.
- b) Analyze these problems to establish their origin and indicate whether these are predicated on human or material resource factors.
- c) Determine whether the solutions lie in an educational program, in leadership or in both, and if material resources are sufficient.
- d) Following these steps, examine the means available for the management of such problems and recommend the best measures available that can be incorporated in a crisis relocation hosting program allowing for a suitable management of people and resources well integrated to permit shelter upgrading operations in harmony with other life sustaining and protecting activities.

- e) Submit a final report on Phase I for approval and clearance in accordance with Section F.2.

2. Phase II

- a) In various locations of the nation, to be chosen by the Government, test the management concept and directions previously derived and determine what is applicable in part only or in whole to certain geographic areas.
- b) Repeat the tests and determine what should remain and what should be altered and replaced by new management concepts and directions in problem areas.
- c) Submit a final report on Phase II for approval and clearance in accordance with Section 5.2."

The approach to the study of Host Area Program Coordination is outlined in Section 1.3 of this chapter. The overall report describes study content and conclusions. Specific tasks of the contract scope of work are reported as follows:

1. Phase I

- a) Problems encountered by relocatees in host areas are classified by functional area in Chapter 4 and Appendices A (submitted separately) and B. Shelter upgrading is the subject of Chapter 5. Reception, care, information for the public, and other activities are discussed in Chapters 4 and 6.
- b) The analyses of the problems are included in Chapters 4, 5 and 6.
- c) Solutions to the problems are discussed in Chapter 8 and summarized in Chapter 9.
- d) Management of people and resources in a crisis relocation hosting program involves both organizational concepts (Chapter 2) and crisis relocation objectives, policies, and functions (Chapter 3). These are incorporated in the later analyses of Chapters 6 and 8.
- e) The Phase I report was submitted in May 1978.

1. Phase II

- a) The development and conduct of the initial field tests are described in Chapter 7 and Appendix C.
- b) The final field test results have been incorporated into the analyses of Chapter 6, the text of Chapter 7, and the conclusions and recommendations of Chapters 8 and 9. Specific findings are included in Appendix C.
- c) This document is the Phase II final report.

In addition to the tasks enumerated in the contract statement of work, the SYSTAN proposal for research (as modified) anticipated a DCPA requirement for a handbook manual, to be submitted separately from this final report. During the course of the research, it was determined that the current state of the art of local planning has not yet reached the point necessary to define the content of such a handbook. A current DCPA contract provides a timely and systematic approach to the development of a host-area field manual.

1.2 PROBLEM

DCPA is continuing its research program to develop concepts and methods to improve crisis relocation planning and operations at the local government level. Numerous materials have been developed to facilitate local and state level emergency planning. Of particular use to this study have been:

1. Current crisis relocation planning (CRP) guidance is contained in a five-part Planning Guide (References 1 through 5). Part I of this Guide provides data on state-level activities and the basic outline of functional areas. Part III deals with host-area planning, and includes procedures for providing housing and food, emergency services support, logistic and economic controls, and fall-out shelters.
2. Human Sciences Research, Inc. has prepared guidelines and instructions for the preparation of host-area reception and care plans, tables of organizations, and lists of staff responsibilities (Reference 6).

3. Ralph Garrett has summarized the state-of-the-art of shelter management research (Reference 7).
4. The American National Red Cross (ANRC) is presently preparing a training guide for congregate lodging and shelter management (Reference 8).
5. In addition, there are research studies and guidance (References 9 through 33) which deal with individual functional areas, including public safety, medical and public health, food, transportation, and electrical energy.
6. Under George Sisson's leadership, extensive materials have been developed for upgrading fallout shelter facilities and operations. These materials provided basic technical data for the present research study (especially Reference 10).
7. Additionally, CRP projects underway in the DCPA regions were consulted to provide data on local operations (References 34 through 42).

While as much as possible should be accomplished as early as possible, it is likely that civil defense activities will remain a low-priority item at all levels of government. An actual crisis would rapidly change this situation, and greatly increase all civil defense activities. These activities would have to be accomplished by the line and staff organizations of government, institutions, and industry and by the general population largely on a self-help basis. Recognizing the infeasibility of organizing and maintaining a high level of civil defense activities in local areas, federally-sponsored planning teams are working at regional and state levels to accomplish crisis relocation planning over an extensive five- to eight-year period. These teams are to be assisted by state and local officials.

To supplement the planning effort, DCPA is also preparing self-help training materials for use by local government either during the crisis buildup or during the crisis itself. DCPA has recently sponsored a study to develop a "Planners Guide for Crisis Relocation for Training Workshops" (Reference 25), which is designed to assist local organizations to rapidly develop effective crisis relocation plans and to indoctrinate local management personnel through workshop exercises. Workshop exercises and simulation training appear to be an effective means for introducing crisis relocation concepts and materials, and for initiating the planning effort with local executives. Such exercises were used during Phase II to present and evaluate the management concepts and procedures for host-area operations.

Because of the enormous impact of the relocated population on the host area, local host-area government officials cannot be expected to perform all of the required functions without help. They will have to rely on outside staff assistance provided by risk-area government and private organizations, with additional management support from state and federal agencies, public utilities, and area-wide private organizations.

DCPA staff members are well aware of the difficulties of generating and maintaining comprehensive disaster planning and operating capabilities in local communities when the event of a disaster is viewed as an improbable and uncertain occurrence. A management staff will have to be recruited, organized, and trained on a largely self-help basis at the time of the crisis. This type of planning will hold true for all elements of emergency operations.

In addition to the unique staffing and management problems associated with reception and care functions, host-area officials will be faced with major integration and coordination problems. Many supplies and services will be provided by systems controlled outside of the host counties (i.e., gas, electricity, water, transportation and petroleum supplies and services). Food items and pharmaceuticals will be centrally-controlled, and may pass through risk-area distribution centers.

The construction industry differs from other industries in that it operates primarily on a contract or project basis. Most projects are individually designed, contracted, scheduled and constructed. Successful contractors have developed highly-specialized management techniques to effectively assemble materials, equipment, and skilled labor at construction sites. These contractors maintain day-to-day, detailed local knowledge of their suppliers and subcontractors.

Crisis relocation bases its operation on the existing pre-crisis systems, while adapting and coordinating the ongoing resources, procedures, and practices to the new situation. It is considered that the changed demand patterns for resources and services can best be accommodated by existing operators. The integration and coordination of the many normally-autonomous operating systems and their management present significant problems. The situation becomes more complex in light of the current limited capabilities of host-area civil defense officials, the potential "crash" demand schedules, and the limited resources of DCPA.

Crisis relocation research and planning has identified the tasks required in host areas, the responsible persons and organizations, and outlined schedules of recommended

activities. A broad spectrum of activities will be performed by heterogenous groups, under leaders likely to be unfamiliar with their roles and their environments. There is a need to explore the likely availability of material resources and skilled labor in the host areas. Management intelligence systems are needed to communicate supply and demand data to decisionmakers. Upgrading of fallout shelter operations will constitute a unique major requirement in host areas, concurrent with reception, care and other life-sustaining activities. This research is designed to identify the vital policy decisions of the crisis relocation program, and to investigate and devise a concept for host-area management, coordination and direction.

1.3 RESEARCH APPROACH

The research was divided into several tasks, structured to meet the study objectives, incorporate prior DCPA research and planning guidance, and effectively use the experience of the research team.

Phase I

Task 1: Investigate Crisis Relocation Data to Define Host-Area Problems. As indicated in the problem statement, DCPA has generated extensive materials relevant to host-area crisis relocation planning, training and operations. Crisis relocation studies were surveyed to determine management objectives, functions and problem areas. General principles of organizing theory were reviewed. Difficulties and obstacles to integrating shelter-upgrading operations with the measures of reception, care, information to the public, and other life-sustaining activities were investigated.

Task 2: Analyze Host-Area Problems. The analyses of crisis relocation management problems focused on executive decisions by functional area which prove vital to the selection and scheduling of programs and in the allocation of resources on a local basis. Constructing, equipping and provisioning sufficient improvised or expedient fallout shelter spaces will be a major problem in most host areas. The allocation of refugees and host-area residents to the facilities will require significant management capabilities. While there may be a general surplus of manpower in host areas, efficient and effective shelter upgrading operations require ingenuity, engineering and management skills, as well as careful allocations of building materials, construction equipment and skilled labor.

Task 3: Develop Alternative Concepts for Host-Area Management. Essential elements of each functional area were

identified to define feasible management levels for decisions. A broad range of functional areas was studied to encompass the many management problems which will be encountered in host areas in the various geographical areas of the country. Early in the study, it became apparent that many critical management decisions affecting host-area operations would be beyond host-area jurisdictional control and capability.

Task 4: Determine Host-Area Management Concepts and Procedures. Solutions to host-area problems will require a combination of executive leadership, training, and efficient allocations of material resources and labor. Even host areas which are relatively rich in shelter resources should devise programs to further enhance their survival capabilities. An effective crisis relocation management system should be sufficiently flexible to accommodate a wide variety of host-area operating problems and capabilities. Its objective should be the effective control and allocation of essential resources.

Task 5: Prepare Phase I Final Report. The Phase I report contained the research method and analyses of the study. It offers alternative solutions to host-area problems and recommended management concepts and procedures. That document, modified by the findings from the field work, is the basis for this Phase II final report.

Phase II

Task 6: Develop Exercise Program to Test Host-Area Management Concepts and Procedures. The Phase II research effort is concerned with the development of a program to test the management concepts and procedures developed in Phase I and to conduct test exercises to validate and expand the materials. The first task was to develop a format for the test exercises. During the development of the test program, meetings were held with the COTR and other key DCPA research staff members to review progress and to select various host areas in the country to test and validate the management concepts and procedures.

Task 7: Conduct Initial Tests of Management Concepts and Procedures. The initial tests were held with DCPA regional officers, selected staff members, and knowledgeable representatives of state and local governments. The initial exercises were in the States of Kansas and Louisiana.

Task 8: Evaluate Initial Test Findings. The findings of the initial test exercises were evaluated to validate the management concepts and procedures, and to determine what modifications and additions were desirable for the final test.

Task 9: Conduct Final Test of Management Concepts and Procedures. During the preceding Tasks 7 and 8, the research staff -- in conjunction with DCPA research and regional personnel -- scheduled a final local test exercise. This was conducted in the State of New York.

Task 10: Analyze Test Results. The findings from the exercises in the host jurisdictions were incorporated into the Phase I materials to derive a final set of management concepts and procedures to deal with host-area requirements.

Task 11: Prepare Phase II Final Report. This final report includes the research methodology and findings, and recommendations for further DCPA investigation. It also includes revised specifications for the new management concepts and procedures for the host areas.

2. ORGANIZATIONAL THEORIES FOR EMERGENCY OPERATIONS

2.1 ORGANIZING PRINCIPLES

Operations during crisis relocation will be conducted under conditions without precedent in the United States in terms of areas, numbers of people, and political, social and economic dislocation. Organizational theories provide a basis for analyzing and evaluating management and organization concepts. John F. Devaney described these theories in his reports entitled "Organizing the Locality for Emergency Operations" and "Evaluation of Civil Defense Systems" (References 43 and 44). The reader especially interested in organizational theory should consult Devaney's reports and his source materials. This section of the report is confined to theoretical considerations directly related to crisis relocation operation and management.

Organization involves the selection, direction and accomplishment of tasks. The accomplishing -- doing the physical work -- falls to operating staff at the lowest levels of the organizational hierarchy. The supervisory staff controls and coordinates the operating staff. A complex network of decision processes must occur before action can be taken. The following organizing principles relate to this study:

- Balance: (1) between standardization and flexibility, (2) between centralization and decentralization, (3) between efficiency and equity, and (4) between span of control and chain of command.
- Specialization: Division of the work so that each staff member will have as few duties as possible; related to standardization.
- Flexibility: Adjustable to modification or change of product, process or procedure.
- Decentralization: Delegating decisionmaking authority to lower competent levels.
- Efficiency: Objectives achieved at lowest costs.

- Equity: Objectives achieved with equal, "fair" sharing of costs and benefits.
- Span of Control: Number of subordinates, whose work is interrelated, reporting to a superior.
- Chain of Command: Levels of management between highest authority and operating staff.
- Coordination: Means provided for directing all efforts toward a common goal.

It should be noted that these principles do not imply values of "good and bad." In many cases, the principles may be paired and the two will lead to opposite recommendations. Application of the principles involves judging alternatives for the case under consideration.

2.2 DECISION MAKING

A decision is a statement about a future state of affairs that selects one future in preference to others and directs behavior to achieve it. It is based on two kinds of premises:

1. Fact: A statement about the observable world and the way it operates that can be tested to find whether or not it is true.
2. Value: A consideration which is deemed desirable or useful that is signified by such terms as "ought," "good," or "preferable" and cannot be reduced to factual terms.

The decisionmaking process begins with some ethical premise that describes the objective of the organization. Judgement enters the process when choosing between factual premises whose accuracy cannot be known with the information or within the time available. (This element of judgement is often confused with the ethical element of a decision.)

The two main functions of the executive hierarchy are to interpret the intention of the organization and to set the time for integrated action. This indicates the need for a central clearinghouse to gather intelligence, make decisions, and notify all other positions of relevant information and changes in plans or actions. Because this central clearinghouse involves the exercise of authority, every communication should be authenticated:

- The person issuing the communication must be known to occupy the clearinghouse position.
- The position must be known to have authority to issue this type of communication.
- The communication must be known to be an authorized issuance from that position.

An authenticated communication enables the staff to act for and in the name of the top authority.

Crisis relocation will affect service, function, personnel and location of ongoing organizations. For example, the food industry will find its product line curtailed to essential commodities and services, its distribution and communication systems reoriented, and its manufacturing and consumer groups in different locations.

Crisis relocation (and the more extreme case of maximum dispersal) involves reorientation of the authority structure and dispersal of production and consumption. These situations require consideration for decisionmaking of the principles of centralization versus decentralization, and span of control versus chain of command.

2.3 DECENTRALIZATION

Of itself, decentralization is neither good nor bad, desirable nor undesirable. Decisions about decentralization should be based on the degree to which it will aid in achieving the objectives of the organization. Some criteria are:

- Coordination: What is the requirement for coordinating local activities with activities in other localities? If the activity neither affects nor is affected by activities or conditions outside its locale, the need for coordination is small. (This does not mean that the decisionmaking authority may not be kept to a higher level.)
- Information: Who has ready access to facts on which to base decisions? Decisions are best made when the decisionmaker has reliable information about the problem, the alternative courses of action, and their likely consequences. By shortening the distance for passing information, one lessens the margin of error. The decisionmaker closest to the source of the problem -- organizationally and geographically -- should have access to the most accurate information.

However, he may not recognize the range of alternative solutions or their consequences.

- **Capability and Capacity:** Who has the capability to make a sound decision? Capability means the ability, knowledge, and experience required to make a judicious choice from the alternatives. Capability is relative to the difficulty and complexity of the problem and its solutions. Capacity also relates to workload (the amount of other work the executive and his staff have to do). What anyone can do in a given period is limited. Assigning a person more than he can do will tend to assure that he will not only fail to do that task, but also his other work.
- **Timing:** Must the decision be speedy and on-the-spot? Sometimes, in a rapidly worsening situation, the decision cannot wait on the niceties of staff studies and the use of specialist advice. In less urgent situations, the time required to make a decision may significantly affect its cost. The effect of delay must be a consideration in the decision to decentralize.
- **Significance:** How many functions are involved and what are the cost (a) of the decision or (b) of a mistake in the decision? The greater the number of functions involved, the greater is the complexity and the need for capability. In general, the greater the cost of an error in the decision, the higher the level at which it would be made. On the other hand, the higher the level, the more it will cost to make the decision.
- **Communications:** Will reliable communications be available? This consideration applies chiefly to emergency organizations. The nature of the emergency or of the work may preclude communication at the time the decision is required. During emergencies, unreliability of communications may dictate a policy of decentralization.

2.4 SPAN OF CONTROL

Span of control is a term used in discussions of limits of executive capacity in terms of numbers of subordinates. It is not a precise term: sometimes it is used to mean "number supervised;" at other times, it means "number reporting to," and these terms can differ substantially in meaning. It is a measurement of the number of relationships among executives and subordinates. Adding one subordinate

to a group more than doubles the number of relationships; for example, from 100 for a group of 5 (one supervisor and 4 subordinates) to 222 for a group of 6. From this, it may be concluded that 5 or 6 is a reasonable maximum number of subordinates. However, surveys of organizations indicate that it is normal practice to substantially increase the number. Line and staff organizations provide vertical coordination and control by functional specialists, allowing a supervising unit to control 20 or more subordinate units.

Span of control is related in organizational theory to "short chain of command": the idea that there should be as few levels of management as possible between the highest authority and the operating worker. These two theories tend to be contradictory: the less the span of control, the longer the chain of command. Final solution usually involves compromises between them.

2.5 ORGANIZATIONAL STRUCTURE

There is an accepted process of building organizational structures: (1) identify objectives and purposes; (2) identify functions and processes; (3) identify decisions; (4) establish a hierarchy of decisions; and (5) derive an organizational structure. The following chapters of this report analyze the organization steps in this order.

The form of the organizational structure is dictated almost entirely by the division of work. The exercise of authority inevitably requires a line. Planned (standing) committees are usually found in the legislative portion of the organization. The requirement for staff is primarily determined by the amount of work to be done by each executive and by the technical complexity of the work. The degree of decentralization is determined by the capability and capacity of the personnel, effective communications, and operational efficiency. Therefore, the form of the structure is more derived than decided.

For crisis relocation, we are primarily considering reorganizing existing organizations (rather than creating new ones) to cope with changed objectives and operating conditions. In a reorganization, existing groups should be retained if feasible. One of the most important elements is the interpersonal relationships among fellow workers. Over time, each group member makes the necessary adjustments to subordinate his irritations with the others and minimize frictions that reduce the efficiency of the group. And each gains assurance in his expectations of what the others will do in a given situation. There will be significant problems in the transition from peacetime organization modes to

crisis relocation modes during the crisis-expectant (or initial crisis) period. These problems should be considered following resolution of desired crisis relocation management concepts.

Another consideration involves the problems of dealing with disposition of elements of the former organization which are no longer viable. The persistence of bureaucracies is well recognized. Of particular concern for crisis relocation is the premise that following a peaceful resolution of the underlying causes, our intention is to return to our pre-crisis organization structure.

2.6 APPLICATION OF THEORIES TO CRISIS RELOCATION MANAGEMENT CONCEPTS

Consideration of the theoretical bases for organizing provides guidance to analyze and evaluate crisis relocation management and organizational concepts. These considerations tend to be qualitative -- elements to be evaluated -- rather than quantitative facts or rules. The following applications pertain to this analysis of host-area management concepts:

- Statements of organizing principles provide defined alternatives which can be judged for operations under crisis relocation or maximum dispersal.
- Host areas represent the lowest echelon of the crisis relocation management structure: the operating level for reception, care and protection of the bulk of the population. Host-area management depends on decisions from higher levels of the organization.
- Decision making requires clearinghouses for information (the Emergency Operating Center). This clearinghouse both centralizes intelligence for decisions and authenticates promulgated decisions.
- The locations of products and functions, consumers, and many ongoing essential organizations will change. This will result in modified organizational structures.
- Crisis relocation will decentralize many organizational functions. Of the criteria used to evaluate the effects of decentralization, competence, capacity, and communications are probably most important.
- Span of control applies to crisis relocation organization in the same sense as decentralization.

Overextended spans of control make operations more vulnerable to intelligence and communication failures, to costly judgement errors, and to lack of control.

- Crisis relocation involves reorganization of existing management structures. Judgement decisions are required as to the feasibility and effectiveness of the proposed modifications, and of means to accomplish the transition from peacetime to crisis relocation.

3. OBJECTIVES FOR CRISIS RELOCATION OPERATIONS

3.1 CRISIS RELOCATION OPERATION POLICIES

DCPA has developed a set of crisis relocation operations policies, which is presented in its planning guidance (References 1 through 5) and associated documents. The guidance applies to levels of government (such as states, risk areas and host areas) and to specific functions (such as telecommunications, food and transportation). At present, the guidance for organization planning (Reference 5) is being held in abeyance. Development of a management system for crisis relocation requires an integrated statement of organizational objectives, functions and problems. This section of the report draws a concept of operations from the various planning guidance documents.

The overall civil preparedness program is directed at assisting state and local governments to improve their readiness for life-saving operations in any type of emergency. "Emphasis is on operational capability--the ability to actually conduct coordinated operations in a major emergency. The Secretary of Defense has stressed that the civil preparedness program '...is, and has always been, an essential element of our overall strategic deterrence posture.' He has further stressed the need for flexible response options, both for in-place protection and for crisis relocation from high-risk areas" (Reference 4). DCPA has two basic strategies for protecting populations threatened by major hazards resulting from natural disasters or military emergencies. One is to provide the best protection possible with the population "in place" at or near their homes, schools and places of work if warning time is short. The second is for people to leave the threatened area if time allows.

This research study is concerned with the contingency of a severe international crisis, in which it could be desirable for people to relocate from major cities and other areas that might suffer the direct effects of nuclear weapons (e.g., blast, heat), should the crisis escalate to an attack. DCPA has analyzed the hazards which could result from nuclear attack, and has identified areas of military importance and of high population and industrial concentrations. These are considered to have a high risk of experiencing the direct effects of nuclear weapons (Reference 45).

Other parts of the United States are considered likely to experience fallout only. While the risk designations do not constitute a prediction that large cities would necessarily be the objective of direct attack, prudence dictates that plans for urban areas should be based on the possibility of experiencing direct effects from nuclear weapons (Reference 4).

The planning guidance points out that a national capability to relocate people from risk areas during an extremely intense international crisis could provide additional time for negotiations should an adversary attempt to intimidate us. These negotiations would hopefully succeed in averting a war, so that in fact there would be no attack upon the United States. It is apparent that a negotiating period during such a crisis would allow our military forces to achieve desirable relocation, redeployment and stand-down objectives. It would allow time to resolve underlying sources of the crisis itself (limited military conflicts or economic confrontations). Should the crisis escalate to a nuclear exchange, relocating people from U.S. risk areas has the potential to save many millions of lives. Thus, the objectives of crisis relocation are (1) to buy time to develop favorable non-war solutions to the crisis, (2) to develop a position of equal or enhanced strength vis-a-vis an adversary in a diplomatic and defensive sense, and (3) to improve the survivability of the nation by protecting its population and resources in case of an attack. These objectives imply that the United States should maintain its viable economic and military structures and operations during crisis relocation.

3.2 INITIATION AND DURATION OF CRISIS RELOCATION

The authority to initiate the relocation of the population of the major cities in a nuclear crisis may be expected to be limited to the highest national authorities. The President and his staff would be making every effort short of war to resolve the nuclear confrontation. It is likely that most citizens would be acutely aware of the potential catastrophe. In these circumstances, the President probably would not want to be faced with premature evacuation of U.S. cities.

However, there is no past experience similar to a future nuclear crisis in which the President might seriously consider evacuating our large cities. Responsible local leaders might urge or be urged to "do something." A major relocation involves obvious costs, disruption, and damage claims that are likely to deter most city governments from recommending that their citizens leave. Host-area officials

may also contend that no city mayor can impose his urban population on them on his own volition. Thus, any authority lower than the Governor of the state is unlikely to be acceptable to most local officials. Since it is likely that the authorizing level of government would be held liable for damages, most state governors are unlikely to direct crisis relocation, lacking a firm request from the President of the United States.

Once the difficult decision had been made, it follows that as many risk-area residents as possible should be relocated. Approximately half of the states have adopted a Model State Law that contains among its provisions authority for the Governor of the state to "direct and compel the evacuation of all or part of the population from any stricken or threatened area within the State. . .prescribe routes, modes of transportation, and destinations in connection with evacuation. . .commandeer or utilize any private property if he finds this necessary. . .control ingress and egress to and from a disaster area, the movement of persons within the area, and the occupancy of premises therein. . .and make provisions for the availability and use of temporary emergency housing." Lacking physical damage experience, governments are most reluctant to invoke such extreme measures as compelling evacuation or commandeering private property.

In states where current emergency legislation does not authorize the Governor to compel evacuation, the relocation of risk-area residents may be assumed to be "impersonally directed." Information messages to the public would state that, in response to a request by the President, the relocation plan for the area was being put into effect and that the risk area was being evacuated. This approach is appropriate even in states where direct authority exists. Therefore, planning should be based on the hosting of all risk-area residents assigned to host jurisdictions. If fewer actually relocate, the pressure on host-area capabilities will be accordingly reduced.

The timing of relocation cannot be estimated precisely, but is likely to involve at least one week and possibly several weeks. The planning guidance is based on 72 hours to evacuate risk areas. While severe international crises may be resolved quickly, additional time would be required to carry out and verify declared intentions. Neither side is likely to reoccupy its cities until assured that agreements are being implemented. If the relocated stance is time-limited, it would allow the adversary to "play chicken," and could force Presidential decisions contrary to crisis relocation objectives. "State and regional planning, especially, should aim at establishing a stable level of support to the relocated population that could be continued

indefinitely if necessary and that would not encourage attempts to return prematurely" (Reference 4).

3.3 STATE-LEVEL OPERATIONS FOR CRISIS RELOCATION

At the state level, the mission of government in crisis relocation is to support the activities of localities by providing for the needs and protection of the population -- those who remain in the risk areas or return to them to work, those in host areas, and those who reside in places that are neither risk nor host areas. The state should conduct two kinds of crisis operations. One is the employment of state forces in direct support of local operations; i. e., assign units or individuals from its own forces to augment local forces. Secondly, the state can assure local availability of essential goods and services by controlling and expediting their production, distribution, and use within the limits of what is available. This requires coordination of the activities of the several organizations -- public and private -- whose combined efforts are required to get available resources to those who need them.

Direct operational support of its localities can be done within each individual state. So also can resource control and supply in many states in the less densely populated parts of the country. But in some areas, such as the Northeast Corridor, relocation may involve interstate movements of people, and regional or even multi-regional operations. In some areas, relocation movements may be wholly intra-state, but normal distribution patterns for goods and services to the retail level may be inter-state. In these cases, regional or multi-regional level coordination will be necessary.

Operational support can only be supplied from those state government organizations that have substantial operating capabilities: the state police or highway patrol or the state highway commission, for example. Support by the State Highway Patrol would first be needed for assisting in the control of traffic in the relocation movement, and this assignment of the Patrol would likely be on state and federal highways. The need for this original commitment would diminish when the relocation movement was complete. At that time, the unit that was originally committed might be sent to a second commitment, say to control through traffic on main resource distribution routes. Or the unit could be withdrawn to a reserve status, for later contingent assignments. In contrast, support by State Highway Department units would be needed when unusual traffic patterns resulting from the relocation caused accelerated damage to

essential roadways. The assignment of State Highway units would likely be to contingent support. Similar considerations would apply in the assignment of individuals. Direct support can also be provided by one locality to another, but to accomplish this effectively and efficiently, some machinery is needed to assign surplus capability. This coordination is a function of the state in a crisis relocation situation.

Support through the control and expediting of production, distribution, and use of essential goods and services differs greatly from operational support. Goods and services are supplied for the most part by companies that are privately owned and operated. Over the years, these companies have developed organizational and operational arrangements-- both internal and intercompany--that have resulted in production and distribution systems that operate efficiently to meet the normal pattern of consumer demands. Some of these arrangements are formal, but more often they are informal and based on acquaintance and trust among the individuals involved. It cannot be expected that any alternative or substitute system could be constructed quickly that would operate as well.

A crisis relocation would alter the geographical pattern of the demand for goods and services and possibly that of production and supply. It would also alter the content of the demand because it is visualized that the supply of goods and services would have to be restricted to essentials. This would require a rapid adjustment of the production/distribution system. Here again, it cannot be expected that adjustment of the system could be accomplished as well by a new organization as by those who operate the existing system. People who can best adjust and operate the supply/distribution system must know what essential items are to be supplied and distributed, and what the new geographical distribution of the consumers will be. This information is supplied by the state, because only the state and its local governments have the capability to obtain this information.

Designation of the essential items to be supplied and distributed requires not only their identification but also the specification of quantities and recipients. In addition to the allocation of end items for consumption by the people, goods and services are required for production and distribution. This is a state activity because no one below the state level has the authority to apply controls to resources within the state.

3.4 RISK- AND HOST-AREA OPERATIONS FOR CRISIS RELOCATION

The basic national objective for crisis relocation of the risk-area population is that all persons not authorized to remain in the risk area should have left by the end of the third day. Studies of the feasibility of hosting the relocatees, as well as the need for flexibility to maintain defense production and support mobilization activities, indicate that relocation of many organizations intact may be desirable. It can be expected that a substantial number of relocatees assigned to a typical host jurisdiction will be members and dependents of organizations, able to aid in reception and care of their group. Some of these organizations will be hospitals, convalescent homes, and correctional institutions with patients or inmates requiring care or custody in similar institutions of the host jurisdiction. Some will be relocated expressly to help the host jurisdiction to care for relocatees or to prepare fallout shelters. If the host jurisdiction is near a risk area, there will be employees who must commute to conduct essential operations in the risk area.

A basic policy objective is to house and care for relocated risk-area residents in non-residential facilities within the host area; that is, planning to billet relocatees in host-area households is to be avoided. At the same time, it may be anticipated that a high proportion of host-area residents will volunteer to take in relocating families. Host-area surveys of non-residential structures indicate that, on the average, nearly four relocatees can be accommodated for each host-area resident, allotting 40 square feet of floor space per person. Although not all of these facilities may be available for housing, substantial amounts of housing will also be found in vacant residential units, both year-round and seasonal, and in residential outbuildings such as garages and barns. Other factors, such as the availability of potable water supplies or capacity of sewage treatment facilities or septic tank fields, may limit the numbers of risk-area residents that can be hosted in a given area.

Availability of sufficient quantities of fallout shelter for use by both residents and relocatees may influence the host capability of some areas. Where residential basements are common, the basic policy would be to have host-area residents (and guest families) share residential basements, leaving shelter space in non-residential structures for relocatees housed in congregate care facilities. Exceptions may occur where large amounts of underground space in mines and caves exist, where residential basements are few in number, and in areas where heavy fallout levels may be in prospect. Host-area surveys conducted to date have indicated a possible increase in the known inventory of existing

fallout shelter space in non-residential structures and opportunities for upgrading of lower-grade shelter space. Where no other solutions can be found, expedient shelters can be constructed.

The planning guidance (References 3 and 4) indicates that production and distribution of goods and services in local areas will be restricted to essential items in quantities adequate by emergency standards. Thus, activities carried on in the risk area would be of two kinds: (1) risk-area operations, and (2) risk-area support. Risk-area operations are essential activities that must be undertaken at fixed facilities during the relocation period. These operations may be classed into three categories for operating purposes. The first category consists of those activities carried on at industrial and business facilities -- food processing and distribution facilities, defense plants, refineries, bank computer sites, and the like. The second category consists of those activities carried on at residential facilities -- hospitals, correctional institutions, and other special-care facilities having inmates or patients who are not moved to the host area. The third category of risk-area operations consists of service activities -- electric power, gas, water and sewage disposal. These activities are usually carried on in industrial facilities but, for the most part, they are needed to enable the other risk-area operations to continue.

Risk-area support consists mainly of governmental activities to aid the orderly exodus from the risk area, to support risk-area operations, to maintain the integrity of the risk area, and to maintain civil defense readiness in the event the crisis should culminate in a nuclear attack.

Because it is considered that transportation resources will be stressed to distribute essential supplies to the relocated population, non-essential host-area production and distribution will be limited to supplies on hand. Essential host-area activities, including fallout shelter construction, would be expanded to their feasible limits. The management of the essential organizations is considered to be in the best position to determine the critical characteristics of their activities and to define essential facilities and work forces.

The basic concept of continued risk-area operations is that minimum activities necessary or appropriate to the crisis situation will be maintained by commuting the essential work force from nearby host areas where the workers will be housed, fed, and sheltered with their families while off duty. This policy is intended to keep the numbers of people in the risk area at any one time to a minimum. It would be expected, for example, that new construction, modi-

fications, and most route maintenance activities would be suspended and that most recordkeeping and office work would be done at the relocation headquarters in the host area. To further minimize the numbers of people in the risk area and to ease commuting requirements, facilities in the risk area would be operated on a two-shift basis, each of 12-hours duration for round-the-clock operations.

Arrangements should be made to provide blast-resistant shelter and emergency evacuation measures for the on-duty workers. Organizations engaged in risk-area operations would be expected to provide personnel for civil defense assignments at the work site, in addition to those required for essential operations. It should be noted that inmates or patients in residential facilities would also require in-place protection.

Risk-area operations and support would be controlled from the central city Emergency Operations Center (EOC) in urbanized areas and the risk-county EOC in other risk areas. Staging areas would be located in the vicinity of clusters of operating facilities. Staging areas would provide on-shift feeding, emergency medical care, vehicle refueling, emergency repair capabilities, and general support to risk-area operations. The staging area direction and control unit would function as a subordinate command center to the main EOC and would serve as shelter complex headquarters in the event of an attack warning.

3.5 ECONOMIC CONSIDERATIONS

The relocation of urban populations poses obvious economic dislocations. While many persons would continue to perform their normal jobs and others would work at emergency tasks, many normally employed persons would find themselves without their usual source of income. Similarly, many business and industries, both in risk areas and in host areas, would not be able to operate. Continuing to pay salaries and wages would not be practical for many businesses and governmental organizations. The preparation of payroll vouchers, normal banking facilities, and delivery of the mails would be curtailed. The provision of housing and other essentials, including food and medical care, would likely be at the expense of the government for relocated families and many host-area families as well. If the crisis is peacefully resolved, provisions would probably be made to compensate individuals for losses entailed by the relocation and to provide government credit to businesses whose loss of cash flow have placed their continued existence in jeopardy. In other words, an equitable sharing of losses resulting from crisis relocation would be brought about through the

federal authority. While the details of such arrangements may undergo elaboration during the crisis and after relocation, it is anticipated that no one would be denied the necessities of life through inability to pay, and that the continuity of businesses and other institutions would be protected. Policies and procedures for dealing with these dislocations are currently being developed at the federal level.

3.6 MAXIMUM DISPERSAL CONSIDERATIONS

Early planning activities for crisis relocation have tended to locate the relocated population in large non-residential buildings in the small cities of the host counties. This tends to create secondary population concentrations. Recent projections of adversary force levels in the mid-1980's indicate capabilities to attack these secondary concentrations as well as the large urban areas. These conditions suggest the need for maximum dispersal of the relocated population to achieve deterrence and protection.

The impact of such a policy is presently being investigated at the federal level. Problems of logistics, sufficient congregate care and shelter facilities, and social services and controls may be insurmountable in many areas. For this research on crisis relocation management concepts, it appears that maximum dispersal can be treated as an extended evolutionary step. For example, it is expected that more host areas would be involved, distribution and communication lines would be extended, and risk-area support would be more dispersed. A viable management concept should be flexible to accommodate these matters of uncertainty and degree.

3.7 CONCEPT OF OPERATIONS FOR CRISIS RELOCATION

The DCPA planning guidance, as cited in the preceding sections of this chapter, provides an adequate basis to define a basic concept of operations for crisis relocation. The principal elements of the concept may be summarized:

- Crisis relocation is one of two civil defense strategies to protect population threatened by a nuclear attack. It would be implemented if adequate warning time is anticipated. In-place protection is the second strategy; it would be implemented if short warning is anticipated.

- The objectives of crisis relocation are (a) to buy time to allow peaceful resolution of the crisis issues, (b) to maintain or enhance the United States' position (military, diplomatic and economic) versus its adversary, and (c) to improve the survivability of the nation by protecting its population and resources in case of attack.
 - Crisis relocation will be initiated only in extremely grave circumstances because of its inherent costs, disruptions and losses. The President and state governors together would initiate the action.
 - The public will respond in terms of its perception of the hazard and the persuasiveness of its leaders. It is considered impractical to physically force compliance with the directives.
 - The duration of the crisis relocation will be uncertain throughout its course. At least three days strategic warning will be expected. The relocated condition should be operated so that it can be continued indefinitely.
 - The operational roles of the federal government and its agencies tend to be defined along functional lines. (They are not explicitly treated in the referenced planning documents.) It is expected that the federal government would continue to exercise control in its traditional fields (e.g., interstate commerce, banking and finance, military procurements, agricultural support) in a decentralized mode. Activities would be staffed from regional field offices.
 - At the state level, operations will be conducted in two modes. Direct operational support will be given to risk and host areas by state agencies with significant operating capabilities (i.e., Highway Patrol, Fire Services, and Highway Department). This support will be both by supplementing local forces and by providing reserve units to handle contingencies.
- A second state-level operation will be to designate, coordinate and expedite the production, distribution and use of goods and services. (Actual production and distribution will be controlled by existing organizations and management.)
- Risk-area activities will be minimized to achieve population relocation. Essential industrial and business operations, selected residential facilities (hospitals), and essential service activities will be

continued. Government services will be continued to aid the exodus, support risk-area operations, maintain risk-area integrity, and maintain civil defense readiness. These activities will be maintained by a commuting workforce housed in adjacent host areas. Blast shelters or tactical evacuation capabilities should be provided.

- Host-area activities will involve providing congregate care and fallout shelter protection for the relocated population largely in non-residential structures. Accommodation of relocated families in host residences will be encouraged, but not planned for. Because of distribution limitations, productive activities will be restricted to essential industries.
- Economic dislocations will be compensated for by federal government policies designed to accomplish an equitable sharing of losses resulting from crisis relocation.
- Current considerations of a "maximum dispersal" policy introduce uncertainties and more severe problems for crisis relocation. Any crisis management concept should be flexible to accommodate such variations.

4. MANAGEMENT POLICIES FOR CRISIS RELOCATION

4.1 GENERAL POLICIES

The outlined concept of operations, drawn from DCPA guidance, is adequate to formulate a preliminary statement of management policies. It is clear that present DCPA planning seeks to maintain a flexible response structure in the relocated mode. The flexible structure is designed to provide an effective level of protection, to maintain adequate production and distribution of essential goods and services, to preserve existing political and economic institutions, to allow an equitable sharing of losses, and to effectively move to a peacetime or postattack condition.

The flexible response structure appears to be a feasible and viable set of policies. To analyze the internal consistency of management concepts and to explore alternative organizational structures, it is helpful to postulate boundary conditions around the central case. These are outlined in Exhibit 4.1.

A preliminary statement of management policies by functional area is summarized in Exhibit 4.2. The present policies are listed in the center column headed "Flexible." These are interpreted for each functional area in an internally consistent manner. Alternative policies are listed for the "Precautionary" and "War Imminent" boundary levels of activities.

Several problems of internal consistency and organizational capabilities are raised for the central case by the listings of Exhibits 4.1 and 4.2:

- To sustain the relocation stance for an indefinite period, it appears that all productive activities (particularly outside the risk areas) will be under constant pressure to expand operations.
- A very large burden is placed on federal and state government to control and allocate resources, particularly if their organizations are relocated or dispersed. Guidance is sparse concerning responsibility and control of interstate operations.

EXHIBIT 4.1

LEVELS OF RELOCATION ACTIVITIES

Precautionary Relocation

- Condition: Respond to diplomatic crisis to match Soviet actions. Expect to return to normal in one to two weeks.
- Objectives: Provide President with enhanced bargaining position; facilitate change to more severe condition; and reduce vulnerability.
- Actions: Disperse population at minimum cost and dislocation of people, resources, and systems.

Flexible Relocation

- Condition: Respond to general threat of strategic war. Expect minimum of three days attack warning; and prepare to maintain relocated position for three weeks to infinity.
- Objectives: Enhance diplomatic and military stance; facilitate change to more severe condition; reduce vulnerability; and achieve ability to hold position indefinitely.
- Actions: Disperse and protect population and organizations to achieve maximum effectiveness of operations with equitable distribution of costs.

War-Imminent Relocation

- Condition: Respond to definite threat of strategic war. High probability of attack within one week, destroying urban centers.
- Objectives: Allow military stand-down and last resort diplomacy; achieve maximum dispersal and protection of population, essential resources and organizations.
- Actions: Abandon (and cannibalize) all risk areas; and achieve maximum survival position without regard to cost.

EXHIBIT 4.2

PRELIMINARY STATEMENT OF MANAGEMENT POLICIES BY FUNCTIONAL AREA

<u>Functional Area</u>	<u>Precautionary</u>	<u>Flexible</u>	<u>War-Imminent</u>
1. Direction and Control	Normal operations by present systems, with Federal and State governments responsible for extraordinary actions.	Centralized regional control, with Federal-State representatives to direct operations and allocate resources.	Host county decentralized operations, with Federal, State and Risk Area operational personnel dispersed.
2. Reception and Care	Maximum use of public facilities with minimum on-site control. Use public feeding facilities. Minimal movement control.	Mixed congregate care, private lodging. Home and on-site feeding. Control movement to and from risk areas.	Maximum dispersal of people in private homes with shelter. Others allocated to shelters. Limited in-county mobility.
3. Shelters	Use existing fallout shelters in host areas.	Supplement non-residential facilities and increase host area protection factors on a priority basis.	Total diversion of resources to provide maximum protection.
4. Emergency Operations	Supplement host forces from risk areas. Autonomous operations with normal coordination.	Operations coordinated from local EOC's. Host forces supplemented by auxiliaries from risk areas.	Services controlled by host EOC. Forces supplemented to maximum degree feasible.
5. Business and Finance	Continue to use existing systems to extent possible.	Central control of operations and resources by State. Allocation of external resources by State. Essential business activities maximized in host areas.	Risk-area activities discontinued. Non-essential activities severely curtailed. Host county operations and resources locally controlled and allocated. External resources controlled by State.

(Exhibit 4.2, Continued)

<u>Functional Area</u>	<u>Precautionary</u>	<u>Flexible</u>	<u>War-Imminent</u>
6. Legal and Judicial	Maintain status quo, with deferral of non-vital issues.	Defer or dismiss all non-criminal cases. Relax controls and rules on selected basis.	Remove all constraints on non-criminal activities.
7. Essential Industries	Determine revised demands and supplies and adjust production and distribution.	All levels of government determine and allocate demands. Industry adjusts production and distribution.	Maximize protection of vital resources and equipment.
8. Local Government	Minimize extraordinary costs to be borne by Federal government. Maintain accountability.	Maintain budget constraints. Maintain accountability while increasing protection.	Maximize reduction of vulnerability. Abandon cost considerations.
9. Households	Individuals are largely "on their own." Money payments with public welfare only when necessary.	Mixed money and welfare economy. Debt-moratorium, price controls and some (local) rationing.	Complete government control. Welfare economy.

- Maintaining a structure with host population in residence and relocated population in public facilities requires a dual host area distribution and allocation system, presumably controlled at the local level by host area government. This could lead to isolation of relocatees into an equivalent of "displaced persons" camps.
- The dispersal of risk-area emergency operating forces to act as "fillers" for host-area forces weakens potentially critical resources. In many cases, urban units are organized on a very sophisticated basis with specialized training, equipment, intelligence and communication resources adapted to the urban population characteristics. Maximum effectiveness would be achieved by keeping these forces under risk-area direction, and organizing them into "task units" to respond to contingencies as they arise.
- Legal and judicial functions are inadequately provided. It appears intolerable (and unnecessary) to suspend normal "due process of law" traditions.
- There is inadequate recognition of the many units of local government which are only loosely coordinated in peacetime. This is especially true of multiple risk-area jurisdictions. When these are added to the privately-operated essential industries, the number of claimants for state and federal support will impose severe communications and control problems.
- Due to uncertainties, dislocations and shortages during crisis relocation, the many claimants will become competitive for resources. The intelligence system may be inadequate to allow state and federal authorities to adjudicate equitably among the claims.
- From an organizational standpoint, the objective of maintaining existing jurisdictions, prerogatives and organizations (to facilitate return to pre-crisis status) may be dysfunctional to objectives of achieving efficiency, maintaining relocation indefinitely, and integrating relocatees into host-area activities (to maximize deterrence and postattack survival).

4.2 GEOGRAPHICAL DISPERSAL UNDER CRISIS RELOCATION

The basic objective of crisis relocation is to protect people by moving them from relatively concentrated risk areas to relatively dispersed host areas. Concomitant with this population dispersal will be a realignment of organiza-

tion structures, lines of communication, and allocation of essential resources. It will be necessary to control and coordinate the various essential government and industrial organizations in the relocated mode. One measure of the complexity of the management problems is the extent and number of government jurisdictions involved in the relocation process.

For this report, the term "relocation area" includes the risk, host and non-risk/non-host jurisdictions associated with the central risk city (or target area). Non-risk/non-host areas are included because they will also be subject to crisis relocation controls, and because they may change status under a policy of maximum dispersal. Further, people from a risk area might move so far geographically that it would be expeditious from a management standpoint to serve them as part of a different relocation area. Hence, the territory of a relocation area would resemble that of an economic trading area. There may also be a few regions in the United States not associated with risk areas which should be organized separately. However, in most cases, the relocation area would be similar to the existing conglomerate areas.

Crisis relocation counties in three states or regions were analyzed to indicate the extent of geographical dispersal. The more recent concept of both maximum dispersal would, obviously, increase the number of jurisdictions involved. (Until further development of that concept, it is not practical to measure its impact.) Enumerations by counties vastly understate the coordination and control problems. There are many separate cities and towns, independent public districts (for example, school, water and transportation), utility service areas, and private organization distribution areas. Therefore, the following analyses are merely preliminary indicators of the extent of the management problems.

The preliminary Arizona State Plan (Reference 37) indicates three risk areas: Phoenix, Tucson and Yuma. Six counties are considered joint risk/host areas and eight counties will be host areas only (Exhibit 4.3). While the fourteen counties represent a manageable number for state agency control, distances and topography may present significant operational problems.

Early allocations for the State of Colorado (Exhibit 4.4) reported in the State-level planning guidance (Reference 1) identified three risk areas: Denver-Boulder, Colorado Springs and Pueblo. These three risk and associated host areas involve 48 of the 63 counties in Colorado. An additional county (Sterling) was identified with a risk area outside Colorado. There were 14 counties not classified as

EXHIBIT 4.3

ARIZONA RISK AND HOST COUNTIES BY RELOCATION AREA

Relocation Area	Counties		
	Risk/Host	Host	Total
Phoenix	1	6	7
Tucson	4	2	6
Yuma	<u>1</u>	—	<u>1</u>
Total	6	8	14

(Source: Reference 37)

EXHIBIT 4.4

COLORADO RISK AND HOST COUNTIES BY RELOCATION AREA

Relocation Area	Counties			
	Risk	Host	Other	Total
Denver-Boulder	5	27	0	32
Colorado Springs	1	10	0	11
Pueblo	1	4	0	5
Sterling	0	1	0	1
Non-Risk, Non-Host	<u>0</u>	<u>0</u>	<u>14</u>	<u>14</u>
Total	7	42	14	63

(Source: Reference 1)

either risk or host areas. While these are preliminary allocations (from the Adagio printouts), they indicate the extent of the dispersal. The 32 counties involved in the Denver-Boulder relocation area are several hundred miles apart. They fall into different economic distribution and communication system areas, and are isolated by geographic terrain. Control and coordination of the 63 county jurisdictions would impose severe problems for the state agencies.

The Northeast Corridor presents complex organizational problems because crisis relocation activities will overlap state boundaries. The data for this analysis are taken from the Northeast Corridor report by Strobe, Rainey and Henderson (Reference 36). That report was concerned with the allocation of population to achieve reasonable hosting ratios and to minimize travel distances and times. It was not concerned with crisis relocation organization or management.

Almost 400 counties in 14 states are included in the Northeast Corridor (Exhibit 4.5). Of these counties, 94 are excluded because they are too distant from the risk areas or are associated with risk areas outside of the Northeast Corridor. One-hundred seventeen counties are categorized as risk or combined risk-host, and 184 counties are host areas. To facilitate the analysis, the Northeast Corridor was divided into nine planning areas, each identified with a major risk area (Exhibits 4.5 and 4.6). The number of counties involved with each planning area ranged from 21 to 55. There were 8 to 26 risk or risk-host area counties in each planning area.

The extent of crisis relocation in the Northeast Corridor obviously disassociates much of the population from normal state jurisdictions. The large number of county jurisdictions imposes severe coordination and control problems. The complexity of the management problems is further illustrated by the large numbers of relocatees involved: over 60 million (almost 30%) of the nation's population would be involved, and over 46 million would be relocatees.

This brief analysis of the geographical extent of crisis relocation introduces the following considerations to the design of management systems:

- There are large numbers of organizations and jurisdictions, both public and private, which must be considered for crisis relocation management. In peacetime, many of these are largely self-sufficient, loosely-coordinated, and interact on a minimal basis in a competitive (marketplace) mode. The political/economic systems are locally oriented, and are

EXHIBIT 4.5

NORTHEAST CORRIDOR RISK AND HOST COUNTIES

BY STATE AND PLANNING AREA

State	Planning Area	Counties				Total
		Risk	Risk/Host	Host	Other*	
Maine	A-1	0	7	9	0	16
New Hampshire	A-1	0	4	6	0	10
Rhode Island	A-1	3	2	0	0	5
Massachusetts	A-1,A-2	7	5	2	0	14
Connecticut	A-1,A-2	3	4	0	1	8
Vermont	A-2	0	1	13	0	14
New York	A-1, B	8	8	39	7	62
Pennsylvania	B,C-1,C-2	2	7	36	22	67
New Jersey	C-1,C-2	15	5	0	1	21
Delaware	D	2	0	1	0	3
West Virginia	D	0	0	3	52	55
Maryland	D, E-1	8	5	6	0	19
Virginia	D,E-1, E-2,E-3	20	0	69	11	100
District of Columbia	<u>E-1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
	9	69	48	184	94	395

* Counties excluded because they are too distant from the risk area or are associated with risk areas outside the Northeast Corridor.

(Source: Reference 36)

EXHIBIT 4.6

NORTHEAST CORRIDOR RISK AND HOST COUNTIES

BY PLANNING AREA AND STATE

Planning Area	Number of States	Counties			
		Risk	Risk/Host	Host	Total
A-1	5	10	16	17	43
A-2	3	3	7	17	27
B	2	8	8	39	55
C-1	2	6	7	16	29
C-2	2	11	5	16	32
D	4	8	3	16	27
E-1	3	6	2	29	37
E-2	1	8	0	22	30
<u>E-3</u>	<u>1</u>	<u>9</u>	<u>0</u>	<u>12</u>	<u>21</u>
9	14	69	48	184	301

(Source: Reference 36)

relatively flexible and responsive to external change. It appears that it will be most effective and efficient to maintain present organizational systems, except where equity and national survival considerations dominate.

- Crisis relocation will disperse production and consumption on a geographical basis. This will tend to reduce total production of goods and services, and will reorient distribution and coordination systems.
- In many cases, relocation will separate people from their normal activities, organizations and jurisdictions. It would be prudent during relocation to establish viable and productive ties between host-area and relocatee populations. This consideration would be vital for postattack operations.
- For organizational considerations, there will be significant disparities between geographical areas in hosting ratios, protection factors, resource availability and productive capabilities. Within relocation areas, management policies should be structured to efficiently achieve maximum production and distribution. Management policies under state and federal control should be structured to equitably allocate resources between relocation areas. Thus, all relocation management should be tailored to the needs of individual areas.

4.3 MANAGEMENT FUNCTIONS BY OPERATING LEVEL

As noted in Chapter 3, crisis relocation will require operations under conditions without precedent in the United States. Recognition of the probable nature and level of potential management problems and policy decisions is crucial to establishing the concept and design of emergency operating organizational systems. A list of potential management problem areas was drawn from the DCPA planning guidance (References 1 through 5) and from a representative group of reports dealing with special aspects of crisis relocation (References 6 through 28). Potential management problems were classified into normal civil defense functional categories drawn from Reference 1. These are presented in Exhibit 4.7.

The research approach was to associate each of the referenced documents with pertinent management problem areas. A set of representative policy decisions was drawn from these references. The purpose of this part of the research was to clarify the nature and operating level for

EXHIBIT 4.7

CLASSIFICATION OF MANAGEMENT PROBLEMS BY FUNCTIONAL AREA

Functional Area

Sub-Area

Management Problem

- 1.0 Direction and Control
 - 1.1 General
 - 1.1.1 Definition of Activities
 - 1.1.2 Emergency Organization and Operation
 - 1.1.3 Controls
 - 1.2 Intelligence
 - 1.2.1 Emergency Organization and Operation
 - 1.3 Warning
 - 1.3.1 Emergency Organization and Operation
 - 1.3.2 In-Place Versus Relocation Options
 - 1.4 Communications
 - 1.4.1 Emergency Organization and Operation
 - 1.5 Public Information
 - 1.5.1 Media Selection
 - 1.5.2 Message Content
- 2.0 Reception and Care
 - 2.1 Lodging and Feeding
 - 2.1.1 Lodging
 - 2.1.2 Feeding
 - 2.2 Registration and Information
 - 2.2.1 Registration
 - 2.2.2 Information Requirements
 - 2.3 Services
 - 2.3.1 Economic and Financial Services
 - 2.3.2 Personal Services
- 3.0 Fallout Shelters
 - 3.1 Facilities
 - 3.1.1 Definition of Capabilities and Requirements
 - 3.1.2 Reevaluation of Survey and Allocation Data
 - 3.1.3 Shelter Upgrading and Construction
 - 3.2 Fallout Shelter Management
 - 3.2.1 Definition of Activities and Organization
 - 3.2.2 Redistribution of Evacuees
 - 3.2.3 Provision of Shelter Supplies and Equipment

(Exhibit 4.7, Continued)

Functional Area

Sub-Area

Management Problem

4.0 Emergency Operations

4.1 General Government

4.1.1 Financial Status

4.1.2 Extraordinary Costs

4.2 Manpower and Training

4.2.1 Definition of Activities

4.2.2 Activity Coordination

4.2.3 Training Activities

4.3 Legal and Judicial

4.3.1 Definition of Activities

4.3.2 Fundamental Legal Issues

4.4 Public Safety

4.4.1 Definition of Activities

4.4.2 Emergency Organization and Operation

4.5 Medical and Health

4.5.1 Medical Organization and Operation

4.5.2 Sanitation Organization and Operation

4.5.3 Water and Sewage Organization and Operation

5.0 Essential Industry

5.1 General

5.1.1 Definition and Information

5.1.2 Production and Distribution

5.1.3 Finance

5.1.4 Manpower

5.2 Financial

5.2.1 Check Cashing

5.2.2 Deposit Withdrawals

5.2.3 Earning Asset Management

5.2.4 Other Services

5.3 Food

5.3.1 Supply and Demand

5.3.2 Distribution System Adjustments

5.3.3 Distribution System Control

5.3.4 Feeding Arrangements

5.4 Health Supplies and Equipment

5.4.1 Distribution System Adjustments

5.5 General Supplies

5.5.1 Distribution System Control

(Exhibit 4.7, Continued)

Functional Area

Sub-Area

Management Problem

- 5.6 Transportation
 - 5.6.1 Movement Control
 - 5.6.2 Commuting
 - 5.6.3 Transport Goods
- 5.7 Fuel
 - 5.7.1 Supply and Demand
 - 5.7.2 Distribution System Adjustments
 - 5.7.3 Petroleum and LPG
 - 5.7.4 Gas
 - 5.7.5 Solid Fuels
- 5.8 Electric Power
 - 5.8.1 Distribution Control
- 5.9 Telecommunications
 - 5.9.1 Control of Usage
- 5.10 Support to Military
 - 5.10.1 Definition and Controls

- 6.0 Non-Essential Business
 - 6.1 General
 - 6.1.1 Definition and Information
 - 6.1.2 Production and Distribution
 - 6.1.3 Finance
 - 6.1.4 Manpower

(Source: Reference 1 and Appendix A)

control of decisions. It was not necessary (nor within the scope of this research) to produce a precise or comprehensive list. Therefore, greatest emphasis was given to functional areas subject to extensive study and reporting. For example, radiological monitoring and support to the military are sparsely covered because studies and plans were not available to the research staff. Such functional areas as lodging and feeding, public safety, and financial services are extensively covered. The detailed listing of the 353 representative policy decisions, reported in Appendix A, have been submitted separately to DCPA/Research Directorate.

Ultimate implementation of policies necessarily occurs at the point of operation, the lowest level of management. Hierarchies of management provide decisions necessary to allocate personnel, resources, and equipment to facilitate and control implementation. Auxiliary functions -- such as accountability, capital investment, and production and distribution scheduling -- are controlled by higher ranks of management. This analysis is concerned with the higher level, policy decisions, required to direct implementation.

Policy decisions were evaluated to determine which level of organization could effectively exercise control. Consideration began from the most decentralized level (the host area) and proceeded to the most centralized (risk area and state or federal). The selection criteria were authority, capability (knowledge), and resource or personnel control. The evaluations are based on the "flexible" response set of policies.

Exhibit 4.8 shows representative excerpts from Appendix A. Under the functional area of reception and care and the management problem of feeding, 12 policy decisions were derived from the DCPA planning and research documents. They were evaluated according to the indicated criteria. Five items were considered suitable for host-area control, six for state or federal control, and one for risk-area control. Decisions regarding local host jurisdiction actions, assuming increased personnel, are subject to host control. Provision of security and controls for the food supply was delegated to risk-area control because the assembly and distribution of food stocks are centralized in risk-area warehouses. (There would, of course, be secondary security measures required at local and regional levels. It would be desirable to coordinate these from the central, key concentration points.) The remaining six policy decisions involve allocation or control issues clearly above local discretion.

Under the functional area of emergency operations (public safety and the management problem of emergency organization and operations), six policy decisions were enumerated. These do not include first-echelon management

EXHIBIT 4.8: SELECTED SETS OF POLICY DECISIONS

Functional Area: 2.1 Reception and Care--Lodging and Feeding

Management Problem: 2.1.2 Feeding

<u>Level of Control</u>	<u>Policy Decisions</u>
State-Fed.	1. Establish priorities of allocation and resupply.
State-Fed.	2. Establish minimum caloric requirements.
Host	3. Consider fixed versus mobile versus home feeding facilities.
Host	4. Determine extent of private capacity to supply food.
Host	5. Provide for special diet and health foods.
State-Fed.	6. Establish payment/reimbursement system.
State-Fed.	7. Establish control system.
State-Fed.	8. Arrange procurement/utilization of government shelter supplies.
Host	9. Realign food service system and staff and train personnel.
Host	10. Provide facilities and supplies for family pets.
Risk	11. Provide security and controls for food supply.
State-Fed.	12. Consider impact of "freeze" orders.

Functional Area: 4.4 Emergency Operations--Public Safety

Management Problem: 4.4.2 Emergency Organization and Operations

<u>Level of Control</u>	<u>Policy Decisions</u>
Host	1. Review planned organization, staffing, operations, and facilities.
Host	2. Add auxilliary personnel, train and assign.
Host	3. Incorporate Federal, state and risk-area personnel into organization.
Risk	4. Allocate forces between areas and activities.
Risk:	5. Provide surveillance and coordinate with other intelligence activities.
Risk	6. Provide contingent "task forces" to handle emergencies.

problems involved in implementing fire or police activities. Nor do they include important elements such as transportation and communications, which are treated elsewhere in the classification. It was judged that the first three policy decisions were subject to host-area control. The problems of area and activity allocations, of intelligence and of contingent support would all require forces controlled by risk-area government. While these forces might operate in host areas under host-area control for contingent problems, it would be impractical (and legally or politically infeasible) to separate them from their central control on a long-term basis.

Appendix B shows the count of policy decision by level of control. This data is summarized in Exhibit 4.9 by major functional areas. There are significant numbers of policy decisions at each level for each functional area. The following considerations pertain to the development of crisis relocation management concepts:

- There are many policy decisions which will be made or reevaluated at all levels of control during the crisis relocation period.
- There is a logical hierarchy of decision control which relates the scope of the decision to the level of management. There is a continuation and extension of the peacetime structure of vital business and government functions into the crisis relocation period.
- It will be necessary to have an effective means of feedback from local operations to higher-level decisionmakers, so they can mobilize and allocate resources and coordinate functions.
- Rapid, efficient and authoritative promulgation of higher-level decisions will be vital to local operations.
- The dispersal of organizations (separation of personnel from operating communications, records and resources) during crisis relocation will severely disrupt normal management systems.
- A viable concept for management during crisis relocation should include decentralization of higher-level management personnel to relocation areas, with authorities to make, promulgate and implement decisions, and with capabilities to communicate both intelligence up from and policy decisions down to local governments.

EXHIBIT 4.9
DISTRIBUTION OF POLICY DECISIONS
BY FUNCTIONAL AREA

Functional Area	Number of Policy Decisions	Number by Level of Control		
		Host Area	Risk Area	State/Federal
1.0 Direction and Control	62	16	24	22
2.0 Reception and Care	49	20	12	17
3.0 Fallout Shelters	36	11	12	13
4.0 Emergency Operations	81	28	24	29
5.0 Essential Industry	106	23	23	60
6.0 Non-Essential Business	<u>19</u>	<u>3</u>	<u>4</u>	<u>12</u>
TOTAL	353	101	99	153

(Source: Appendix B)

5. FALLOUT SHELTERS

5.1 FALLOUT SHELTER REQUIREMENTS

Most crisis relocation requirements involve adapting and modifying existing organizations and functions to serve the critical needs of the dispersed population. The established and experienced management of these on-going operations will continue to direct their specialized activities. A major unique requirement for crisis relocation operations will be to provide and enhance fallout protection for the relocated population. Another unique function will be radiological monitoring. The increased need for welfare services and for an integrated intelligence structure is so severe that major operational changes will be necessary, perhaps requiring new management structures. Fallout shelter protection is selected to illustrate the nature and scope of emergency crisis relocation management systems to meet unique requirements.

Civil defense planning envisions that fallout shelter facilities will be provided by existing buildings with a protection factor (PF) of 40 or best available, by upgrading existing structures, and by the construction of expedient shelter facilities. Regardless of the precrisis perception of adequacy of host area protection, each area will have incentives to improve its condition. The spectrum of possible activities is broad, ranging from simple lean-to enclosures in the basements of private homes to substantial earth-moving operations to increase the protection of roofs, walls and floors of private or public structures. There is also the possibility of major large unit construction to provide shelters where severe deficiencies exist.

Present DCPA crisis relocation guidance states that shelter improvements in host areas should be accomplished by local and relocated personnel using materials and equipment locally available. While the construction industry (with its suppliers and distribution systems) is the normal resource to build and modify structures, it may not be appropriate for crisis relocation operations. Provided that an intelligent and aggressive management system could be instigated, however, many host-area officials might opt to attempt to use the construction industry. Therefore, the following investigation was conducted. It is consistent

with the requirements of flexible crisis relocation management to provide for all options, including utilization of less than PF 40 (best available) shelter.

5.2 OVERVIEW OF THE CONSTRUCTION INDUSTRY

William H. Van Horn of the URS Research Company, with the assistance of Michael Pachuta, DCPA technical representative, reported on the vulnerability and postattack capability of the U.S. construction industry (Reference 10). The background discussions and conclusions of that report appear most pertinent to the problems of managing the construction of fallout shelter facilities during a crisis relocation. This chapter has drawn heavily on the contents of that report, incorporating only necessary modifications to adapt the contents from postattack to crisis-oriented capabilities.

Construction industry activities and auxiliary functions within the United States account for over 14% of the nation's gross national product (GNP) each year. In spite of the economic importance of construction, the industry is fragmented and changeable, and is difficult to define except in most general terms. Unlike the manufacturing industry, the construction industry does not provide a single line of associated products or services; rather, it comprises a number of services that provide a product designed specifically to meet its client's requirements. The critical elements of the industry may be defined in terms of the major construction functions and their relationship to associated organizations. The three major functions of the construction industry are command, design, and field construction.

The command function is normally assigned to the client or owner. He formulates the requirement for construction, provides the necessary criteria, and directly or indirectly provides the required real estate, zoning and finance. About 70% of construction is privately owned, with the remainder divided between federal, state and local governments.

The design function is commonly performed by independent architectural or engineering firms who develop the owner's concept and translate it to a final detailed design. They also often act as the owner's agent to select the contractor and to provide general supervision of the construction. Because of the importance of the close and intimate relationships of the overall design of the building and its structural, mechanical and electrical components, it is common practice to coordinate architects and engineers into

single design firms so that they work closely from the beginning of the design process. There are approximately 50,000 architectural and engineering firms of all sizes, with 10,000 firms accounting for over 85% of total receipts for the activity.

The field construction function is normally assigned to a general building contractor who is mainly a coordinator or manager of a complex aggregation of specialists. The contractor integrates the individual functions to produce the finished structure. He is directly or indirectly responsible for buying all materials and for providing the required construction equipment. General building contractors vary from the numerous "one-man" operations to the large corporations operating on a national and international scale. Very large projects may exceed the capabilities of individual construction firms, so it is not unusual for several to combine into a joint venture established for a particular project. There are over 90,000 general contracting organizations. The largest five percent represent over 50% of the total receipts for this sector of the industry. In addition, there are over 30,000 heavy construction contractors (i.e., highway and streets) and over 200,000 special trade contractors (e.g., plumbing, electrical, concrete).

Because of the relatively large number of firms in the construction industry, systems of communication within the industry have been developed. Two readily available communication channels could be utilized to mobilize the contract construction industry in time of crisis. They include: the major industry associations, to which most larger contractors belong, that currently act as clearinghouses for the industry; and the large general contractors who are continuously interacting with one another and with smaller general contractors as well as with specialty contractors. The large and well identified firms are the core of the construction activity within the nation and within any given region. Since they are constantly competing with each other, and since they all draw on the same pool of resources (materials, manpower and equipment), they are well acquainted with their respective capabilities. In short, a simplistic but very effective communication network exists within the construction industry which could be expected to work well in a crisis period.

The construction industry's major expertise lies in the effective management of the diverse resources and manpower required for the fabrication of unique finished products. In all three of its major functions there is a hierarchy into which construction firms of comparable size can be placed. This hierarchy provides a ready means of assigning specific construction firms to tasks for which they are best

qualified. In time of crisis, the construction industry could readily move its many resources from on-going construction activities to building and improving fallout shelters. For example, road contractors -- probably in surplus in a crisis relocation -- could be diverted to building shelters.

The most critical element of general construction is project management. Project managers must have skills in a broad range of areas, including design, planning, organization, coordination of various contractors and supplies, public relations, and the ability to make far-reaching decisions quickly. It is estimated that there are between 3,000 and 9,000 field construction managers capable of and experienced in managing projects of \$50 million or more. Since project managers are in short supply, it is essential that they be moved promptly into positions of responsibility during a crisis. Although lesser supervisory skills and craftsmen and operators are also critical, the pool from which they may be drawn is much broader and appears to offer less of a constraint.

Shortages of particular construction materials may occur at both the national and local levels, but sufficient alternative materials are available that these shortages may not be crippling. Basic construction materials -- such as concrete blocks, sand and gravel, lumber and steel -- are widely distributed in large quantities. Moreover, during a crisis, it is likely that most on-going construction projects could be curtailed or deferred at little long-term loss. Materials from these projects could be made available for fallout shelters. Sufficient heavy equipment should be available for excavation and construction purposes, although it may not be located close to host areas at the time of relocation. It does not appear feasible or necessary to maintain inventories of materials or heavy equipment; rather, planners should rely on the internal communication network of the construction industry itself to assemble available supplies when and where required. This is consistent with the concepts of Plan Bulldozer, a long-term civil defense program.

5.3 CRISIS MANAGEMENT OF THE CONSTRUCTION INDUSTRY

In crisis periods, the command, design and field construction functions of the construction industry would remain; however, emphasis would shift considerably and the type and magnitude of construction requirements could change drastically.

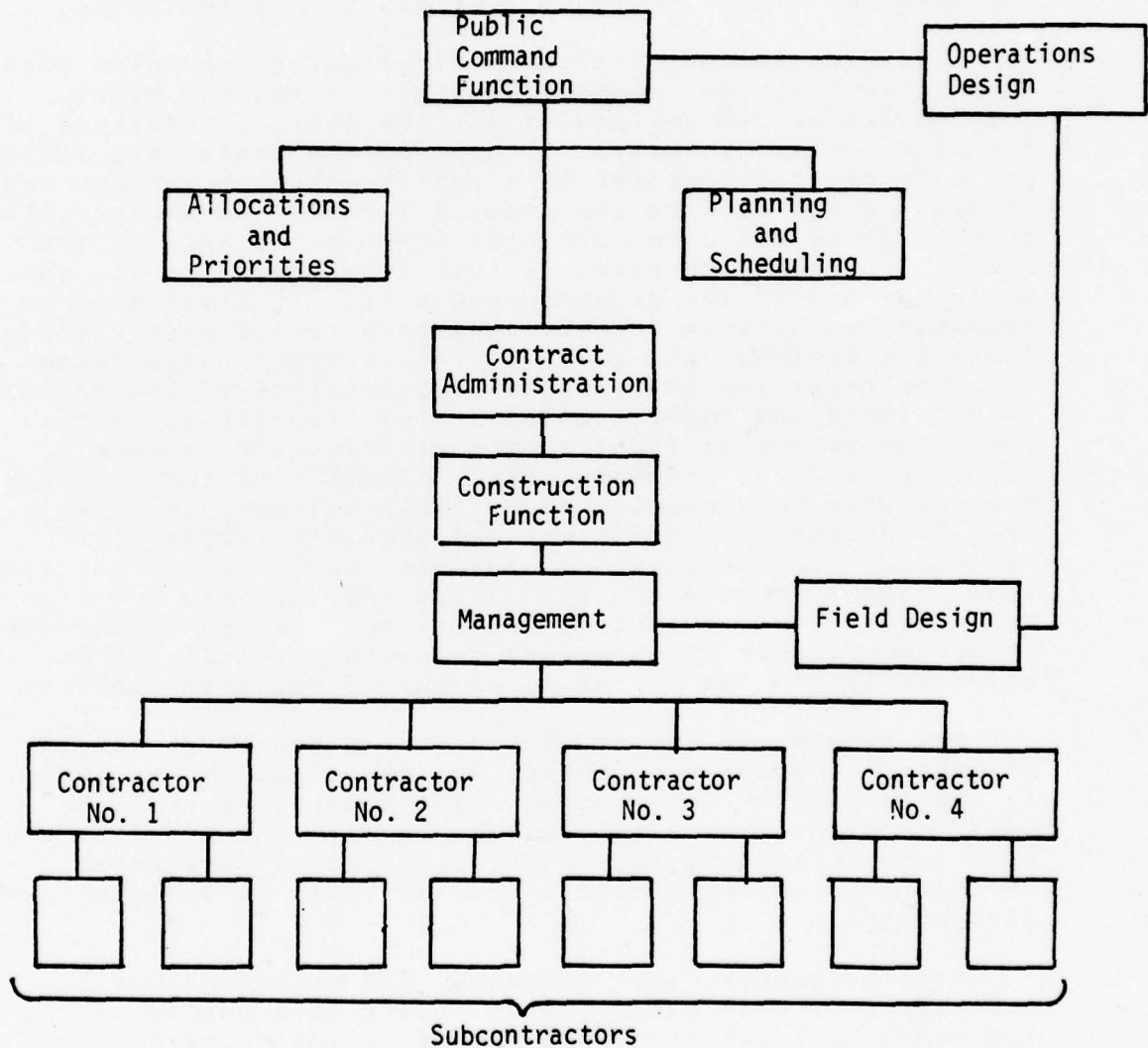
Small-scale construction projects to provide fallout protection may simply be a family providing a lean-to shelter in its basement, or digging and covering slit trenches. In this case, the family (or groups of families) could provide all of the necessary functions with minimal instructions from civil defense authorities. For host area residents, this appears to be a feasible and effective way to provide enhanced fallout protection. The command function is covered by personal ownership of the property with minimal financial involvement, the design functions are simple, and the materials for the project could be obtained either from the owners site or from available supplies at local lumberyards. Labor would be provided by the residents.

Upgrading fallout shelter protection or providing expedient fallout shelter spaces for public buildings might involve formal recognition of all the typical functions of the construction industry. Enhancing the protection factor for a group of relocatees in a public school building, for example, could require the command function to be exercised by the school board to authorize movement of soil to the roof and walls, with possible long-term damage to the school buildings and to the grounds around it. It might also be necessary to arrange for building permits and possibly for financial assistance. Local officials might raise design problems regarding the structural capability of the building to withstand the added loadings. The liabilities of the school board and of local architect/engineers in case of failures could be indeterminate. Finally, if the construction were to be accomplished by local citizens or by refugees, undirected, inefficient and possibly ineffective protection might result. It appears that local authorities might choose to move the relocatees into private homes or into large-scale protection facilities. In the latter case, it would probably be necessary to coordinate efforts to effectively use the resources of the construction industry.

The referenced report by Van Horn explored at length alternative management schemes for the construction industry in the postattack environment. The same considerations pertain to the crisis relocation period. Moreover, it could be desirable to institute a crisis-oriented management structure which could function efficiently in a postattack environment.

For the construction industry, the command function (usually a private owner) would revert to a public sponsor. The organizational framework for utilizing construction resources selected by Van Horn is shown in Exhibit 5.1. The major strength of the postulated organization is that each function is assigned crisis duties comparable to its precrisis duties. The command function concentrates on overall resource allocation, contract administration, planning and

EXHIBIT 5.1
AN ORGANIZATIONAL FRAMEWORK
FOR UTILIZING CONSTRUCTION RESOURCES
DURING CRISIS RELOCATION



(Source: Reference 10)

scheduling. Its operational and design components would be most useful in an advisory capacity to the construction functions. Architects and engineers could be doing very specialized types of work, well within the range of their skills. Large construction companies could be undertaking the job for which they are well suited: the management of large projects. The limited capabilities of subcontractors should be subordinated to the larger contractors.

Likely candidates for the command function are the public works engineer (usually found in municipal governments), the state department of highways, or federal agencies ordinarily responsible for federal construction. The design function would be concentrated on engineering evaluations of present structures and the design of specialized fallout facilities. Field construction would require little change in overall operational concept. For the purpose of shelter facility work, however, smaller contractors would be incorporated into larger general construction organizations. These may be consortiums of large contractors or a single quasi-government consortium.

In normal times, the public works engineer either prepares the project design and specifications or utilizes the services of a local architectural and engineering firm. He acts as a contract administrator (the command function), solicits competitive bids, selects the contractor, administers the contract and, finally, accepts the completed job. He does not become involved in the construction itself, nor does he deal with subcontractors. However, through his role as contract administrator, the public works engineer is knowledgeable in seeking out local construction resources and utilizing these resources effectively. The public works engineer also operates in local emergencies. In this case, he calls upon local contractors who supply resources, equipment and operators on a time and materials basis. In this sense, the public works engineer expands his capabilities to serve as the general contractor for the job. This model serves for local emergencies of short duration. It is not suitable for large projects of long duration because it places the public works engineer in the role of the field construction supervisor -- a role for which he is not trained, and which does not utilize the management skills of the construction industry. His authority and competence is limited to his jurisdiction, so he is not in a position to exercise regional control.

In some cases, the state government agencies may prove suitable for the command function, but they suffer handicaps relative to federal agencies. First, engineering manpower at the state level is relatively scarce; second, state facilities are often scattered and specialized; and third, in many cases relocation areas overlap state boundaries.

For these reasons, Van Horn did not give detailed consideration to states as a primary source for the regional command function.

Within the federal government, several agencies have demonstrated construction and contract administrative capabilities. These include: Public Building Service of the Government Service Administration, the Bureau of Reclamation, the Veterans Administration, the Army Corps of Engineers, the Naval Facilities Engineering Command, and the Air Force Engineering Command.

The selection of the appropriate federal agency to manage construction activities is discussed at length by Van Horn. He concludes that the Corps of Engineers has most of the attributes necessary to provide the leadership function. Among its specialities, it has the experience and the operational responsibility of performing the National Fallout Shelter Survey (working with the Navy). It directs the Army's Emergency Protection Program, and has statutory responsibility for supporting natural disaster operations when declared by the President. It has vast construction management expertise for all types of structures. Its personnel are dispersed widely across the country, and it is flexible in its ability to shift personnel between areas and functions.

The Corps has intimate knowledge of the architectural and engineering firms and general contractors within its districts. It maintains files which allow contract administrators to readily select firms that are reputable, honest, and most qualified to perform specific projects. Furthermore, since the Corps is nationwide, it has a viable communications network through which it is able to transfer information and resources between regions. A final important consideration in favor of the Corps is its wide recognition and acceptance by the construction industry itself. Most large general contractors are familiar with its personnel and practices. In time of emergency, the Corps has demonstrated that it can make financial commitments and can meet these commitments promptly following completion of work.

The major drawbacks to the use of the Army Corps of Engineers are that it is not uniformly distributed throughout the nation, its total resources are limited, and it would be hard-pressed to meet the requirements of the many individual host communities. Finally, the Corps is basically a military organization and, by law, the military has first call on it. It can be conjectured that the civil works aspects of the Corps could be neatly excised in time of crisis to serve the civilian role as a regional command function. But under existing law such is not the fact.

It is therefore concluded that separate analyses should be made for each relocation area to determine the most appropriate agency to manage the fallout shelter construction program. Authority should be areawide to insure proper scheduling and allocation of activities and resources. The following considerations appear pertinent to upgrading or constructing fallout shelters:

- Each local area will have incentives to improve its fallout protection.
- Small-scale construction projects for private residences could probably be accomplished by private citizens. Large-scale projects might require the services of the construction industry.
- Shortages of some construction materials are likely, but alternatives are probably available. There might also be shortages of equipment and skilled manpower. The internal communications network of the construction industry is probably best suited to assemble resources when and where required.
- It may be necessary for a public agency to assume the direction and control (command) function for large-scale projects. This would probably require a federal policy decision. The authority of the agency should be on a regional basis to properly determine needs and allocate resources. The agency should also have sufficient authority to commit (contract) in the name of the federal (or state) government.
- The design and field construction functions could be controlled by major construction firms. They could subcontract to smaller general and specialized contractors.
- The Army Corps of Engineers appears most suited to the command role, but its capabilities are limited and its primary responsibility is military. Therefore, decisions should be made on a case-by-case basis. To broaden the scope of the Corps' capabilities, the Navy, Air Force and other federal agencies with construction expertise might be brought under the Corps' control as a major component of the concept of military support to civil government.

6. PRESENT CRISIS RELOCATION MANAGEMENT GUIDANCE

6.1 OVERALL MANAGEMENT SYSTEM

Host-area management represents the operating level (lowest echelon) of organization for crisis relocation. As is normal for operating organizations, this is the level at which goods and services are produced and consumed. While management at this level can make local implementation and procedural decisions, such decisions are dependent on higher-level decisions which dictate overall objectives and policies, and which limit authority and resources. Therefore, host-area management concepts must be derived within a framework of a total organization structure.

As noted in Chapter 3, DCPA guidance for crisis relocation is usually stated in terms of planning rather than operations. The guidance data have been explored, summarized, and analyzed in the preceding chapters. For each functional and jurisdictional area, the guidance calls for organizations to make operational plans and to specify persons (or positions), resources and equipment to implement these plans. The feasibility, legality and logic of this approach is well developed and rationalized in the planning guidance and supporting documentation.

Initial planning efforts, conducted with DCPA regional support, have applied the guidance to local jurisdictions and have, at least partially, included local operations. With intent, these local operations reflect local environments, capabilities and preferences. Exhibit 6.1 presents a representative summary organization chart which shows the relationship between the various organization elements during crisis relocation. The chart is based on the guidance materials; it is not specified by them. There are numerous variations in specific local plans.

The pictured organization chart essentially maintains traditional peacetime relationships. These tend to be on vertical bases, divided by functions. Horizontal interactions are marketplace transactions, or result from overlapping functions. The organization for crisis relocation (which omits legislative and judicial functions) is normal for line-staff relationships in government and industry in peacetime. Reading down, the solid lines in Exhibit 6.1

represent line control; the dashed lines staff control, coordination and support. Reading up, both sets of lines represent demand and intelligence flows. There are, of course, significant degrees of difference in the line-staff control relationships for individual functions and organizations. In the representative summary organization chart of Exhibit 6.1, the distinction between solid and dashed lines obscures individual relationships and degrees of control. These relations will change if the country moves from peacetime to crisis relocation to wartime. The degree of change will depend on expectations about the severity of the threat.

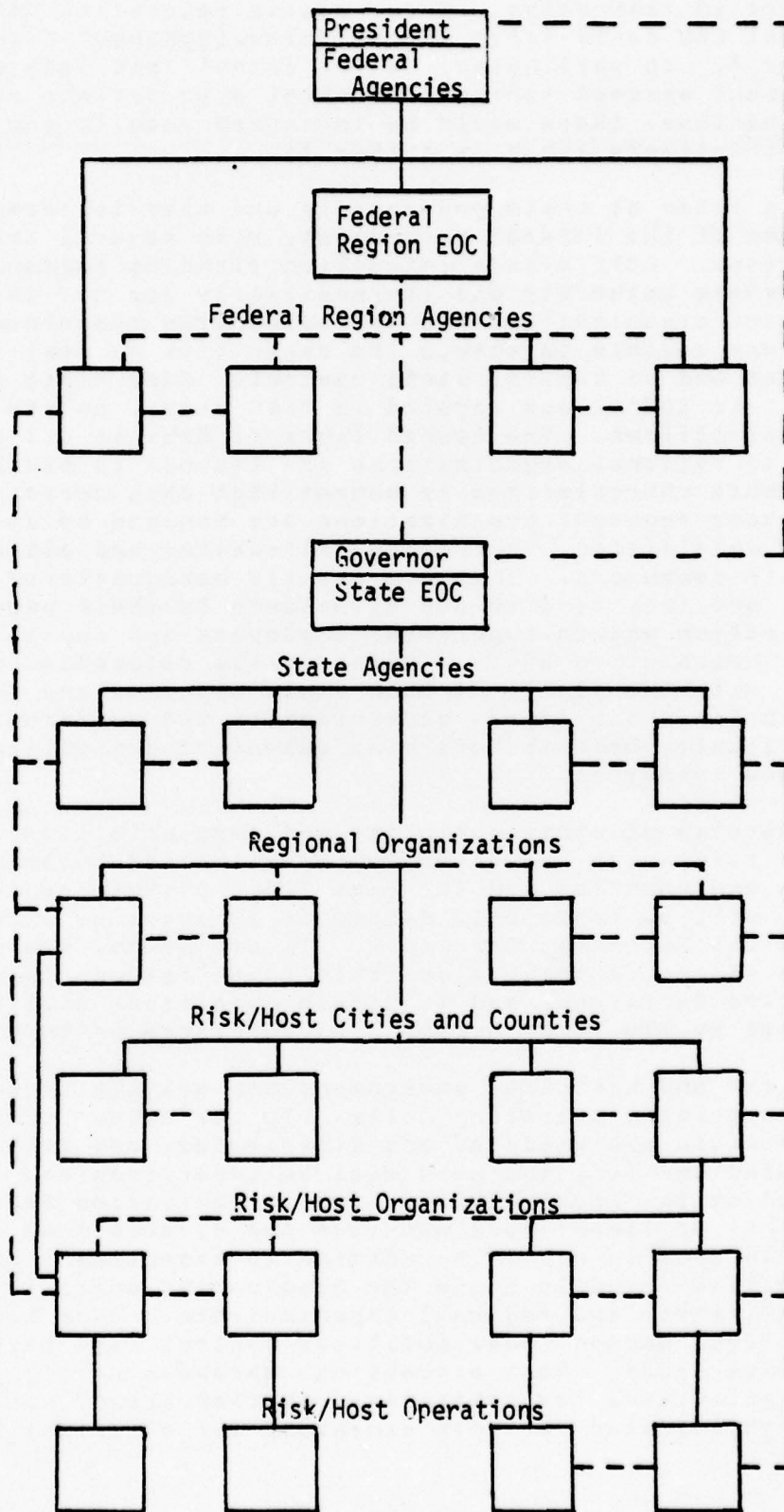
There are many examples of the diverse relationships between federal and state agencies and private organizations. The Federal Reserve Board (actually a quasi-federal agency) exerts line control over many private banking activities (typically regional or risk area organizations). The ICC and the CAB directly regulate elements of the interstate transportation industry. The Department of Agriculture affects counterpart state agencies and local farmers by direct support and by prestigious knowledge and advice.

State control is exercised in a similar manner. Public utility commissions control finances and prices of local and regional utility companies. Local jurisdictions are dependent on state agencies for revenues and direct support. School boards (and other special districts) may report to state agencies independent of city and county jurisdictions. A state police organization may, by prestige and specialized support, exercise more control over local police forces than does the local city or county government.

Private industry is normally largely independent of (or may even control) local political jurisdictions, taking its direction from a corporate control structure. This condition may be reinforced by special ties between the industry and higher echelons of government, such as the defense industry. Federal and state regulatory agencies sometimes preempt local jurisdictional control.

Reading down the chart (Exhibit 6.1), there is little change from peacetime to crisis relocation in the relationships between federal agencies and the states. The Federal Regional EOC is interposed to provide an important centralized coordinating function. (In peacetime, the coordination is accomplished in a decentralized mode.) This recognizes the increased federal role imposed by the need to adjudicate and allocate resources and to control activities (by rationing, monetary controls, direct support and the like). Under wartime conditions, and perhaps crisis relocation, some federal coordination would become control functions. If restricted or saturated communications were expected, the

EXHIBIT 6.1: REPRESENTATIVE SUMMARY ORGANIZATION CHART FOR CRISIS RELOCATION



Regional EOC could assume intermediate, decentralized authority. The regional headquarters of most federal agencies are in risk areas. Under crisis relocation, the Regional EOC could serve as the "clearinghouse" described in Chapter 2. In particular, to the extent that federal government assumed increased control over private regional organizations, there would be increased need to coordinate and authenticate lines of authority.

The roles of state governments and agencies are similar to those of the federal government, with several important exceptions. DCPA crisis relocation planning guidance indicates state authority and responsibility for designating essential organizations and for allocating resources. These tasks are certain to strain the capacities of most state agencies and of central state control. Many state capitols (and their EOC's) are located in risk areas, as are state regional offices. The dashed lines of Exhibit 6.1 from state to regional organizations are tenuous in peacetime, often more characterized by competition than coordination. The larger regional organizations are managed by specialists in the acquisition, production, allocation and distribution of their resources. They are usually headquartered in risk areas, and they tend to owe allegiance to their parent organization and to suppliers, employees and customers on a local jurisdiction basis. Under crisis relocation conditions, with the staffs of both state agencies and regional organizations dispersed, communication and coordination will be difficult, both to determine essential activities and to allocate resources.

Exercise of state authority and responsibility under crisis relocation, relative to the risk- and host-area cities and counties and the many local private organizations, will be especially difficult in populous areas (similar to the Northeast Corridor). In all areas, the capacity of the states to acquire reliable intelligence, to make effective decisions, and to direct operations will be strained by the large number of subordinate units.

Risk- and host-area government and private organizations are the primary operating units. To the extent that goods and services are produced and distributed, and people are sheltered and fed, the work will be supervised and accomplished at the local level. Local organization levels are (millions of times) more numerous and diverse than can be shown in Exhibit 6.1. In addition to essential industries, risk cities normally house the headquarter operations of federal, state and regional organizations. Many host-area activities, except local political control, are directed from risk areas. Most processing, warehousing and distribution activities are centralized in risk areas, along with the sophisticated services necessary for efficient operation

and control. Specialized resources and activities exist in risk areas to serve the concentrated urban population. For these functions, it would be logical to show risk areas at a separate organizational level above host areas. (It was not done because of the equal political status.)

During crisis relocation, there will be strong pressure to retain the unique viable strengths of risk-area organizations, as recognized by the categorization of essential industries. It is believed that the many unique services of the risk areas are essential to support host-area operations and the relocated urban population. Host-area management should concentrate on the immediate day-to-day operations of caring for the refugee population, maintaining host-area population, and expanding economic activities. On a self-help basis, host areas may be expected to find, train and place personnel to accomplish their day-to-day activities. This will tend to saturate their capabilities, so they cannot be expected to have reserves to cover contingencies, nor to provide management for regional activities or special programs (upgrading or building expedient shelters).

6.2 JURISDICTIONAL PROBLEMS

Chapter 4 presents an analysis of crisis relocation management policies and functions. The geographic dispersal of production, distribution, communication and consumption will cause obvious losses of efficiency and production. The dispersal (and its losses) will also pose significant jurisdictional problems for all organizational levels.

Risk-area political units are normally headed by elected political officials (and appointed professionals like the city managers and police and fire chiefs). Within local, state and federal laws, these officials represent and manage their jurisdictions and constituencies, often in a competitive mode with other jurisdictions. The officials are served by specialized staff, organized to effectively and efficiently deal with their particular urban problems. The staffs owe primary allegiance to their jurisdictions and constituencies, although they also often have professional ties with unions, associations and state or federal agencies.

Crisis relocation will pose an important dilemma for risk-area governments. On one hand, most of their constituency will be resident outside their jurisdiction; on the other, the resources and essential activities will remain within their jurisdiction. Their legal authority and responsibility is bounded by their jurisdiction. In a practical sense, the specialized organizational units are also

tied to the jurisdiction. The positions and salaries of the employees come from the risk-area organizations. The notion of severing these ties and being controlled by foreign organizations will be repugnant to most people. Employees classified as non-essential to their jurisdiction will be categorized as second-class citizens. It appears that all elements of risk-area governments would be strongly biased to maintain their jurisdictional ties and unit integrity. Moreover, they will be in a unique position to define risk-area requirements, which in turn defines their essential status.

There is an initial tendency to view the urban risk area as a cohesive jurisdictional unit that will be relocated to multiple host areas. Most often, a risk area includes a complex of overlapping jurisdictions, representing equally complex, overlapping constituencies (e.g., almost 500 separate political jurisdictions have been identified in the San Francisco Bay Area). Under crisis relocation conditions, the host sites for the constituency of any particular risk area jurisdiction will often be difficult to identify, let alone to service. This difficulty will be aggravated by the relocation plans for employees of various essential organizations. Thus, the proposition is weak that risk-area governments should disperse their personnel, equipment and resources to serve their constituents in host areas. This condition will reinforce the bias to maintain risk-area control.

Industrial organizations in risk areas will be under similar pressures. Each manager will be faced with the alternative of moving or shutting down operations versus justifying the position of his business as essential. Present planning activities designating essential activities are unknown, or considered extremely remote contingencies, to most managers. When the effects of moving or shutting down are imminent, significant numbers may opt to continue in risk areas. Regional organizations will also face problems attempting to transfer operations and personnel from risk areas to host areas. Only at the lowest operating levels will functions be interchangeable. An illustrative case would be the relocation of the manager and staff of a large urban store to a small unit in a host city. A decision must be made by regional headquarters as to who now manages the host store. There are cogent arguments for both sides, and any decision will be "no-win."

Host-area government organizations normally are tied more personally than risk governments to their jurisdictions and constituencies. Sparser population densities result in less specialization and more personal contacts among the various officials. This represents a major asset for crisis relocation because the engendered characteristics promote

the flexibility, rapid response, and self-sufficiency needed to deal with the sudden large influx of relocatees. As recognized by the DCPA planning guidance, it is not legally nor practically feasible to impose risk area (or state and federal) management on host governments. The same conditions apply to business and social activities.

The host-area management problems are counterpart to risk-area problems. The integration of risk-area personnel as fillers in host-area organizations requires identification of skills, training, and discipline. Skills for such major host-area activities as farming, food processing, and mining are scarce in the urban population. Even where urban skills are applicable, local organizations may be reluctant to vastly expand employment because of problems of paperwork, liability, cash flow, union agreements, safety, security and personnel conflicts.

As noted in Section 6.1, normal relations between federal and state governments and regional organizations are conducted according to functional requirements. The functional organizations are structured to accommodate jurisdictional boundaries, with varying degrees of control dictated by criteria including capability, efficiency and responsibility. Crisis relocation will create jurisdictional problems for higher echelons of managements in such regions as the Northeast Corridor, where large numbers of people leave their states and normal economic areas. In many regions, relocation will shift and disperse population within the state or economic area, precluding higher-level management jurisdiction (not necessarily function) problems.

6.3 FUNCTIONAL PROBLEMS

The analyses of Chapter 4 indicate that there will be significant numbers of critical policy decisions to be made at all levels of organization during crisis relocation. The dispersal of organizations indicates the need for decentralized control to compensate for losses of communication capacity and reliability, for uncertain intelligence to and from higher echelons, and for shortages of qualified personnel at regional, state and federal levels. Conversely, the many vital decisions would oversaturate the capacities of host-area managers, and are beyond their knowledge, authority and responsibility. This indicates the need for effective management control on a centralized basis. Unfortunately, merely assigning authority and responsibility to higher echelons in either a command or coordinative mode of organization provides little confidence that decisions will result in adequate, equitable or efficient operations.

The representative chart (Exhibit 6.1) indicates a transition from peacetime to crisis relocation organization which preserves basic line-staff relations. This accords to the principles of efficiency of Chapter 2. However, as noted, it obscures the disruption to the complex relations imposed by the dispersal of risk-area management functions. The task of reassembling these functions either into host-area management or into state-level organizations would introduce inefficiencies, loss of communication and control, and conflicts of authority.

The case of the construction industry and fallout shelters (Chapter 5) illustrates the management control problems. In this case, the personnel, equipment and resources for the field construction function are designed and organized to be mobile to accomplish construction where, when and how specified. (Very few other industrial activities have this fortunate characteristic; most are tied to fixed locations.) However, the command and design functions and the headquarters management for the field construction functions are all centralized in risk areas. Host-area governments lack management capacity, knowledge of requirements, and financial resources to fill the command function. The technical skills for the design function and for project management are outside the host areas. Therefore, decentralizing the construction industry to host areas does not appear to be a practical management concept.

Counterpart difficulties appear from consideration of management problems at the state level. Generally, state governments lack the technical capacity to manage the many diverse construction projects to upgrade and construct expedient fallout shelters. They may also lack the authority and financial resources to control the large, integrated and responsible construction firms. A major problem for any centralized management scheme will be that of intelligence. What is needed, where and when? What resources are available, where and when? What alternatives are feasible? For the construction industry, it appears that the most effective management system would centralize control at a relocation area level. State and federal officials could be delegated financial and contracting authority to accomplish the command function. They could also achieve necessary communication and coordination between areas and with state and federal governments. Large construction firms could assemble the necessary design and project management personnel, and could provide the local relocation area intelligence and communications to muster resources. These firms could also accomplish the field construction functions.

Another end of the spectrum of functional management problems lies in essential products which originate in host areas. An illustration would be the case of Farmer Brown,

who is harvesting his potato crop. It is likely that he would normally ship these to the local cooperative processing plant for cleaning, grading and sacking. It is also likely that Brown has already contracted his crop to a food broker, canning company, wholesaler, or committed it in the futures market. However, host-area officials (including the sheriff) might come to Brown with the valid argument that the potatoes are needed to feed the local and relocatee population within the county. State, federal and regional buyer representatives have imperfect communications, knowledge of the broad requirements, and authorities. They recognize both the immediate local needs, and the general requirement to fill the food distribution pipeline.

Lacking an authenticated, viable, coordinated management structure to assure Brown, host-area officials, and regional representatives that local needs will be met promptly, and because Brown's contract is fully valid, it is unlikely that the potatoes will be shipped out of the host county. The worst (but most likely) result would be that no decision would be made, and the potatoes would be held in storage for the duration of the crisis.

The breakdown illustrated above results from the fact that each of the participants is called on to make decisions outside of his normal scope; and each is responsible to authorities who are physically and organizationally remote. There is no mechanism for distinguishing the trivial from the most significant problems. Thus, each participant must pass each problem (couched in his esoteric language) up the organization structure to a level where coordination is possible. In this case, the level would be a state agency-sponsored food distribution coordinating committee. That committee would make a decision based on the communicated statements of requirements, and on its intelligence from other functional organizations. The decision would then be promulgated through the operating organizations back to each host-area representative. Only on the assumption that each local participant received the message, understood the decision in the same way, and that no one appealed, could action be taken. It would take relatively few issues of this size and type to saturate the communication and decision structures.

It appears that a more viable management structure would provide for decisionmaking at a more local level. An operating center serving a relocation area could have shorter lines of communication, better intelligence, and more direct controls with its risk and host jurisdictions and private organizations. If its authority was authentic, it could judge the importance of the decision and act accordingly. The net result of the actions would comprise the intelligence to be communicated to higher authority (state-level) for overall management.

6.4 PRESENT HOST-AREA MANAGEMENT GUIDANCE

As noted in the first paragraph of this chapter, host-area management represents the operating level of crisis relocation organization. It therefore depends on effective and efficient management at higher levels. Present overall organizational concepts appear to incorporate structural weaknesses which cast doubts on overall effectiveness. Limited skills and capacities of host-area operating management limit its ability to overcome the weaknesses. It appears that delegating improper responsibilities to host-area management would not only insure that those functions would not be accomplished, but also that the legitimate host functions would be neglected. Jurisdictional constraints impede the transfer of external management into host-area organizations. Therefore, for this discussion, it is necessary to assume that viable decisionmaking control organizations will evolve at higher levels, and that these organizations will operate effectively.

The analyses of Chapter 4 (based on the sample of representative decisions of Appendix A) indicate that decisions appropriate for host-area management are to:

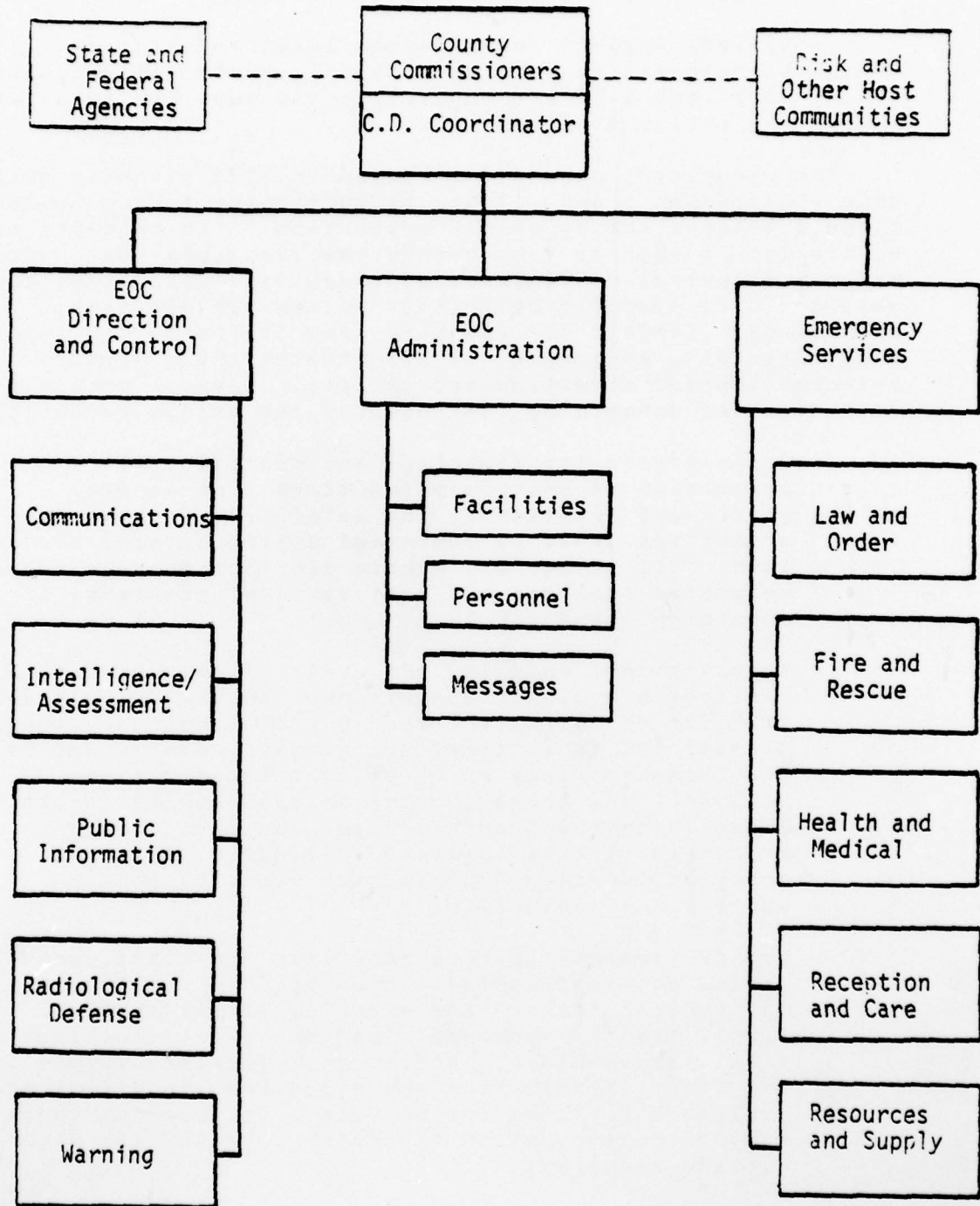
- Adapt existing host-area organizations to emergency status, assign emergency responsibilities, control administrative and financial affairs, and maintain accountability.
- Determine local operating priorities, and defer non-essential activities as necessary.
- Provide for internal security and control (with contingent support).
- Expand local operating organizations to meet needs on a self-help basis, incorporating necessary supplemental labor and training.
- Devise means within the jurisdiction to comply with changing procedures and resource allocations as dictated by federal and state agencies.
- Maintain and expand internal control communications, local public instructions and warning (but not overall public information) and control internal transportation.
- Provide lodging and feeding for relocatees by implementing selected levels of accommodations in public and private facilities and in private homes.

- Devise and implement systems for acquiring and maintaining vital data on relocatees.
- Advise, support and allocate local resources to allow private citizens to upgrade and supply fallout shelters, and allocate population and supplies to existing public shelters.

The management concepts embodied in DCPA planning guidance (References 3 and 11) may be sufficient to accomplish these functions during crisis relocation. The concepts may be flexible enough to accommodate the functions even under maximum dispersal conditions, although final judgement must wait for more specific definition of maximum dispersal conditions. Exhibit 6.2 (adapted from the host-area guidance materials, Reference 13) illustrates the suggested organization for direction and control. Several comments are warranted concerning its adequacy for crisis relocation:

- Organization for direction and control implies a separation of emergency functions from general government functions. The totality of host-area activities would be dedicated during crisis relocation. (If there is a subtle distinction here between relocatee problems and host resident problems, it should be abandoned.)
- In peacetime, only law and order, fire, and health services are viable operations. Any extant capabilities for the direction and control functions (except special EOC facilities) are normally controlled by the three services or by private organizations. Moreover, the three service chiefs usually report directly to the Commissioners, and have strong professional ties to state and federal agencies. The crisis relocation organization seems to invite conflicts of authority.
- County governments have many line and staff functions, not represented, which perform vital direction and control tasks. For example, administrative, legal, fiscal, personnel, and contracts functions are vital components of government. The established line and staff organization would continue to direct and control activities during crisis relocation; they would also accomplish the major coordination with outside agencies.
- The EOC could provide centralized backup, coordination and communications during crisis relocation, and a contingency site for postattack operations.

EXHIBIT 6.2: REPRESENTATIVE HOST-AREA ORGANIZATION
FOR CRISIS RELOCATION DIRECTION AND CONTROL



(Source: Adapted from Reference 11)

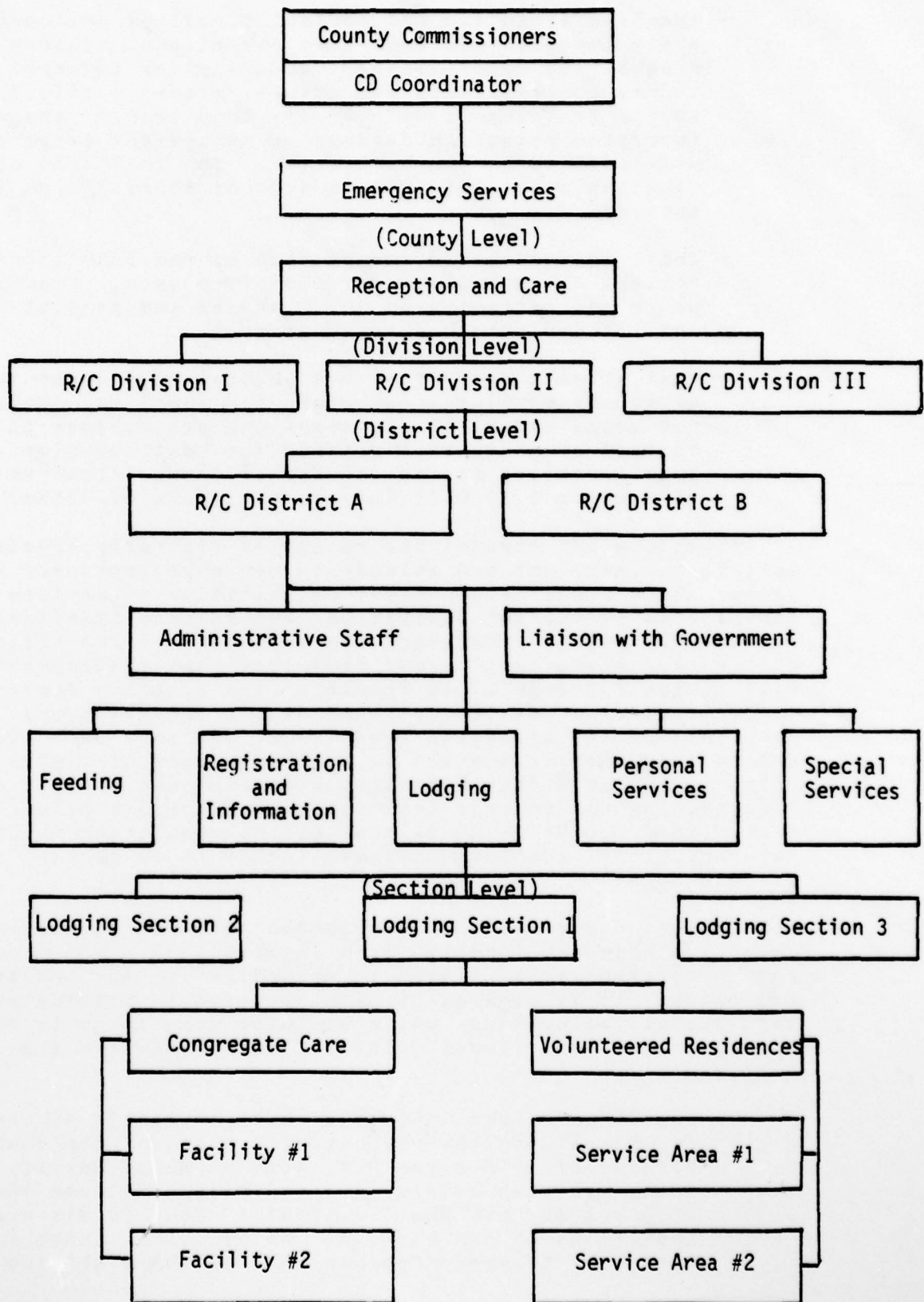
- The five direction and control functions are obviously important to host-area operations, and can probably be accomplished adequately for internal county control (with the caveats stated earlier). It should be recognized, however, that each of these functions primarily depends on management decisions made outside of the host areas. The indicated coordination understates the degree of control from the outside.
- There is inadequate recognition of the functions of cities, towns and special districts (e.g., schools, water and agriculture) which may be independent of and yet dominate county government.
- Most private operations are subordinated under the emergency services, resources and supplies. Many, if not most, essential organizations are subject to line control by management outside the host counties. This condition (as in the Farmer Brown illustration of Section 6.3) will lead to conflicts of authority.

Reception and care of the relocated risk-area population will be an important and relatively new experience for host areas. Many areas have nucleus capabilities in welfare organizations, tourist facilities, and seasonally-affected private businesses. However, the magnitude of the influx will be so severe that unique organizational requirements will emerge. Though it is feasible (and probably desirable) to centralize control of fallout shelter upgrading and construction to relocation area (RAOC) control, reception and care is clearly subject to host-area control. DCPA policies indicate that host-area organizations provide dual distribution and control functions during crisis relocation: centralized for 50 to 80 percent of the population in communal facilities, and decentralized for 20 to 50 percent in private homes.

Exhibit 6.3 shows the recommended chain of command for reception and care (adapted from Reference 3). The organization apparently was tested in natural disasters and found effective. It is consistent with the need to provide public care for all relocatees, while allowing some to go to volunteered private residences. The following comments are pertinent:

- The organization imposes eight line levels of organization between the relocated citizen and the county government. (For the U.S. Army in World War II, there were ten levels of organization between the buck private and the President.) Four levels are identified in Exhibit 6.3. In addition, there is the Emergency Services Coordinator and there are two

EXHIBIT 6.3: REPRESENTATIVE CHAIN OF COMMAND FOR RECEPTION AND CARE



(Source: Adapted from Reference 3) 6-11a

steps at the District Level and three steps at the Section Level.

- The organization appears to embody a span of control concept of approximately one supervisor to six subordinates. For a host county with 150,000 to 200,000 evacuees, with three eight-hour shifts, the number of people in the chain of command for reception and care will exceed the number of evacuees. (For the sample case of Fremont County, Colorado, this would not happen because at some levels the span of control is limited to one supervisor for only two subordinates. It is also noted that some steps could be combined.)
- The long chain of command will effectively preclude intelligence moving up from relocatee to county commissioners, and directions and control from moving down. Whether deliberate or not, it will appear that the organization embodies all of the dysfunctions of the ultimate bureaucracy.
- The separation of relocatees in congregate facilities from host-area activities is inherent in the organization. This will impede the need to integrate and expand operations.
- The organization violates the concept of "government by the consent of the governed." While relocatees may not be in a position to resist, it appears that many host-area residents may not subject themselves to the organization. This will result in a social dichotomy, and may require extreme police measures. It is doubtful if such force could be made available in host counties, or even if county governments would tolerate them.
- For those relocatees in private residences, the organization is superfluous. (It is suspected that there would be an inverse correlation between the number of private residences volunteered and the degree of control by the reception and care service.)
- The organization will become more complicated to the extent that the doctrine of maximum dispersal will require relocation to private residences and small congregate care facilities.

7. FIELD TESTS OF RESEARCH FINDINGS

7.1 EXERCISE FORMAT

The Phase I research (Chapter 1) generated conclusions and recommendations on crisis relocation management concepts and operations. These were described in an Interim Phase I Draft Report issued in May 1978. The Phase II research involved field tests to explore these concepts with DCPA region, state government and host-area planning and management officials. Four workshop exercises were conducted late in 1978. The interim conclusions and recommendations have been modified in this report to reflect the data from the exercises. This chapter describes the field test procedures and summarizes those findings relevant to the conduct of the exercises. Appendix C includes the consolidated responses of government officials to related questions.

The format and approach of the workshop exercises were developed by the research staff and DCPA research personnel. It was recognized that existing NCP planning at the host-area government level has been conducted on an incremental basis, with emphasis on the identification of congregate care and shelters, population allocations, movement modes and routes, and critical resource and distribution problems. This initial-step planning has also required familiarizing local officials with the crisis relocation rationale, and outlining their roles in the relocation effort. State-level planning has limited the number of host areas subject to the planning activities. Therefore, local knowledge of crisis relocation organization and management problems has been restricted to those directly related to initial planning efforts.

It was decided that the workshop format should be kept simple and sufficiently general to encourage active discussion on those subjects that participants felt were important for their own areas. At the same time, it was necessary to direct the exercises toward evaluating the pertinent conclusions reached during Phase I, and to provide consistency between the exercises so regional differences could be evaluated. Other constraints were imposed by the need to support the initial DCPA-sponsored planning efforts, and to ensure that participants recognized the distinction between the research objectives and the evaluation of existing local plans and capabilities.

The Phase I interim conclusions were analyzed to determine which were subject to local evaluation and implementation. Sets of specific questions were derived to elicit discussion in the general areas of:

- Direction and control;
- Emergency services; and
- Reception and care.

Presentation of the questions (listed in Appendix C) was preceded by a brief discussion of crisis relocation rationale and planning, the objectives and methods of this research, and general assumptions (scenarios) about the exercise. The time-frame was three days after the announcement of crisis relocation. Conditions had stabilized in the host areas, but the future was unknown. This scenario was selected to encourage participants to consider the longer-term management and operational problems they would be likely to face.

7.2 EXERCISE CONDUCT

With the assistance of the COTR, Mr. George C. Van den Berghe, the research staff solicited DCPA regional representatives to select appropriate locations for the exercises. Preliminary outlines of the exercise format were distributed. The following exercises resulted:

- Ellsworth County, Kansas (October 1978). Workshop held in Kansas City with Region Six representatives and NCP planners from Kansas and Missouri (References 39 and 40).
- Webster Parish, Louisiana (October 1978). Workshop held in Shreveport with Regional Five representatives, Louisiana State Emergency Preparedness staff, and NCP planners (Reference 41).
- Webster Parish, Louisiana (October 1978). Workshop held in Minden, with representatives of Webster Parish and local governments (Reference 41).
- Glens Falls, New York (December 1978). Workshop held in Glens Falls with Region One and New York Division of Military and Naval Affairs representatives, NCP planners, and local government officials (Reference 42).

The COTR attended the Louisiana and New York exercises. (Tapes and summaries of all workshops have been submitted to DCPA research personnel). The findings of these workshops have been incorporated in the discussion of management alternatives (Chapter 8) and the conclusions and recommendations of this report (Chapter 9). Changes to the initial Phase I findings have not been explicitly cited, except when opinions differed substantially. Appendix C includes the presentation materials (used as viewgraph slides for the exercises) and summarizes the discussions on specific questions.

7.3 OVERALL CONCLUSIONS OF FIELD TESTS

- The workshops and specific questions developed the desired dialogue with participants. Local officials were interested in the research problems. The questions related to direction and control elicited the most discussion.
- Local officials who attended the workshops tended to be unfamiliar with crisis relocation plans and planning. They recognized this as an overall weakness. The planning is being accomplished primarily by federal and state personnel, who find it difficult to generate local interest, participation, and more than perfunctory acceptance of the NCP plans. To date, NCP planning tends to be first-cut, dealing with desk-top allocations, identification of resources, and political acceptance. These statements do not imply criticism of any government officials, nor of the NCP planners. Rather, the problems of crisis relocation planning themselves are time-consuming and extremely difficult to solve. It appears to the researchers that:
 - a. Contacts with local governments are more complex and difficult than the guidance suggests.
 - b. Many local contact-acceptance problems must be "swept under the rug" to achieve preliminary progress.
 - c. With a few exceptions, NCP planners have had no contact with private sector personnel.
 - d. Integrated risk/host area planning will be difficult, time-consuming, and fraught with political implications, but is essential to effective crisis relocation management.

- There was repeated emphasis on the need for federal or state anticipatory funding for equipment, supplies, and radiological protection before the relocation. Financial support of crisis relocation is assumed, but the related procedures and authorities are either unknown or misunderstood by local officials. However, they anticipate long lead times in ordering and installing materials and equipment. Emergency communications generally are cited as most critical and inadequate. Local officials consider that organization and implementation depend on firm contracts, which require firm funding.
- Many local officials expressed open hostility to present crisis relocation concepts. It is also the host area position (shared by others) that they should retain all peacetime political and economic prerogatives. This is based on their perceptions which involve:
 - a. Political impossibility of planning to modify the authority/responsibility structure;
 - b. Repeatedly stated opposition to any risk-area authority in host areas.
 - c. Expectation of support from state or federal government to enforce police powers.
 - d. Expected risk-area personnel and resources being available on call.
 - e. Lack of understanding and expressed consensus of opinion against relocation by organization.
- Many officials doubt their abilities to effectively manage their operations and accept responsibilities under crisis relocation conditions. Host-area personnel reinforce and emphasize conclusions about the difficulty of dealing with relocatees. There is:
 - a. No consideration of incorporating relocatees into host area activities, except for those belonging to churches or fraternal organizations and those with special skills.
 - b. Universal (variously stated) anticipation of intractable problems with special groups of relocatees.

- c. Need for relocatees to obey orders ("act as guests").
 - d. Question as to the availability and allocation of fallout shelters, and the infeasibility of upgrading shelters or constructing expedient shelters because they lack equipment, materials and skills.
 - e. Concern over the inadequacy of RADEF operations.
- All participants recognized that the concepts of management and operations are important, and that further guidance is needed. However, they are presently preoccupied with initial planning and allocation problems (a "layered approach to planning"), and have not considered the research issues in depth. They feel there should be emphasis on educating and informing key personnel and deriving cadre organizations.
 - It was generally agreed that the research conclusions are realistic and consistent with the participants' knowledge and personal attitudes toward NCP planning. There were no arguments regarding analyses or findings:
 - a. on factual bases.
 - b. on feelings regarding vital need for improved organizations.
 - c. identification of problem areas.
 - d. importance of subject area.
 - e. need for coordinated efforts between host and target areas to preplan use of resources and personnel.

The major objections to the assumed "situation" (Appendix Exhibit C.5) was that within four days the movement would be completed (New York), and that food supplies would be adequate. These variances were not considered vital to the exercises.

The discussions on specific questions supported the general conclusions of the research, although the concepts were new to the participants. (Present planning has not yet reached the operating management level.) No one offered other solutions to the decentralization problems, and the need for flexibility was stressed.

8. ALTERNATIVE CRISIS RELOCATION MANAGEMENT SYSTEM

8.1 OVERALL MANAGEMENT SYSTEM

As noted in Chapter 2, concepts of centralized versus decentralized management control are not inherently "good or bad," nor are they subject to analysis by quantitative criteria. Concepts of line versus staff organization are similarly limited. Thus, when reorganization (caused in this case by crisis relocation) is considered, the analyst strives to minimize organizational changes and to preserve prior jurisdictions and functions. The rationale for this judgement is based on firm principles which recognize organizational needs for confidence between individuals in matters of authority and responsibility, skill and capacity, information and intelligence, communication capabilities, and judgement for timing and significance of decisions. Individuals who have worked together overtime in a stable relationship will have ironed out their problems and achieved the confidence necessary for efficient operations.

The crisis relocation reorganizational structure implicit in the DCPA planning guidance partially recognizes these principles. Essential risk-area organization operating units are preserved by relocation to host areas or by commuting if relocation is not feasible. The higher level control and decisionmaking structure is incorporated in state-level coordinating committees. Prior jurisdictions and functions are continued in their organizations. Except where necessitated by anticipated shortages, command versus coordination and line versus staff relations are also preserved. Unique crisis relocation functions (e.g., reception and care and fallout shelters) are assigned to operating jurisdictions, host areas, with staff augmentation from relocated personnel.

However, analysis of the reorganization structure indicates several weaknesses according to accepted principles and criteria:

- The overall effect of crisis relocation reorganization is decentralization of operating management to host areas and centralization of decisionmaking management to state-level (or state/region-level).

- This change shortens the chain of command, which broadens the span of control. More knowledge and capacity and clearer lines of authority and coordination are required.
- Separation of risk-area personnel from their normal jurisdictions and organizations will tend to produce conflicts of authority at operating and at centralized coordination levels.
- The number of demands and amount of information passed up from operating to control levels will increase, as will the decisions and controls passed down.
- Normal communication channels will be lengthened, intelligence systems will be disrupted, and normal "clearinghouses" to compile information and authenticate authority will be eliminated.
- Public information sources will be independent of local control and coordination. The implications of news will be subject to various interpretations.
- System reliability and confidence will decrease, and personnel will be faced with unfamiliar decision responsibilities.

When these weaknesses are considered in relation to the resources, capabilities, and flexibilities of present organizations, and to the crisis relocation objectives of Chapter 3 (especially if they tend toward the "precautionary" case), it is difficult to justify any modification of the proposed organizational structure.

8.2 CRISIS RELOCATION OPERATING CENTER CONCEPT

The weaknesses may become critical should crisis relocation conditions require long-term staying power and intense preparations for postattack survival. These requirements appear consistent with DCPA's "flexible response" objectives. A Relocation Area Operating Center (RAOC) could be designed to alleviate the reorganization weaknesses. The design embodies the following concepts:

- The nation would be divided into several hundred relocation areas based on present risk/host conglomerate and economic/trading area definitions. Most of the relocation areas would include risk areas. (This is a slight modification to present planning.)

- An RAOC would be formed for each relocation area. There is precedent for such an organization in metropolitan area authorities, and in regional private and government organizations. Normally, however, these are limited to specific functional authority and lack the broad coordinating responsibilities envisioned for the RAOC.
- The RAOC would be delegated authority to act for federal, state and private organizations in all matters internal to the relocation area. A particular responsibility would be the coordination and rationalization of public information. If the relocation area were wholly within a state, a state official would be in charge; if the area overlapped state boundaries, a federal official would be in charge.
- The RAOC staff would include representatives from all jurisdictions and each essential federal, state and industrial organization. (Numerous small organizations would be represented by a dominant company or an association representative.) The representatives would coordinate intelligence and operations for the relocation area jurisdictions on a functional basis. Operations would be managed from normal headquarter sites. The higher-level decision structure would continue its duties, coordinated by federal region and state EOC's.
- The RAOC should be sited to provide physical protection and communication capacity. (A separate study concerns the availability and capability of EOC's.) There are numerous existing state and regional organizations based on geographic, economic, and political considerations. Ideally, the RAOC location would be at the population and transportation centroid of the relocation area, outside the risk area.
- Risk- and host-area operating units and organizational structures would be maintained (not dispersed as "fillers" for host organizations), except for those functions (e.g., schools) whose clientele were completely dispersed. Host-area organizations would manage their increased demands by expanding operations with selected personnel from the host and relocatee population. This would be accomplished on a self-help, best-efforts, training-on-the-job basis. Specialized risk-area operating units would be dispatched, at host-area request and RAOC direction, to provide contingent support. (There is precedent in mutual aid agreements which provide for centralized coordination and control.)

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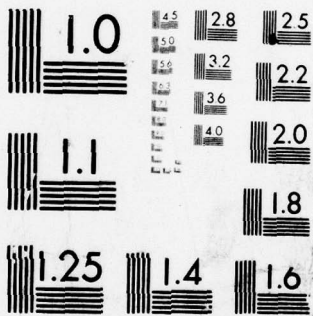
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It is recognized that the RAOC concept is purely theoretical, because no such organization exists. It is highly unlikely that the RAOC organization could be created, even on a stand-by basis, under present peacetime conditions, because the proposed participants would non-concur. They would have cogent arguments of (1) lack of staff time and conflicting responsibilities, (2) past demonstration of competence without reorganization in limited disasters, (3) crisis uncertainties which preclude high confidence predictions of need, and (4) shortages of manpower and authority to staff the RAOC. Should DCPA be convinced that the weaknesses of the present organization concept are sufficiently critical, the Agency could include the following elements in its crisis relocation planning to facilitate the creation of the RAOC organizations during the crisis:

- Include non-host/non-risk counties into viable political and economic relocation areas.
- Identify candidate organizations to staff the RAOC's, and develop nucleus, cadre staffs on a volunteer basis.
- Survey the relocation area to find suitable sites for RAOC operations.
- Conduct limited training exercises with cadre personnel to refine the RAOC concept.
- Limit crisis relocation planning to assume the existence of the RAOC should the crisis extend in duration and severity. This impacts on risk-area management plans in eliminating the requirement to disperse essential forces to host areas. It also impacts on host-area management plans in eliminating the need for long lines of uncertain communications to parallel and higher authorities, for assuming decision responsibilities in functional areas outside their knowledge and capacity, and for incorporating many of the numerous, diverse and "foreign" operating personnel into their operations. In addition, host-area management will have access to self-sufficient, specialized units (such as risk-area police) on a contingent basis, and to coordinated external resources (such as the construction industry) for extraordinary operations.

Discussions with state and local officials during the workshop exercises indicated that they consider the RAOC concept to be generally valid. However:

- a. Each area should be considered separately, and will involve many configurations. Greater acceptance

can be expected in states organized on a regional or district basis for emergency operations. It also ties in with areas with mutual aid agreements.

- b. The concept fits with DCPA EOC and communications planning (Reference 33), but these may also need to be considered separately by area.
- c. There are significant questions about national conformity versus local and state laws, practices, and organizational structures, including resource management.

Specific comments regarding the RAOC concept were mixed. New York officials found it fit nicely to their districts and EOC structure. Region Five and Webster Parish found it acceptable. Louisiana officials accepted the concept at first, then rejected it as "another layer of bureaucracy." Region Six follows the planning guidance concepts of seeking additional resources in sequence, in the host area, from the risk area, and finally from state and federal government. This may be sufficient in areas with relatively few jurisdictions and sparse population. They also felt that local officials are accustomed to dealing directly with state and federal officials. Reporting to an intermediate authority (the RAOC concept) might jeopardize their local autonomy. These reservations certainly emphasize the need for a flexible approach to crisis relocation management that "customizes" organizational structures to local conditions.

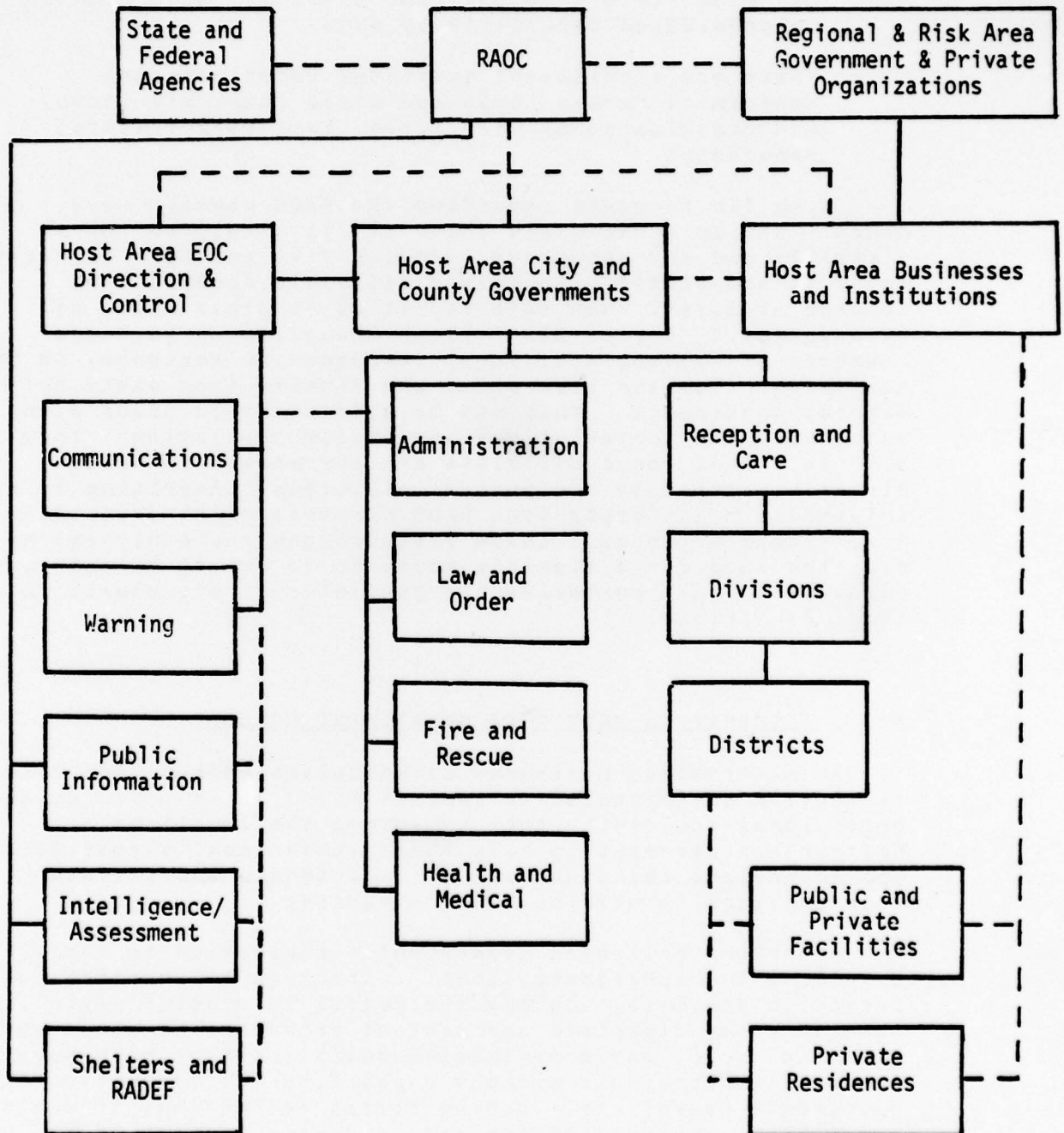
8.3 ALTERNATIVE HOST AREA MANAGEMENT CONCEPT

An alternative host-area organization concept for crisis relocation is presented in Exhibit 8.1. It is based on an operational philosophy that minimizes the functions of host-area government to keep them within local capabilities, and emphasizes the functions of individuals and private organizations to utilize their expertise.

Peacetime host-area government organization is modified by adding two suborganizations: direction and control, and reception and care. During the crisis relocation period, the EOC-based direction and control organization would operate on a backup and coordination basis. Its primary purpose would be to provide a standby capability for transition to postattack operations. During crisis relocation, it would be staffed and equipped by the line operating departments. A unique feature would be the line responsibility of regional government (represented by the RAOC) for control of public shelter upgrading and construction in coordination with

EXHIBIT 8.1

ALTERNATIVE HOST-AREA ORGANIZATION CONCEPT FOR CRISIS RELOCATION



host-area government. It would also control the radiological defense, public information, and intelligence operations.

The reception and care organization would be structured to spans of controls of 20 to 30 subordinate units. The basic operating units would be in public facilities with 20 to 30 evacuees and private residences with 10 to 20 evacuees. Units of this size (3 to 10 families) could be self-sufficient if normal business and government services were available. They would be self-organizing; they are competent to purchase, prepare and serve food or to find public eating places; to obtain police, fire, or medical help; to get to banks and jobs; and, in the case of private residences, to construct expedient fallout shelters. They can also go directly to city or county government if they don't like how things are run.

Maximum use of private residences should be encouraged because they are designed to bed and board people pleasantly and efficiently. An initial function of the reception and care organization would be to facilitate the placement of evacuees in facilities. After that, it would coordinate moves and handle the relatively few genuine welfare cases. A span of control of 20 to 30 subordinate units appears appropriate.

During the workshop exercises, some officials (particularly Region Five representatives) were reluctant to accept the idea of shifting responsibility for RADEF and public fallout shelters from local to RAOC control. Nevertheless, each discussion dealt in some way with the inability of host areas to provide these services and facilities. The relations between risk and host areas must be confronted and studied, in order to understand the degrees to which:

- a. Functions and authorities of state and federal government and the private sector should be integrated;
- b. Host areas are able to operate (or plan) alone; and
- c. Planning should reflect anticipated postattack requirements.

Some local participants failed to understand the need for and intent of a "clearinghouse" and "authenticated actions" for crisis relocation management. Instead, they visualized "coordinating" or liaison teams to perform the intelligence, decisionmaking, and promulgation duties of management.

DCPA is preparing to assist host-area management for crisis relocation in several ways beyond the planning assistance. "How-to-do-it" materials are being prepared for congregate care management and for fallout shelter improvement. Training and exercise program materials are being devised and tested. A national "backbone" system of facilities for state and local control of emergency operations is currently being studied (Reference 33). These efforts should assist host-area management.

It is clear that more thought and effort needs to be devoted to the roles of the target cities and their relationship to the host areas. The present lack of coordination has many causes. A primary one seems to be that target city officials, because of greater experience, manpower, resources, and sophisticated operations, might overshadow host-area officials within their own communities. Although the subject was discussed at length (with varying degrees of directness) in all the exercises, no agreement was reached on the proper course to take; even the clear and positive need for more precise plans was disputed at times. However, the majority of workshop participants realized that the problem is present and vital, and that its solution will be difficult to find.

9. RESEARCH FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

9.1 PRINCIPLES OF ORGANIZATION

Operations during crisis relocation will be conducted under conditions without precedent in the United States in terms of areas, numbers of people, and social and economic dislocation. A theoretical basis for organizing provides principles and criteria to analyze and evaluate management and organization concepts. These considerations tend to be qualitative -- elements to be evaluated -- rather than quantitative facts or rules. Organization involves the selection, direction and accomplishment of tasks. The accomplishing -- doing the physical work -- falls to operating staff at the lowest levels of the organizational hierarchy. The supervisory staff controls and coordinates the operating staff. The entire organizational behavior involves a complex network of decision processes which precedes actions. A decision is a statement about a future state of affairs that selects one future in preference to others and directs behavior so as to achieve it. The following conclusions pertain to the analysis of host-area management concepts:

- Statements of organizing principles provide defined alternatives which can be judged for operations under crisis relocation or maximum dispersal.
- Host areas represent the lowest echelon of the crisis relocation management structure: the operating level for reception, care and protection of the bulk of the population. Host-area management concepts are dependent on higher-echelon organization structures.
- Decision making requires clearinghouses for information (the Emergency Operating Center). This clearinghouse both centralizes intelligence for decisions and authenticates promulgation of decisions.
- The products, functions, producing and consuming groups and the locations of many ongoing essential organizations will change. This will result in modified organization structures, but the decisionmaking process and control of production and distribution will remain with existing management.

- Crisis relocation will decentralize many organizational functions. Of the criteria used to evaluate the effects of decentralization, competence, capacity and communications are probably most important.
- Span of control applies to crisis relocation organization in the same sense as decentralization. Overextended spans of control make operations more vulnerable to intelligence and communication failures, to costly judgement errors, and to lack of control. However, line and staff organizations allow relatively broad spans of control at administrative levels.
- There is an accepted orderly process to building organizational structures: (1) Identify objectives and purposes; (2) Identify functions and processes; (3) Identify decisions; (4) Establish a hierarchy of decisions; and (5) Derive an organizational structure.
- Crisis relocation involves reorganization of existing management structures. This requires judgement decisions relative to the feasibility and effectiveness of the proposed modifications.

9.2 OBJECTIVES AND FUNCTIONS OF CRISIS RELOCATION

DCPA planning guidance provides an adequate basis to define a basic concept of operations for crisis relocation. The principal elements of the concept may be summarized:

- Crisis relocation is one of two civil defense strategies to protect population threatened by a nuclear attack. It would be implemented if adequate warning time is anticipated. In-place protection is the second strategy; it would be implemented if short warning is anticipated.
- The objectives of crisis relocation are (a) to buy time to allow peaceful resolution of the crisis issues, (b) to maintain or enhance the United States' position (military, diplomatic and economic) versus its adversary, and (c) to protect the nation's population and resources in case of attack.
- The President and State Governors would initiate crisis relocation only in extremely grave circumstances because of its inherent costs, disruptions and losses. The public will respond in terms of its

perception of the hazard and the persuasiveness of its leaders. It is considered impractical to physically force compliance with the directives.

- The duration of the crisis relocation will be uncertain throughout its course. At least three days strategic warning will be expected. The relocated condition should be operated so that it can be continued indefinitely.
- It is expected that the federal government would continue to exercise control in its traditional fields (e.g., interstate commerce, banking and finance, military procurements, agricultural support) in a decentralized mode. Activities would be staffed from regional field offices.
- At the state level, operations will be conducted in two modes. Direct operational support will be given to risk and host areas by state agencies with significant operating capabilities (i.e., Highway Patrol, Fire Services, and Highway Department). This support will be both by supplementing local forces and by providing reserve units to handle contingencies. A second state-level operation will be to designate, coordinate and expedite the production, distribution and use of goods and services. (Actual production and distribution will be controlled by existing organizations and management.)
- Risk-area activities will be minimized to achieve population relocation. Essential industrial and business operations, selected residential facilities (hospitals), and essential service activities will be continued. Government services will be continued to aid the exodus, support risk-area operations, maintain risk-area integrity, and maintain civil defense readiness. These activities will be staffed by a commuting workforce housed in adjacent host areas. Blast shelters or tactical evacuation capabilities should be provided.
- Host-area activities will include providing congregate care and fallout shelter protection for the relocated population largely in non-residential structures. Accommodation of relocated families in host residences will be encouraged, but not planned for. Because of distribution limitations, productive activities will be restricted to essential industries.
- Economic dislocations will be compensated for by federal government policies designed to accomplish an

equitable sharing of losses resulting from crisis relocation.

- Current considerations of a "maximum dispersal" policy introduce uncertainties and more severe problems for crisis relocation. Any crisis management concept should be flexible to accommodate such variations.

9.3 MANAGEMENT POLICIES

Present DCPA objectives are to maintain a flexible response structure in the relocated mode. The flexible structure is designed to provide an effective level of protection, to maintain adequate production and distribution of essential goods and services, to preserve existing political and economic institutions, to allow an equitable sharing of losses, and to effectively move to a peacetime or postattack condition.

It is concluded that fulfillment of the objectives will impose significant management problems:

- To sustain the relocation stance for an indefinite period, it appears that all productive activities (particularly outside the risk areas) will be under constant pressure to expand operations.
- A very large burden is placed on federal and state governments to control and allocate resources, particularly if their organizations are relocated or dispersed. Guidance is sparse concerning responsibility and control of interstate operations.
- Maintaining a structure with host population in residence and relocated population in public facilities requires a dual host area distribution and allocation system, presumably controlled at the local level by host area government. This could lead to isolation of relocatees into an equivalent of "displaced persons" camps.
- The dispersal of risk-area emergency operating forces to act as "fillers" for host-area forces weakens potentially critical resources. In many cases, urban units are organized on a very sophisticated basis with specialized training, equipment, intelligence and communication resources adapted to the urban population characteristics.

- Legal and judicial functions are inadequately provided. It appears intolerable (and unnecessary) to suspend normal "due process of law" traditions.
- There is inadequate recognition of the many units of local government which are only loosely coordinated in peacetime. This is especially true of multiple risk-area jurisdictions. When these are added to the privately-operated essential industries, the number of claimants for state and federal support will impose severe communications and control problems.
- Due to uncertainties, dislocations and shortages during crisis relocation, the many claimants will become competitive for resources. There is no intelligence system to allow state and federal authorities to adjudicate between the claims.
- The objective of maintaining existing jurisdictions, prerogatives and organizations (to facilitate return to pre-crisis status) may be dysfunctional to achieving efficiency, maintaining relocation indefinitely, and integrating relocatees into host-area activities (to maximize deterrence and postattack survival).

During the workshop exercises, there was repeated emphasis on the need for federal or state anticipatory funding for equipment, supplies, and radiological protection before the relocation. Financial support of crisis relocation is assumed, but the related procedures and authorities are either unknown or misunderstood by local officials. However, they anticipate long lead times in ordering and installing materials and equipment. Emergency communications generally are cited as most critical and inadequate. Local officials consider that organization and implementation depend on firm contracts, which require firm funding.

Many local officials were openly hostile to crisis relocation concepts. It is the host area position (shared by others) that they should retain all peacetime political and economic prerogatives. This is based on their perceptions which involve:

- a) Political impossibility of planning to modify the authority/responsibility structure;
- b) Repeatedly stated opposition to any risk-area authority in host areas.
- c) Expectation of support from state or federal government to enforce police powers.
- d) Expected risk-area personnel and resources

being available on call.

- e) Lack of understanding about and expressed consensus of opinion against relocation by organization.

The geographical extent of crisis relocation introduces the following conclusions regarding the design of management systems:

- In peacetime, almost all organizations and jurisdictions, both public and private, are largely self-sufficient, loosely-coordinated, and interact on a minimal basis in a competitive (marketplace) mode. They are relatively flexible and responsive to external change. It appears that it will be most effective and efficient to maintain existing organizational systems, except where compelling arguments of equity and national survival prevail.
- Crisis relocation will disperse production and consumption on a geographical basis. This will tend to reduce total production of goods and services, and will reorient distribution and coordination systems.
- In many cases, relocation will separate people from their usual activities, organizations and jurisdictions. It would be prudent during relocation to establish viable and productive ties between host-area and relocatee populations. This consideration would be vital for post-attack operations.
- For organizational considerations, there will be significant disparities between geographical areas in hosting ratios, protection factors, resource availability and productive capabilities. Management policies under state and federal control should be structured to equitably allocate resources between relocation areas. Within relocation areas, local management policies should be structured to efficiently achieve production and distribution.

Predictions of the nature and level of potential management problems and policy decisions are crucial to establishing the concept and design of emergency operating management systems. An analysis of potential management problem areas revealed significant numbers of policy decisions to be made or reevaluated at all levels of control and for all functional areas during the crisis relocation period. The following conclusions pertain to the development of crisis relocation management concepts:

- The workshop participants recognized that the concepts of management and operations are important, and that further guidance is needed. However, they are presently preoccupied with initial planning and allocation problems (a "layered approach to planning"), and have not considered the issues of this research in depth. They feel emphasis should be placed on educating and informing key personnel and deriving cadre organizations.
- There is a logical hierarchy of decision control which relates the scope of the decision to the level of management. The peacetime structure of vital business and government activities will be continued and extended into the crisis relocation period.
- Rapid, efficient and authoritative promulgation of higher-level decisions will be vital to local operations. It will be necessary to have an effective means of feedback from local operations to higher-level decisionmakers so they can mobilize and allocate resources and coordinate functions.
- The dispersal of organizations (separation of personnel from operating communications, records and resources) during crisis relocation will severely disrupt normal management systems.
- A viable concept for management during crisis relocation should include decentralization of higher-level management personnel to relocation areas, with authorities to make, promulgate and implement decisions. They should be capable of communicating both intelligence up from and policy decisions down to local governments.

9.4 FALLOUT SHELTER CONSTRUCTION

Most crisis relocation requirements involve adapting and modifying existing organizations and functions to serve the critical needs of the dispersed population. A major unique requirement for crisis relocation operations will be to provide and enhance fallout protection for the relocation population. The following conclusions appear pertinent to upgrading or constructing fallout shelters:

- Each local area will have incentives to improve its fallout protection.
- Small-scale construction projects for private residences could probably be accomplished by private

citizens. Large-scale projects might require the services of the construction industry.

- Shortages of some construction materials are likely, but alternatives are probably available. There might also be shortages of equipment and skilled manpower. The internal communications network of the construction industry is probably best suited to assemble resources when and where required.
- It may be necessary for a public agency to assume the direction and control (command) function for large-scale projects. This would probably require a federal policy decision. The authority of the agency should be on a regional basis to properly determine needs and allocate resources. The agency should also have sufficient authority to commit (contract) in the name of the federal or state government.
- The design and field construction functions could be controlled by major construction firms. They could subcontract to smaller general and specialized contractors.
- The Army Corps of Engineers appears best suited to the command role, but its capabilities are limited and its primary responsibility military. Therefore, decisions should be made on a case-by-case basis.

9.5 GENERAL CRISIS RELOCATION MANAGEMENT CONCLUSIONS

The crisis relocation organizational structure implicit in the DCPA planning guidance embodies the following principles: Essential risk-area organization operating units are preserved by relocation to host areas or by commuting if relocation is not feasible. The higher level control and decisionmaking structure is incorporated in state-level coordinating committees. Prior jurisdictions and functions are continued in their organizations. Except where necessitated by anticipated shortages, command versus coordination and line versus staff relations are also preserved. Unique crisis relocation functions (e.g., reception and care and fallout shelters) are assigned host area jurisdictions with staff augmentation from relocated personnel. It is concluded that from analysis of the reorganization structure that there are several weaknesses according to accepted principles and criteria:

- The overall effect of crisis relocation reorganization is decentralization of operating management to host areas and centralization of decisionmaking management to state-level (or state/region-level).

This change shortens the chain of command, which broadens the span of control. More knowledge and capacity and clearer lines of authority and coordination are required. The source of these attributes is not identified.

- Separation of risk-area personnel from their usual jurisdictions and organizations will tend to lessen capacity and produce conflicts of authority at operating and at centralized coordination levels.
- The number of demands and amount of information passed up from operating to control levels will increase, as will the decisions and controls passed down. Normal communication channels will be lengthened, intelligence systems will be disrupted, and normal "clearinghouses" to compile information and authenticate authority will be eliminated.
- Public information sources will be independent of local control and coordination. The implications of news will be subject to various interpretations.
- System reliability and confidence will decrease, and personnel will be faced with unfamiliar decisions.
- Workshop participants generally agreed that the research conclusions were realistic and consistent with their knowledge and personal attitudes toward NCP planning. There were no arguments regarding the:
 - a. Factual bases of the research;
 - b. Vital need for improved organization;
 - c. Identified problem areas;
 - d. Importance of subject area; and
 - e. Need for coordinated efforts between host and target areas in preplanning the use of resources and personnel.

9.6 HOST AREA MANAGEMENT CONCLUSIONS

Analyses of a sample of representative decisions indicate classes of decisions appropriate to host-area management. They are to:

- Adapt existing host-area organizations to emergency status, assign emergency responsibilities, control

administrative and financial affairs, and maintain accountability.

- Determine local operating priorities and defer non-essential activities as necessary, provide for internal security and control (with contingent support), and devise means within the jurisdiction to comply with changing procedures and resource allocations as dictated by federal and state agencies.
- Expand local operating organizations to meet needs on a self-help basis, incorporating needed supplemental labor and training.
- Maintain and expand internal control communications, local public instructions and warning (but not overall public information) and control internal transportation.
- Provide lodging and feeding for relocatees by implementing selected levels of accommodations in public and private facilities and in private homes. Devise and implement systems for acquiring and maintaining vital data on relocatees.
- Provide advice and support, allocate local resources to allow private citizens to upgrade and supply fallout shelters, and allocate population and supplies to existing public shelters.

It is concluded that elements of the host-area management structure suggested in the DCPA planning guidance do not fit host-area capabilities and are inadequate to meet requirements. Specific comments include:

- Many officials doubt their abilities to effectively manage their operations and accept responsibilities under crisis relocation conditions. Host-area personnel reinforce and emphasize conclusions about the difficulty of dealing with relocatees. There is:
 - a. No consideration of incorporating relocatees into host area activities, except for those belonging to churches or fraternal organizations and those with special skills.
 - b. Universal (variously stated) anticipation of intractable problems with special groups of relocatees.
 - c. Need for relocatees to obey orders ("act as guests").

d. Unavailability and inadequacy of fallout shelters, and the infeasibility of upgrading shelters or constructing expedient shelters because they lack materials, equipment and skills.

e. Concern over the inadequacy of RADEF operations.

- Organization for direction and control implies a separation of emergency functions from general government functions. All host-area activities would be dedicated during crisis relocation. (If there is a subtle distinction here between relocatee problems and host resident problems, it should be abandoned.)
- In peacetime, only law and order, fire, and health services are viable operations. Any extant capabilities for the direction and control functions (except special EOC facilities) are normally controlled by the three services or by private organizations. Moreover, the three service chiefs usually report directly to the Commissioners, and have important professional ties to state and federal agencies. The crisis relocation organization seems to invite conflicts of authority.
- There are numerous line and staff functions of county government, not represented, which perform vital direction and control functions. For example, administrative, legal, fiscal, personnel and contracts functions are vital ingredients of government. The established line and staff organization relations would continue to direct and control activities during crisis relocation. They would also accomplish the major coordination with outside activities.
- The EOC could provide centralized backup, coordination and communications during crisis relocation, and a contingency alternate site for postattack operations.
- Participants in the field tests expressed some problems with understanding the need for and intent of a "clearinghouse" and "authenticated actions" for crisis relocation management. Instead, they visualize "coordinating" or liaison teams to accomplish the intelligence, decisionmaking and promulgation functions of management.
- The emergency functions under direction and control are obviously important to host-area operations, and can probably be accomplished adequately for internal

county control. It should be recognized, however, that each of these functions is primarily dependent upon management decisions outside of the host areas.

- There is inadequate recognition of the functions of cities, towns and special districts (e.g., school, water and agricultural) which may be independent of and functionally dominate county government.
- Most private operations are subordinated under the emergency service, resources and supply. Many, if not most, essential organizations are subject to line control by management outside the host counties. This condition will lead to conflicts of authority.
- The many levels of the reception and care organization will preclude communication between citizens and normal host-area government. While relocatees may not be in a position to resist, many host-area residents may not submit to the organization. This will result in a social dichotomy and enforcement problems.
- The reception and care organization is superfluous for relocatees in private residences, once they are located.

9.7 GENERAL MANAGEMENT RECOMMENDATIONS

DCPA should seek remedies to alleviate the organization weaknesses imposed by crisis relocation. A Relocation Area Operating Center (RAOC) concept embodies the following characteristics:

- The nation would be divided into several hundred relocation areas based on present risk/host conglomerate and economic/trading area definitions. Most of the relocation areas would include risk areas.
- An ROAC would be formed for each relocation area. There is a precedent for such an organization in metropolitan area authorities, and in regional private and government organizations.
- The RAOC would be delegated authority to act for federal and state government agencies, and to coordinate private organizations in all matters internal to the relocation area. A particular responsibility would be the coordination and rationalization of public information. It could also be charged with responsibility for upgrading and

constructing fallout shelters and for coordinating RADEF operations. If the relocation area were wholly within a state, a state official might be in charge; if the area overlapped state boundaries, a federal official might be in charge.

- The RAOC staff would include representatives from all jurisdictions and each essential federal, state and industrial organization. (Numerous small organizations would be represented by a dominant company or an association.) The representatives would coordinate intelligence and operations for jurisdictions on a functional basis. Operations would be managed from normal headquarter sites. The higher-level decision structure would continue its functions, coordinated by federal region and state EOC's.
- The RAOC should be sited to provide physical protection and communication capacity. (A separate study is concerned with the availability and capability of EOC's.) There are numerous existing state and regional organizations based on geographic, economic or political considerations. Ideally, the location would be at the population and transportation centroid of the relocation area, outside of the risk area.
- Risk and host area operating units and organizational structures would be maintained (not dispersed as "fillers" for host organizations), except for those functions (e.g., schools) whose clientele were completely dispersed. Host-area organizations would manage their increased demands by expanding operations with selected personnel from the host and relocatee population. This would be accomplished on a self-help, best-efforts, training-on-the-job basis. Specialized risk-area operating units would be dispatched, at host-area request and RAOC direction, to provide contingent support.

Specific comments regarding the RAOC concept were mixed. New York officials found it fit nicely to their districts and EOC structure. Region Five and Webster Parish found it acceptable. Louisiana officials accepted the concept at first, then rejected it as "another layer of bureaucracy." Region Six follows the planning guidance concepts of seeking additional resources in sequence: in the host area, from the risk area, and finally from state and federal government. This may be sufficient in areas with relatively few jurisdictions and sparse population. They also felt that local officials are accustomed to dealing directly with state and federal officials, so reporting to an intermediate authority (the RAOC concept) might jeop-

ardize their local autonomy. These reservations certainly emphasize the need for a flexible approach to crisis relocation management that "customizes" organizational structures to local conditions.

9.8 HOST AREA MANAGEMENT RECOMMENDATIONS

Because host-area management represents the operating level of crisis relocation organization, it depends on effective and efficient management at higher levels. Present overall organizational concepts appear to incorporate structural weaknesses which cast doubts on overall effectiveness. Limited skills and capacities of host-area operating management limits its ability to overcome the weaknesses. Jurisdictional constraints impede the transfer of external management into host-area organizations. Therefore, to recommend host-area management concepts, it is necessary to assume that viable decisionmaking control organizations will evolve at higher levels, and that these organizations will operate effectively.

An alternative host-area structure is recommended which is based on operational philosophy minimizing the functions of host-area government to keep them within local capabilities, and emphasizing the functions of individuals and private organizations to utilize their expertise. Peacetime host-area functions should be retained as is, augmented by expanded staff as deemed necessary. Two suborganizations would be added: Direction and Control, and Reception and Care. During crisis relocation, the EOC-based Direction and Control organization would operate on a backup and coordination basis. Its primary purpose would be to provide a standby capability for transition to postattack operations. During crisis relocation, it would be staffed and equipped by the line operating departments. In many areas, responsibility for control of public fallout shelters and RADEF, intelligence, and public information would be at the regional level.

Reception and care would be organized to control basic operating units in public facilities with 20 to 30 evacuees and private residences with 10 to 20 evacuees. Units of this size (3 to 10 families) could be self-sufficient if normal business and government services were available. They would be self-organizing; they are competent to purchase, prepare and serve food or to find public eating places; to obtain police, fire, or medical help; to get to banks and jobs; and, in the case of private residences, to construct expedient fallout shelters. Maximum use of private residences should be encouraged because they are designed to bed and board people pleasantly and efficiently.

An initial function of the Reception and Care organization would be to facilitate the placement of evacuees in facilities. After that, it would coordinate moves and handle the relatively few genuine welfare cases. A span of control of 20-30 subordinate units appears appropriate.

9.9 DCPA ACTION RECOMMENDATIONS

Local officials who attended the workshops tended to be only superficially familiar with crisis relocation plans and planning. They recognize this as an overall weakness. The planning is being accomplished primarily by federal and state personnel, who find it difficult to get local interest, participation and more than perfunctory acceptance of NCP plans. To date, NCP planning tends to be first-cut, dealing with desk-top allocations, identification of resources, and political acceptance. It is clear to the researchers that:

- a. Contacts with local governments and private officials are more complex and difficult than the guidance suggests.
- b. Many local contact-acceptance problems must be "swept under the rug" to achieve preliminary progress.
- c. With a few exceptions, NCP planners have had no contacts with private sector personnel.
- d. Integrated risk/host area planning will be difficult, time-consuming, and fraught with political implications, but it is essential to effective crisis relocation management.

This finding does not imply criticism of any government officials, nor of the NCP planners. Rather, the problems of crisis relocation planning themselves are time-consuming and extremely difficult to solve. This leads to the caution and recommendation that DCPA should provide all feasible backing and support.

The field tests confirm that the RAOC concept is generally valid. However,

- a. It should consider each area separately, and will involve many configurations;
- b. It fits with DCPA EOC and communications planning, but these concepts may also need to be considered separately by area; and

- c. There are significant questions about national conformity versus local and state laws, practices, and organizational structures.

Because no such organization exists, the RAOC concept is purely theoretical. It is highly unlikely that the RAOC organization could be created, even on a stand-by basis, during peacetime conditions, because the proposed participants would non-concur. They would make cogent arguments about (1) lack of staff time and conflicting responsibilities, (2) past demonstration of competence without reorganization in limited disasters, (3) crisis uncertainties that preclude accurate predictions of need, and (4) shortages of manpower and authority to staff the RAOC. Nevertheless, the Agency could include the following elements in its crisis relocation planning to facilitate the creation of the RAOC organizations during a crisis:

- Include non-host/non-risk counties in viable political and economic relocation areas.
- Identify candidate organizations to staff the RAOC's, and develop nucleus, cadre staffs on a volunteer basis.
- Survey the relocation area to find suitable sites for RAOC operations.
- Conduct limited training exercises with cadre personnel to refine the RAOC concept.

Crisis relocation planning should be modified to assume the existence of the RAOC should the crisis extend in duration and severity. This affects risk-area management plans by eliminating the requirement to disperse essential forces to host areas. It also impacts host-area management plans by reducing the need for long lines of uncertain communications to parallel and higher authorities, for assuming decision responsibilities for functional decisions outside their knowledge and capacity, and for incorporating the numerous, diverse and "foreign" operating staffs into their operations. In addition, host-area management would have access to self-sufficient, specialized units (such as risk-area police) on a contingent basis, and to coordinated external resources (such as the construction industry) for extraordinary operations.

During the workshop exercises, some officials (particularly Region Five representatives) were reluctant to accept the concept that primary responsibility for RADEF and public fallout shelters should be shifted from local to RAOC control. Nevertheless, all the discussions dealt in some way with the inability of host areas to provide these

services and facilities. The risk/host area relations must be confronted and studied to better understand the degrees to which:

- a. Functions and authority of state and federal government and the private sector should be integrated.
- b. Host areas are capable of operating (or planning) alone.
- c. Planning should be in terms of anticipated postattack requirements.

It is clear that more thought and effort must be devoted to the roles of target cities and to their relationship with the host areas. The present lack of coordination can be attributed to many factors. The primary cause seems to be that target city officials, because of greater experience, manpower, resources, and sophisticated operations, might overshadow host-area officials within their own communities. Although the subject was discussed at length (with varying degrees of directness) in each exercise, no agreement was reached on a proper course, nor even a clear and positive need for more precise plans. However, officials do recognize that the problem is vital and its solution will be difficult.

APPENDICES

- A. Policy Decisions Classified by Management Problem, Functional Area, and Level of Control
- B. Distribution of Policy Decisions by Management Problems and Level of Control
- C. Workshop Exercise Format and Summary of Purposes

APPENDIX A

POLICY DECISIONS CLASSIFIED BY MANAGEMENT PROBLEM, FUNCTIONAL AREA, AND LEVEL OF CONTROL

Selected, representative policy decisions pertinent to crisis relocation organization and management concepts were derived from DCPA planning guidance and research reports (References 1 through 28). The lists of decisions have been submitted separately to the DCPA Research Directorate.

As explained in Chapter 4, the purpose of this exercise was to identify the types of decisions for management during crisis relocation, and the appropriate level of organization to make the decision. The research staff was dependent on available reference materials for its data sources. The listing is neither complete nor balanced between functional areas. It is believed that it is representative of the types of decisions, and is adequate to support the analysis. It should be noted that "policy" decisions are included versus "operating" decisions, which are not. The latter involve immediate, vital, detailed operations, which are necessarily controlled by forces at the site (e.g., what is the format and content of the message, who mans the control point for what time period, what food is available and how is it prepared and served?). If crisis relocation is to be managed effectively, these lowest-echelon decisions must be controlled and coordinated by higher-echelon authorities.

APPENDIX B

DISTRIBUTION OF POLICY DECISIONS
BY MANAGEMENT PROBLEMS AND LEVEL OF CONTROL

<u>Management Area</u>	<u>Number of Policy Decisions</u>	<u>Number by Level of Control</u>		
		<u>Host Area</u>	<u>Risk Area</u>	<u>State/Federal</u>
1.1.1	10	8	2	0
1.1.2	4	3	0	1
1.1.3	7	3	0	4
1.2.1	7	0	0	7
1.3.1	3	1	0	2
1.3.2	4	0	4	0
1.4.1	8	0	5	3
1.5.1	10	0	7	3
1.5.2	<u>9</u>	<u>1</u>	<u>6</u>	<u>2</u>
Subtotal	<u>62</u>	<u>16</u>	<u>24</u>	<u>22</u>
2.1.1	10	5	3	2
2.1.2	12	5	1	6
2.2.1	10	5	3	2
2.2.2	7	3	1	3
2.3.1	6	1	1	4
2.3.2	<u>4</u>	<u>1</u>	<u>3</u>	<u>0</u>
Subtotal	<u>49</u>	<u>20</u>	<u>12</u>	<u>17</u>
3.1.1	8	2	5	1
3.1.2	4	0	0	4
3.1.3	7	1	2	4
3.2.1	9	4	3	2
3.2.2	5	3	2	0
3.2.3	<u>3</u>	<u>1</u>	<u>0</u>	<u>2</u>
Subtotal	<u>36</u>	<u>11</u>	<u>12</u>	<u>13</u>
4.1.1	9	4	0	5
4.1.2	7	1	0	6
4.2.1	6	3	1	2
4.2.2	6	4	1	1
4.2.3	5	0	5	0
4.3.1	6	2	2	2
4.3.2	10	0	0	10
4.4.1	7	5	2	0
4.4.2	6	3	3	0
4.5.1	9	3	5	1
4.5.2	5	2	2	1
4.5.3	<u>5</u>	<u>1</u>	<u>3</u>	<u>1</u>
Subtotal	<u>81</u>	<u>28</u>	<u>24</u>	<u>29</u>

(Appendix B, Continued)

<u>Management Area</u>	<u>Number of Policy Decisions</u>	<u>Number by Level of Control</u>		
		<u>Host Area</u>	<u>Risk Area</u>	<u>State/Federal</u>
5.1.1	6	0	4	2
5.1.2	5	2	1	2
5.1.3	4	2	0	2
5.1.4	6	2	3	1
5.2.1	5	0	2	3
5.2.2	3	0	0	3
5.2.3	4	0	0	4
5.2.4	3	0	0	3
5.3.1	4	2	1	1
5.3.2	3	0	0	3
5.3.3	3	1	0	2
5.3.4	3	3	0	0
5.4.1	3	1	2	0
5.5.1	5	0	1	4
5.6.1	5	4	1	0
5.6.2	6	1	5	0
5.6.3	12	2	3	7
5.7.1	4	0	0	4
5.7.2	5	2	0	3
5.7.3	3	0	0	3
5.7.4	3	0	0	3
5.7.5	2	0	0	2
5.8.1	3	1	0	2
5.9.1	3	0	0	3
5.10.1	3	0	0	3
Subtotal	<u>106</u>	<u>23</u>	<u>23</u>	<u>60</u>
6.1.1	4	1	2	1
6.1.2	5	1	1	3
6.1.3	6	0	0	6
6.1.4	4	1	1	2
Subtotal	<u>19</u>	<u>3</u>	<u>4</u>	<u>12</u>
GRAND TOTAL	353	101	99	153

APPENDIX C

WORKSHOP EXERCISE FORMAT AND SUMMARY OF RESPONSES

The background, development and conduct of the workshop exercises are reported in Chapter 6 of this report. Chapter 6 also includes the overall conclusions of the research staff regarding the discussions. This appendix includes the presentation materials, and summaries of the participants' responses to the specific questions. The workshop participants are listed. All but the Kansas City discussions were taped, and notes were prepared for each session. These are unedited working papers and have been submitted separately to the DCPA Research Directorate.

Minor modifications in format and wording were made following each exercise to improve the clarity of the presentation and to avoid earlier semantic problems. Further modifications were made to tailor the presentations to the local areas and their plans. None of these modifications interfered with the comparability of results between the exercises. The materials presented here are in the final format and wordings (the Glens Falls, New York exercise).

The two exercises with host area personnel were preceded by brief introductory statements by DCPA personnel on the nature, rationale and status of crisis relocation planning. R.A. Harker explained the purpose and use of the workshop discussions. He then explained the scope, method and general findings of the interim research efforts. The viewgraph slides shown during this part of the presentation are Exhibits C.1 through C.4. (All exhibits are at the end of this appendix to avoid long textual breaks.) Generally, the participants chose to hear background presentations through with relatively few clarifying questions.

A.E. Wilmore presented the "situation" graph (Exhibit C.5) and conducted the discussions of the specific questions grouped under the headings of Direction and Control, Emergency Services, and Reception and Care (Exhibits C.6 through C.8). Those questions and summary responses follow this paragraph. Finally, R.A. Harker presented the chart on the RAOC concept (Exhibit C.9) and closed the exercise. A later rubric of this appendix lists the overall conclusions of the research staff.

DIRECTION AND CONTROL

Q.1: To what extent do we need to realign our overall host area organization to establish an "emergency government?" What is the status and utilization of our EOC and other special facilities?

A.1: There will be needs to improve the efficiency of local governments to meet the increased requirements. However, it is not politically feasible to plan for any changes except generally expanded government in its present form. While the governors may have emergency powers, even planning to implement them will abrogate the responsibilities of local officials. Generally, officials recognize the severity of the urban-rural problems and rely on

"coordinating teams" for solutions. There were strong expressions that the relocatees are "guests" who must submit to host directions, and that conditions will be harsh.

Host area EOC's are non-existent or adapted from existing structures. Communications and RADEF are identified as the greatest problems.

Q.2: How and to what extent should we coordinate our activities with adjacent areas, risk areas, state, federal and military activities?

A.2: The need for coordination is recognized and considered a priority problems, but they plan to handle it by "coordinating teams," made up of present management personnel. Contacts will be on a personal basis. The system would be to go to risk areas first, then to state level. Help would not be available from other host areas because they would have similar difficulties. Most local officials felt the problem properly belongs to state or federal authorities. Military dependents are considered for congregate care as part of the general population. Local officials hope for, but don't plan on, military support. However, local officials also cannot visualize ever being in a cutoff situation.

Q.3: How do we determine means and levels to control supply and distribution of goods and services?

A.3: This is considered to be state-level, not a host area, question. It is also the most severe problem. Local officials on one hand cannot imagine being isolated from outside resources; on the other hand, they feel little confidence that the planned systems will work. They fear that the whole system could well bog down from organizational and logistic difficulties. The major present concern is with acquiring resources rather than controlling operations.

Q.4: How do we acquire, evaluate, and interpret state and national information?

A.4: All participants expressed a need for reliable data, and a belief that they would get little more than reports from the national news media. They don't expect timely, authoritative or extensive information from state or federal sources, but they would have to base their evaluation on official data and guidance. The use of EBS was raised as a questionable media.

Q.5: How do we establish an internal intelligence system to determine, interpret and report our needs and capabilities to central authorities?

A.5: This was considered to be a difficult and important question but too sophisticated for their present level of planning. Some felt that cognizant local officials would have a sufficient "feel" for the situation, and present systems would have to do. There were questions raised on who "central authorities" would be, and the need to report intelligence.

Q.6: It appears that we may be short of medical supplies. What further data do we need to verify this?

Q.7: If we are short, what do we do about it? What will be the impact on others?

A.6 and A.7: These questions were designed to elicit discussion if the general questions failed to. They were never used. In each workshop, there was more than an hour's discussion on the direction and control questions. There was no reluctance by the local officials to express their opinions and doubts.

EMERGENCY SERVICES

Q.1: What is required to improve the effectiveness of our operations? Should we reorganize our forces? How much more manpower is necessary?

A.1: Participants found it difficult to visualize specific needs or numbers. A reassessment of requirements and capabilities for police, fire, radiological and other emergency and life-saving functions is required from both a manpower and training standpoint. All agreed that more manpower would be required and all expected, in a general way, that it should come from risk areas; but they have not arrived at the point of coordinating with risk areas. Local officials were adamant in their insistence that the host counties control the added forces, but they are aware of the problems.

Q.2: What contingencies should we be anticipating during relocation and how do we cover them?

A.2: There was a wide range of responses to this question. There is a widespread reluctance by local officials to consider these problems. At first, the participants stated that there would be many contingencies, but they would have to handle them as they arose. There would be problems if more refugees than planned for arrived. Funding is a universal problem. In New York, we were greeted with...it's hard to visualize requirements because "no one here really believes in crisis relocation." In Shreveport, the planners were concerned with upgrading shelters while they were occupied. In Kansas City, Webster Parish and New York, the discussion turned to sociological problems, and the need for the churches to act as intermediaries.

Q.3: To what extent do we need contingent support from outside, and how do we ensure we'll get proper help when we need it?

A.3: Planning has not progressed this far. Host areas will "do their best" to get outside support, but in the end they must expect to be self-sufficient. They need to plan with risk-area officials. They doubt that other communities will be willing to share resources, because of possible shortfalls in their own communities. They doubt that aid from state or federal sources will be available because they don't have much to provide. Local officials fear that "outside support" may lead to infringement of their autonomy.

Q.4: Do we need special training for conditions after an attack, such as medical or RADEF?

A.4: There was a consensus on the general needs for training and the lack of personnel and materials to do the job. Crisis-oriented training should be initiated. However, local officials are concerned about what should be done in which time frame. Several participants expressed the view that crisis relocation would require "on-the-job" training with personnel, equipment and materials at hand, and that it would be sufficient. All were concerned with shortages of RADEF officers.

Q.5: Are we prepared to receive and disseminate an attack warning? How should we deploy our forces?

A.5: All the exercise areas have NAWAS drops (except Webster Parish, which has a patched-in operation with Shreveport). The problems of dissemination are germane. Some areas have sirens; others rely on radio. All feel the host area populus would be informed, but it would be difficult to communicate with the relocatees. Moreover, the shortage of fallout shelter spaces make it difficult to know what to say. Region Five officials suggest that the U.S. Weather Service disaster warning system should be an essential component of the overall system.

RECEPTION AND CARE

Q.1: To what extent should be attempt to move people from public facilities to private homes?

A.1: Generally, the host areas are planning only to use private homes volunteered in advance of relocation. All plan for mass feeding, with host area residents generally included. Some Webster Parish officials felt there would be a continuing acceptance of relocatees into private homes. "Would work because most people have relatives in Shreveport and throughout the South because of the influence of the churches." New York officials also felt that many homes would be volunteered. Most participants felt that individuals would have to be allowed to select their guests in order to make private housing work. The government should stay out of the issue because of its sensitivity.

Q.2: To what extent should we attempt to introduce the relocated population into our economic and social structures?

A.2: All respondents were negative to the concept of introducing relocatees in the host area economic structure, except for a few critical skills. Except for church activities, they felt that any inclusion would merely aggravate problems. Relations will become more strained as time goes on.

Q.3: How do we locate key relocatee personnel and identify the particular skills needed?

A.3: Local planners are following DCPA's planning guidance for registration. However, many doubts were expressed: (1) there is too much paper-

work and time wasted; (2) they would miss critical skills, such as former R.N.'s; and (3) they can get needed skills simply by calling for them. New York officials raised the problem of shelter managers. Red Cross is charged with responsibility for national disasters. This lessens the prestige of civil defense. In floods, the Red Cross calls in national professionals, but these professionals would not be available in a crisis relocation.

Q.4: Should we attempt further dispersal of the relocatees, or should we concentrate on upgrading fallout protection?

A.4: This is considered to be a state- or federal-level problem. However, it is generally agreed that further dispersal is impractical. They base this on arguments that (1) they are using all available spaces; (2) the logistical problems would be multiplied; and (3) secondary movements would weaken their control over relocatees. Webster Parish officials did wish to move people into Southern Arkansas. Region Five said the Arkansas areas were already used.

Q.5: Given our present plans for fallout protection, how do we determine what should be done, who should do it, and how do we allocate resources?

A.5: Host area plans include data on shelter upgrading. However, local officials are very skeptical. Many consider the problems to be risk area, state or federal. There is concern about local resources, knowledge and capabilities. Webster Parish does not have enough dirt. New York says it doesn't have enough protection for host area residents, let alone relocatees. "They might just as well stay and die in New York City."

Q.6: Certain organizations were planned to relocate as units so as to continue their activities in the host area or to commute to critical facilities in the risk area. Are these plans working out?

A.6: All areas consider organizational unit relocation to be a dormant or deferred issue. The only exception is for risk-area fire and police forces.

WORKSHOP EXERCISE LOCATIONS AND PARTICIPANTS

1. ELLSWORTH COUNTY

DCPA Region Six, Kansas City Field Office
October 19, 1978

James Holland, Director, DCPA Kansas City Field Office
Frank Mollner, Region Six, Denver Field Officer
Bob Roger, NCP Planner, Missouri
Frank Sotrines, Sr., NCP Planner, Kansas
David Williams, NCP Supervisor, Missouri

2. SHREVEPORT

DCPA Region Five, Shreveport, Louisiana
October 31, 1978

David Churchill, Chief Louisiana NCP Planner
F.L. Morrison, Director, Louisiana State Emergency Preparedness Office
John Roberts, Region Five, Louisiana Field Officer
John Stallings, Region Five, Chief Systems and Plans Division
George Van den Berghe, DCPA Research COTR

3. WEBSTER PARISH

Parish Courthouse, Minden Louisiana
October 31, 1978

Lloyd Beatty, Mayor of Heflin, Chairman, Parish Mutual Assistance Council
Ruby Cobb, Webster C.D. Office Secretary
Gordon Ervin, Webster C.D. Director
Richard Griffin, Mayor of Sarepta
Ruth Overton, Secretary-Treasurer, Webster Parish Police Jury
David Thomas, Webster Parish Deputy C.D. Director
Bill Womack, Vice President, Webster Parish Police Jury

4. GLENS FALLS

New York State, Northern District EOC
December 7, 1978

Robert E. Bader, New York ODP, Northern District
Robert E. Dolan, Montgomery County
Malcolm Douglas, Washington County
J. Hayes, DCPA, Region One
Richard Herskowitz, New York NCP Planner
Casper Kasparian, DCPA, Region One
John Marzola, Warren County
James P. O'Connor, Plattsburg, New York
Ralph Osterhout, Fulton County
C. Rotteveel, New York ODP
George C. Van den Berghe, DCPA Research COTR
John Vosburg, Montgomery County
Robert Winchell, Fulton County

EXHIBIT C.1

REGIONAL-LEVEL WORKSHOPS TO TEST HOST AREA

CRISIS RELOCATION MANAGEMENT CONCEPTS

Purpose

An initial study has developed conclusions and recommendations regarding alternative host area management concepts (Exhibit 1). The purpose of the workshop is to explore these concepts to validate, modify and expand their applicability to crisis relocation.

Method

Conduct a desk-top exercise with six to ten regional personnel, familiar with crisis relocation planning. The workshop should be scheduled for a half-day (three hours) session. A standard set of assumptions (Exhibit 2) will be presented. A set of questions will be presented (Exhibits 3, 4 and 5). The regional personnel will be requested to discuss the questions from the viewpoint of the managers in their host areas. (At the discretion of the region, state or contract planners may be included.)

Results

The results of the workshops will be recorded and the findings will be used to modify the initial study conclusions. The desirability and the feasibility of conducting follow-on workshops with local area personnel will be explored.

EXHIBIT C.2

PROCESS TO BUILD ORGANIZATION STRUCTURES

1. IDENTIFY OBJECTIVES AND PURPOSES
2. IDENTIFY FUNCTIONS AND PROCESSES
3. IDENTIFY DECISIONS
4. ESTABLISH A HIERARCHY OF DECISIONS
5. DERIVE AN ORGANIZATIONAL STRUCTURE

EXHIBIT C.3

- ° CRISIS RELOCATION INVOLVES DECENTRALIZATION OF OPERATING MANAGEMENT AND CENTRALIZATION OF DECISION-MAKING MANAGEMENT.
- ° THIS SHORTENS THE CHAIN OF COMMAND, BROADENS THE SPAN OF CONTROL.
- ° MORE KNOWLEDGE AND CAPACITY, BETTER COMMUNICATIONS, AND CLEARER LINES OF AUTHORITY AND COORDINATION ARE REQUIRED.
- ° MANY RISK AREA "CLEARINGHOUSES" TO COMPILE INFORMATION AND AUTHENTICATE AUTHORITY WILL BE ELIMINATED.

EXHIBIT C.4

HOST AREA MANAGEMENT STUDY CONCLUSIONS

Host area management--public and private--is competent on an effective sustaining basis to achieve:

- ° Reorientation of local organization, staff, facilities, and operation to meet relocation requirements;
- ° Maintenance of fire, police and medical services; and
- ° Reception and care of relocatees.

Host area management will need support to achieve these goals:

- ° Overall plans which define requirements and scope of local activities;
- ° Training material to provide procedures and technical information for self-help operation;
- ° Intelligence, communications and direction from higher authorities; and
- ° Contingent emergency support.

Central management--central city, corporate, state and federal--should provide:

- ° Continuing operations of essential goods and services;
- ° Overall political and economic direction and allocation;
- ° Communications systems for reliable two-way intelligence, rapid transmissions of needs to central authority, and competent, authoritative decisions from central authority;
- ° Effective, organized, rapid-response, contingent emergency service forces; and
- ° Centralized control of public information and of special programs, such as public fallout shelters.

EXHIBIT C.5

THE SITUATION

1. It is now four days after the President and Governor declared the National Crisis and ordered Relocation.
2. The Crisis Relocation Plans have been implemented. We have about three and a half times our resident population, but we don't seem to have any unmanageable problems. All in all, things have worked out well.
3. For the past four days, we've been getting lots of general information over the news media, and it appears that we're in a showdown situation with the Russians. There's lots of debate, but we really don't know anything helpful to tell us how long the relocation will continue or the likelihood of war or peace.
4. The President and Governor have declared a State of Emergency, with all the attendant legal changes. So far, we really haven't felt any great impact of these on our operations. We've been too busy getting people settled and cared for.
5. It appears that essential supplies of food, fuel and medicine are arriving all right. Of course, to day we've been mainly operating from supplies on hand.

EXHIBIT C.6

DIRECTION AND CONTROL

1. To what extent do we need to realign our overall host area organization to establish an "emergency government?" What is the status and utilization of our EOC, and other special facilities?
2. How, and to what extent, should we coordinate our activities with adjacent areas, risk areas, state, federal and military activities?
3. How do we determine means and levels to control supply and distribution of goods and services?
4. How do we acquire, evaluate and interpret state and national information?
5. How do we establish an internal intelligence system to determine, interpret and report our needs and capabilities to central authorities?
6. It appears that we may be short of medical supplies. What further data do we need to verify this?
7. If we are short, what do we do about it? What will be the impact on others?

EXHIBIT C.7

EMERGENCY SERVICES

1. What is required to improve the effectiveness of our operations? Should we reorganize our forces? How much more manpower?
2. What contingencies should we be anticipating during relocation and how do we cover them?
3. To what extent do we need contingent support from outside, and how do we ensure we'll get proper help when we need it?
4. Do we need special training for conditions after an attack, such as medical, RADEF, etc.?
5. Are we prepared to receive and disseminate an attack warning? How should we deploy our forces?

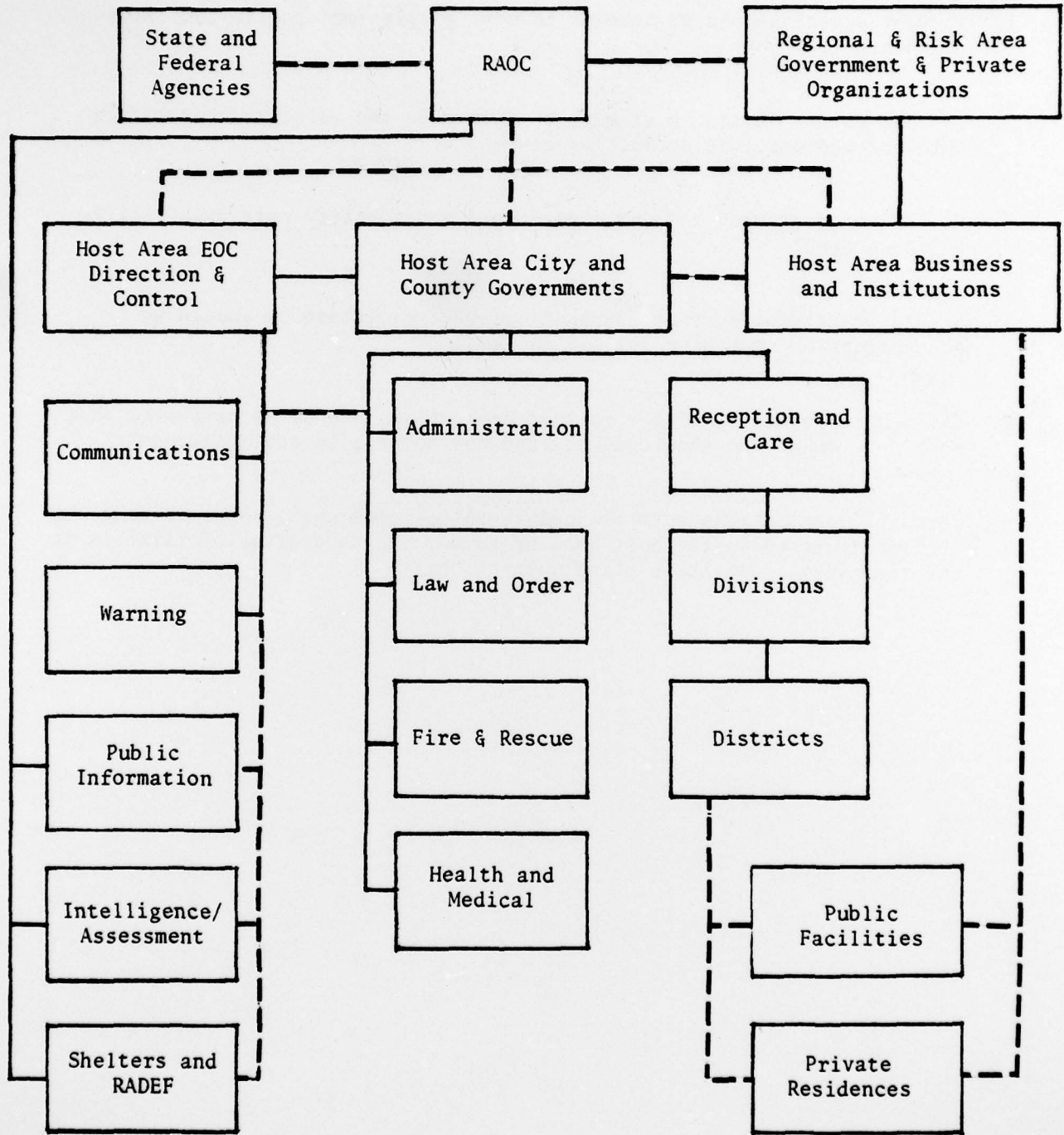
EXHIBIT C.8

RECEPTION AND CARE

1. To what extent should we attempt to move people from public facilities to private homes?
2. To what extent should we attempt to introduce the relocated population into our economic and social structures?
3. How do we locate key relocatee personnel and identify particular skills which we need?
4. Should we attempt further dispersal of the relocatees or should we concentrate on upgrading fallout protection?
5. Given our present plans for fallout protection, how do we determine what should be done, who should do it, and how do we allocate resources?
6. Certain organizations were planned to relocate as units so as to continue their activities in the host area or to commute to critical facilities in the risk area. Are these plans working out?

EXHIBIT C.9

ALTERNATIVE HOST-AREA ORGANIZATION CONCEPT FOR CRISIS RELOCATION



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This final report describes the development of alternative host-area management concepts. DCPA crisis relocation planning guidance and supporting research documents were analyzed to determine organization and management objectives, purposes, policies, and duties. Organization principles and criteria were applied to emergency operations; and levels of decision capability were defined. General management problems resulting from population dispersal were explored on functional and jurisdictional bases. Management requirements for upgrading and constructing fallout shelters were analyzed in light of the structure of the construction industry. Proposed crisis relocation organization modes were compared to requirements and shortcomings were documented; and alternative management concepts were developed to alleviate the shortcomings at both regional and host-area levels of organization. Field exercises were conducted to test, refine and modify the alternative concepts. The results of these exercises were evaluated, and have been incorporated into this final report.

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