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**ANNUAL
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**DEPARTMENT OF DEFENSE
OFFICE OF CIVIL DEFENSE**

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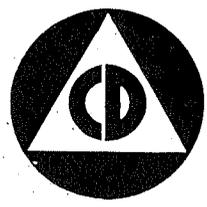
DEPARTMENT OF DEFENSE

ANNUAL REPORT

United States

of the

OFFICE OF CIVIL DEFENSE



FOR FISCAL YEAR

1963

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Letter of Transmittal

THE SECRETARY OF DEFENSE
WASHINGTON

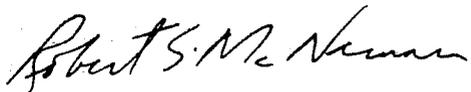
December 21, 1963

DEAR MR. PRESIDENT:

In compliance with section 406 of the Federal Civil Defense Act of 1950 and section 5 of Executive Order 10952 of July 20, 1961, I submit herewith the second annual report of the Office of Civil Defense, covering civil defense functions assigned to me.

Major progress in civil defense during the fiscal year and passage by the House of a shelter development bill (H.R. 8200) has led to increased reliance in our strategic defense planning on prospects for a workable fallout protection system by the turn of the decade. The integration of civil defense and military defense is improving the planning and execution of the total defense effort.

Sincerely,



ROBERT S. MCNAMARA

THE PRESIDENT
THE WHITE HOUSE

Letter of Transmittal

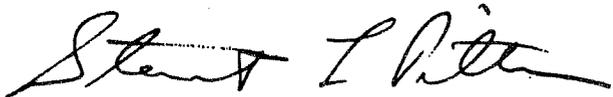
ASSISTANT SECRETARY OF DEFENSE
WASHINGTON

December 19, 1963

DEAR MR. SECRETARY:

Herewith is the second annual report of the Office of Civil Defense. Major developments of fiscal year 1963 are outlined in Part I, entitled "Introductory Highlights."

Sincerely,

A handwritten signature in black ink, appearing to read "Stuart L. Pittman". The signature is fluid and cursive, with the first name "Stuart" and last name "Pittman" clearly legible.

STUART L. PITTMAN

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INTRODUCTORY HIGHLIGHTS

Civil defense progress at the end of fiscal year 1963 was clearly evident on two distinct fronts:

First, noteworthy success in surveying, marking, and stocking of public fallout shelters resulted in changing the character and quality of civil defense in the United States by (1) reorienting civil defense plans and programs around the lifesaving potential offered by a nationwide fallout shelter system and (2) identifying the least expensive methods of expanding this system.

Second, the Armed Services Committee of the House of Representatives conducted an exhaustive study of certain facets of civil defense, particularly those concerning fallout shelters. This completely objective study was extraordinary in that it was based on the extensive testimony of 108 witnesses, most of whom possessed a special competence in some field related to fallout shelters. All arguments against the program had to be answered in unequivocal fashion, and the House was provided the information needed for it to develop and pass legislation designed eventually to extend the lifesaving potential of the nationwide fallout shelter system to every American. This legislation, H.R. 8200, was passed by the House, and was referred to the Armed Services Committee of the Senate on September 18, 1963.

As described in the body of this report, the details of civil defense developments and accomplishments during the year show that a sound and substantial program has been formulated since major civil defense responsibilities were assigned to the Department of Defense 2 years ago. Basic elements of this program are operational and adequately based to support the action needed to make fallout protection available to everyone.

Some major facts on development status of the nationwide fallout shelter system at the end of fiscal year 1963 were:

1. Fallout shelter space for approximately 104 million persons had been located in existing structures. Of this amount, it is expected that shelter for 70 million persons can be marked, licensed, and stocked.
2. Owners of more than 50,000 facilities had signed shelter license agreements for use of space to protect more than 47 million persons.
3. Shelter space to protect nearly 43 million persons had been marked in approximately 54,000 facilities.
4. Cumulative procurement had been initiated for shelter supplies sufficient to serve 50 million persons.
5. Shelters in approximately 21,000 facilities had been stocked with supplies to serve nearly 10 million persons.

6. About 5,000 county and municipal governments were active in local management and installation of shelter supplies.

Other major developments during the year included:

1. Establishment and implementation of civil defense functions as a mission of the Armed Forces to be performed prior to nuclear attack and during emergency conditions existing after attack.

2. Further extension in use of Department of Defense resources for civil defense to include training of radiological monitors by the U.S. Continental Army Command and use of Standby Reserve officers in State and local civil defense work.

3. Establishment of Regional Civil Defense Coordinating Boards to coordinate the civil defense planning of military departments and Federal agencies in the field with State and local governments.

4. Use of approximately 15,000 Field Extension Service personnel of the Department of Agriculture in the rural civil defense program.

5. Increased emphasis on shelter use training and radiological defense training, including decontamination, by development of additional courses offered civil defense personnel at Office of Civil Defense schools.

6. Expansion of training capability by initiation of a program for extension divisions at 51 State institutions of higher learning to train instructors in shelter management and radiological monitoring and to conduct civil defense conferences with State and local officials.

7. Training of approximately 788,000 persons in medical self-help techniques, more than 278,000 in civil defense adult education, and 4,255 key civil defense personnel and instructors at OCD schools.

8. Strengthening of the data base for damage assessment in major resource areas; e.g., food, fuel and power, construction equipment, water, health, and manpower.

9. Completion of plans for the Emergency Broadcast System (EBS), established on August 5, 1963, to replace CONELRAD (Control of Electromagnetic Radiations). The EBS will make approximately 1,700 radio stations available to the President or his spokesman and to State and local governments for the purpose of keeping the citizenry informed during civil defense emergencies.

10. Work in progress on the National Emergency Alarm Repeater (NEAR) system, designed to give immediate indoor warning of impending attack. This included an analysis of 170 electric utility systems to determine size and location of NEAR signal generators and the testing of NEAR prototype generating equipment in 7 electric utility systems.

11. Activation of the Protective Structures Development Center at Fort Belvoir, Va., in December 1962, to provide facilities supporting the development of improved design and construction of protective

CIVIL DEFENSE PROGRAM PERSPECTIVE

The President, in his message to the National Association of State Civil Defense Directors on May 8, 1963, said:

... it makes sense to work today toward more effective civil defense tomorrow. The present national civil defense program is a soundly conceived and practical minimum effort in this direction. I consider this program a sensible and necessary undertaking in which the Federal Government has clear responsibility to provide consistent and continuing leadership, including the necessary financial support without which States, counties and local communities cannot meet their responsibilities.

Launched in fiscal year 1962 and continued throughout fiscal year 1963, the President's civil defense program remained a balanced one consisting of the following components:

1. *A nationwide system of fallout shelters.*—This, the principal part of the program, is designed to locate or develop fallout shelter space and mark and stock it for use by the entire population.

2. *Complementary civil defense systems.*—These are integral elements of the civil defense program that are necessary to make effective use of shelters and to conduct emergency operations. They include:

A. *A nationwide warning system* to inform people of impending attack and let them know when to go to shelter.

B. *Communications systems* to keep people informed of what is happening during a civil defense emergency and to direct emergency operations.

C. *Nationwide monitoring and reporting systems* to collect, evaluate, and disseminate information on radioactive fallout.

D. *A damage assessment system* to develop preattack estimates and postattack assessment of damage for guidance in preattack planning and postattack operations.

3. *Federal assistance* to gain active participation by all levels of government, by all types of private organizations, and by individuals responsible for the safety of others. This assistance includes technical guidance, training and education, financial assistance, and surplus property donations.

4. *Supporting activities* to inform the public of civil defense developments, to gain participation of industry and national organizations, to maintain liaison with international civil defense, and to obtain guidance and recommendations from experts.

5. *Research.*—The President's program uses carefully organized research to give perspective to the development and stockpiling of civil

shelter system and to all complementary systems and activities designed to make fallout shelters practicable and habitable in an emergency.

SHELTER SPACE

Lifesaving Potential

All studies and analyses of possible nuclear attack patterns on the United States demonstrate that fallout shelters can save more lives than any other feasible protective measures. During the past 2 years, the Department of Defense conducted studies of more than 20 attack patterns to analyze military strategy and to evaluate the development of weapons systems and civil emergency planning. The staffs of the Joint Chiefs of Staff and the Defense Atomic Support Agency did the principal targeting, and the National Resource Evaluation Center performed the computer work for these studies.

The studies covered :

1. Various military, urban-industrial, and population targets.
2. Nuclear weapon attacks ranging from 2,000 to 13,000 megatons with combinations of airbursts, groundbursts, and weapons of various sizes.
3. Complex variables involving manner of initiating attacks, enemy targeting options, enemy abort rates, attrition from U.S. military action, duration of attack, weapons accuracy, and upper wind direction and velocity.
4. Evaluation of shelter potential, allowing for poor use of shelters by some occupants and inability of some people to get to shelter.
5. Attacks designed to consider maximum damage of all types, including damage to cities.

Composite results of the studies are shown in figure 1. Noteworthy observations are :

1. A nationwide fallout shelter system would save many millions of lives in any attack.
2. The number of people surviving because of fallout shelter would double or even triple under heavier attacks.
3. At lighter attack levels, 25 to 40 million persons would be saved by a fallout shelter system ; a saving of 40 million lives would increase total survivors from 80 million to 120 million.

Requirements and Sources

During fiscal year 1963, the shelter requirements were reassessed to cover the 5-year period ending fiscal year 1968. With allowance for population growth and movement between home and work, estimated shelter space for 240 million persons will be needed by the end of fiscal year 1968.

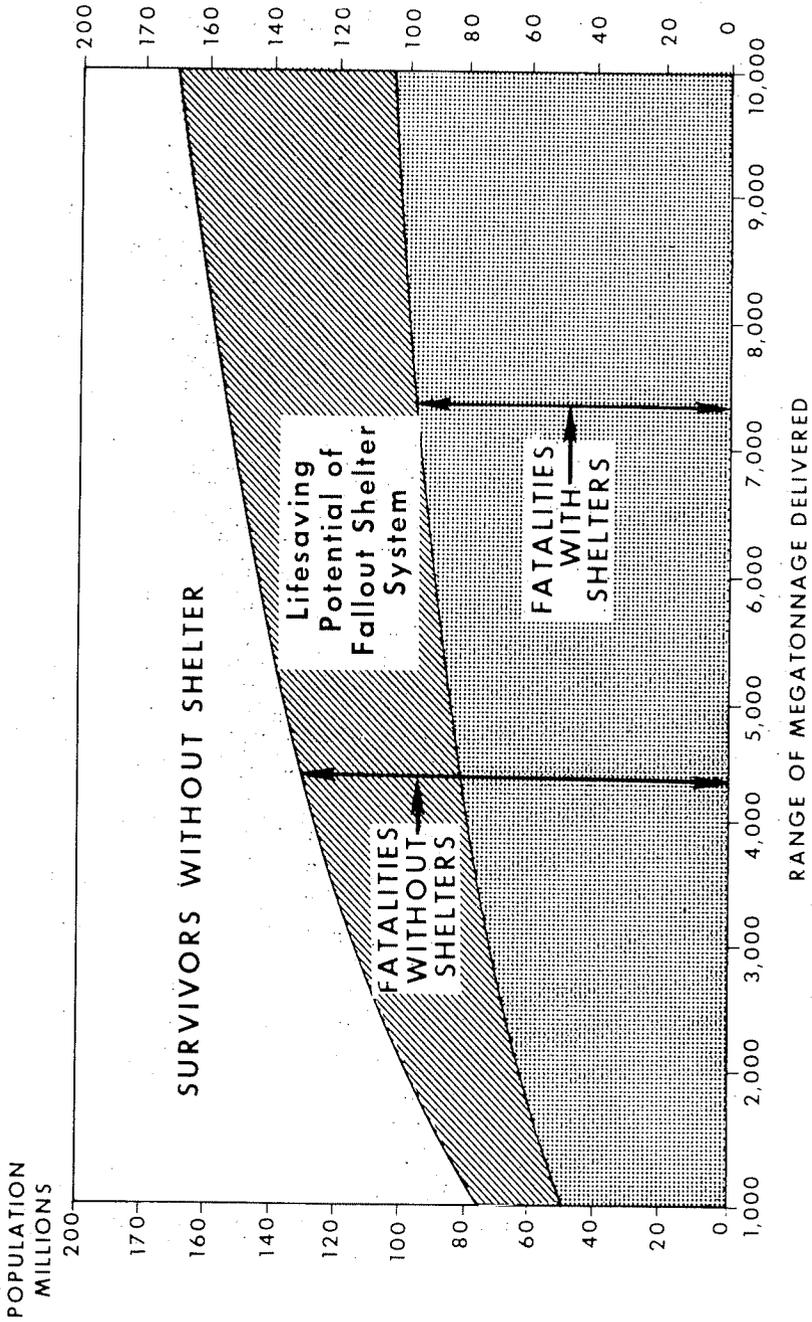


Figure 1.—Lifesaving potential of nationwide fallout shelter system.

Methods planned for obtaining the required amount of shelter space (see fig. 2) include:

1. *The national survey.*—This nationwide program has been in progress since fiscal year 1962. (See *National Shelter Program* in part III.) Of usable shelter space located for approximately 104 million persons, it is anticipated that space can be made available for 70 million. Contingent upon future appropriations, space for an estimated additional 20 million persons is anticipated from this source during the next 5 years as a result of new construction and modification of existing buildings.

2. *The Federal buildings program.*—The incorporation of fallout shelters into Federal buildings (see *Shelters in Federal Buildings* in part III) is expected to provide space for approximately 5 million persons. This is in addition to shelter space located in these buildings by the national shelter survey.

3. *Proposed shelter development program.*—This program is a revised version of the shelter incentives program proposed in fiscal year 1962. Contingent upon future legislation and appropriations, the proposed shelter development program would produce shelter space in nonprofit institutions for an estimated 90 million persons over a 5-year period.

In January 1963, the administration proposed legislation to the Congress (an amendment to the Federal Civil Defense Act of 1950) which would enable the Federal Government to make payment to State and local governments and to any nonprofit institution constructing or modifying approved public shelter space which meets shelter standards and criteria prescribed under the provisions of this act.

This proposed legislation would encourage the development of fallout shelter space in nonprofit schools, hospitals, and welfare institutions, through payment for a portion (or all) of the estimated cost of providing the shelter space. Under the proposed program, the nonprofit status of an institution would be determined by standards used under the Internal Revenue Code. Payment would not exceed \$2.50 per square foot of approved fallout shelter space which:

A. Meets shelter standards prescribed by the Office of Civil Defense.

B. Is located in an area where local civil defense officials certify existing shelter is inadequate to meet the needs under approved local shelter use plans.

C. Can shelter 50 or more persons in one structure.

D. Would be immediately available for public use as shelter in an emergency.

One of the compelling reasons for the proposed Shelter Development Program is that most of the potential shelter spaces found in

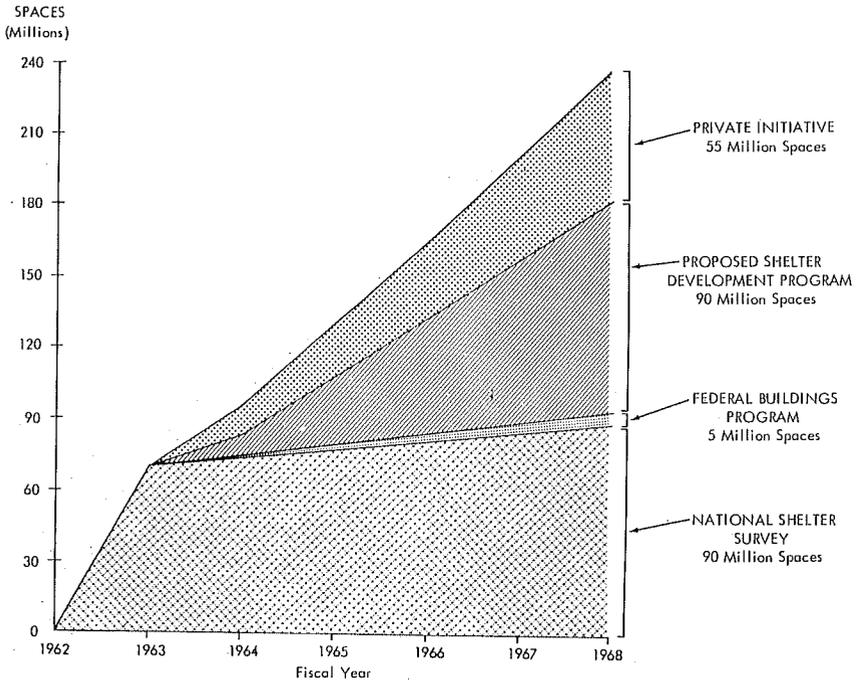


Figure 2.—Planned sources of fallout shelter space.

the survey of the National Shelter Program are in downtown urban areas. Part of them would be usable only for the daytime, working population and out of reach of the nighttime, residential population. Schools usually are well located as shelter sites with respect to residential population.

4. *Private shelters.*—Home, community, and industrial shelter space for 55 million persons is expected to be generated by the impact of other elements of the shelter program and by massive Federal technical assistance. OCD is supporting this effort with shelter research and design development, low-cost home shelter development, educational programs by the Field Extension Service of the Department of Agriculture, and other programs and activities discussed elsewhere in this report.

Shelter summary.—Following is the projected plan for obtaining shelter for 240 million persons:

| Source | Millions of spaces |
|---|--------------------|
| National shelter survey | 90 |
| Shelter in Federal buildings | 5 |
| Proposed Shelter Development Program | 90 |
| Private initiative (industry, homeowners, and others) | 55 |
| Total | 240 |

ORGANIZATION OF CIVIL DEFENSE

Headed by the Assistant Secretary of Defense (Civil Defense), the Office of Civil Defense in the Department of Defense is the basic organization responsible for conducting the civil defense program at the Federal level. The legal basis for this organization is (1) Executive Order 10952, *Assigning Civil Defense Responsibilities to the Secretary of Defense and Others*, effective August 1, 1961, and (2) a subsequent departmental directive of the Secretary of Defense establishing the Office of Civil Defense (OCD) on August 31, 1961. On February 1, 1963, the Assistant Secretary of Defense (Civil Defense) was assigned the additional responsibility of coordinating military aid in civil and domestic emergencies.¹

Since its inception, the OCD has been organized on a functional pattern adaptable and responsive to the civil defense program. At the end of fiscal year 1963, the organizational structure was as shown in figure 3. In the interest of efficiency and effectiveness of operations, some major changes during the year included :

1. Establishment of the Directorate for Technical Liaison, to assure that OCD policies, plans, programs, and executive actions are consistent with and predicated on sound technical and scientific concepts.

2. Elevation of the Office of the Regional Coordinator from division level to staff status in the Office of the Assistant Secretary.

3. Formation of two separate divisions, Communications-Electronics and Warning, in the Directorate for Technical Operations. These were formerly one division.

4. Consolidation of responsibilities for coordination of supply requirements, procurement, contracts, and inventory and supply management. A new Materiel Office in Management was established to handle this function, formerly organizationally diversified.

The authorized personnel ceiling in effect at the end of fiscal year 1963 called for 1,068 positions. Of these positions, 448 were at the departmental level, 470 at the 8 OCD regional offices (see fig. 4), and 150 at other field activity locations such as training centers and warning centers. The personnel ceiling was lower than that of the preceding fiscal year by 80 positions, and the percentage of field positions was up from approximately 45 percent to 58 percent of the total ceiling. This increase in field positions was principally the result of greater effort to handle most OCD operational activities with States through the eight regional offices.

The OCD initiated special training for its personnel to develop an integrated management information system. The system will rely

¹ See app. 1.

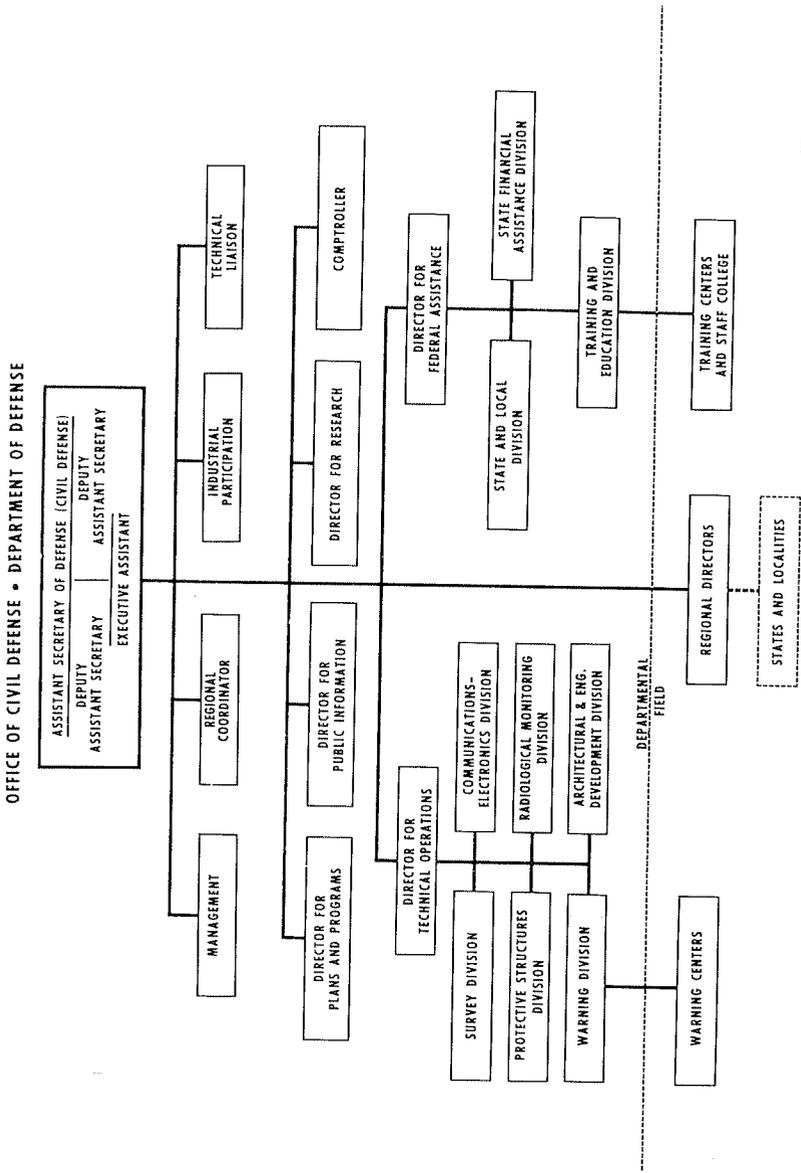


Figure 3.—OCD organization chart.

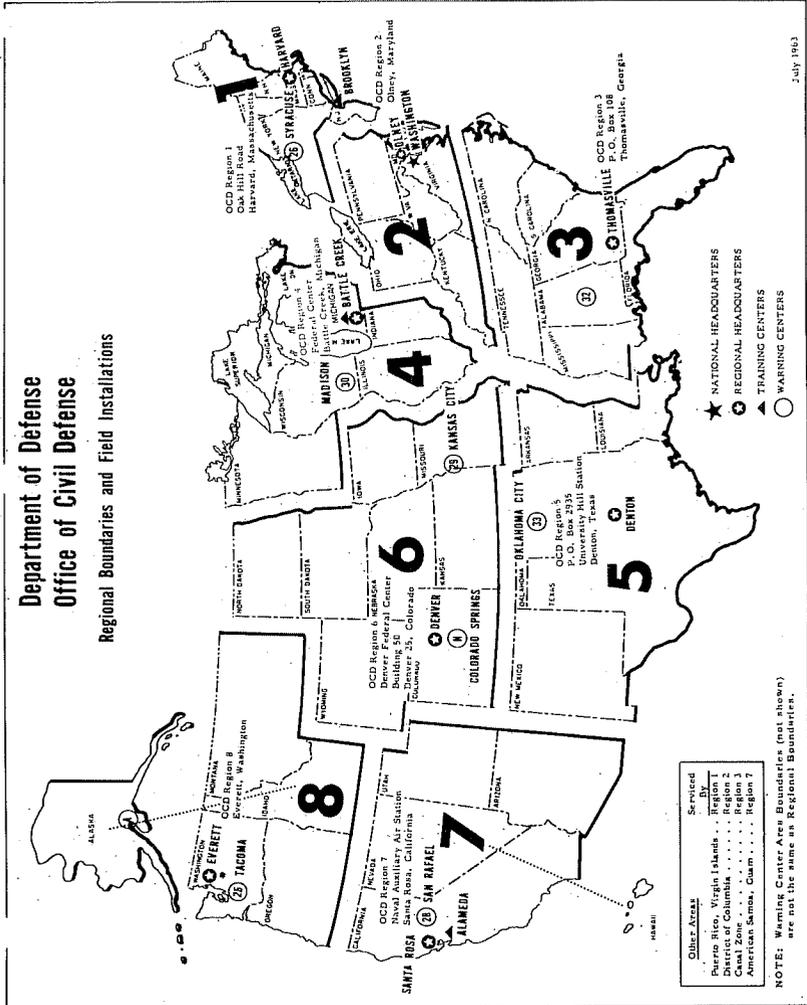


Figure 4.—OGD regions.

upon the use of automatic data-processing equipment and the application of Program Evaluation and Review Techniques (PERT) and other management techniques to control program scheduling and to provide information for making vital decisions on allocating resources to meet program objectives.

In addition to maintaining an organizational pattern adaptable to civil defense needs and training its personnel in suitable management techniques such as PERT, the OCD promoted efficiency and economy of operations through other available means. For example, auditing of Federal matching funds accounts maintained with the States and their political subdivisions resulted in revisions in the matching funds program and clarification of policy decisions. Through the use of new and improved reporting techniques and automatic data-processing methods, the cost of the shelter surveys in the National Shelter Program was reduced substantially below initial estimates, resulting in saving thousands of man-hours and several million dollars.

COORDINATED FEDERAL SUPPORT

All civil defense efforts of the Federal Government are coordinated through the OCD. This focuses the use of Federal resources on priority programs and activities with a national purpose that has become increasingly evident during the past 2 years, especially during fiscal year 1963. Transfer of major civil defense functions to the Department of Defense by Executive Order 10952 made this type of operation possible, and the OCD has pursued it to full advantage by (1) using DOD resources for civil defense and (2) coordinating civil defense operations of Federal civilian agencies.

Military Support of Civil Defense

Fiscal year 1963 marked a period of conclusive recognition that effective civil defense is of necessity a complement of military defense. It was indeed recognized that civil defense is an integral part of the overall defense structure, and that its size and character are intimately related to those of the Nation's defense forces. Secretary McNamara, on January 31, 1963, in his testimony on military posture before the Committee on Armed Services, House of Representatives, stated:

The effectiveness of an active ballistic missile defense system in saving lives depends in large part upon the existence of an adequate civil defense system. Indeed, in the absence of adequate fallout shelters, an active defense might not significantly increase the proportion of the population surviving an all-out nuclear attack. For this reason, the very austere civil defense program recommended by the President . . . should be given pri-

In his statement of June 4, 1963, to Subcommittee No. 3, Committee on Armed Services, House of Representatives, Gen. Earle G. Wheeler, speaking for the Joint Chiefs of Staff, said :

. . . Very plainly, we recognize that situations may exist where national evaluation shows civil recovery should have a priority over certain military requirements. These situations cannot be predicted in advance. Meanwhile, a prudent and practical attitude in the light of offensive and defensive requirements dictates that military assistance complement the civil effort in civil defense. This is the basic view of the Department of Defense and the Joint Chiefs of Staff on civil defense.

Active planning for civil defense is now underway within the services. Military defense plans are being coordinated with civil defense plans. Military guidance is being furnished to Federal, State, and local agencies in developing their plans. We designate type units in civil defense plans if such units are both required and available. We consider all active units and all Reserve component units available for civil defense missions but the commitment of a specific unit to a specific mission—combat or civil defense—is conditional to evaluation at the time . . .

Gen. Curtis E. LeMay, Chief of Staff of the Air Force, in a letter to the same committee on June 11, 1963, said :

The program to stock all available public shelter areas on our bases with subsistence, medical kits, and radiation equipment is almost complete. We are encouraging members of the USAF Standby Reserves to assist in local civil defense planning; we are participating in civil defense planning at the regional level; and all base commanders have been directed to work closely with local civil defense directors to insure mutually supporting civil defense operations. . . .

Military role.—On April 23, 1963, the Secretary of Defense, by departmental directive,² established certain civil defense functions as a mission of the Armed Forces to be performed during emergency conditions involving nuclear attack or conditions preceding a nuclear attack on the United States. This directive for the first time clearly outlines the basic concepts of military support, states the reasons and requirements for an effective civil defense program, and stresses the interdependence of military and civil defense. During the latter part of fiscal year 1963, the military departments were implementing this directive with telling effectiveness, as evidenced by daily observation. In addition, DOD instructions were issued for guidance in implementing established DOD shelter policy at military installations; e.g., (1) *Utilization of Fallout Shelter Space at Military Installations*,³ and (2) *Marking and Stocking of Fallout Shelter Within Military Installations*.⁴

Use of Department of Defense resources.—Throughout fiscal year 1963, the civil defense program was accelerated with increased economy and efficiency of operations made possible only by maximum use

² See app. 2.

of DOD resources. This is reflected in many instances elsewhere in this report, and the strong impetus thus given civil defense was evident in several areas of operation:

1. The Army Corps of Engineers and the Navy Bureau of Yards and Docks continued to carry out a major portion of the National Shelter Program by surveying the entire Nation for available fallout shelter space. In addition, they assisted this program by using existing architectural and engineering talent for shelter planning and designing, by conducting engineering case studies, and by constructing, managing, and operating a protective structure and development center.
2. The Defense Supply Agency managed the logistics of all OCD supplies; e.g., procurement, receipt, storage, and issuance to State governments of all shelter supplies, management of OCD emergency supply inventory, and use of technical military capability for food and container research and development of procurement specifications.
3. The Defense Communications Agency integrated the civil defense communications system with military communications systems to improve emergency capability, provide greater reliability and flexibility, and reduce vulnerability by using more dispersed facilities.
4. The Adjutant General's Office, Department of the Army, performed major OCD publication services such as procuring printing and binding, distributing new publications, maintaining reserve stocks, and filling requisition requests from State, local, and public sources.
5. The Army Finance Office performed all OCD payroll and disbursing services.
6. The military departments made Standby Reserve officers available to State and local governments for assignment of civil defense duties.
7. The U.S. Continental Army Command (USCONARC) trained State and local civil defense personnel in explosive ordnance reconnaissance and radiological monitoring.
8. The North American Air Defense Command (NORAD) maintained an integrated military and civilian warning system providing warning service to all OCD warning centers.
9. Arrangements with the Air Force provided for the Civil Air Patrol (CAP) to perform aerial radiological monitoring in 48 States, the District of Columbia, and Puerto Rico.
10. The Joint Chiefs of Staff, the Defense Atomic Support Agency, the Weapons System Evaluation Group, and the National Military Command Systems Support Center were chief participants in studies of attack patterns analyzing military strategy and evaluating weapons systems and civil emergency planning. These studies established need

fense program. In addition, continuing information and evaluation studies from this source are essential for maintaining the OCD damage assessment system and for determining the adequacy of OCD operational plans.

11. The General Counsel of the Department of Defense and the Assistant to the Secretary of Defense (Legislative Affairs) furnished OCD legal and legislative liaison services.

12. The Assistant Secretary of Defense (Public Affairs) continued to perform certain civil defense public information functions to assure coordination of public information common to both military and non-military programs.

Support of Other Federal Agencies

In accordance with Executive Order 10952 assigning major civil defense responsibilities to the Secretary of Defense, the Office of Civil Defense works with other Federal agencies to develop and execute civil defense programs. This Executive order also provided that the Director, Office of Emergency Planning, would advise and assist the President in connection with the total civil defense program and would be responsible for the continuity of government programs at the Federal, State, and local levels. Under Executive Order 10958, certain civil defense responsibilities with respect to food and medical stockpiles were assigned to the Secretaries of Agriculture, and Health, Education, and Welfare, respectively.

Nine Executive orders (10997-11005) signed by the President in February 1962 and nine Executive orders (11087-11095) signed by the President in February 1963 generally prescribe emergency preparedness functions of the several departments and agencies under all emergency conditions. To a limited degree, most of these Executive orders include civil defense functions that must be carried out in consonance with national civil defense plans, programs, and operations of the Secretary of Defense.

The OCD uses contractual arrangements with Federal departments and agencies to coordinate other civil defense functions performed by them. The OCD has entered into contractual arrangements with several departments and agencies to use their special competence in performing its functions under Executive Order 10952; e.g., numerous research projects, compilation of damage assessment data, and use of the Field Extension Service of the Department of Agriculture in rural civil defense. Various relationships of this type with other Federal agencies are described in applicable sections of this report.

Regional Civil Defense Coordinating Boards were established in January 1963⁵ to coordinate civil defense plans and action of all

military departments and Federal agencies with State and local civil defense operations.

STATE AND LOCAL RESPONSE

The ultimate success of the President's civil defense program requires positive response from State and local governments and from industrial, organization, and community leaders. Several facts during fiscal year 1963 revealed that this response was forthcoming, and there is reason to expect that it will continue in proportion to the civil defense leadership shown by the Federal Government in helping to provide fallout shelter space as outlined in preceding sections of this report.

Two major examples of this response were:

1. Willingness of tens of thousands of building owners and managers to make their buildings available for public fallout shelters. Despite natural public dislike for the necessity of providing self-protection against nuclear attack, less than 10 percent of building owners and managers covered by the shelter survey have declined to make their buildings available as public shelters without compensation. This includes the use of valuable storage space for shelter supplies.
2. Participation of approximately 5,000 county and municipal governments in the local management and installation of supplies in public fallout shelters.

All States supported the movement of supplies into shelters, and at least 61 State and local governments provided supplementary funds for this purpose. Reports show that 166 volunteer groups in 33 States and the District of Columbia donated labor and equipment to move supplies into shelters. Many trucking organizations, including members of the National Defense Transportation Association and many local units of the International Brotherhood of Teamsters, were active in this movement in several cities; e.g., San Francisco, Calif., Omaha, Nebr., Salt Lake City, Utah, Jacksonville, Fla., and New Orleans, La. Other volunteers included college and high school students, local police and firemen, local units of veterans and civic organizations, the Boy Scouts of America, the Salvation Army, Goodwill Industries, the Civil Air Patrol, and the National Guard.

Building owners in some cities have included shelter space in new construction, and one industrialist pledged \$50,000 to upgrade shelter space for 10,500 persons to meet the shelter deficiency in his community.

At the end of fiscal year 1963, budgets for civil defense operations in States and U.S. possessions generally showed an upward trend for the current biennium. Increases ranged from less than 1 to 129

1 to 71 percent in 12 States; one State showed no change, and current appropriation action was incomplete in 5 States and in the District of Columbia.

There has been some activity on the part of individuals, communities, and industry to develop shelters without Federal financial assistance. Although complete factual data on these activities are unavailable, detailed information reveals the existence of 405 community and industrial shelters so developed.

Some noteworthy examples of these shelters in industry are:

1. A total of 175 firms have produced 244 shelters; 218 have an aggregate capacity for 500,000 persons, averaging 2,300 persons per shelter.

2. Eight companies reported spending a combined total of more than \$1,470,000 to build, equip, and stock shelters.

3. Known shelters developed by banks totaled 43 and by telephone companies, 34.

4. One aircraft company has a blast shelter equipped with filters and a separate fallout shelter to accommodate 30,000 persons.

5. One company has provided fallout shelters in 7 plants to accommodate 3,911 persons; one 200-man shelter cost \$100,000, and one shelter has blast protection for 30 pounds per square inch overpressure.

6. Nine insurance and 12 utility companies have completed shelters for all employees, and 5 large companies are incorporating shelter into all of their plants dispersed nationwide.

Community shelters developed without Federal financial assistance are usually joint ventures of several families, sometimes involving entire apartment projects and in a few instances entire communities. Of 135 known shelters of this type, 63 are in apartment houses, 42 in schools, 5 in hospitals, and 4 in churches; 21 are sponsored by industry or other groups. Data on total capacity of these shelters are unavailable, but some of them are of considerable size; e.g., one 6-family underground shelter cost \$7,000 and can accommodate 100 persons, one city project costing \$10,000 will increase existing shelter from 700 to approximately 3,700 spaces, and a school shelter will accommodate 800 persons.

Reports of thousands of private family shelters in existence are difficult to substantiate. However, one company has scheduled the construction of family fallout shelters in a housing development containing 3,000 family units, of which 800 are currently under construc-

FINANCIAL SUMMARY

Approximately \$128.1 million was available to the Office of Civil Defense for obligation in carrying out civil defense operations during fiscal year 1963. Of this amount, \$2.3 million was carried over from fiscal year 1962 to be used for construction of facilities. The balance of \$125.8 million was from new appropriations made available for fiscal year 1963.

At the end of the year, OCD had obligated more than \$109 million. The \$18.7 million of unobligated funds includes \$18.3 million carried over into fiscal year 1964, leaving a balance of \$0.4 million no longer available. The amounts obligated for specific operational programs and activities are shown in table 1.

TABLE 1.—Financial summary for fiscal year 1963

[In thousands]

| Budget activity | Funds available for obligation | Funds obligated |
|---|--------------------------------|-----------------|
| GRAND TOTAL | \$128, 145 | \$109, 443 |
| OPERATION AND MAINTENANCE, TOTAL | 72, 845 | 72, 436 |
| Warning and detection | 14, 147 | 14, 084 |
| Warning and alert | 4, 120 | 4, 066 |
| Radiological fallout detection and monitoring | 8, 890 | 8, 884 |
| Warehousing and maintenance | 1, 137 | 1, 134 |
| Emergency operations | 17, 551 | 17, 308 |
| Communications and control | 1, 567 | 1, 525 |
| Damage assessment | 1, 608 | 1, 590 |
| Training and education | 9, 869 | 9, 821 |
| Public information | 4, 107 | 3, 977 |
| Industrial participation | 300 | 295 |
| Red Cross advisory services | 100 | 100 |
| Financial assistance to States | 27, 500 | 27, 464 |
| Survival supplies, equipment, and training | 6, 760 | 6, 738 |
| Emergency operating centers | 7, 800 | 7, 786 |
| Personnel and administrative expenses | 12, 940 | 12, 940 |
| Management | 13, 647 | 13, 580 |
| RESEARCH, TOTAL | 53, 000 | 36, 886 |
| Shelters | 42, 000 | 30, 107 |
| Shelter survey and marking | 9, 300 | 3, 967 |
| Shelter stocking | 32, 700 | 26, 140 |
| Research and development | 11, 000 | 6, 779 |
| CONSTRUCTION OF FACILITIES, TOTAL | 2, 300 | 121 |



Part III

NATIONWIDE FALLOUT SHELTER SYSTEM

Consistent with national shelter policy, a nationwide fallout shelter system is planned to produce shelter space for an estimated 240 million persons by the end of fiscal year 1968. Existing and proposed methods for attaining this goal are described in part II under *Shelter Space, Requirements and Sources*. This part of the report describes the progress achieved toward this goal during fiscal year 1963.

NATIONAL SHELTER PROGRAM

Immediate objectives of the National Shelter Program, initiated in September 1961; are to: (1) Locate suitable fallout shelters in existing facilities, (2) mark them with distinctive signs, and (3) stock them with food and water, medical and sanitation kits, and radiation measuring instruments. Long-range objectives are to keep the program current by: (1) Updating and maintaining the validity of shelter data and (2) locating additional shelters in communities having shelter deficiencies.

Upon initiation of this program, it was determined that public fallout shelters to be marked and stocked must (1) contain space for at least 50 persons, allowing 10 square feet per person in adequately ventilated shelters and 500 cubic feet in unventilated space, (2) contain 1 cubic foot of secure storage space per person, and (3) have a protection factor of at least 100. These requirements remained the same except that in October 1962, as the result of continued technical studies, the protection factor requirement was changed to 40; i.e., the radiation inside the shelter would be reduced to one-fortieth or less of that existing outside. This broadens the source for selecting available shelters and permits maximum use of available shelter space in existing buildings.

Fallout Shelter Survey Activities

The initial shelter survey was completed in fiscal year 1963. Using procedures and techniques developed and specified by OCD, the Army Corps of Engineers and the Navy Bureau of Yards and Docks contracted with architect-engineer firms to make the survey and supervise the work in two phases.

Phase I operations primarily identified potential fallout shelter areas in all public and private buildings, excluding single-family

dwellings, having a fallout protection factor of 20 or higher, and a potential capacity for at least 50 persons. Contractors analyzed day and night population data, determined potential public fallout shelters in assigned geographical areas, and collected structural data for machine computation of protection factors of buildings. Only structural data on shielding, not data on fitness for occupancy or modification, were sought.

Phase II operations made a detailed onsite survey of buildings identified in Phase I as having a protection factor of 40 or higher and being suitable for fallout shelter. It devised means and made cost estimates for increasing the capacity of all structures and for improving the shelter potential of buildings having less than a 100 fallout protection factor. Phase II also included the survey of selected special facilities, such as caves, mines, and tunnels, for shelter suitability. Principal improvements considered were additional shielding to increase amount of protection and ventilation to improve habitability and increase shelter capacity.

Data processing and reporting.—The voluminous data derived from Phase I operations were collected on an adaptation of the FOSDIC form (an acronym for *Film Optical Sensing Device for Input to Computers*), a form originally developed by the Bureau of the Census. By microfilming and electronic processes, the Bureau of the Census converted the data to computer codes on magnetic tape, and the National Bureau of Standards used electronic computers to determine the fallout protection factor of all surveyed buildings.

For use in shelter planning, pertinent information for each building or facility surveyed was sent to appropriate State and local civil defense officials. Similar information was sent to each of the military services relative to facilities under their jurisdiction. This information included the capacity of existing buildings and special facilities suitable for shelter use, the applicable fallout protection factor, estimated cost of upgrading substandard shelter space to a protection factor of 100, and estimated cost of increasing shelter space by such improvements as ventilation. However, the expense of upgrading and improving shelter space remained the responsibility of property owners.

For program control and further use in shelter planning, data compilations included the identification of shelter space available according to various types of structural categories; e.g., 33 classes of physical vulnerability, 5 types of ownership, 9 groups coded for 41 types of current usage, and 9 types of special facilities. In addition, shelter space data were summarized for standard locations, as used by the Bureau of the Census, to show the findings for the entire Nation,

States, and counties, cities of more than 25,000 population, and standard metropolitan statistical areas.

Operational results.—Phase I was completed on September 15, 1962. More than 5 million buildings were considered in this phase of the survey, and potential shelter space having a protection factor of 40 or higher was provisionally located. (See table 2.)

The magnitude of this operation is indicated by (1) the 595 contracts that the Army Corps of Engineers and the Navy Bureau of Yards and Docks negotiated with architect-engineer firms to conduct the fieldwork and (2) the processing of 519,340 FOSDIC forms and the computation of data therefrom by the Bureau of the Census and the National Bureau of Standards. Separate forms were used for sections of large or irregular buildings having more than one structural part.

TABLE 2.—Phase I shelter survey results

| PART A. BUILDINGS CONSIDERED | | | | |
|------------------------------|---------------------|--------------------------------------|------------------------------|-------------------|
| Total | Patently unsuitable | Rejected by architects and engineers | Acceptable | |
| 5,000,000 ¹ | 1 3,600,000 | 1 1,000,000 | 381,802 | |
| PART B. BUILDINGS SURVEYED | | | | |
| Total | Unacceptable | | Acceptable | |
| | Protection factor | | Protection factor | |
| | Less than 20 | 20-39 | 40-99 | 100 to over 1,000 |
| | 66,973 | 98,463 | 103,467 | 112,899 |
| 381,802 | Total 0-39: 165,436 | | Total 40 over 1,000: 216,366 | |

¹ Estimated.

Phase II fieldwork was completed by January 1, 1963. The Army Corps of Engineers and the Navy Bureau of Yards and Docks negotiated 644 contracts with architect-engineer firms for this operation. It involved further study of buildings identified in Phase I as having acceptable potential shelter space, and the survey of special facilities. Finally, onsite analysis was made of more than 220,000 buildings and 20,000 special facilities.

Usable shelter space was located in more than 125,000 facilities (see table 3) having a protection factor of 40 or higher and a capacity to accommodate a minimum of 50 persons. Shelter space for more than 2 million additional persons was found in facilities too small to meet the 50-person accommodation requirement.

The principal result of this operation was the location of shelter

inventory will be adjusted as certain facilities are resurveyed and added in areas where there is a deficiency, and as shelter space in excess of requirements in other areas is deducted. It is estimated that the final result of these adjustments will show a nationwide total of 104 million usable shelter spaces. Of this inventory, it is expected that space for 70 million persons can be marked, licensed, and stocked.

Other important results included the following facts and conclusions:

1. Acceptable fallout shelter is available in practically all of the 765 places having more than 25,000 population and in 60 percent of the 2,528 smaller urban centers having more than 5,000 population.

2. Approximately 12 million of the acceptable fallout shelter spaces located are in special facilities.

3. Acceptable fallout shelter space with a protection factor of 40 or higher could be developed for an additional 62.6 million persons by improving ventilation, and 50 percent of this space is located where additional shelter space is needed.

4. Included in the additional acceptable shelter space that could be developed by improving ventilation is space for approximately 16.4 million persons which is located in facilities owned by nonprofit and non-Federal health, education, or welfare institutions and by State or local governments; i.e., 11.2 million in institutional facilities and 5.2 million in State and local government facilities.

Updating operations.—Following completion of the initial fallout shelter survey, Phases I and II, OCD, in May 1963, established systematic procedures for keeping the results of the survey current and for making effective use of the data. Although insufficient time has elapsed to achieve the desired results, these procedures were designed to: (1) Maintain a current nationwide inventory of available fallout shelter space, (2) add to the inventory any shelter facilities inadvertently omitted in the initial survey, (3) identify and add to the inventory any shelter facilities of the 40-99 protection factor category that were omitted under earlier procedures, (4) survey and add to the inventory newly constructed facilities suitable for shelter, or facilities that have been upgraded or improved sufficiently to warrant it, (5) correct errors and discrepancies that may be discovered in the initial survey of shelter facilities, and (6) analyze facilities that are believed to contain significant shelter space of a 40-protection factor or higher, although not so reported in the initial survey.

This operation will provide for a continuing fallout shelter survey on a limited scale, as needed. But priority will be given to areas where shelter deficiencies exist.

Shelter license agreements.—An important continuing action of the shelter survey is the signing of license agreements by building owners

TABLE 3.—Phase 2 shelter survey results ¹

| Area | Shelter space located, protection factor of 40 or higher | | Area | Shelter space located, protection factor of 40 or higher | |
|---------------------------|--|---------------------------------|---------------------|--|---------------------------------|
| | Number of facilities | Number of spaces (in thousands) | | Number of facilities | Number of spaces (in thousands) |
| Total..... | 125, 445 | 103, 680 | Region 4—Continued | | |
| Region 1..... | 49, 214 | 34, 730 | Minnesota..... | 2, 915 | 1, 964 |
| Connecticut..... | 2, 500 | 2, 057 | Wisconsin..... | 3, 198 | 1, 984 |
| Maine..... | 453 | 237 | Region 5..... | 6, 974 | 5, 033 |
| Massachusetts..... | 5, 287 | 3, 740 | Arkansas..... | 1, 250 | 761 |
| New Hampshire..... | 340 | 155 | Louisiana..... | 619 | 828 |
| New Jersey..... | 5, 093 | 3, 153 | New Mexico..... | 349 | 163 |
| New York..... | 33, 740 | 24, 342 | Oklahoma..... | 1, 801 | 924 |
| Rhode Island..... | 519 | 498 | Texas..... | 2, 955 | 2, 957 |
| Vermont..... | 202 | 90 | Region 6..... | 10, 518 | 7, 749 |
| Puerto Rico..... | 1, 065 | 456 | Colorado..... | 1, 033 | 831 |
| Virgin Islands..... | 15 | 2 | Iowa..... | 1, 643 | 943 |
| Region 2..... | 21, 031 | 19, 400 | Kansas..... | 1, 404 | 1, 099 |
| Delaware..... | 355 | 202 | Missouri..... | 3, 072 | 3, 834 |
| District of Columbia..... | 1, 703 | 1, 948 | Nebraska..... | 2, 467 | 687 |
| Kentucky..... | 1, 555 | 1, 863 | North Dakota..... | 360 | 109 |
| Maryland..... | 1, 503 | 1, 610 | South Dakota..... | 400 | 179 |
| Ohio..... | 5, 598 | 4, 197 | Wyoming..... | 139 | 67 |
| Pennsylvania..... | 7, 615 | 7, 343 | Region 7..... | 7, 866 | 9, 055 |
| Virginia..... | 2, 027 | 1, 831 | Arizona..... | 361 | 289 |
| West Virginia..... | 675 | 406 | California..... | 6, 134 | 7, 945 |
| Region 3..... | 6, 522 | 5, 465 | Hawaii..... | 345 | 183 |
| Alabama..... | 1, 016 | 786 | Nevada..... | 189 | 156 |
| Florida..... | 812 | 608 | Utah..... | 816 | 474 |
| Georgia..... | 915 | 1, 051 | American Samoa..... | 1 | 0 |
| Mississippi..... | 261 | 180 | Guam..... | 20 | 8 |
| North Carolina..... | 1, 264 | 899 | Region 8..... | 3, 578 | 2, 782 |
| South Carolina..... | 587 | 297 | Alaska..... | 246 | 110 |
| Tennessee..... | 1, 574 | 1, 603 | Idaho..... | 335 | 97 |
| Canal Zone..... | 93 | 41 | Montana..... | 486 | 136 |
| Region 4..... | 19, 742 | 18, 866 | Oregon..... | 1, 095 | 1, 002 |
| Illinois..... | 7, 285 | 9, 946 | Washington..... | 1, 416 | 1, 437 |
| Indiana..... | 2, 619 | 2, 024 | | | |
| Michigan..... | 3, 725 | 2, 945 | | | |

¹ While the above table reflects the total nationwide estimated usable shelter spaces located of 104 million, adjustments will be made in the distribution by States when the resurvey of certain facilities and areas has been completed to reflect an increase in gross spaces located and when spaces excess to requirements in specific areas have been determined and deducted. It is estimated that the end result of the changes will still show a nationwide total of 104 million usable spaces located, of which an estimated 70 million can be made available with consent of owners, and with storage space for stocks.

to permit the use of acceptable shelter space by the public. Local governments are responsible for obtaining these agreements.

A special Government form, *Fallout Shelter License or Privilege*, when signed by the property owner, authorizes: (1) Temporary access by the public to specified shelter space in emergencies, (2) posting and maintenance of shelter signs, (3) maintenance of shelter supplies and equipment on the premises, and (4) Federal and local government inspection. Public use of the shelter is specified as being "for the sole purpose of temporarily sheltering persons during and after any and every actual or impending attack." Public access for testing

purposes is not granted and, if desired, would have to be separately agreed upon by the owner and local government.

The agreement entails no monetary payment to or by the owner. He may revoke the license unilaterally by sending a 90-day written notice by registered mail to the appropriate local government agency and to the Office of Civil Defense regional office.

The OCD will stock only those shelters covered by such written agreements. At the end of fiscal year 1963, owners of more than 50,000 facilities had signed shelter license agreements covering fall-out shelter space sufficient to protect more than 47 million persons.

Shelter Marking

A basic part of the National Shelter Program is the official marking of public fallout shelters that meet minimum requirements and that owners permit to be used for this purpose.

Standard fallout shelter signs furnished by the Federal Government through central procurement are used. (See fig. 5.) They are identical in appearance for inside and outside marking, except that inside signs are 10- by 14-inch steel and outside signs are 14- by 20-inch aluminum. Federal funds are used to place most of these signs, but State and local governments have volunteered to help. At the end of fiscal year 1963, approximately 54,000 facilities having a capacity to shelter nearly 43 million persons had been marked. This accounted for the posting of 106,027 exterior and 355,425 interior signs.

Shelter Stocking

The final objective of the National Shelter Program is to stock public fallout shelters that have been identified, marked, and licensed. Basic elements in meeting this objective are identification, development, selection, procurement, distribution, and storage of essential survival items.

Essential survival items are: basic food rations, water containers, sanitation kits, medical kits, and radiological kits. The Federal Government develops, selects, procures, and distributes these supplies at the lowest possible cost. Local governments are responsible for requisitioning these supplies, placing them in licensed shelters, filling the water containers, and assuring their security, maintenance, and availability for emergency use.

The provisions are expected to remain usable for at least 5 years and are considered adequate to sustain life and maintain shelterees in condition to resume active and productive life upon emergence. Supplementary provisions, to improve the comfort of shelter occupants, and special foods or medications may be supplied locally if desired.



Figure 5.—Placement of standard fallout shelter sign.

Water.—The most essential survival item is emergency drinking water. Life, without physiological damage, can be maintained for days with water alone.

To obviate transportation and labor costs of supplying many tons of prepacked water, OCD provides only the containers for water storage. The containers are filled at the shelter site with water from sources meeting Public Health Service standards. During an emergency, it is intended that these containers, after being emptied, be used as receptacles for human waste.

Containers being furnished are lightweight, 17½-gallon metal drums provided with a double polyethylene liner. (See fig. 6.) One container is intended to serve five shelterees. Tests have indicated that these containers are suitable for long-term storage.

Cumulative procurements initiated by the end of fiscal year 1963 will provide over 10 million containers and liners for water storage to serve 50 million shelter occupants. Deliveries were scheduled for completion by December 31, 1963.

Other developments during fiscal year 1963 concerning supply and storage of water included:

1. Development of tentative designs for nesting-type drums to conserve storage and shipping space. Indications are that because of special tooling and production costs, this type of drum made of steel, aluminum, or plastic would be more expensive than the type presently used.

2. Issuance of instructions to allow suitable substitution of available shelter supplies in lieu of those issued by the OCD. For instance, water containers need not be stocked in public shelters having other adequate water storage and sanitation facilities.

3. Studies started to ascertain the feasibility of providing water for shelters from tanks, wells, or other sources.

Food.—The most recent basis for shelter food rations is the statement issued in April 1962 by the Food and Nutrition Board of the National Academy of Sciences-National Research Council on minimal allowances of food and water for fallout shelter survival. Basic rations were previously developed according to criteria defined by the interdepartmental Advisory Group on Research and Development for Food for Shelters, established in 1958 by the predecessor agency of the OCD.

The basic ration, 10,000 calories per shelteree, contains proper components of protein, carbohydrate, and fat. However, a minimum amount of protein is included, since consumption of high-protein foods for prolonged periods with limited consumption of water would be harmful. The calorie content is adequate for sedentary conditions.

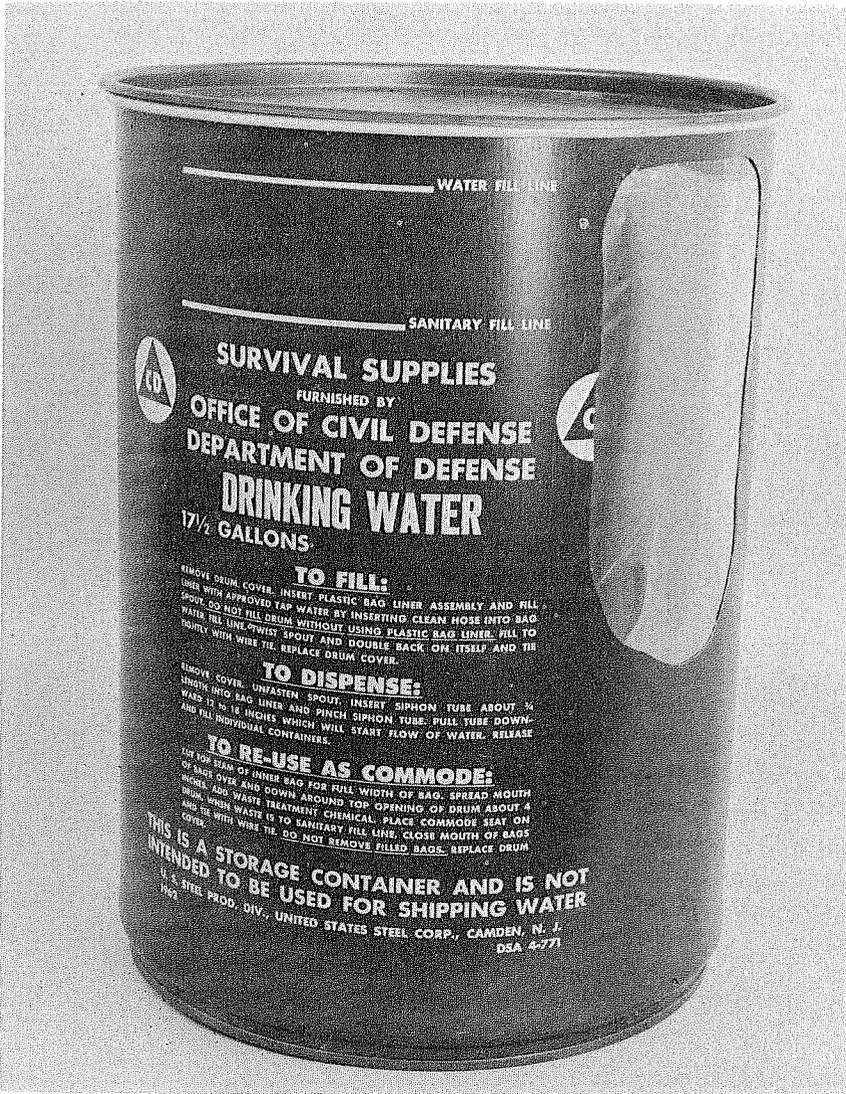


Figure 6.—Public fallout shelter water container showing polyethylene liner.

Except in small areas of intense radiation, shelterees may be able to augment the basic ration with food from nearby sources.

Three basic food rations have been procured: (1) A wheat flour base biscuit developed by the National Biscuit Co. for the New York State Civil Defense Commission, (2) a wheat-corn flour cracker developed by the Midwest Research Institute for the State of Nebraska, and (3) a special wheat base bulgur wafer developed by the U.S. Department of Agriculture. A fourth food item is a carbohydrate supplement developed for shelter use by the Armed Forces Food and Container Institute. The Food and Nutrition Board of the National Academy of Sciences-National Research Council and other prominent authorities have concurred in using the carbohydrate supplement for this purpose. Based on dietary criteria of minimal food allowances for fallout shelter survival, the carbohydrate supplement is used with the cereal base food in quantities up to one-third the weight of the total food ration.

The shelter rations received for distribution during fiscal year 1963 included biscuits, crackers, and the carbohydrate supplement. Near the close of the fiscal year, competitive procurement was initiated to obtain approximately 26 million pounds of cereal base food; i.e., biscuits, crackers, or bulgur wafers. Bulgur wafer procurement had previously been limited to a test quantity.

Other nonperishable foods normally available for public shelter use may be substituted in lieu of those otherwise provided by the OCD for stocking shelters.

Cumulative procurement of food rations at the end of fiscal year 1963 totaled 250 million pounds, an amount sufficient to serve 50 million persons. These rations are packaged in metal containers. (See fig. 7.)

Sanitation kit.—Sanitation kits, designed for waste disposal during shelter occupancy, are provided in two sizes: one to serve 25; the other, 50 persons.

The kit consists of a 17½-gallon fiber drum (see fig. 8) packed with toilet seat, toilet paper, aseptic chemical, sanitary napkins, waterless hand cleaner, plastic drinking cups for individual use, and other items. In fiscal year 1963, the specifications of the kit were revised to permit use of a dry in place of a liquid aseptic chemical. During shelter occupancy, emptied water containers provide additional drums required for sanitation purposes. This method of waste disposal has been proved satisfactory according to tests supervised by the U.S. Public Health Service.

Since assembly of the kits is on the schedule of *Blind Made Products* under the terms of the Wagner-O'Day Act of June 25, 1938 (52 Stat.

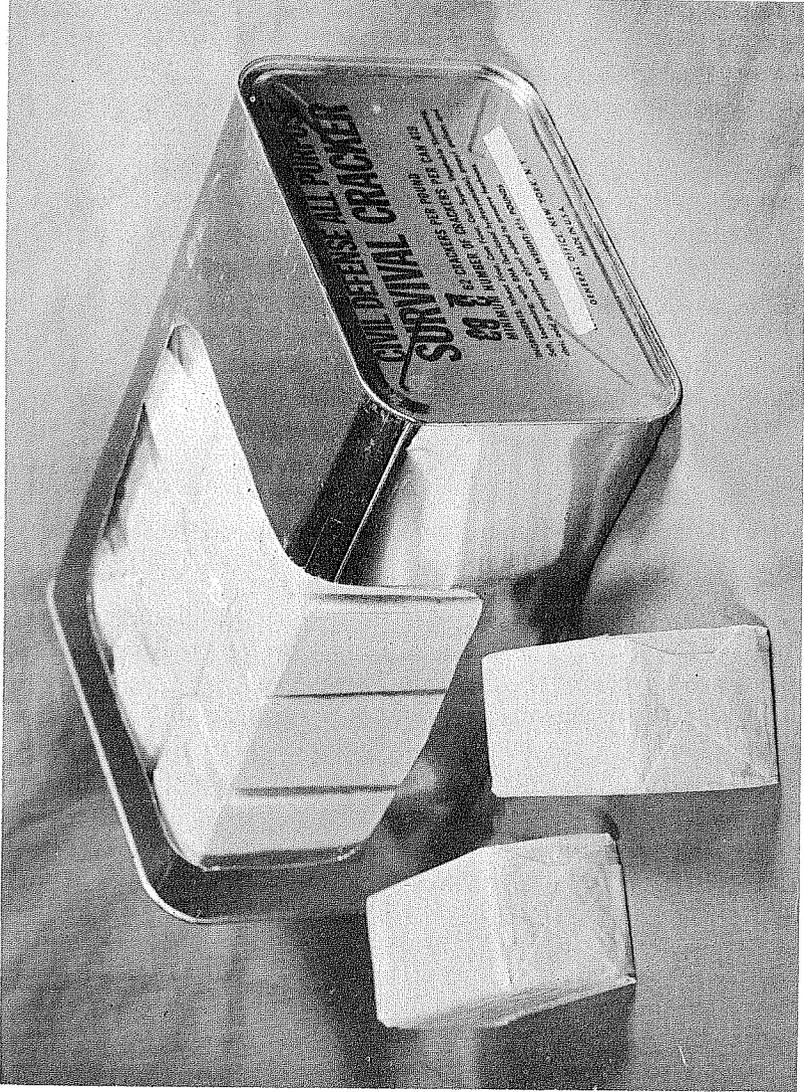


Figure 7.—Public fallout shelter food rations.



Figure 8.—Public fallout shelter sanitation kit SK-4
(designed to serve 50 persons).

1196; 41 U.S.C. 46-48), seven workshops for the blind performed this task for the OCD. The National Industries for the Blind selected these shops and procured the individual kit items.

Cumulative procurement at the end of fiscal year 1963 resulted in assembling 90,000 of the smaller kits and 998,000 of the larger ones. Upon completion of deliveries in December 1963, enough kits will be available to serve over 50 million persons.

Medical kit.—Medical kits are of two sizes: one to serve 50-65 persons; the other, 300-325. (See fig. 9.) They contain different quantities of identical items that provide an austere capability to save lives and alleviate suffering by (1) preventing disease and checking its transmission, (2) controlling emotional stress, and (3) controlling disease symptoms to alleviate suffering and prevent complications. Medication and devices are not provided for chronic diseases, childbirth, or for purposes that require a high degree of professional proficiency.

Since sex, age, health status, skills proficiency, and professional ability of shelter occupants can be estimated only generally, the kits are designed for nonprofessional use and contain nontechnical instruction booklets.

All items in the medical kit have the approval of the U.S. Public Health Service, Division of Health Mobilization, and DOD medical authorities. In addition, the contents were reviewed by competent medical authorities to determine feasibility of modification to meet the needs of special health problems. It was concluded that the contents are adequate to serve emergency needs generally of normal, healthy persons. Persons having special health problems will need to make provisions for them prior to entering a shelter.

Certain components of the medical kit are subject to freezing during storage or shipment. Use of dry products and revision of packaging to prevent this damage were approved, and further improvements to solve this problem were being developed and tested during fiscal year 1963.

At the end of fiscal year 1963, cumulative procurement of medical kits totaled 235,000 small and 117,000 large kits. This will be sufficient, upon delivery, to serve more than 50 million persons. The Defense Medical Supply Center of the Defense Supply Agency procures the components of the medical kit for OCD and assembles them into kits at selected military medical depots.

Radiation kit.—At least one radiation kit is furnished for each licensed public fallout shelter. (See fig. 10.) To be used by, and under the supervision of a trained radiological monitor, the kit contains: (1) A low range beta-gamma discriminating survey meter (CD V-700), known as a Geiger-Muller tube, for monitoring personnel, food, and water, (2) a high-range survey meter (CD V-715) or ion chamber for monitoring inside and outside the shelter, (3) two dosimeters (CD V-742) for measuring personnel exposure, and (4) a dosimeter charger (CD V-750) to reset and recharge the dosimeters.

During the early stages of shelter occupancy and the arrival of radioactive fallout, the radiological monitor will survey the inside of the shelter to locate the areas offering the greatest protection. After radiation has decreased sufficiently to permit emergence, the monitor will survey outside the shelter to obtain data on radiation intensity. These data will provide valuable technical guidance to the shelter manager and to the local emergency operations center.

At the end of fiscal year 1963, shelter radiation kits had been furnished to approximately 32,000 public shelters.

Logistics.—The Defense Supply Agency (DSA), through its various supply centers, procures shelter supplies, and the General Services Administration procures radiological defense equipment for the OCD. Manufacturers ship the supplies to kit assembly points or to warehouses provided or controlled by the Federal Government. From these warehouses, the supplies are distributed to local governments for stocking public shelters.

Supplies from manufacturers are received as separate components; e.g., cases of food, water containers, or sanitation items. At kit assembly points appropriate items are packaged into kits; e.g., sanitation, medical, and radiation kits. The kits are shipped to the distribution warehouses and issued with non-kit items as complete sets of shelter stock for individual shelters. The most important feature of this procedure is assurance of balanced shelter stocks for capable shelter support if needed. In addition, this obviates the need for back orders and followup shipments.

Both rail and motor vehicle transportation are used to transport supplies from manufacturers to kit assembly points and warehouses at Federal expense. Distribution from warehouses to local governments is generally by motor vehicle. Local governments provide transportation for pickup and delivery of supplies to shelters if they are within 25 miles of the warehouse. If greater distances are involved, the Federal Government pays for transportation to individual shelters or to a central delivery point. About 75 percent of the supplies are picked up within the 25-mile radius; the balance, approximately 25 percent, are shipped at Federal expense.

Operational status.—Large-scale shelter stocking operations began in December 1962 when supplies became sufficiently available. Although some stocking was completed earlier, most of the shelter provisioning activities prior to that date were primarily concerned with establishing requirements, preparing specifications, and establishing procedures for procurement, transportation, warehousing, and transfer of title of supplies to local governments.

As local governments gained experience and public cooperation, the pace of shelter stocking was accelerated. Various cities conducted special exercises that resulted in stocking shelter space for as many as 100,000 persons in 1 day. At the end of fiscal year 1963, shelter space for nearly 10 million persons had been stocked.

The average cost to the Federal Government of shelter stocking during fiscal year 1963 was \$2.42 per space, and cumulative procurement initiated was sufficient to accommodate 50 million persons. Future stocking operations depend upon the amount of shelter space located or developed and the availability of funds to stock them. In fiscal year 1964, contingent upon appropriation of requested funds, OCD plans to increase the cumulative procurement of shelter supplies sufficiently to serve 70 million persons.

SHELTERS IN FEDERAL BUILDINGS

Major purposes for providing fallout shelter in Federal buildings are to: (1) Stimulate State, local, and private investment in shelters

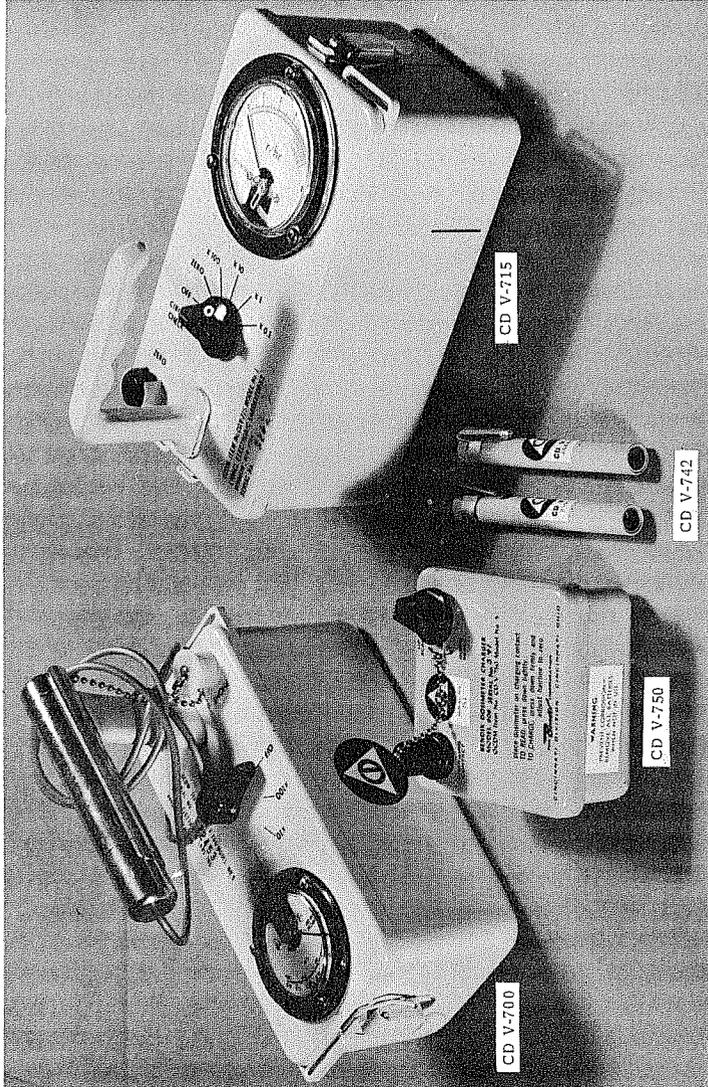


Figure 10.—Public fallout shelter radiation kit CD V-777-1.

1 CD V-700 (low range beta-gamma survey meter)

2 CD V-742 (dosimeters)

1 CD V-715 (high range gamma survey meter)

1 CD V-750 (dosimeter charger)

by Federal example, (2) help produce more shelter space where needed, (3) acquire detailed technical information and cost data on public shelter construction, (4) develop less expensive methods of incorporating shelters in public buildings, and (5) encourage architects and engineers, by actual experience, to develop greater capability in protective designing that can be applied nationwide.

Since fiscal year 1960, a directive to Federal departments and agencies has required them to include fallout shelter design and construction costs in their budget estimates for appropriate new Federal buildings. In addition, incorporation of shelter in existing Federal buildings has been encouraged.

The first and only significant fund for incorporating shelters in new and existing Federal buildings was \$17.5 million made available from the civil defense appropriation contained in the Department of Defense Appropriation Act, 1962. Fallout shelter for more than 500,000 persons will be added to the nationwide shelter inventory when agencies complete shelter construction projects for which these funds were allotted during fiscal year 1962. At the end of fiscal year 1963, the approximate completion of this construction was: 60 percent for the Tennessee Valley Authority and the Departments of Agriculture and the Interior, 90 percent for the Veterans' Administration and the Panama Canal Company, and less than 10 percent for buildings under cognizance of the General Services Administration (GSA).

As a result of the limitation on shelter construction contained in section 303 of the Independent Offices Appropriation Act, 1963, GSA held this construction in abeyance pending approval of the Public Works Committees of the Senate and of the House of Representatives. During fiscal year 1963, GSA submitted to them for this purpose a shelter prospectus on 476 buildings.

The fallout shelter survey, conducted as part of the National Shelter Program, resulted in locating acceptable shelter space in more than 15,000 Federal buildings for approximately 7.6 million persons. Analysis of data from this survey showed that acceptable shelter space for an additional 4.6 million persons can be provided by adding ventilation and making other inexpensive changes. The OCD worked in liaison with other Federal agencies to facilitate the incorporation of protective features of this nature where needed.

SHELTER SUPPORT PROGRAMS AND ACTIVITIES

Protective Structures

Emergency operating centers.—Continued operation of governments at all levels after a nuclear attack is contingent upon their having protected sites for conducting civil defense emergency operations. A

principal OCD objective is to construct protected sites for each OCD regional office for this purpose and to assist and encourage State and local governments to do likewise.

Construction of the first OCD regional emergency operating center was almost complete at the end of fiscal year 1963. Located in OCD Region 5 at Denton, Tex., design and construction of this center, to accommodate an emergency staff of 500, was started in 1960. Total cost will be approximately \$2.8 million. (See figs. 11 and 12.)

During the latter part of fiscal year 1963, site surveys were being made to find the most suitable location for the second center, to be located in OCD Region 1. Funds appropriated in fiscal year 1962 will be used to adapt existing prototype designs to this site and to construct the center. Site surveys for protected emergency operating centers for the other six OCD regional offices were also being conducted. Funds for constructing these centers will be included in future budget requests.

Each OCD regional emergency operating center is designed to serve as (1) headquarters for regional activities in peacetime, (2) headquarters for regional emergency operations in wartime, and (3) alternate headquarters for national civil defense operations in an emergency.

Federal matching funds are used for planning and constructing protected emergency operating centers for State and local governments. (See *Financial Assistance* in part V.) During fiscal year 1963, the number of requests for assistance in constructing these centers increased 250 percent over requests received during fiscal year 1962. Construction of 11 centers was completed during fiscal year 1963, making a total of 39 (10 State, 20 county, and 9 city). In addition, 66 centers were under construction, 88 were in the planning stage, and 81 existing State and local buildings were modified to provide minimum protection from radioactive fallout.

Prototype shelters.—Prototype shelter construction was continued by using funds allocated from fiscal years 1960 and 1961 appropriations in the amount of \$4,297,400. By the end of fiscal year 1963, the construction phase of this program was nearly complete: of 658 approved construction projects, 641 were completed, 6 community prototypes were canceled, and 11 were being designed or constructed. However, the Federal Government may retain use of these shelters for demonstration purposes up to 5 years.

Consistent with its original objectives, this program is serving effectively to (1) demonstrate family and community shelter construction throughout the Nation, (2) produce valuable technical information, (3) create national and international interest in shelters

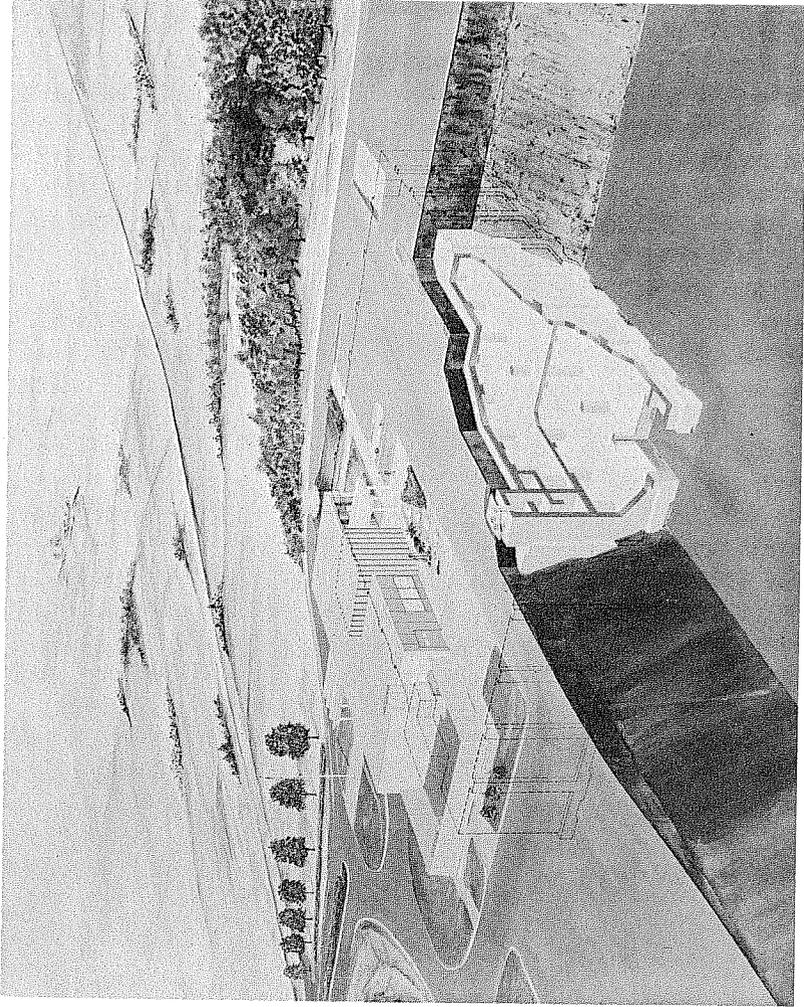


Figure 11.—Artist's rendering of OCD Region 5 Emergency Operating Center, Denton, Texas.

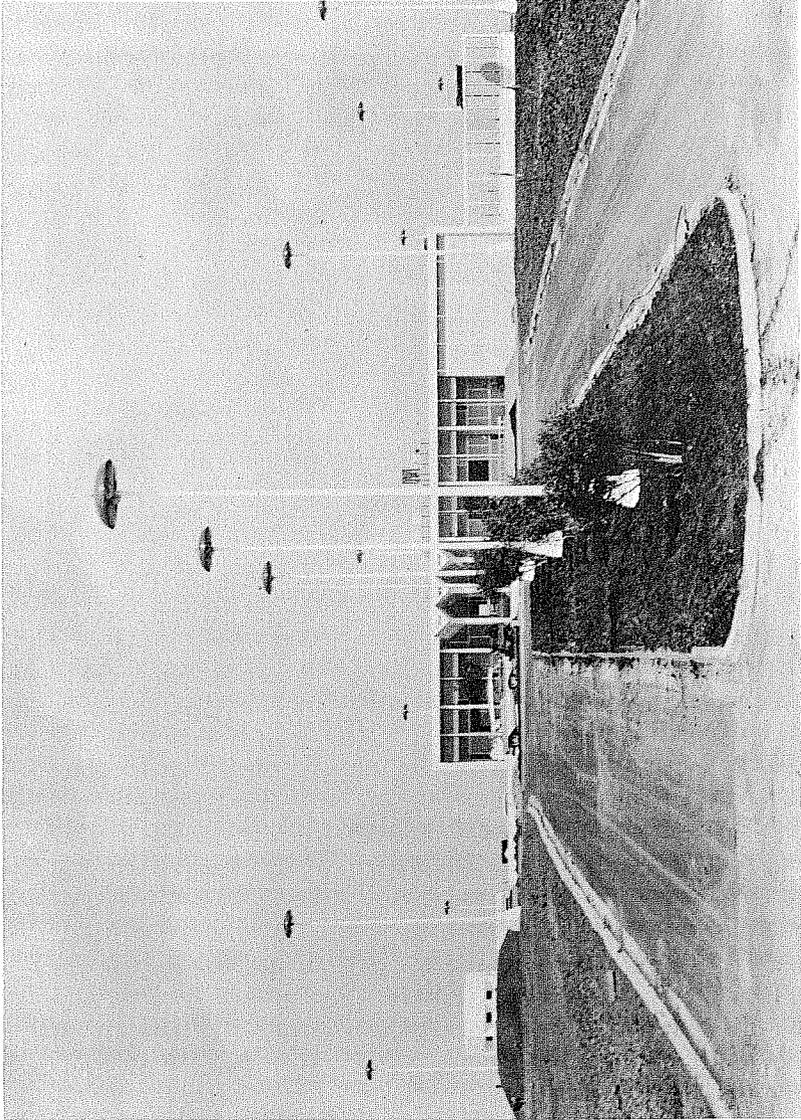


Figure 12.—Main entrance to OCD Region 5 Emergency Operating Center, Denton, Texas.

and (4) add space for about 50,000 persons to the nationwide shelter inventory. This program also was the source of valuable information used to formulate the National Shelter Program.

Family shelter design, development, and evaluation.—OCD continued activities in shelter design, development, and evaluation principally to protect family shelter purchasers and ethical shelter dealers and provide them with the best available information on shelter structures and equipment.

More than 100 proprietary shelter designs were evaluated; 67 of them were assigned serial numbers, indicating that they met minimum OCD family shelter requirements. In addition, OCD produced several revised and new designs for both fallout and blast-resistant shelters.

OCD worked with leading technical authorities to develop a special building code for shelter construction. In support of this effort, OCD issued Technical Memoranda 62-5, *Shelter Doors and Hatches*, and 62-6, *Minimum Technical Requirements for Manual and Electric Ventilators*. In addition, similar memoranda were to be prepared for issuance on related shelter subjects; e.g., fire prevention in family shelters, and technical requirements for emergency generator sets.

Protective Structures Development Center.—The Protective Structures Development Center was developed during fiscal year 1962 and opened for operation during fiscal year 1963. Located at Fort Belvoir, Va., the main objectives of this center are to: (1) Develop, test, evaluate, and improve design and construction of protective structures and associated equipment, (2) provide facilities for testing effectiveness of radiation shielding, and (3) provide an area for manufacturers to erect shelter structures or components for testing and evaluation.

Major accomplishments during fiscal year 1963 primarily were the establishment of the Center and the provision of appropriate equipment and professional services for its operation. Two reinforced concrete shelters were completed, marked, and stocked for demonstration to Center visitors. These shelters, one of 1,000- and the other of 200-person capacity, were inspected by approximately 1,000 persons. In addition, several expedient shelters were erected, and test data were collected on them for analysis. These are special community shelters designed to be constructed expeditiously and made ready for use within a short time after selection of shelter site.

Protection of radio stations.—OCD worked with selected individual radio stations to make their facilities operational for broadcasting information to the public under fallout conditions. (See *Communications, Emergency Broadcast System*, in part IV.) Federal funds

are granted these stations upon their agreement (1) to maintain suitable equipment at their own expense and (2) to build shelter that will enable them to operate continuously under radioactive fallout conditions that would exist after a nuclear attack.

Contingent upon availability of funds, an estimated 1,700 stations are expected to participate in these agreements during the next 5-year period. At the end of fiscal year 1963, 108 such agreements were in effect. Fallout protection was provided for 67 stations during fiscal year 1962; agreements for providing protection for 41 additional stations were made during fiscal year 1963. Cost of the program in fiscal year 1963 was approximately \$1.1 million.

Engineering case studies.—Engineering case studies of several types of structures were started in fiscal year 1962 and extended through fiscal year 1963. The purpose of the studies is to obtain data on shelter engineering designs for those types of structures that are a major source of shelters; e.g., schools, hospitals, commercial and industrial facilities, and civic buildings. The data relate shelter engineering designs to variations in soil, climate, construction methods and costs, and building codes in different geographical areas.

Pending receipt of final reports on the 158 case studies started in fiscal year 1962, preliminary information obtained has proved invaluable to OCD in planning operations for the proposed Shelter Development Program. (See *Shelter Space, Requirements and Sources*, in part II.) Contracts, initiated for extracting and analyzing the data received from these studies, are expected to produce additional valuable results. The data will be programed for automatic processing and tested for use in technical management of large-scale shelter programs.

Funds used for case studies in fiscal year 1963 totaled approximately \$217,000. Contingent upon final analytical results of present studies, additional studies may be needed to complete this program.

Professional advisory services.—The OCD provides highly specialized professional advisory services to architects, engineers, and other personnel engaged in protective design, construction, and vulnerability reduction. This is accomplished through direct consultation and issuance of technical publications in the form of: (1) Professional manuals on technical aspects of designing protective structures, (2) professional guides on incorporating protective features into major buildings such as schools, apartment buildings, and industrial plants, (3) design studies containing suggested designs for incorporating protective features into buildings, (4) engineering case studies presenting detailed reports on design and construction of specific projects, and (5) technical memoranda on subjects requiring

only a brief presentation. At the end of fiscal year 1963, 24 of these publications had been issued.

The OCD continued studies on vulnerability reduction. New activities included vulnerability reduction studies relating to houses and public utilities and, through master planning, the vulnerability reduction of communities. Advisory services were extended to development of computer methods for use by architects and engineers in analyzing protective features. In progress during fiscal year 1963 were six computer programs designed to be used separately or as one comprehensive program to provide analytical data on resistance to nuclear blast, fallout gamma radiation shielding, environmental conditions, engineering costs, and protection from thermal and nuclear radiation and fire. To provide technical information for OCD personnel, data were being developed from plans, specifications, and other technical materials for programing into an automatic data-processing system.

Professional Development of Architects and Engineers

The Nation needs the help of all architects and engineers to provide a nationwide system of fallout shelters designed to furnish protection for every American.¹ In recognition of this fact, OCD continued to take positive action to assure that members of these professions may have an opportunity to (1) understand the need for incorporating fallout shelter in existing buildings and new construction and (2) develop adequate capability for planning and designing protective construction. Major efforts to accomplish this are described in this section of the report.

Fallout Shelter Analysis course.—During fiscal year 1962, a 2-week course in *Fallout Shelter Analysis* was developed to qualify architects and engineers for conducting the fallout shelter survey that is part of the National Shelter Program. (See *National Shelter Program*, in part III.) Originally taught during fiscal year 1962 at selected military and civilian schools and universities, the course was offered repeatedly during fiscal year 1963 at several locations, including George Washington University, Washington, D.C., the University of Michigan, the University of Washington, the U.S. Army Engineer School, and the U.S. Navy School for Civil Engineer Corps Officers.

In addition to covering shelter analysis, the course was revised to emphasize planning and designing shelter areas in new construction. To accommodate students who could not meet the 2-week schedule, the course was offered on a semester basis in several instances. A special textbook titled *Shelter Design and Analysis* was prepared and dis-

¹ See app. 8 for information on Advisory Committee on Design and Construction of Public Fallout Shelters.

tributed for use during the course. Volume 1 of this book is *Fallout Protection*. Volume 2, *Equivalent Building Method*, contains a simplified procedure for determining the protection factor of buildings.

The Cuban crisis in October 1962 stimulated a renewed demand by architects and engineers for the course. Consequently, traveling teams of instructors were sent to teach the course in various cities. Among instructors of this course were faculty members of the Universities of Arizona, Hawaii, Kentucky, Miami, Mississippi, Southwestern Louisiana, and Vermont; the State Universities of Ohio, Oregon, Pennsylvania, and Washington; Southern Methodist University, Worcester Polytechnic Institute, Montana State College, and San Jose State College.

To accommodate architects and engineers unable to attend a regularly scheduled *Fallout Shelter Analysis* course, the University of Wisconsin is scheduled to conduct the course under contract during fiscal year 1964 on a pilot basis, using home study and correspondence techniques.

Approximately 1,300 architects and engineers completed the course during fiscal year 1963, making a total of 3,879 qualified graduates. OCD awards all qualified graduates a certificate of proficiency and lists them in the *OCD Directory of Architects and Engineers Qualified in Fallout Shelter Analysis*.

Faculty development.—OCD summer institutes are conducted primarily to qualify faculty members of architectural and engineering schools to teach the *Fallout Shelter Analysis* course, and to enable them to develop suitable curricular material for use in their schools. The institutes are cosponsored by the American Society of Civil Engineers, the National Society of Professional Engineers, and the American Institute of Architects.

These institutes were conducted during fiscal year 1963 at the Universities of California, Colorado, and Illinois and at Worcester Polytechnic Institute. During fiscal year 1964, summer institutes will be conducted at these schools and at the University of Michigan. As a result of these institutes, 63 schools of architecture and engineering are assisting in disseminating technical information on protective construction and shelter design to architects and engineers. During fiscal year 1963, 68 representatives from 51 universities, government agencies, and several private firms attended these institutes. It is anticipated that in fiscal year 1964, 30 additional schools will be associated with this effort as a result of these institutes. A special summer institute on fundamental radiation shielding problems was conducted at Kansas State University of Agriculture and Applied Science during fiscal year 1963 and will again be offered there in fiscal

year 1964. A fallout simulator on the campus permits experimental verification of theoretical designs developed.

Design competition and technical information.—A design competition, started in fiscal year 1962 among architects and engineers to produce school shelter designs; was completed. Administered under contract by the American Institute of Architects, the competition clearly demonstrated that shelter can be economically incorporated into school construction without interfering with educational functions or with the esthetic quality of the building. First, second, and third prizes were offered to participants in each OCD region. The regional first-place winners were then rejudged to select a national grand prize winner.

OCD distributed to architects, engineers, school administrators, and school boards *The National School Fallout Shelter Design Awards*, TR-19, a publication showing the varieties of shelter construction and design that the winning entries demonstrated to be acceptable for use in school construction. An abridged version showing these designs was also distributed to the public. These publications will enable the entire Nation to derive maximum benefit from results of the competition.

During fiscal year 1963, OCD negotiated a contract with the American Institute of Architects to administer another design competition among architects and engineers. It will feature fallout protection designs and dual use of shelter space throughout an entire community, including a shopping center.

OCD also conducted an industrial shelter design conference at Rice University, Houston, Tex., to develop designs for five industrial buildings, including shelter space for dual use.

During fiscal year 1963, OCD awarded contracts for research projects at the Universities of California, Illinois, and South Florida and at Kansas State University of Agriculture and Applied Science, Louisiana State University and Agricultural and Mechanical College, New York University, Agricultural and Mechanical College of Texas, George Washington University, Howard University, Rice University, Worcester Polytechnic Institute, and Carnegie Institute of Technology.

The immediate purpose of these projects is to obtain technical information essential to civil defense. But it is anticipated that eventually these projects will help major educational institutions to incorporate protective construction as a standard part of the professional training of architects and engineers.

These research projects are designed to secure information to fill a specific need and to preclude duplication of other research. In addi-

tion, the institution selected must already have the required facilities and equipment as well as qualified staff, preferably a fallout shelter analyst. Consequently, the cost of these projects is relatively low.

Workshops.—Part of the Six-Point Accelerated Civil Defense Program announced in November 1962 as a result of the Cuban crisis was the establishment of shelter construction workshops for architects, engineers, and building contractors. These 4-hour workshops were held primarily to acquaint members of the construction industry with hazards of fallout radiation and how to improvise shelter against it. More than 9,000 persons attended the 194 workshops held in 184 cities.

In June 1963, OCD conducted a 3-day seminar for State school plant officials to acquaint them with technical requirements for fallout protection and how to incorporate fallout protection in school construction. The seminar was conducted with the cooperation and assistance of the Office of Education, DHEW. Representatives from 47 States and Puerto Rico attended.

Pennsylvania State University, by contract with the OCD, agreed to conduct a series of workshops and four 1-week courses to acquaint architects with shelter planning and with the results of the school shelter design competition concluded in fiscal year 1963. These workshops and courses will be conducted during fiscal year 1964.

Protective construction courses.—Special protective construction courses in nuclear defense engineering were conducted for practicing architects and engineers at the Universities of Arizona and Washington. Need for these courses originated as a result of requests made of architects and engineers to incorporate protective construction features in addition to radiation shielding in structures.

Part IV

COMPLEMENTARY CIVIL DEFENSE SYSTEMS

Complementary civil defense systems are those systems that are essential to effective use of shelters and to preattack planning and postattack operations. Used in support of the nationwide shelter system, they will assure a balanced civil defense program. These systems are: Civil Defense Warning, Communications, Monitoring and Reporting, and Damage Assessment. This part of the report specifically covers these systems.

CIVIL DEFENSE WARNING

The Federal Government provides for disseminating warning to certain points throughout all parts of the United States. From these points, the State and local governments are responsible for warning the public.

Throughout the continental United States, except Alaska, Federal, State, and local warning systems are joined into a Civil Defense Warning System (CDWS). Until late in fiscal year 1963, this system was called the Attack Warning System (AWS). CDWS consists of Federal, State, and local parts, relying upon the use of many important communications facilities to form a giant warning network. OCD has also arranged for warning systems to serve Alaska and Hawaii, as well as Guam and American Samoa, Puerto Rico, and the Virgin Islands.

Federal Warning Systems

National Warning System.—The National Warning System (NAWAS), the Federal portion of CDWS, serves the continental United States, except Alaska. It connects 8 OCD Warning Centers, located at major North American Air Defense Command (NORAD) installations, with 500 strategically located warning points. (See fig. 13.) This network is a special voice communications system over which direct warnings can be sent simultaneously within a few seconds to each of the 500 warning points. These warning points are at key Federal locations, State capitals, and in numerous cities from which the warnings can be sent via State and local warning systems to the public. (See fig. 14.)

Several NAWAS improvements were accomplished during fiscal year 1963. The number of OCD Warning Centers was increased from 7 to 8, the additional center being approved and staffed during the year and opened for operation on August 1, 1963. W. 1. 1. 1. 1.

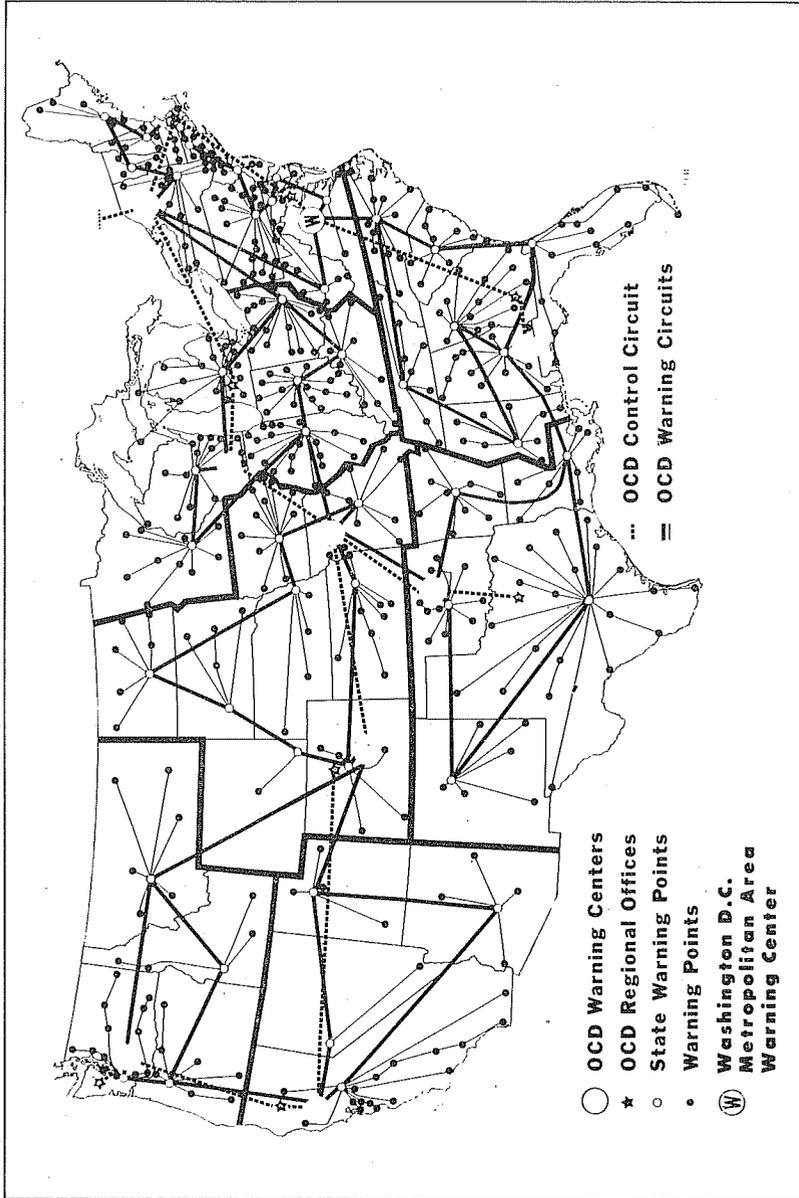


Figure 13.—National Warning System (NAWAS).

under contract to prepare for establishing regular training exercises for improving and testing NAWAS. OCD plans eventually to extend these exercises to State and local warning systems. In addition, the U.S. Army Corps of Engineers completed a survey of NAWAS warning points, begun in fiscal year 1962, to show the available fallout protection at these points and what construction would be required to provide a minimum protection factor of 100.

Washington Warning System.—OCD operates a warning system covering the Washington, D.C., metropolitan area. This system contains 248 sirens and facilities for voice communications with local civil defense headquarters and certain Federal civilian and military installations. Twelve additional sirens were acquired during fiscal year 1963 for installation early in fiscal year 1964.

Warning for Alaska and Hawaii and United States possessions.—Alaska and Hawaii and U.S. possessions are served directly by warning facilities located at appropriate military installations. During fiscal year 1963, the Alaskan Warning System was established. It can send warnings by telephone from an OCD Warning Center at the NORAD installation near Anchorage to 10 warning points serving the major cities of Alaska. A Federal warning system serves two points in Hawaii and extends to Guam and American Samoa; another Federal system serves two points in Puerto Rico and one in the Virgin Islands.

*National Emergency Alarm Repeater system.*¹—The National Alarm Repeater (NEAR) system is designed to give immediate indoor warning of impending attack to the public by transmitting a special power impulse over electric utility lines. This system requires the installation of (1) special purpose signal generating equipment in the electric distribution network and (2) special purpose indoor receivers.

Since the NEAR system requires a frequency different from that used in normal transmission of electric power, electric utility systems must be analyzed to determine the location and size of NEAR signal generators needed to produce the required warning coverage. Contractual arrangements were made providing for this type of analysis of approximately 170 electric utility systems serving 44 metropolitan areas containing 41 percent of the population of the United States and generating 31.5 percent of the Nation's electric power.

Engineering tests of the NEAR system, started in October 1962, will continue through fiscal year 1964. These will include a complete investigation of frequencies ranging from 180 through 300 cycles per second. Prototype NEAR receivers and operational control methods of the system have proved to be satisfactory.

¹ See app. 9 for information on Industry Defense Advisory Committee on the NEAR system.

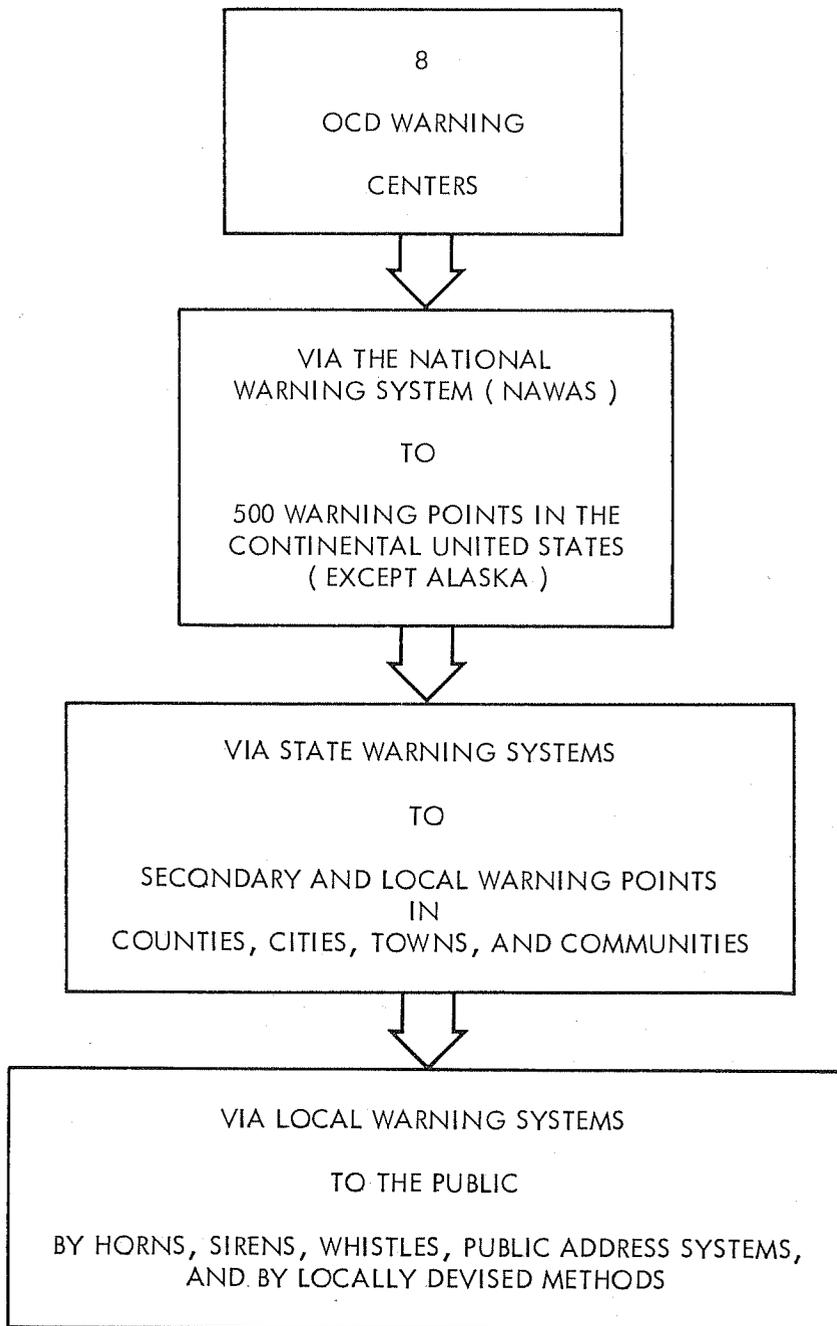


Figure 14.—Warning flow chart for the continental United States, except Alaska.

The testing of seven electric utility systems, for which NEAR prototype generating equipment was procured in fiscal year 1962, is scheduled for completion by December 1963 at Phoenix, Ariz., Columbia, Mo., Colorado Springs, Colo., Alma, Wis., Grand Rapids and St. Louis, Mich., and Fort Lauderdale, Fla.

Specifications, including procedures for quality testing, were developed for NEAR generating equipment and receivers. The specification for NEAR generating equipment was used in procuring 16 NEAR signal generators of various sizes. These will be installed during fiscal year 1964 in electric utility systems serving the western portion of the Lower Peninsula of Michigan, where the NEAR system will be completely tested.

State and Local Warning Systems

State and local warning systems rely upon a variety of communications facilities to send warnings and supplemental information from the 500 NAWAS warning points to several thousand local warning points. Included among them are police radio, teletypewriter, and telephone circuits. OCD provides guidance and financial assistance to help the States and their political subdivisions strengthen their warning systems. However, State and local participation is optional. Of 677 cities having a population of 25,000 or more, 353 have acquired warning systems with the help of Federal matching funds; the remaining 324 cities and many smaller communities lacked warning systems at the end of fiscal year 1963.

Both outdoor and indoor warning devices are used as part of local warning systems to alert the public. The most commonly used outdoor warning device is the siren. Voice sound devices, less commonly used, are more expensive; however, they can be used not only for alerting the public but also for issuing spoken instructions. The telephone, radio, and other devices and systems are used for indoor warning.

COMMUNICATIONS

The Office of Civil Defense has primary interest in three types of communications activities: (1) Emergency communications for civil defense operations, (2) emergency communications for addressing the public, and (3) support of State and local communications systems.

Operational Communications

During fiscal year 1963, all OCD operational communications systems were completely integrated with other communications systems of the DOD. This was accomplished by placing all OCD communications under the operational and management direction of the Defense Communications Agency (DCA). Results of this action were (1)

greater economy and efficiency in the use of existing communications resources and (2) increased communications reliability and resources for civil defense.

Basic system.—The National Communications System No. 1 (NACOM 1) is the basic means for transmitting OCD operational communications. (See fig. 15.) The system is specifically designed for speed, flexibility, and continuity of service required in civil defense emergency operations. It consists of a leased Teletype network, with alternate telephone capability, connecting OCD national and regional headquarters and all State civil defense offices except that in Hawaii. The function of NACOM 1 is to provide the means of communications necessary for coordinating emergency government operations from Federal to State levels. Its connections extend to emergency relocation sites of selected Federal agencies, and portions of the system have been modified to accommodate data transmission of the National Resource Evaluation Center (NREC).

The portion of the NACOM 1 system connecting OCD and its regional offices is operational full-time daily. The portion connecting the OCD regional and State offices can be activated within 1 hour. In addition, each station can provide 24-hour communication via the Teletypewriter Exchange Service with any Government or commercial station that maintains similar service.

Backup system.—The National Communications System No. 2 (NACOM 2) is a backup system for NACOM 1. (See fig. 16.) NACOM 2 is a high frequency radio network for voice and for code transmission by radio teletypewriter methods. Control facilities for stations in this system are located in the same area as NACOM 1 facilities to provide fast routing of messages over either system.

By the end of fiscal year 1963, NACOM 2 was operational at the OCD emergency relocation site, all OCD regional offices, 23 State installations, and Puerto Rico. Future plans call for extending the network to include all States and the Panama Canal Zone, American Samoa, and the Virgin Islands.

Emergency Broadcast System

CONELRAD (Control of Electromagnetic Radiations) procedures remained in effect throughout fiscal year 1963. However, the Emergency Broadcast System (EBS) was developed to replace it early in fiscal year 1964.

Established in 1951 as a military requirement to prevent the use of radio transmissions as a navigational aid to air attack, CONELRAD relied upon the alternate use of 640- and 1240-kilocycle frequencies for broadcasting civil defense information during an emergency when only selected stations equipped for such broadcasting would remain

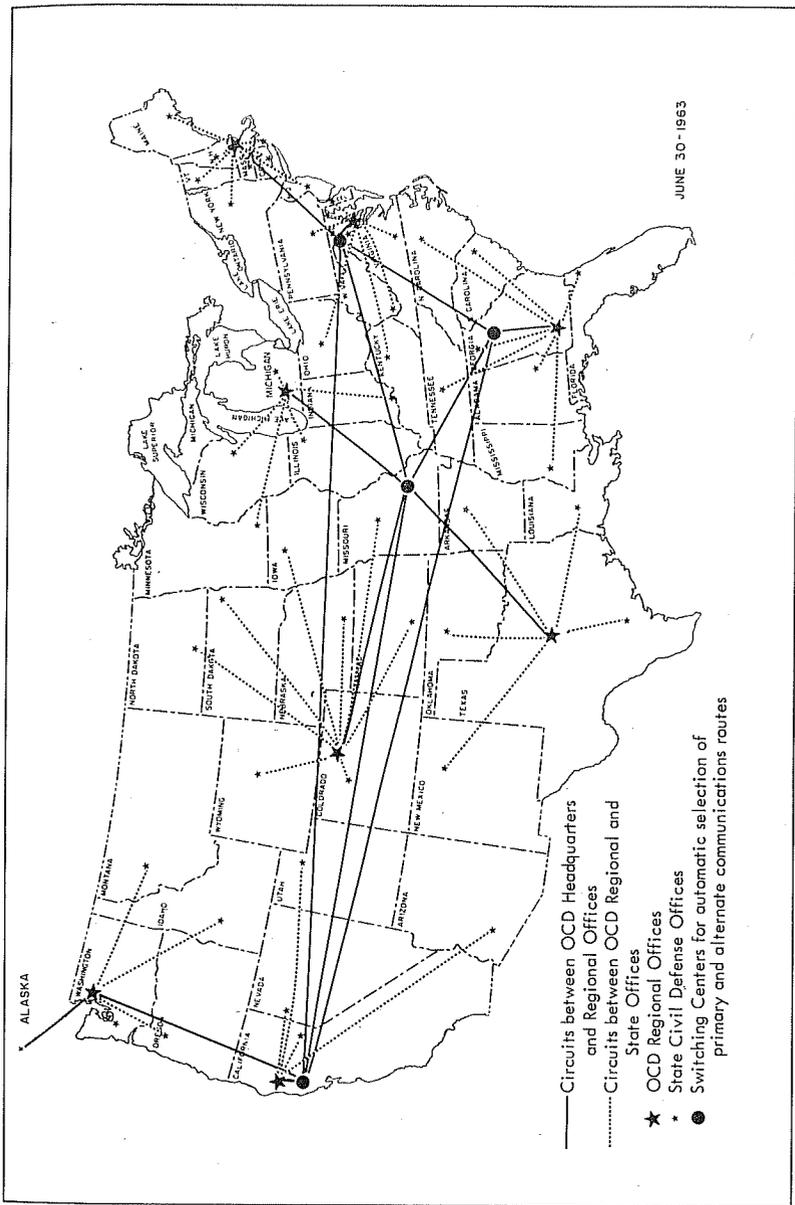


Figure 15.—National Communications System No. 1 (NACOM 1).

on the air. In April 1962, the Department of Defense (DOD) informed the Federal Communications Commission (FCC) that the minimizing of electromagnetic radiation of transmitters was no longer a military requirement. Subsequently, a joint DOD-FCC release stated that the relaxation of this requirement would permit more effective Presidential and civil defense communication with the public during emergencies. This was the basis for planning and developing the EBS during fiscal year 1963.

Plans called for the EBS network to become operational during fiscal year 1964. Developed by the FCC in cooperation with its National Industry Advisory Committee, the Office of Emergency Planning (OEP), and the DOD, the EBS will rely upon the use of approximately 1,700 radio stations to give daytime and nighttime coverage to enable 98 percent of the population to receive radio information. The EBS will be available, on a priority basis, to the President or his authorized spokesman; it will serve State and local governments in communicating with their citizenry, to keep them informed of civil defense operations.

The OCD worked with radio stations which will be in the EBS network to provide fallout protection and suitable equipment for their operation under emergency conditions. (See *Shelter Support Programs and Activities, Protection of radio stations*, in part III.)

Support of State and Local Systems

OCD continued to help strengthen State and local civil defense communications systems by providing Federal matching funds for communications facilities.

The Radio Amateur Civil Emergency Services (RACES), established in 1952, continued to expand. RACES serves an important function in civil defense by enabling amateur radio operators to supplement State and local communications systems in emergencies. At the end of fiscal year 1963, the RACES program continued to operate in every State and included 38,500 amateur operators and 1,793 approved plans.

MONITORING AND REPORTING

Radiological Defense

In accordance with Executive Order 10952, OCD continued to develop, maintain, and strengthen an effective and operationally ready radiological defense monitoring and reporting system. This system is necessary to provide accurate and timely information on the extent, intensity, and duration of radiological hazards that would exist from fallout after a nuclear attack. Without this information, intelligent

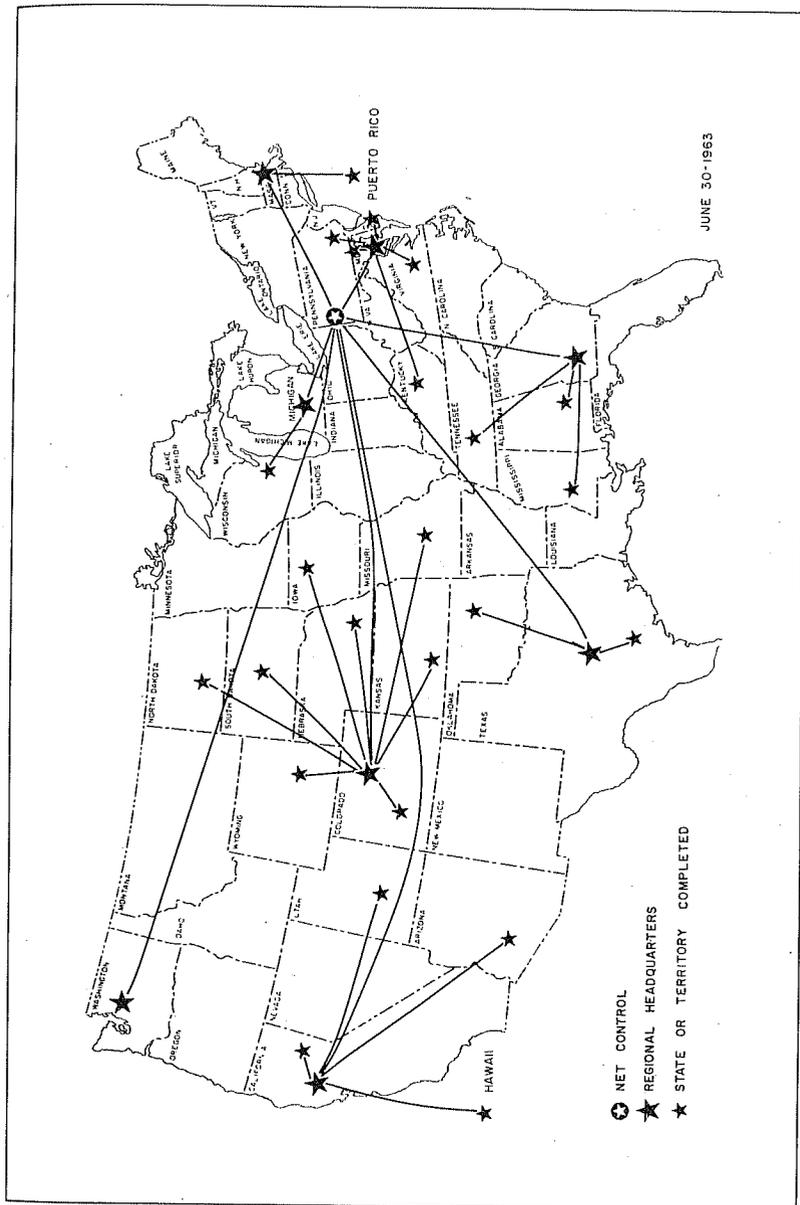


Figure 16.—National Communications System No. 2 (NACOM 2).

use of shelters, controlled postattack remedial movement of population, and effective decontamination would be seriously hampered during the postattack period. Specifically, the information would be needed to: (1) Warn people of the presence of fallout and advise them on proper countermeasures, (2) locate the best shielded portions of public shelters and advise shelterees when radiation intensity will permit them to emerge, (3) provide technical guidance to the Nation's leadership at all levels, (4) provide guidance for emergency operations, (5) determine the extent of contamination of essential industrial and agricultural facilities, including land, forests, food, and water resources, and (6) apply effective decontamination procedures.

Key elements of an effective radiological monitoring and reporting system are: (1) Properly maintained and calibrated instruments, (2) a minimum of 150,000 monitoring stations equipped with instruments for surface and mobile monitoring and for aerial monitoring at selected stations, (3) radiation monitoring instruments in public fallout shelters (see *Shelter Stocking, Radiation kit*, in part III), (4) control centers or collection points with facilities to receive, plot, analyze, and evaluate monitors' reports, (5) properly trained monitors and radiological defense officers, and (6) operating and training manuals to assure standardized procedures for the entire Nation.

Federal network.—During fiscal year 1963, 4,000 Federal radiological monitoring stations were added, making a total of 7,515, including 43 outside the 50 States. (See fig. 17.) A total of 1,045 stations are at military field facilities and 6,470 are at Federal civilian field facilities.

Approximately 1,000 of these stations would report postattack fallout information directly to the OCD by teletypewriter. These are stations of the Weather Services of the U.S. Weather Bureau, Air Force, and Navy, and of the Federal Aviation Agency. The other stations would report this by telephone or commercial Teletype to OCD regional offices via local and State civil defense offices. Most of these stations are at facilities of the Departments of Agriculture, Commerce, and the Interior; the Department of Health, Education, and Welfare; the Post Office Department, the Tennessee Valley Authority, and the Atomic Energy Commission. The Defense Communications Agency will be requested to develop a coordinated system for selected Federal monitoring stations to report postattack fallout information to the OCD.

All Federal monitoring stations would report postattack fallout information to local governments within the area of operations. The Departments of Agriculture, Commerce, the Interior, and Health, Education, and Welfare also use the monitoring capability at their field facilities to carry out civil defense functions assigned to them

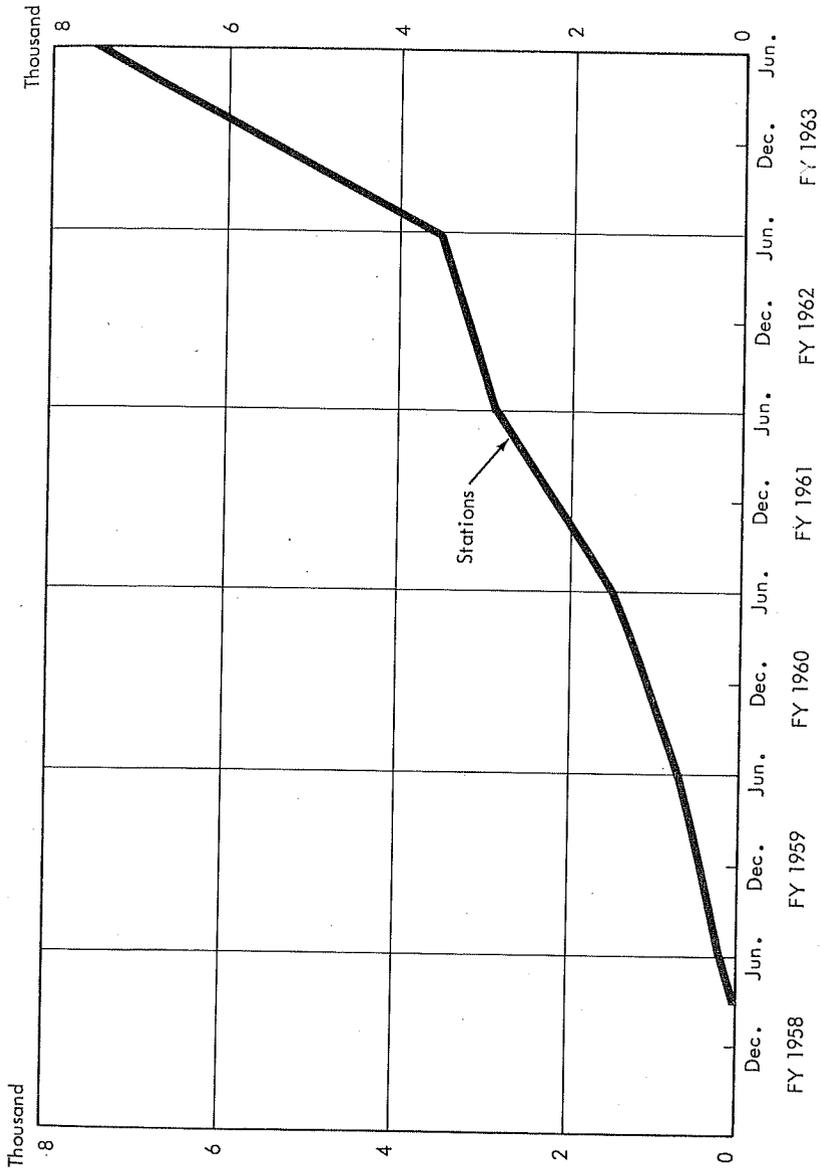


Figure 17.—Growth of Federal radiological fallout monitoring network.

under Executive Orders 10998, 10999, 10997, and 11001, respectively.

The OCD is furnishing a radiological defense operational set CD V-777 to each civilian Federal monitoring station. Each operational set (see fig. 18) contains three survey meters, two dosimeters, and a dosimeter charger.

State and local network.—OCD continued to develop a network of State and local monitoring stations, mostly among fire, police, health, welfare, sanitation, engineering, and conservation services as well as at public airports having aircraft servicing facilities. At the end of fiscal year 1963, approximately 31,000 State and local monitoring stations had been established. (See fig. 19.) OCD furnished each of these stations with monitoring instruments equivalent to those shown in figure 18. Expansion of the State and local network was less rapid than anticipated for fiscal year 1963 for two reasons: (1) Difficulty in meeting the 100 protection factor preferred for monitoring stations and (2) priority of effort in development of monitoring capability in approximately 32,000 licensed public shelters. (See *Shelter Stocking, Radiation kit*, in part III.)

In addition to radiological instruments furnished to monitoring stations, State and local monitoring capability is augmented by approximately 170,000 radiological defense items granted for training purposes and 160,000 similar items granted to high schools for educational purposes. However, since these grants were prior to fiscal year 1962, and since the instruments have been used considerably for monitor training, their reliability for prolonged operational use is questionable.

Aerial monitoring.—During fiscal year 1963, OCD initiated procurement of 1,250 special aerial monitoring instruments. Until these become available, the CD V-710 or CD V-715 survey meters furnished by OCD are being used by the States for this purpose. When monitoring stations are located at or near airports, these survey meters can be used for interim aerial monitoring as well as for on-station and surface mobile monitoring.

In cooperation with the Federal Aviation Agency (FAA), OCD developed a plan for the postattack use of all non-air-carrier aircraft within the United States to support high-priority civil defense missions; e.g., aerial monitoring, visual damage reconnaissance, and transportation of people. Potentially, 80,000 aircraft are involved in this plan which will be an annex to the FAA State and Regional Defense Airlift Plan.

According to arrangements with the U.S. Air Force, the Civil Air Patrol (CAP) will perform aerial monitoring, and 48 States, the District of Columbia, and Puerto Rico have made agreements with the CAP for this service.

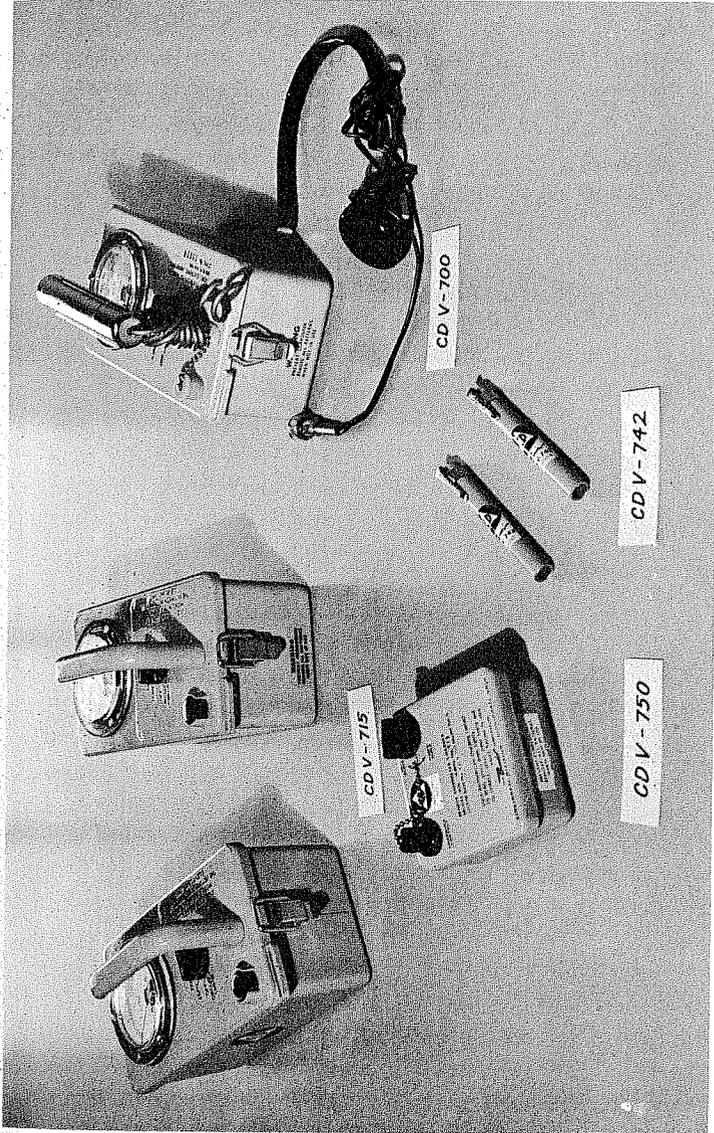


Figure 18.—Radiological defense operational set CD V-777.

- 2 CD V-715 (high range gamma survey meters)
- 1 CD V-700 (low range beta-gamma survey meter)
- 1 CD V-750 (high range gamma survey meters)
- 1 CD V-742 (dosimeter charger)
- 2 CD V-742 (dosimeters)

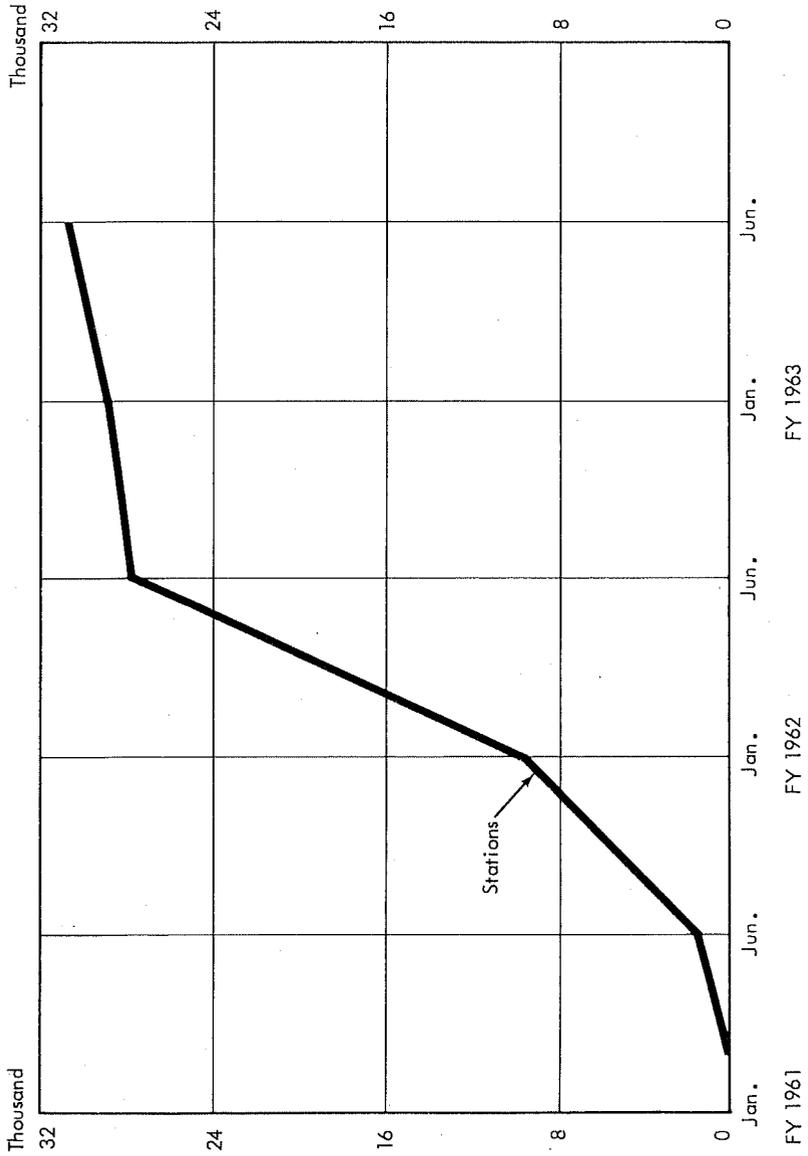


Figure 19.—Growth of State and local radiological fallout monitoring network.

OCD continued to work toward the establishment of aerial monitoring stations at public airports and landing strips in the United States. Plans call for achieving this capability with CD V-781 aerial survey meters at 300 airports by the end of calendar year 1964.

Instrument procurement and distribution.—Contracts were awarded during fiscal year 1963 for the procurement of radiological defense equipment and for the continuation of the special calibration and maintenance study costing approximately \$8.3 million. This included about 1.2 million instruments, consisting of (1) 100,000 remote reading CD V-717 survey meters for use in monitoring stations, (2) 990,000 dosimeters for civil defense workers, (3) 1,250 aerial survey meters, (4) 100,000 special Geiger tubes to increase range and operational capability of CD V-700 survey meters used for monitoring food, water, and personnel, and (5) 200 remote reading blast-resistant CD V-711 survey meters for testing and subsequent installation in emergency operating centers. To test performance and assure high quality of instruments procured, OCD developed plans and procedures for constructing an instrument testing facility. (See fig. 20 for cumulative procurement and expenditures for radiological defense instruments.)

Most of the instruments distributed during fiscal year 1963 were contained in approximately 6,500 monitoring sets granted to Federal, State, and local monitoring stations and in more than 32,000 shelter radiation kits destined for public fallout shelters. (See figs. 10 and 18.) In addition, 573,786 dosimeters were granted to the States for use by postattack civil defense workers. Cumulative distribution of instruments at the end of the fiscal year was as follows:

| | |
|--|--------------------|
| To States for training and operational purposes (requests approved and instruments delivered or being shipped) | 963, 330 |
| To States for public shelters | 164, 755 |
| To Federal agencies for training and operational purposes | 144, 677 |
| To a total of 14,510 high schools and colleges for training and education | 159, 599 |
| To various users for other purposes | 855 |
| Total number of instruments | 1, 433, 216 |

Fiscal year 1964 procurement plans call for (1) limited acquisition of remote reading survey instruments for use at monitoring stations and (2) acquisition of shop and test equipment, spare parts, and replacement items. In addition, OCD will review instrument development, technology, and performance in the light of past experience and revise procurement specifications accordingly. This will assure future acquisition of instruments of maximum reliability that have been manufactured according to highest quality standards and adapted to the most modern techniques.

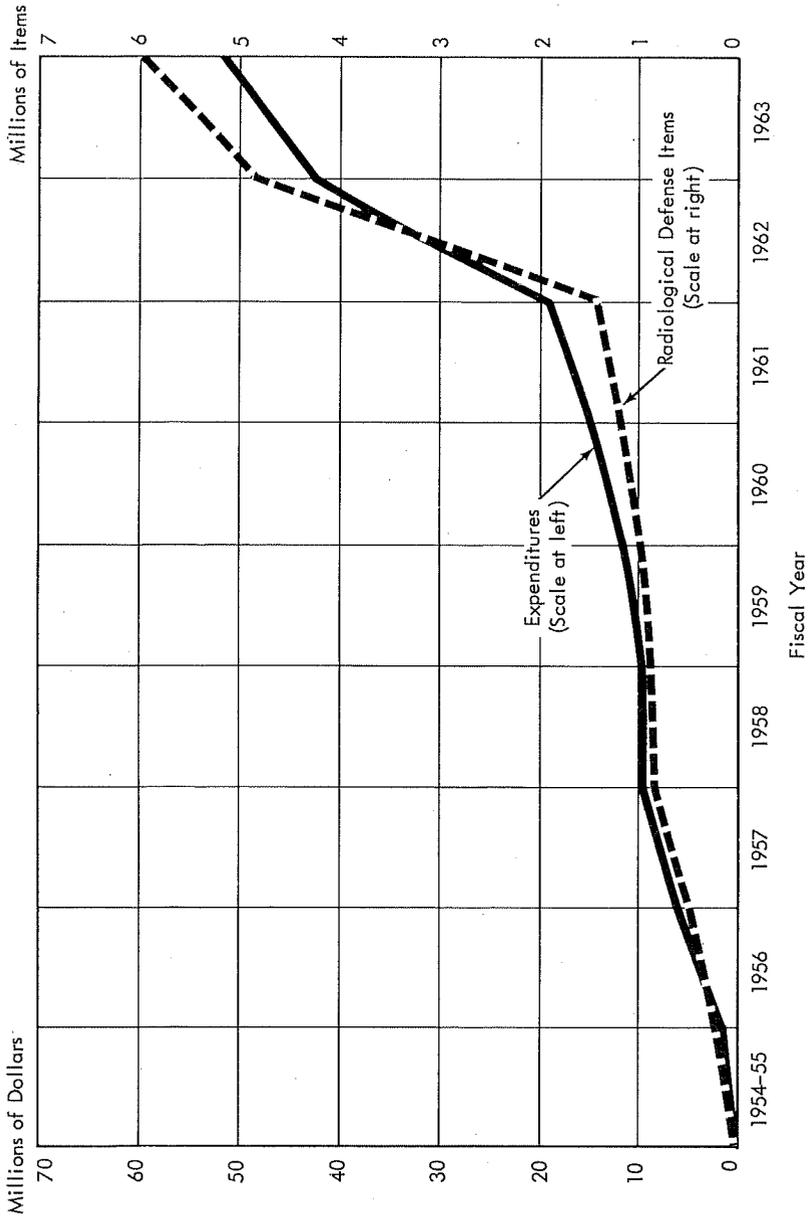


Figure 20.—Procurement of radiological defense instruments.

Instrument calibration and maintenance.—OCD continued its support of the calibration and maintenance of radiological defense instruments. Maintenance work was done at 10 dispersed shops operated for the DOD by the General Services Administration and at 1 shop operated by a Veterans' Administration supply depot. Available to all Federal agencies and to all States that do not have their own shops for this purpose, this service will be continued through calendar year 1964.

During fiscal year 1963, OCD proposed a new program for assisting the States in establishing their own calibration and maintenance shops. According to this plan, OCD would (1) loan an operational calibrator to each facility, (2) grant spare parts, batteries, shop and test equipment and tools, and (3) provide Federal matching funds for salaries of technicians, shop rental, and transportation.

Federal guidance and monitor training.—OCD prepared for issuance to State and local governments the criteria and guidance materials needed to plan, implement, and operate a radiological monitoring, reporting, and decontamination system. In addition, OCD arranged with the U.S. Weather Bureau to use new computer technique procedures for routine preparation and processing of fallout forecasts based on current high-level wind observations. These procedures will reduce the annual cost of this service from about \$100,000 to \$27,000.

Each of approximately 38,500 Federal, State, and local monitoring stations has at least 2 trained radiological monitors. Many stations have two additional trained monitors to provide for continuous 24-hour emergency operations. Monitor training for public shelters was accelerated during fiscal year 1963. This was made possible by the use of college and university extension services in the States and the training facilities of 51 U.S. Army bases. OCD recommends at least four monitors for each public shelter.

During fiscal year 1963, OCD processed and forwarded to the Atomic Energy Commission (AEC) for approval 235 applications for licenses to use AEC radiation sources for instrument calibration, training, and other purposes. The AEC requires these licenses of all personnel using these radiation sources. A total of 1,384 licenses in effect at the end of fiscal year 1963 had been processed by OCD for Federal and local governments.

Chemical and Biological Defense

Neither chemical nor biological weapons have been developed to the point at which they constitute a threat to the continental United States competitive with that of nuclear weapons as a killer of people. These and other potential weapons are kept under the closest possible

study so that military and civil defense measures may be developed to meet them if and when they pose a sufficient threat.

Should weapons of this type materialize as an instrument of inter-continental warfare, the response would be air filtration for shelter areas, protective masks for some shelter occupants, and other feasible adaptations of the fallout protection system to this new threat. Standby defensive capabilities in existence or under development include the following:

1. During fiscal year 1963, the General Tire & Rubber Co., under OCD contract, completed mass production studies of a protective mask for public use that would prevent inhalation of most toxic chemicals and biological micro-organisms. As a result of these studies, mass production procedures and requirements are available for release to prospective manufacturers. If warranted by future needs, this information would be made available to manufacturers who would be encouraged to produce the low cost masks for sale to the public through normal retail channels.

2. Research and development work was conducted on the testing and production of particulate filters that would be effective in removing biological agents from home and group shelter ventilators.

3. OCD had approximately 40,000 protective masks in its warehouses at the end of the fiscal year. About 135,000 protective masks had been distributed to Federal, State, and local facilities for familiarization, demonstration, and operational purposes.

4. Under Executive Order 10958, August 14, 1961, the Department of Health, Education, and Welfare (DHEW) maintains a stockpile of supplies for treating biological and toxic chemical casualties.

5. Under Executive Order 11001, February 16, 1962, DHEW carries primary responsibility for developing and coordinating programs for prevention, detection, and identification of human exposure to, or contamination of foods and drugs with, toxic chemicals or biologicals that might be used in an attack on the United States. Under Executive Order 10998, February 16, 1962, the Department of Agriculture carries similar responsibility for protecting animals and crops and their products. OCD provides leadership, program guidance, and coordination to these departments in carrying out these functions.

DAMAGE ASSESSMENT

Executive Order 10952, dated July 20, 1961, assigned to the Secretary of Defense responsibility for development of plans and operations of systems to undertake a nationwide postattack assessment of (1) the nature and extent of damage resulting from enemy attack and (2) the surviving resources, including systems to monitor and report specific hazards resulting from the detonation or use of special

weapons. Other Executive orders, subsequently issued to Federal departments and agencies, have assigned them responsibility for maintaining damage assessment capabilities related to their normal functions and for providing data to the Department of Defense. This function is to be carried out in consonance with the national defense plans, programs, and operations of the Secretary of Defense.

Plans and Systems

OCD damage assessment plans and systems in effect and under development are designed to (1) determine the probable effects of enemy attack upon human and material resources and services of the Nation and (2) provide guidance for postattack survival operations.

Preattack assessment.—By analysis of the effects of a range of hypothetical attacks, OCD derives data to: (1) Advise industry and Federal, State, and local agencies on the relative vulnerability of proposed relocation or operational sites, (2) study effectiveness of the shelter program and shelter program proposals, (3) determine feasibility and effectiveness of other civil defense programs, (4) compute requirements for survival resources after an attack, (5) advise the Departments of Agriculture, and Health, Education, and Welfare on the location of civil defense stockpiles, and (6) advise regional and State civil defense directors on possible hazards to areas within their jurisdictions.

Postattack assessment.—After an attack, the extent of damage to human and material resources and services and the evaluation of remaining resources and services would determine the most feasible survival operations conducive to recovery at all levels of government.

To provide data for these operations and nationwide action most conducive to recovery, OCD plans call for postattack damage assessment at OCD regional headquarters and at State and local levels. OCD provides training and reference data for this purpose. Damage assessment at these levels will provide regional, State, and local officials with independent means of appraising damage in their operational areas and will reduce their need for information from OCD headquarters. OCD plans to obtain initial postattack damage assessments from centrally located automatic data-processing computers that rapidly produce estimates of casualties, resources, and facility damage.

Plans being developed with the U.S. Air Force for aerial reconnaissance of damaged areas should provide more accurate estimates of destruction than initial estimates obtained from automatic data computers. Final postattack damage assessment will be based on data obtained by onsite inspection and continued use will be made of computers to process these data. As the damage assessment plans are

developed further, Federal and local government agencies will be called upon to assist in this service.

Survival Resources and Requirements

Under Executive Order 10952, OCD is responsible for providing assistance to State and local governments in a postattack period, including water supply, debris clearance, health, traffic, police, and population evacuation capabilities. A major OCD role in meeting this responsibility is that of developing estimates of resources and services required for civil defense emergency operations. This includes programing these national civil defense requirements so that they may be supplied from surviving resources and services or from resources available as a result of preattack preparations such as stockpiling. Consequently, OCD works with other DOD organizations and Federal agencies to develop plans, criteria, techniques, and procedures for estimating net postattack deficiencies of essential survival resources and services for each phase of emergency operations. During fiscal year 1963, activities in this field included work on:

1. Preattack planning to (1) develop techniques and procedures for determining emergency supply demands, (2) provide a continuing data base for all levels of government, (3) ascertain supply-demand through requirements studied in cooperation with other agencies, (4) analyze means of meeting requirements for essential emergency resources and services under various emergency conditions, and (5) develop recommendations for meeting estimated postattack deficiencies for civil defense operation.

2. Postattack operational plans to establish policies and programs to be implemented at all government levels for meeting survival requirements; e.g., a system of claiming emergency survival supplies at national and regional levels to supply deficiencies that cannot be met at State or local levels.

3. Transportation plans that resulted in reaching an understanding between the National Defense Transportation Association, the DOD Traffic Management Service, and the Assistant Secretary of Defense (Civil Defense) on the use of transportation facilities for civil defense. Civil defense transportation requirements were incorporated into instructions and regulations of the DOD and its agencies.

Data Base Improvements

Resource data are obtained manually and by use of automatic data-processing systems. These data are used for program evaluation, preattack and postattack planning, and policy determination for strategic evacuation and emergency operations. During fiscal year 1963, OCD, through contracts and agreements with other agencies,

completed or continued projects to materially strengthen the data base for these purposes. Major resources were:

1. *Food*.—The data, developed by counties, include estimates showing amounts of food supplies normally available in wholesale distribution warehouses, retail stores, households, and public or institutional eating places.

2. *Fuel and power*.—Data were obtained showing location and quantity of petroleum fuel available at secondary storage facilities.

3. *Engineering and construction equipment*.—Data on these resources are based on a current nationwide survey of construction and engineering projects and Army equipment available for emergency civil defense operations.

4. *Water*.—Data on the location of water systems, including critical portions, are based on a current survey of water systems serving communities throughout the Nation.

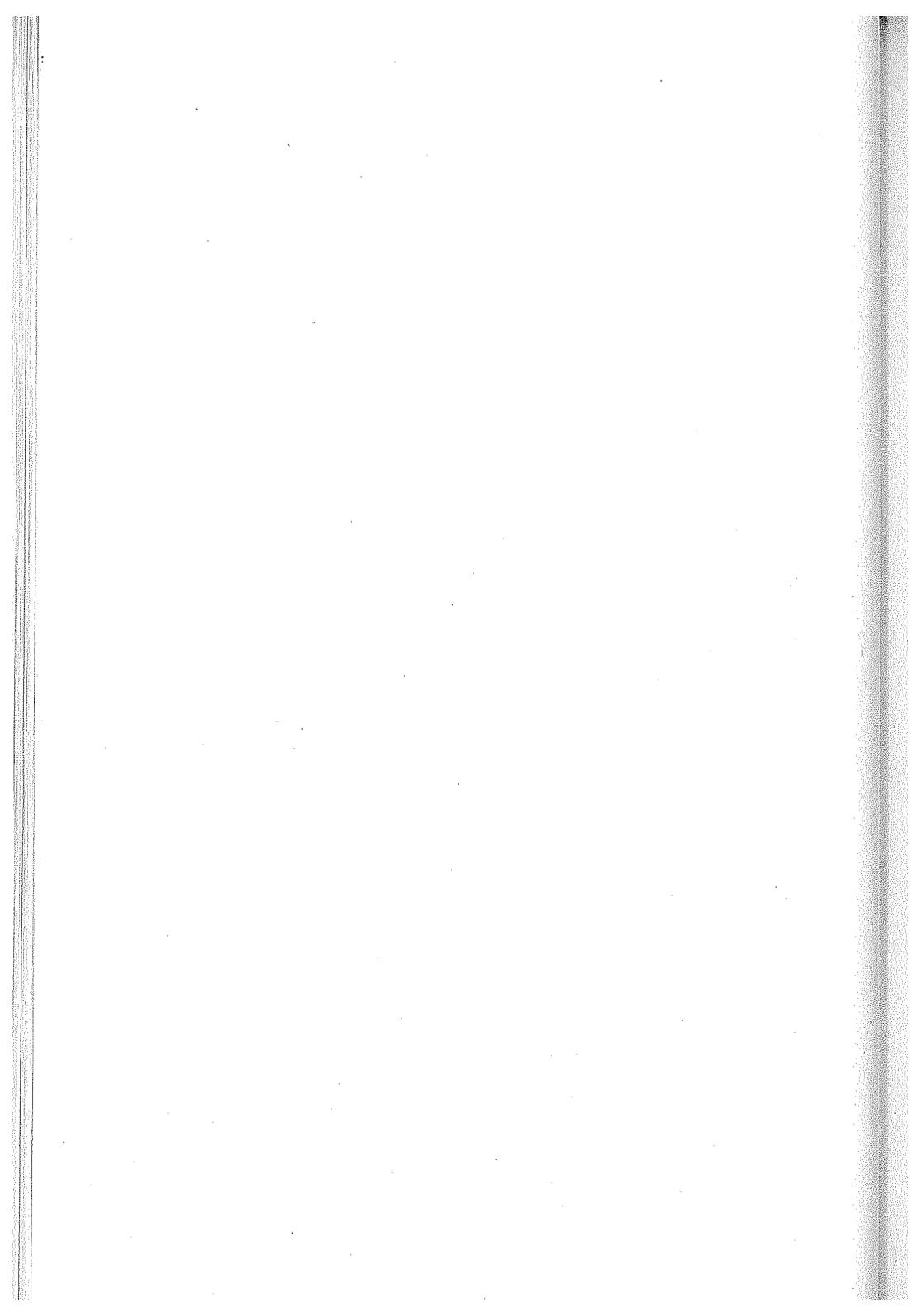
5. *Medical and health resources*.—Data on these resources are based on a nearly completed survey of health manpower, State and local health departments and clinics, and storage locations of prepositioned civil defense emergency hospitals.

6. *Educational manpower and facilities*.—Upon completion, a nationwide survey of school facilities and personnel will provide important data on manpower and community facilities potentially available for civil defense operations.

At the end of fiscal year 1963, OCD had in progress a study to determine the required resources and their availability for immediate postattack operations. Data obtained from this source will be used in developing a portion of an OCD intelligence system for emergency operations. Arrangements were also made to develop plans for conducting a postattack population survey.

As a result of work completed and in progress, OCD will have information suitable for automatic data-processing on a variety of resources and services and will be able to produce summaries applicable to cities, counties, standard metropolitan areas, States, OCD regions, and the entire United States. This information, invaluable as a strong current data base, will be available for use in any type of emergency.

In addition to improving the data base, OCD continued to seek information on more economical means of providing maximum protection of life and property; for example, in cooperation with other DOD agencies, comprehensive studies were completed on comparative costs of various shelter systems, including those that would support defense plans relying upon the use of antiballistic missiles.



FEDERAL ASSISTANCE PROGRAMS AND ACTIVITIES

The governing criterion for the existence and operation of each OCD Federal assistance program or activity is that it must effectively help State and local governments develop civil defense capabilities in the most efficient and economical manner. Throughout fiscal year 1963, assistance for this purpose was made available on a continuing basis by (1) training key personnel and educating the public for civil defense, (2) providing Federal matching funds, (3) donating Federal surplus property for civil defense use, and (4) maintaining an inventory of emergency supplies and equipment. In addition, OCD provided support to all civil defense programs and activities through technical assistance and guidance.

TECHNICAL ASSISTANCE AND GUIDANCE

The OCD extended technical assistance and guidance to all State and local governments to help them (1) develop fallout shelter for all their citizens, (2) take necessary action for effective use of shelters, and (3) implement coordinated emergency operational plans. Principal accomplishments are described in the succeeding paragraphs.

Policy guidance.—OCD policy guidance for State and local governments is based on continued analysis of their problems and projected liaison with Federal agencies having field personnel and other resources available for civil defense. Three major developments during fiscal year 1963 of special importance in providing policy direction were:

1. *Establishment of Regional Civil Defense Coordinating Boards*¹ in January 1963.—The responsibilities and functions of these boards paved the way for coordinated civil defense planning and action on the part of the military departments and all Federal agencies having assigned emergency preparedness functions. This made Federal resources in the field more readily available to State and local governments; State subcommittees to coordinate Federal civil defense activities in each States were also established.

2. *Team visits.*—During the latter half of fiscal year 1963, at least one State in each OCD region was visited by OCD headquarters and regional representatives to help analyze State and local problems

having policy implications. This practice will be extended to each State.

3. *Preparation of the Federal Civil Defense Guide.*—This is an OCD publications series giving program and policy guidance to civil defense directors and other Federal, State, and local officials. As each chapter of the guide is published, it is released to OCD regional offices, and under controlled distribution to Federal, State, and local offices.

Program direction and guidance.—OCD continued to issue instructional materials on civil defense programs and projects to assure a coordinated approach among technical staffs of State and local officials. Special effort was made to provide guidance to State and local governments and to all Federal agencies assisting in identifying, marking, and stocking public fallout shelters under the National Shelter Program. For example, a followup inspection was made of 66 buildings that were included in the original test project of this program in fiscal year 1962 and known as *Shelter One*. More than a year after shelters in these buildings had been stocked, the supplies were found to be in satisfactory condition except for the theft of one radiological instrument and a portion of a medical kit, and deterioration of fiber water containers (of a type no longer used) in one shelter. Also, one outer food container was found open, but sealed contents remained undisturbed.

More comprehensive onsite monitoring, to gain firsthand information on dealing with shelter stocking, was a 24-city project selected for this purpose in May 1962; it was later expanded to cover 40 cities. Conducted at an accelerated rate in these cities throughout fiscal year 1963, the marking, licensing, and stocking of shelters were closely observed. Problems in distribution, warehousing, use of forms, public information, use of volunteers, and posting of signs were readily detected and solved. The detailed firsthand information obtained from this project was evaluated and made available to State and local governments for their assistance and guidance in the nationwide implementation of the National Shelter Program. Results of the accelerated program in the 40 cities were valuable to governments at all levels.

Other noteworthy assistance included:

1. *Community shelter planning.*—Recognizing that all communities will need tailormade plans for using their shelters effectively as they are developed through the National Shelter Program, OCD arranged to provide pertinent guidance information to them. Through contractual arrangements with the Stanford Research Institute, a prototype shelter utilization and planning project was conducted in Montgomery County, Md. Based on this experience, OCD later started

two similar projects in each OCD region. Knowledge and experience gained in this manner will enable OCD regional staffs to direct and assist all communities in shelter utilization planning.

2. *Use of military Standby Reserve officers.*—As the result of a decision made by the Secretary of Defense, Standby Reserve officers may acquire retirement point credit for participating in State and local civil defense work. OCD arranged to inform local officials monthly of the number of officers in each county available, requested, and designated for civil defense assignments. At the end of fiscal year 1963, civil defense authorities had requested the services of 6,506 officers; 4,562 were available, and 1,767 had been assigned. More of these officers can be assigned as civil defense work schedules are developed that are compatible with the work schedules of the officers.

3. *The American National Red Cross (ANRC) advisory service.*—Through contractual arrangements with the ANRC, OCD obtained advisory services applicable to State and local civil defense. In addition, the ANRC, through its local chapters, conducted training of great value to civil defense; e.g., first aid, home nursing, and emergency mass feeding.

4. *Law enforcement guidance.*—In recognition of special law enforcement problems associated with civil defense emergency functions, OCD held a special seminar attended by 79 police officials, making a total of 455 who attended such seminars during the past 2 years. OCD also continued arrangements with the U.S. Continental Army Command (USCONARC) for the training of local police in explosive ordnance reconnaissance. During fiscal year 1963, 6,980 law enforcement officers were trained, making a total of approximately 22,000 trained in explosive ordnance reconnaissance since January 1959. (For additional information on training of State and local personnel, see section on *Training and Education*.)

5. *Coordination of major disaster responsibilities.*—On February 1, 1963, the Assistant Secretary of Defense (Civil Defense) was made responsible for coordinating military aid in civil and domestic emergencies.² During the remaining portion of fiscal year 1963, OCD coordinated Department of Defense assistance, as required, in 12 major disaster areas involving 11 States and Guam.

6. *Special attention to rural civil defense.*—By contract, OCD arranged for the Field Extension Service of the U.S. Department of Agriculture (USDA) to conduct a civil defense information and education program among rural people and those in cities of less than 10,000 population. Since most public shelters developed by the National Shelter Program are in larger cities, the purpose of this

² See app. 1.

action was to help rural people develop survival plans and home shelters as well as to cooperate in community shelter planning. Approximately 15,000 USDA Field Extension Service personnel assisted in this work. The interest and information developed from this service has proved to be of real value. (See *Public Information, Publications*, in part VII.)

TRAINING AND EDUCATION

Civil defense training and education activities during fiscal year 1963 were continued in pursuit of objectives well defined the preceding year to: (1) Train those key leaders specifically responsible for planning and directing civil defense operations, (2) provide skilled civil defense workers, and (3) provide for educating the public in use of shelters; e.g., the public must learn where shelters are, when to go and how to get to them, how to live in them, and what to expect upon leaving them to enter a postattack environment. The effort and means exercised to meet these objectives are described in the succeeding paragraphs of this report.

OCD schools.—OCD continued to operate the Staff College, Battle Creek, Mich., and the Civil Defense Training Centers at Alameda, Calif., and Brooklyn, N.Y. Graduates of the 133 classes taught during the year totaled 4,255: 1,183 from 47 classes at Staff College, 928 from 36 classes at the Alameda center, and 2,144 from 50 classes at the Brooklyn center. The graduates were principally key civil defense personnel, instructors, and Federal personnel having civil defense responsibilities.

Standard courses taught were: *Civil Defense Management, Shelter Management for Instructors, Civil Defense Planning and Operations, Radiological Monitoring for Instructors, and Radiological Defense Officer.* In addition, special courses were offered in support of the Civil Defense Adult Education and University Extension Programs.

New developments at OCD schools during fiscal year 1963 included:

1. Offering a new course, *Elements of a Shelter System Capability*, in May 1963.
2. Development of a new course, *Radiological Decontamination Specialist*, for future instruction.
3. Development of an expanded *Radiological Defense Officer* course to include decontamination planning and evaluation.

Civil Defense Adult Education Program.—Started in fiscal year 1960, the Civil Defense Adult Education Program (CDAEP) was accelerated in fiscal year 1963 with greater emphasis on developing knowledge and awareness of civil defense organization and plans primarily to help achieve effective community fallout shelter systems.

Under contract with the U.S. Office of Education, the program was continued in 35 States, the District of Columbia, and Puerto Rico and was extended to 10 additional States during fiscal year 1963. Selected State personnel attended one of three seminars held at OCD Staff College to train them to conduct 15-hour seminars locally for teachers needed in the program. Upon certification by the State, these teachers established and taught a 12-hour course to adults. Federal funds were allocated under State contract to finance instruction locally, without expense to the students. In addition, OCD furnished training films and related instructional material for use in these courses to supplement the recently revised student manual *Personal and Family Survival*.

During fiscal year 1963, the number of teachers trained in this program totaled 14,786; a total of 263, 259 adults graduated from the 10,070 courses offered. Additional benefits derived from this program were (1) training received by many adults who completed less than the 12 hours of instruction required for graduation, and (2) the incorporation of civil defense instruction into the regular school curriculum and other activities by teachers trained in the CDAEP.

Civil Defense University Extension Program.—Through the extension divisions of certain State institutions of higher learning, a new program, the Civil Defense University Extension Program, was initiated in fiscal year 1963. Contracts for this purpose were signed by 51 colleges and universities in 49 States, the District of Columbia, and Puerto Rico. Under these contracts, the colleges and universities will conduct (1) 518 civil defense conferences with State and local officials, (2) 392 courses to train shelter management instructors, and (3) 346 courses to train radiological monitoring instructors. Instructors qualified as a result of this training will then train shelter managers and radiological monitors locally.

Participating universities and colleges recruited staffs for conducting this program, and OCD initiated their training at the OCD Staff College, Battle Creek, Mich. The major portion of this training will be conducted during fiscal year 1964.

Medical self-help training.—Developed for the OCD by the U.S. Public Health Service of DHEW and in cooperation with the American Medical Association, the Medical Self-Help Program is designed to train the public to meet emergency health needs if professional medical help is unavailable for prolonged periods. The goal is to train at least one member of every household in medical self-help.

Based on the results of a trial phase of medical self-help training conducted in fiscal year 1962 and the results of a survey of the participants, minor revisions of the course material were made as recom-

mended by a civil defense advisory committee established for this purpose.³ The U.S. Public Health Service, in consonance with OCD policies and under a work order agreement, then contracted for production and distribution of training materials and promotional information.

At the end of fiscal year 1963, approximately 788,000 persons were participating in the course in classrooms, on television, or by other means. Many high schools plan to teach medical self-help during fiscal year 1964. One airline having about 32,000 employees has started training them in this course; several major industries are considering the training for their employees. One military base has trained 2,000 of its 10,000 military dependents and civilian staff in medical self-help; a military command of 250,000 persons has implemented the training.

Radiological monitor training by the Army.—To augment the supply of radiological defense monitors needed for staffing fixed radiological monitoring stations and public fallout shelters, OCD made contractual arrangements in April 1963 with the U.S. Continental Army Command (USCONARC). Using the full capability of 51 Army posts available for this training, USCONARC could train 100,000 monitors per year.

In preparation for this program, under which monitor training will begin during fiscal year 1964, 86 Army instructors completed the *Radiological Monitoring for Instructors* course at OCD schools. The Atomic Energy Commission was requested to license Army instructors to handle the radiation source sets that the OCD will provide in addition to radiological defense instruments and other training materials.

Immediate plans call for the training of approximately 20,000 monitors by USCONARC teams operating from 30 participating Army posts. Requests for this training originate at State and local levels and are directed through OCD regional offices to the appropriate military channels. Training locations and schedules are then arranged by direct agreement between local civil defense officials and the Army post providing the training.

National education organizations.—Active OCD liaison with major national education organizations increased during fiscal year 1963. The key role of schools and educators in the proposed shelter development program is indicated by requests for guidance materials from school officials and teachers. In response, OCD contracted with (1) the National Education Association (NEA) to prepare and publish a 2-color 16-page civil defense article in the March 1964 NEA Journal, and (2) the National Commission of Safety Education, NEA, to

³ See app. 6.

prepare a revision of the publication *Civil Defense Education Through Elementary and Secondary Schools*. OCD will provide technical and financial assistance in support of these projects. OCD staff participated in the annual meetings and provided exhibits and technical information on shelters to the National School Boards Association, National Education Association, American Association of School Administrators, and the Association of Higher Education.

Training requirements.—During fiscal year 1963, OCD placed greater emphasis on establishing civil defense training needs, standards, and programs to be supported by an effective reporting system for use in evaluating training achievement. Several staff studies were conducted for this purpose and two projects were started under contract to provide information on (1) the feasibility of programed instruction and civil defense training, and (2) individual training standards for staff and skills training requirements.

Training materials.—OCD prepared and distributed instructor guides, student manuals, visual aids, and other training materials for use by State and local civil defense organizations in conducting standard courses supported by Federal matching funds. Special training material was provided in support of radiological monitoring and shelter management instructor training conducted as part of the University Extension Program. In addition, contracts were made with five educational institutions to develop training material on: (1) Auxiliary police, Michigan State University, (2) teaching methods and techniques, Kansas State University of Agriculture & Applied Science, (3) radiological decontamination skill, University of Tennessee, (4) auxiliary firemen, Oklahoma State University of Agriculture & Applied Science, and (5) rescue training, Agricultural & Mechanical College of Texas.

An extended contract with the U.S. Army Pictorial Center provided for production of training films on radiological monitoring and shelter management. New contracts were executed for development of training films on civil defense management and adult education. Contracts were also awarded for the assembly of training kits for use by shelter management and radiological monitoring instructors.

FINANCIAL ASSISTANCE

In accordance with the provisions of the *Federal Civil Defense Act of 1950*, as amended, the Office of Civil Defense, Department of Defense, continued to provide Federal matching funds to States, territories, and possessions. The OCD required all recipients of these funds during fiscal year 1963 to submit an official program paper showing objectives, specific activities, and points of emphasis within the various civil defense programs.

Funds obligated for civil defense supplies, equipment, training, and emergency operating centers during fiscal year 1963 totaled approximately \$14.5 million. (See table 4.) Of this total, more than \$7.7 million was obligated to State and local governments for emergency operating centers. (See *Protective Structures, Emergency Operating Centers*, in part III.) Other major obligations were for communications, warning, and medical supplies.

Approximately \$12.9 million was made available to help State and local governments pay essential personnel and administrative expenses. During fiscal year 1963, all States, the District of Columbia, Puerto Rico, American Samoa, Guam, the Virgin Islands, and more than 1,200 of their political subdivisions participated in this program. (See table 5.) State and local employment supported by these funds is required to be under a merit system satisfying Federal standards. The number of participating subdivisions in fiscal year 1963 was about 37 percent greater than the preceding fiscal year. According to available staffing plans, paid State and local employees performing civil defense functions totaled approximately 5,000 in fiscal year 1963, an increase of approximately 14 percent since the end of June 1962.

The program for partial reimbursement of travel and per diem expenses of students attending OCD schools was continued to encourage training of State and local civil defense personnel. Course completion certificates issued to students under this program during fiscal year 1963 totaled 2,349, and the amount reimbursed was \$130,416. Cumulative expenditures since the beginning of the program in fiscal year 1960 totaled \$467,042; and completion certificates issued totaled 7,807.

SURPLUS PROPERTY

Public Law 655, 84th Congress, authorized the donation of Federal surplus property for use in any State for civil defense purposes. Since Congress authorized such action in 1957, property having an acquisition cost of approximately \$239.7 million has been transferred to the States. Federal surplus property valued at approximately \$22 million was donated to the States during fiscal year 1963. (See table 6.)

The demand for trucks, generators, and firefighting and communications equipment exceeded the available supply. Throughout fiscal year 1963, recipients of surplus property donations were required to submit the same type of official program paper as that required of recipients of Federal matching funds.

TABLE 4.—Fiscal year 1963 Federal contributions for supplies, equipment, training, and emergency operating centers

| Area | Amounts obligated | | |
|---------------------------|-------------------|-----------------------------------|-----------------------------|
| | Total | Supplies, equipment, and training | Emergency operating centers |
| Total..... | \$14, 523, 454 | \$6, 737, 488 | \$7, 785, 966 |
| Region 1..... | 5, 481, 261 | 2, 337, 009 | 3, 144, 252 |
| Connecticut..... | 129, 298 | 129, 298 | ----- |
| Maine..... | 295, 020 | 102, 892 | 192, 128 |
| Massachusetts..... | 231, 033 | 211, 033 | 20, 000 |
| New Hampshire..... | 81, 979 | 81, 504 | 475 |
| New Jersey..... | 1, 199, 815 | 64, 566 | 1, 135, 249 |
| New York..... | 3, 321, 660 | 1, 549, 752 | 1, 771, 908 |
| Rhode Island..... | 72, 102 | 47, 852 | 24, 250 |
| Vermont..... | 138, 168 | 137, 926 | 242 |
| Puerto Rico..... | 12, 186 | 12, 186 | ----- |
| Virgin Islands..... | ----- | ----- | ----- |
| Region 2..... | 1, 197, 510 | 580, 287 | 617, 223 |
| Delaware..... | 14, 902 | 11, 441 | 3, 461 |
| District of Columbia..... | 5, 404 | ----- | 5, 404 |
| Kentucky..... | 79, 274 | 78, 849 | 425 |
| Maryland..... | 497, 794 | 140, 513 | 357, 281 |
| Ohio..... | 105, 312 | 101, 426 | 3, 886 |
| Pennsylvania..... | 429, 525 | 213, 289 | 216, 236 |
| Virginia..... | 55, 954 | 32, 023 | 23, 931 |
| West Virginia..... | 9, 345 | 2, 746 | 6, 599 |
| Region 3..... | 943, 534 | 500, 319 | 443, 215 |
| Alabama..... | 73, 772 | 73, 772 | ----- |
| Florida..... | 76, 849 | 57, 904 | 18, 945 |
| Georgia..... | 115, 353 | 101, 995 | 13, 358 |
| Mississippi..... | 84, 191 | 44, 991 | 39, 200 |
| North Carolina..... | 171, 721 | 122, 656 | 49, 065 |
| South Carolina..... | 222, 189 | 84, 689 | 137, 500 |
| Tennessee..... | 199, 459 | 14, 312 | 185, 147 |
| Canal Zone..... | ----- | ----- | ----- |
| Region 4..... | 904, 354 | 490, 088 | 414, 266 |
| Illinois..... | 107, 879 | 77, 599 | 30, 280 |
| Indiana..... | 70, 179 | 56, 679 | 13, 500 |
| Michigan..... | 115, 529 | 63, 004 | 52, 525 |
| Minnesota..... | 82, 876 | 58, 901 | 23, 975 |
| Wisconsin..... | 527, 891 | 233, 905 | 293, 986 |
| Region 5..... | 2, 033, 081 | 605, 726 | 1, 427, 355 |
| Arkansas..... | 100, 134 | 93, 329 | 6, 805 |
| Louisiana..... | 1, 106, 271 | 116, 035 | 990, 236 |
| New Mexico..... | 9, 332 | 2, 582 | 6, 750 |
| Oklahoma..... | 563, 186 | 207, 954 | 355, 232 |
| Texas..... | 254, 158 | 185, 826 | 68, 332 |

TABLE 4.—Fiscal year 1963 Federal contributions for supplies, equipment, training, and emergency operating centers—Continued

| Area | Amounts obligated | | |
|---------------------|-------------------|--|-----------------------------------|
| | Total | Supplies, equipment, and training | Emergency operating centers |
| Region 6..... | 1, 454, 953 | 1, 096, 220 | 358, 733 |
| Colorado..... | 201, 045 | 170, 660 | 30, 385 |
| Iowa..... | 357, 452 | 352, 445 | 5, 007 |
| Kansas..... | 276, 309 | 44, 781 | 231, 528 |
| Missouri..... | 122, 313 | 113, 763 | 8, 550 |
| Nebraska..... | 46, 522 | 30, 584 | 15, 938 |
| North Dakota..... | 330, 388 | 276, 774 | 53, 614 |
| South Dakota..... | 110, 493 | 97, 040 | 13, 453 |
| Wyoming..... | 10, 431 | 10, 173 | 258 |
| Region 7..... | 2, 198, 461 | 1, 005, 713 | 1, 192, 748 |
| Arizona..... | 57, 551 | 44, 051 | 13, 500 |
| California..... | 1, 783, 929 | 732, 480 | 1, 051, 449 |
| Hawaii..... | 223, 233 | 104, 546 | 118, 687 |
| Nevada..... | 57, 360 | 57, 360 | ----- |
| Utah..... | 76, 388 | 67, 276 | 9, 112 |
| American Samoa..... | ----- | ----- | ----- |
| Guam..... | ----- | ----- | ----- |
| Region 8..... | 310, 300 | 122, 126 | 188, 174 |
| Alaska..... | 25, 069 | 4, 069 | 21, 000 |
| Idaho..... | 64, 894 | 5, 525 | 59, 369 |
| Montana..... | 10, 853 | 4, 093 | 6, 760 |
| Oregon..... | 71, 064 | 23, 554 | 47, 510 |
| Washington..... | 138, 420 | 84, 885 | 53, 535 |

EMERGENCY SUPPLIES AND EQUIPMENT INVENTORY

An inventory of emergency supplies and equipment under OCD direction was valued at approximately \$36.5 million at the end of fiscal year 1963. Included in this inventory were forty-five 10-mile units of engineering equipment valued at more than \$10 million. Stored at 19 locations throughout the Nation, this equipment was available for local emergency use to pump and purify water during periods of natural disaster and postattack operations.

A major part of the inventory consisted of radiological defense equipment valued at approximately \$24.7 million. This equipment included instruments and other items being packaged into kits for use at licensed public shelters and into operational sets for use at radiological monitoring stations. The remaining part of the inventory, valued at approximately \$1.8 million, contained biological defense

equipment; e.g., protective masks, chemical detection kits, decontamination sets, and water purification units.

Procurement and management of medical supply inventories became the responsibility of the Department of Health, Education, and Welfare under Executive Order 10958, effective August 14, 1961.

TABLE 5.—Fiscal year 1963 Federal contributions for civil defense personnel and administrative expenses

| Area | Amount obligated | Political subdivisions | |
|----------------------------|------------------|------------------------|--------|
| | | Number participating | Staff |
| Total | \$12, 940, 247 | 1, 258 | 5, 012 |
| Region 1 | 3, 818, 780 | 111 | 1, 266 |
| Connecticut | 149, 758 | 10 | 50 |
| Maine | 151, 950 | 15 | 72 |
| Massachusetts | 341, 000 | 18 | 125 |
| New Hampshire | 33, 300 | ----- | 10 |
| New Jersey | 346, 100 | 35 | 179 |
| New York | 2, 596, 300 | 25 | 726 |
| Rhode Island | 97, 400 | 5 | 33 |
| Vermont | 42, 870 | 3 | 16 |
| Puerto Rico | 52, 576 | ----- | 52 |
| Virgin Islands | 7, 526 | ----- | 3 |
| Region 2 | 1, 477, 678 | 129 | 641 |
| Delaware | 60, 250 | 3 | 26 |
| District of Columbia | 85, 300 | ----- | 20 |
| Kentucky | 131, 874 | 22 | 79 |
| Maryland | 291, 901 | 16 | 115 |
| Ohio | 227, 380 | 11 | 97 |
| Pennsylvania | 433, 583 | 41 | 200 |
| Virginia | 160, 915 | 20 | 61 |
| West Virginia | 86, 475 | 16 | 43 |
| Region 3 | 1, 872, 108 | 297 | 881 |
| Alabama | 300, 504 | 49 | 134 |
| Florida | 337, 900 | 38 | 160 |
| Georgia | 382, 609 | 84 | 201 |
| Mississippi | 145, 500 | 25 | 82 |
| North Carolina | 347, 895 | 48 | 141 |
| South Carolina | 198, 900 | 34 | 94 |
| Tennessee | 158, 800 | 19 | 69 |
| Region 4 | 1, 573, 491 | 262 | 644 |
| Illinois | 264, 950 | 43 | 123 |
| Indiana | 160, 328 | 15 | 59 |
| Michigan | 323, 087 | 50 | 117 |
| Minnesota | 437, 390 | 85 | 178 |
| Wisconsin | 387, 736 | 69 | 167 |

TABLE 5.—Fiscal year 1963 Federal contributions for civil defense personnel and administrative expenses—Continued

| Area | Amount obligated | Political subdivisions | |
|---------------------|------------------|------------------------|-------|
| | | Number participating | Staff |
| Region 5..... | 826, 000 | 92 | 387 |
| Arkansas..... | 128, 342 | 13 | 61 |
| Louisiana..... | 244, 763 | 12 | 114 |
| New Mexico..... | 65, 780 | 6 | 24 |
| Oklahoma..... | 144, 115 | 22 | 73 |
| Texas..... | 243, 000 | 39 | 115 |
| Region 6..... | 854, 462 | 210 | 450 |
| Colorado..... | 149, 678 | 22 | 58 |
| Iowa..... | 116, 946 | 26 | 83 |
| Kansas..... | 97, 512 | 31 | 56 |
| Missouri..... | 214, 000 | 33 | 101 |
| Nebraska..... | 98, 111 | 17 | 46 |
| North Dakota..... | 89, 215 | 37 | 44 |
| South Dakota..... | 60, 000 | 24 | 37 |
| Wyoming..... | 29, 000 | 20 | 25 |
| Region 7..... | 1, 932, 853 | 90 | 520 |
| Arizona..... | 127, 500 | 11 | 46 |
| California..... | 1, 484, 253 | 66 | 379 |
| Hawaii..... | 168, 600 | 4 | 40 |
| Nevada..... | 62, 400 | 5 | 21 |
| Utah..... | 67, 600 | 4 | 25 |
| American Samoa..... | 5, 500 | ----- | 3 |
| Guam..... | 17, 000 | ----- | 6 |
| Region 8..... | 584, 875 | 67 | 223 |
| Alaska..... | 61, 965 | 5 | 15 |
| Idaho..... | 90, 300 | 27 | 57 |
| Montana..... | 48, 226 | 10 | 20 |
| Oregon..... | 147, 184 | 9 | 45 |
| Washington..... | 237, 200 | 16 | 86 |

TABLE 6.—Federal surplus property transferred to State and local governments for civil defense purposes

[In thousands of dollars]

| Area | Acquisition cost of transferred property ¹ | |
|---------------------------|---|---------------------|
| | Fiscal years 1957-63 | Fiscal year 1963 |
| Total..... | \$239, 680 | \$22, 343 |
| Region 1..... | 40, 579 | 4, 903 |
| Connecticut..... | 4, 975 | 393 |
| Maine..... | 5, 092 | 516 |
| Massachusetts..... | 9, 762 | 1, 873 |
| New Hampshire..... | 1, 865 | 180 |
| New Jersey..... | 6, 662 | 765 |
| New York..... | 7, 946 | 616 |
| Rhode Island..... | 1, 681 | 293 |
| Vermont..... | 771 | 93 |
| Puerto Rico..... | 1, 826 | 174 |
| Virgin Islands..... | | |
| Region 2..... | 23, 340 | 1, 296 |
| Delaware..... | 231 | 35 |
| District of Columbia..... | | |
| Kentucky..... | 2, 494 | 127 |
| Maryland..... | 4, 562 | 283 |
| Ohio..... | 3, 413 | 96 |
| Pennsylvania..... | 7, 324 | 367 |
| Virginia..... | 4, 202 | 210 |
| West Virginia..... | 1, 115 | 177 |
| Region 3..... | 49, 269 | 6, 264 |
| Alabama..... | 7, 511 | 771 |
| Florida..... | 14, 279 | 1, 235 |
| Georgia..... | 11, 063 | 1, 432 |
| Mississippi..... | 4, 677 | 979 |
| North Carolina..... | 7, 111 | 969 |
| South Carolina..... | 2, 504 | 287 |
| Tennessee..... | 2, 124 | 591 |
| Canal Zone..... | | |
| Region 4..... | 29, 609 | 2, 049 |
| Illinois..... | 7, 501 | 611 |
| Indiana..... | 4, 485 | 102 |
| Michigan..... | 12, 015 | 1, 085 |
| Minnesota..... | 3, 437 | 118 |
| Wisconsin..... | 2, 171 | 133 |

See footnote at end of table.

TABLE 6.—Federal surplus property transferred to State and local governments for civil defense purposes—Continued

[In thousands of dollars]—Continued

| Area | Acquisition cost of transferred property ¹ | |
|----------------------|---|---------------------|
| | Fiscal years 1957-63 | Fiscal year 1963 |
| Region 5 | 29, 084 | 2, 661 |
| Arkansas | 5, 174 | 234 |
| Louisiana | 7, 580 | 508 |
| New Mexico | 1, 011 | 12 |
| Oklahoma | 3, 478 | 418 |
| Texas | 11, 841 | 1, 488 |
| Region 6 | 15, 985 | 1, 262 |
| Colorado | 3, 377 | 94 |
| Iowa | 978 | 84 |
| Kansas | 1, 230 | 92 |
| Missouri | 3, 760 | 345 |
| Nebraska | 1, 418 | 46 |
| North Dakota | 1, 546 | 247 |
| South Dakota | 2, 026 | 183 |
| Wyoming | 1, 649 | 171 |
| Region 7 | 41, 178 | 2, 927 |
| Arizona | 1, 498 | 174 |
| California | 34, 420 | 2, 122 |
| Hawaii | 325 | 59 |
| Nevada | 969 | 186 |
| Utah | 3, 966 | 386 |
| American Samoa | | |
| Guam | | |
| Region 8 | 10, 635 | 981 |
| Alaska | 1, 219 | 65 |
| Idaho | 2, 083 | 363 |
| Montana | 553 | 56 |
| Oregon | 2, 179 | 248 |
| Washington | 4, 601 | 249 |

¹ Figures may not add to exact totals due to rounding.

RESEARCH

Civil defense research during fiscal year 1963 marked a period of continuity of effort in pursuit of major objectives established in fiscal year 1962 when OCD redirected research activities to: (1) Identify and develop more economical hardware and operational procedures for civil defense, (2) improve effectiveness of civil defense systems, (3) increase capability of men and machines for postattack operations, (4) improve readiness of the entire civil defense program, and (5) provide more useful data for making basic decisions in planning and operating civil defense programs.

In the interest of economy and efficiency, OCD reduced the number of individual contractors performing its research and placed greater emphasis on using those contractors who had demonstrated superior research capability. In addition, OCD used effectively the results of applicable research completed by other Federal agencies; e.g., data on burn therapy and improved antibiotics developed by military research and the Department of Health, Education, and Welfare (DHEW); biological and ecological radiation effects data from research by the Atomic Energy Commission (AEC) and DOD agencies such as the Defense Atomic Support Agency (DASA); and weapons effects data developed under the auspices of the DOD, DASA.

An increased percentage of fiscal year 1963 research funds was committed to Federal agencies and educational institutions. Comparative percentages of funds committed to various types of research groups for fiscal years 1962 and 1963 were:

| | <i>Percent</i> | |
|--|--------------------|-------------|
| | <i>Fiscal year</i> | |
| | <i>1962</i> | <i>1963</i> |
| Department of Defense (DOD)..... | 18.1 | 17.9 |
| Federal agencies exclusive of DOD..... | 15.8 | 22.1 |
| Educational institutions..... | 5.0 | 9.6 |
| Private organizations, including industrial laboratories, research institutes and foundations, and quasi-Government agencies.. | 61.1 | 50.4 |
| Total..... | 100.0 | 100.0 |

Major functional categories and projects.—OCD research operations are organized into four major functional categories: Shelter, Support Systems, Postattack, and Systems Evaluation. The per-

centage of research funds committed to each of these for fiscal year 1963 was:

| | <i>Percent</i> |
|-------------------------|----------------|
| Shelter | 36.1 |
| Support Systems..... | 25.1 |
| Postattack | 16.8 |
| Systems Evaluation..... | 22.0 |
| Total | 100.0 |

Research under the four functional categories is grouped by projects, each of which is directed toward filling definite civil defense needs. The commitments of approximately \$10.8 million invested in research during fiscal year 1963 are shown in table 7, according to major category and project. Under appropriate subsequent headings in this report, each category is described in more detail, as are also some of the major accomplishments.

Tasks and subtasks.—To expedite attainment of urgently needed solutions of specific problems and to promote efficiency and economy in managing civil defense research, OCD research projects are first grouped according to tasks and the tasks separated into subtasks or specific research problems for operational purposes. A summary of distribution and status of research subtasks is shown in table 8.

Problem areas.—Some aspects of basic civil defense research present especially difficult problems and require continuing effort and unique approaches. This is partly a result of the nature of the data sought and partly because civil defense is a relatively recent addition to the context of most research endeavors. For example, the lack of basic data on physical and chemical characteristics of fallout has delayed some research studies. These data can best be derived from actual fallout material available after nuclear weapons testing. But in comparison with the development of information for weapon designers, the development of information for this aspect of civil defense research has had second priority in weapons tests. Lack of appropriate civil defense data from weapons tests has made it necessary to pursue research in theoretical and high temperature chemistry.

Other problem areas are:

1. Shelter habitability tests. These tests must deal with many interrelated problems; e.g., physiological and psychological reactions of people under various environmental conditions, minimum equipment needed to control shelter environment, shelter management procedures, and supplies necessary for subsistence. To obtain reliable data on shelter habitability therefore requires study and analytical and experimental evaluation of various criteria and parameters involving realistic tests in representative shelters containing both human and simulated occupants.

TABLE 7.—Research funds programed, committed, and obligated, fiscal year 1963¹

| Type of research (category and project) | Programed | Committed | Obligated |
|---|-----------------------|-----------------------|-----------------------|
| Total..... | \$11, 000, 000 | \$10, 786, 011 | \$6, 778, 864 |
| Shelter..... | 4, 040, 000 | 3, 891, 058 | 2, 326, 493 |
| Protection studies..... | ² 645, 000 | ² 662, 862 | ² 338, 526 |
| Shelter environmental studies..... | 1, 075, 000 | 1, 073, 196 | 808, 121 |
| Subsistence and habitability..... | 415, 000 | 410, 245 | 306, 445 |
| Component development..... | 405, 000 | 307, 915 | 36, 960 |
| Shelter management..... | 300, 000 | 298, 867 | 39, 835 |
| Shelter systems studies..... | 200, 000 | 196, 619 | 120, 000 |
| Shelter development tests and evaluation..... | 1, 000, 000 | 941, 354 | 676, 606 |
| Support systems..... | 2, 755, 000 | 2, 709, 901 | 1, 387, 004 |
| Monitoring systems..... | 395, 000 | 384, 620 | 162, 832 |
| Communications and warning..... | 440, 000 | 458, 792 | 254, 527 |
| Reduction of vulnerability..... | 470, 000 | 438, 611 | 39, 805 |
| Emergency medical research..... | 255, 000 | 244, 015 | 155, 000 |
| Fire, rescue, and damage control..... | 995, 000 | 984, 678 | 727, 000 |
| Emergency phase operations research..... | 200, 000 | 199, 185 | 47, 840 |
| Postattack research..... | 1, 875, 000 | 1, 814, 936 | 1, 192, 264 |
| Radiological phenomena..... | 410, 000 | 409, 734 | 349, 281 |
| Radiological countermeasures..... | 635, 000 | 630, 128 | 476, 000 |
| Repair and reclamation..... | 300, 000 | 294, 726 | 164, 898 |
| Postattack, medical, health, and welfare..... | 310, 000 | 309, 023 | 97, 569 |
| Recovery and maintenance..... | 220, 000 | 171, 325 | 104, 516 |
| Systems evaluation..... | 2, 330, 000 | 2, 370, 116 | 1, 873, 103 |
| CD systems analysis..... | 662, 000 | 660, 897 | 660, 985 |
| Strategic analysis..... | 225, 000 | 224, 900 | 224, 900 |
| Vulnerability requirements..... | 234, 000 | ³ 281, 216 | 233, 255 |
| Organization and training..... | 135, 000 | 134, 665 | 55, 255 |
| Planning support..... | 344, 000 | 344, 708 | 234, 308 |
| Intelligence..... | 320, 000 | 319, 850 | 190, 850 |
| Physical environment..... | | | |
| Sociological and psychological..... | 410, 000 | 403, 880 | 273, 550 |

¹ Funds for research appear as research and development portion of appropriation titled "Research" in table I of financial summary in pt. II.

² Includes \$4,309 utilized for prototype shelter projects.

³ Includes \$48,075 for studies of protective structures.

2. Communications and radiological defense requirements. Difficult research problems are encountered (1) in determining communications requirements for conducting survival operations involving command and control in such activities as rescue, firefighting, and radiological defense, and (2) in ascertaining radiological defense data needed upon emergence from shelters.

TABLE 3.—*Distribution and status of research subtasks, June 30, 1963*

| Research category | Number of subtasks | | | |
|-------------------------|---------------------------------|-------------------------------|-----------|-------------|
| | Continued from fiscal year 1962 | Initiated in fiscal year 1963 | Completed | In progress |
| Shelter..... | 80 | 31 | 37 | 74 |
| Support Systems..... | 60 | 22 | 27 | 55 |
| Postattack..... | 25 | 13 | 15 | 23 |
| Systems Evaluation..... | 43 | 19 | 16 | 46 |
| Total..... | 208 | 85 | 95 | 198 |

3. Vulnerability reduction. Some daily needs of city planners, industry, and the urban public appear to be contrary to civil defense requirements for vulnerability reduction. Intensive study is needed to find ways of achieving common objectives for this purpose.

4. Fire hazard. Under some attack conditions, fire would be a serious hazard to shelter occupants. Means must therefore be found to reduce the incidence of fire and to extinguish or at least limit its spread when it does occur.

5. Development of experienced personnel to conduct research on complex postattack problems. Some contractors have found it necessary to delay research on civil defense problems for extended periods of time needed to train personnel.

Seminars.—The OCD conducted 46 weekly seminars to brief research contractors and Government staff members on current information and progress in civil defense research. These seminars served to stimulate wider understanding and use of research information as well as to provide perspective and balance to the development of a dynamic civil defense program in accord with present and future needs.

SHELTER

The principal purpose of shelter research is to develop a more adequate technical basis for the design, construction, and use of shelters. Consideration is given to radiological shielding, blast and fire resistance, and shelter components; also, special attention is given to the environment within shelters, to requirements for sustaining life, and to managing shelter operations.

During fiscal year 1963, OCD expanded research studies on environmental conditions existing in identified public fallout shelters and on the development of more effective ventilating equipment to improve habitability and utilization of shelter space. Greater emphasis was placed on seeking economical solutions to water supply and sanitation

problems in shelters, especially in relation to storage space. In addition, solutions were sought to legal, financial, technical, and organizational problems encountered in integrating the use of shelter facilities into communitywide plans.

Major accomplishments included :

1. Development of additional information about radiation shielding. This indicated a need to modify the method of determining the shelter protection factor. These modifications will produce more reliable protection factors for buildings having certain characteristics concerning height, interior partitions, setbacks, areaways, and limited open surroundings such as streets.

2. Establishment of procurement specifications for the bulgur wheat shelter ration as a result of prior development and production testing.

3. Tests of shelter rations used to stock public fallout shelters. The tests were conducted in simulated shelters under conditions of severe austerity. Two of these tests lasted 2 weeks, and participants who remained for the duration suffered no adverse physical effect.

SUPPORT SYSTEMS

With the exception of shelter research and studies involving post-attack operations, support systems research includes studies in support of other civil defense functions and operations; e.g., vulnerability reduction studies, warning, command and control, communications, damage control, medical aid, radiation detection, and population movement control.

Research started during fiscal year 1963 included (1) a major study of radio warning devices, (2) efforts to develop effective damage control, firefighting, rescue, and medical aid in fringe target areas, and (3) investigation of smokescreens and other means of minimizing the fire hazard resulting from nuclear explosions.

A systematic research program was established to improve emergency communications and warning systems. The use of long-range radio navigation signals for attack warning appears promising.

Noteworthy accomplishments in this area of research were:

1. Development of mathematical models (a system of mathematical equations and expressions for feeding data into electronic computers) for use in evaluating tactical and strategic evacuation of urban populations. These models were used to develop basic population movement data for Albuquerque, N. Mex., and New York City, and a tactical evacuation model was used to test the plans for moving people into shelters in Montgomery County, Md., and as a basis for other prototype shelter utilization plans.

2. Identification and evaluation of social and psychological factors involved in strategic movement of dependent population groups.

3. Studies in emergency medical research. According to one study, greater emphasis should be placed on maintaining the health of uninjured survivors. Studies of special health problems of young mothers, infants, and other age groups resulted in developing appropriate health procedures for their welfare. Continuing studies are designed to identify medical support and countermeasures for dealing with major health and medical problems that would result from nuclear attack.

4. Completion of preliminary studies of thermal countermeasures. Results indicated the feasibility of using smoke, consisting of heat-absorbing particles, to provide significant protection to large areas against primary ignition by nuclear weapons. It was also found feasible to use airborne infrared sensing equipment to detect and map fires obscured by heavy smoke.

POSTATTACK

The principal purpose of postattack research is to explore the development of systems and functions applicable to civil defense during the restoration period; e.g., decontamination, damage repair, control of and subsistence for surviving population, and procedures for coping with postattack conditions. Research in this area is devoted to investigations of long-term effects and hazards of nuclear attack and the means available for recovering from these effects.

During fiscal year 1963, OCD progressed in (1) defining the magnitude of postattack problems concerning housing, sanitation, and medical care, and (2) developing greater understanding of the effectiveness and cost of decontamination and other measures to reduce fallout radiation hazards. Studies were also continued to identify critical activities needed for survival, to analyze debris clearance problems, and to develop procedures for maintenance of the surviving population and recovery of essential social and economic functions.

Examples of achievements during fiscal year 1963 included:

1. Quantitative evaluation of some fallout characteristics based upon experimental measurement of certain thermodynamic properties of soil and fission products. In addition, mathematical processes and theories, applied to observed nuclear weapons test data, resulted in identifying and describing essential features and fringe conditions associated with the fireball produced by nuclear explosion.

2. Field tests by the Naval Radiological Defense Laboratory and the Army Nuclear Defense Laboratory resulted in the development of more efficient and more reliable procedures and processes for radiologi-

cal reclamation and simple decontamination under temperate and cold weather conditions. Studies were completed on assessing the civil defense preparedness of metropolitan water systems and on applicable recovery methods and procedures. Information from these studies is being incorporated into a manual on operational recovery planning techniques.

3. A comprehensive analysis of vulnerability and restoration of electric power and iron and steel production was completed for (1) an area of critical power production and (2) an area of critical steel production.

4. A general survey of health maintenance factors was conducted for OCD by DHEW in several areas having different climatic conditions. Preliminary assessment of the relationship of these factors to postattack conditions was completed at four locations.

5. A study was completed of the effects of some aspects of nuclear radiation, blast, and thermal phenomena associated with various types of attack. The information derived from this study is used by biologists and ecologists in estimating the environmental conditions that would prevail in a postattack period.

6. A study of biological effects of radioisotopes resulting from nuclear explosions and the consequent need for decontamination of food, water, and farmland. Greater emphasis was placed on analyzing civil defense capabilities associated with use of shelters in existing buildings and inclusion of fallout shelter in new construction.

SYSTEMS EVALUATION

Research in systems evaluation primarily concerns studies of weapons effects, systems analysis, and sociological and psychological factors in civil defense. This area of research includes studies to determine civil defense program requirements and to identify feasible systems to support these requirements.

During fiscal year 1963, OCD furnished data for a study undertaken in the Office of the Secretary of Defense to show the relationship between active and passive defense. In addition, OCD conducted a study analyzing the total civil defense system that is primarily based on use of shelters in conventional buildings.

As a continuing study, OCD analyzed the vulnerability of various service and production systems in the United States to derive information for developing clear statements of performance requirements for executing civil defense functions. An evaluation of alternative methods of organizing civil defense operations and of the associated training requirements was started. Improved methods were developed to help planners at all levels to produce suitable operational plans and

programs and to evaluate and test them. Civil defense problems relating to communications, information required at various government levels, and public knowledge, attitudes, and beliefs were under continued study.

Part VII

SUPPORTING ACTIVITIES

An effective and efficient civil defense is contingent upon an informed public, the support and understanding of industry and national organizations, and a nationwide and worldwide program perspective. Major supporting activities or programs that contribute to the successful pursuit of these civil defense aspects are discussed in this part of the report.

PUBLIC INFORMATION

In recognition of its responsibility to the public, OCD sought to keep all citizens currently informed of (1) progress in the National Shelter Program, (2) development of complementary civil defense systems in support of the nationwide shelter system, and (3) their civil defense responsibilities.

In addition to the normal preparation and release of information during fiscal year 1963, the OCD faced the task of helping to keep the public informed in time of crisis. Incident to the Cuban crisis in October, OCD responded to thousands of queries for civil defense information from newspaper, radio, and television representatives, as well as from the general public. To help meet this public demand for information, 10 million copies of each of two handbooks were reprinted: *Fallout Protection: What To Know and Do About Nuclear Attack*, H-6, and *Family Shelter Designs*, H-7. At the end of the fiscal year, more than 41 million copies of *Fallout Protection* and more than 15 million copies of *Family Shelter Designs* had been distributed since their original issuance in 1962.

Public media.—Informational material prepared for use in mass media outlets and for special audiences included 36 civil defense news releases emanating from the Pentagon, 49 information bulletins primarily for State and local civil defense directors; and special articles for magazines, encyclopedias, and trade journals.

Exhibits on community and home shelters, shelter stocking, and personal preparedness were shown at 682 locations for observation by more than 22.5 million persons. (See fig. 21.) Of 21 major exhibits displayed during the year, 8 were handled by the military services as a joint DOD information effort. Smaller portable displays of the large exhibits were produced for use in public buildings, commercial establishments serving the public, and local meetings of clubs and

A special exhibit, showing the winning designs in a national school fallout shelter design competition, attracted wide attention, especially among school architects and engineers. (See *Protective Structures, Design competition and technical information*, in part III.) Publications accompanying the exhibit and distributed to the public depict the basic finding that school construction can be modified to furnish protection from fallout without sacrifice of architectural or functional qualities.

Three new motion pictures were produced: *About Fallout*, a definitive film on radioactive fallout and how to protect against it; *Shelter on a Quiet Street*, dealing with home shelters as part of the National Shelter Program; and *Town of the Times*, a dramatic film demonstrating the arguments, pro and con, when a town is faced with the question of improving shelter in the schools. A 6-month report from 192 Army Film and Equipment Exchanges, primary distributors of OCD films, showed that 26 current OCD films were shown more than 5,500 times. This is in addition to use of the films by OCD regional offices, training centers, State and local civil defense offices, and television stations.

OCD continued direct distribution of civil defense announcements to television stations. To fit station timing and programming, 60-, 20-, and 10-second spot announcements were produced: *Warning Signals*, demonstrating the two signals and explaining their meaning; *40,000 Bowcars*, showing the amount of supplies being manufactured and shipped to public fallout shelters; *City Shelter*, describing the shelter survey; and *Shelter Sign*, showing the yellow and black shelter sign and its meaning. These announcements also were distributed for use in motion picture theaters.

In addition to announcements sent directly to television stations, two other television announcements, *What Goes Into a Community Fallout Shelter* and *Shelter Sign Significance*, were sent to OCD regional offices for use on local programs to highlight local activities associated with stocking of public fallout shelters.

Nearly \$3 million of radio time devoted to civil defense was contributed by 2,600 local radio stations as a public service in presenting the OCD weekly series *Stars for Defense*. The Columbia Broadcasting System and the American Broadcasting Co. networks carried the OCD-sponsored series *Entertainment USA* and *Startime USA*, programs that combine entertainment with civil defense information.

The Outdoor Advertising Association continued to cooperate with OCD in displaying 3,500 large posters showing the yellow and black public shelter sign. (See fig. 22.) In addition, smaller civil defense posters were used in post offices, other public buildings, buses, streetcars, and commuter trains.

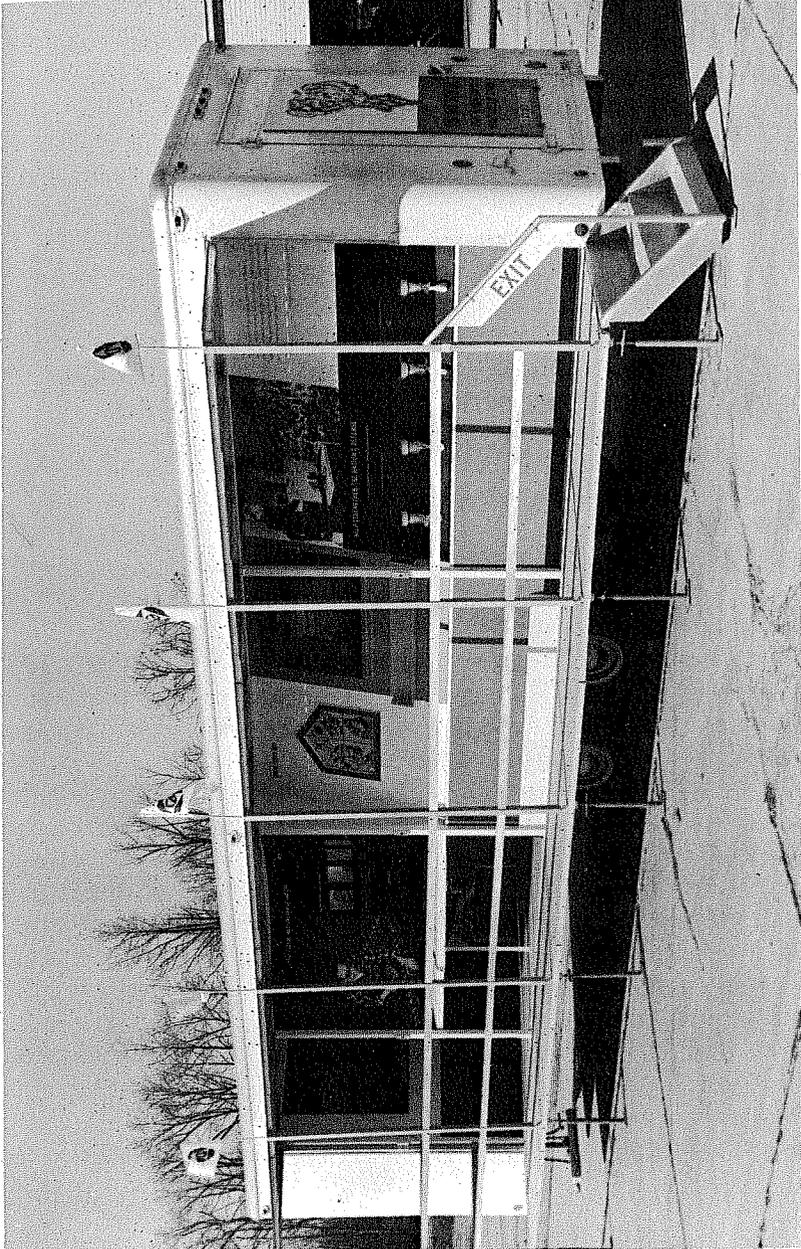


Figure 21.—Portable civil defense exhibit.

Publications.—An information packet, *Organized Action for Civil Defense*, was distributed to the national and local leaders of 13 major national organizations having a total membership of 18.5 million persons. Each packet contained basic civil defense public information material and a booklet providing guidance to local units on helping local civil defense directors meet their numerous responsibilities under the National Shelter Program. A kit of informational material for use by public information officers in describing shelter stocking was also developed for lease through OCD regional offices.

In addition to publications distributed by the OCD, the U.S. Department of Agriculture (USDA) cooperated with the OCD in preparing and distributing civil defense publications specifically designed for rural audiences. The USDA Federal Extension Service made the major distribution of these publications, and information copies were sent to State and local civil defense offices. In addition to leaflets for 4-H Clubs, the publications included: *Soils, Crops and Fallout From Nuclear Attack*, *Fallout and Your Farm Food*, *Your Livestock Can Survive Fallout From Nuclear Attack*, *Rural Fire Defense*, *Fallout Is Your Affair*, *What People Can Do About Rural Civil Defense*, and *Your Farm Preparedness Plan*.

TECHNICAL LIAISON

Through close liaison work, the OCD sought to improve the effectiveness and efficiency of its operations by assuring that OCD policies, plans, programs, and executive actions were consistent with and predicated on sound technical and scientific concepts. This included technical liaison with the National Academy of Sciences-National Research Council, appropriate Federal agencies, numerous technical and scientific societies and associations, individuals and companies, and civil defense staffs of the North Atlantic Treaty Organization.

In addition, liaison activities served to correlate research findings throughout the Department of Defense with civil defense requirements and to accelerate progress in using these findings to maximum advantage. Action was taken to make research results more readily available to the OCD operational staff. Through discussion groups and continued informal contacts with individual staff members, new ideas and concepts were translated for practical application in civil defense.

INDUSTRIAL PARTICIPATION

The principal objective of OCD industrial participation activities is to encourage and help industry in planning, establishing, and maintaining civil defense programs. This is primarily achieved by working with business and industrial leaders to gain their active

participation in (1) the National Fallout Shelter Program, (2) preparing their facilities for civil defense, and (3) assisting their State and local governments in civil defense efforts.

Activities recommended to industry cover all aspects of civil defense preparations. Guidance and assistance is disseminated to industry on these activities through publications, training materials, exhibits, and conferences or meetings with business and industrial leaders.

Information.—In addition to information disseminated through media developed by OCD and other Federal agencies (see *Public Information, Publications*, in part VII), business and industrial organizations developed several publications for this purpose during fiscal year 1963.

Many industrial establishments distributed civil defense information to their employees; e.g., 10 companies distributed 500,000 publications to 50,000 employees, and 4 companies distributed approximately a million copies of home preparedness material to 300,000 employees. Other business firms prepared booklets of civil defense instructions specifically for their employees and regularly released civil defense information to them in issues of company periodicals.

Meetings and briefings.—OCD assisted trade, professional, and civic organizations, colleges and universities, and governments at all levels in sponsoring conferences and seminars on industrial civil defense. Approximately 150,000 business, professional, educational, and civic leaders were briefed on civil defense at these meetings. Eleven of these meetings were seminars held at the invitation of State Governors. Some major national organizations that took part in the conferences were: U.S. Civil Defense Council, Great Lakes Association of Railroad & Utilities Commissioners, American Ordnance Association, American Nuclear Society, National Institute for Disaster Mobilization, Aerospace Industries Association, American Association of Collegiate Schools of Business, and National Association of Building Owners & Managers.

Training.—The President has assigned emergency preparedness functions to numerous Federal agencies by Executive orders. OCD worked with these agencies to help them provide training consonant with civil defense plans. As a result, industrial civil defense material was distributed to thousands of persons trained by other Federal agencies. For example, (1) The Food and Drug Administration, DHEW, trained more than 6,000 persons associated with the food industry in 48 States, (2) The Industrial College of the Armed Forces presented civil defense material to more than 11,000 senior military officers and key civilian leaders, (3) more than 1,000 emergency planning officials were presented civil defense information at sessions of the Military Police School, Fort Gordon, Ga., (4) OCD

provided guidance material and assistance to the Departments of the Army, Navy, and Air Force for use at their field headquarters in pursuing their mission of industrial mobilization and civil defense planning.

Shelter development.—Through conferences, meetings, publications, and correspondence, OCD has confronted industrial and business leaders with the need for radiation fallout shelters as the key element in a balanced civil defense program. In addition to supporting the National Fallout Shelter Program and the activities of State and local civil defense organizations, many industrial establishments have trained key employees in shelter management and have marked and stocked shelters at their own expense to protect their employees. (See *State and Local Response* in part II.) For example, one company provided shelter for 65,000 employees and signed shelter license agreements providing shelter for 10,000 persons in the community. Another company marked and stocked shelters at its own expense for 60,000 employees. In addition, executives from 17 companies appeared before the House of Representatives Armed Services Committee (Subcommittee No. 3) as witnesses for proposed shelter legislation, and 19 companies submitted written statements for this purpose.

LABOR SUPPORT

Labor and trade unions, as evidenced by past records, continued in their strong support of civil defense. This support was confirmed by their leading spokesmen as well as by the actions of many individual members. Some outstanding examples were:

1. In Washington, D.C., the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) supported the National Shelter Program by being one of the first participants to have their building surveyed, marked, and stocked as a public shelter.

2. The International Brotherhood of Teamsters furnished free use of personnel and trucks for local use in many cities to help stock public fallout shelters.

3. The secretary-treasurer of the AFL-CIO, representing almost 14 million union members, appeared before the House of Representatives Armed Services Committee (Subcommittee No. 3) as a witness in support of proposed shelter legislation. The president of the AFL-CIO Building and Construction Trades Department sent the committee a written statement in support of this legislation. State and city labor organizations sent telegrams and letters in support of the proposed legislation. In addition, the AFL-CIO Legislative Department supported proposed appropriations and other civil defense legislation before the Congress.

4. The AFL-CIO Public Affairs Department sponsored a program in support of civil defense. It was broadcast over 136 radio stations on which the Assistant Secretary of Defense (Civil Defense) was a speaker.

5. Twelve labor leaders accepted appointments to the DOD Executive Reserve Program; they will be active in all aspects of civil defense.

6. Labor publications generally increased space devoted to civil defense. Many feature articles showed illustrations of trade and union personnel helping in shelter stocking.

7. The AFL-CIO Union Label Industry Show, St. Louis, Mo., showed civil defense exhibits to 211,000 persons and distributed 61,000 items of civil defense educational material.

INTERNATIONAL ACTIVITIES

The principal objectives of OCD international activities are to strengthen the mutual defense of the United States and friendly foreign countries and to enhance diplomatic relations. In coordination with the Department of State, these objectives have been achieved by participating with the North Atlantic Treaty Organization (NATO), the Central Treaty Organization (CENTO), and Canada in civil defense planning, and by exchanging personnel visits and information with numerous friendly nations.

In October 1962, the NATO Civil Defense Committee, at its 21st meeting, adopted a resolution recognizing that providing radiation fallout protection is the most valid and practical means for saving lives that is available within the limits of national resources. This resolution was proposed by the U.S. delegation to the committee headed by the Assistant Secretary of Defense for Civil Defense.

OCD staff represented the United States at several NATO meetings including the Shelter Working Party in November 1962, the Civil Communications Planning Committee in June 1963, the spring meeting of the Civil Defense Committee, and the Scientific Working Party in June 1963. OCD NATO representatives also conferred with civil defense officials in Belgium, Denmark, England, Italy, Norway, and Sweden. In addition, OCD helped the Department of State to prepare statements for use in presenting the position of the United States at meetings of the NATO Senior Civil Emergency Planning Committee and some of its technical committees and working groups concerning communications, firefighting, and warning. As a result of official arrangements, a member of the U.S. Civil Defense Council and several State civil defense personnel conferred with appropriate civil defense officials during visits in Europe.

During fiscal year 1963, OCD continued its contacts with CENTO nations by supplying them with training material and public and technical information.

The United States continued its customary close civil defense liaison with Canada. In November 1962, the Assistant Secretary for Civil Defense and the Director of the Office of Emergency Planning (OEP) met with Canadian officials; i.e., the Secretary to the Cabinet and the Director of the Emergency Measures Organization. Discussions at the meeting concerned development of certain aspects of civil defense of mutual interest to both nations, revision of the 1951 civil defense agreement between the two countries, need for joint regional conferences and planning, and improved arrangements for direct technical liaison. The Public Information Officer of the Emergency Measures Organization consulted with OCD staff in January 1963, and other Canadian officials continued discussions on Canadian Army survival responsibilities. A major tangible achievement of liaison with Canada during fiscal year 1963 was the distribution of a roster of technical civil emergency planning representatives of the two countries. This will facilitate exchange of information and assure closer liaison.

Receipt of more than 300 requests for information from 50 countries evidenced the continued interest of foreign countries in the U.S. civil defense program. In addition to responding to these requests, OCD furnished NATO countries 64 technical reports and memoranda and supplied the NATO Civil Defense Library with 5 other reports for loan to member nations. At the request of the Department of State, OCD sent several U.S. embassies publications for distribution to their diplomatic staffs.

In response to requests from the United States, other countries furnished OCD scientific reports and information on their civil defense budgets, shelter programs, and legislation. In addition, Australia, Belgium, France, and the United Kingdom sent copies of recently issued publications that are similar in content to the OCD handbook *Fallout Protection: What To Know and Do About Nuclear Attack*. Ten countries regularly furnish OCD with copies of their civil defense periodicals from which selected articles are translated for professional use.

The United States exchanges civil defense equipment with foreign countries for testing and evaluation purposes. During fiscal year 1963, protective masks were loaned to Canada and the Republic of China, and radiological instruments were made available to Pakistan for this purpose. Switzerland submitted an evaluation report in response to such a loan previously made.

OCD held briefings and conferences for official representatives from Australia, Belgium, Canada, England, Finland, France, Greece, India,

Ireland, Italy, Jamaica, Spain, Sweden, Switzerland, Venezuela, and West Germany. The Civil Defense Directors of Australia and Finland consulted with Federal and State civil defense staffs for several days. In addition, the Civil Defense Director of the Netherlands, recently elected Chairman of the NATO Civil Defense Committee, visited OCD. Nine countries sent a total of 24 representatives to OCD training courses, and 6 countries sent a total of 11 engineers to attend OCD summer institutes on protective construction.

THE AMERICAN NATIONAL RED CROSS

The American National Red Cross (ANRC), a quasi-governmental organization, continued to offer all appropriate assistance to Federal, State, and local governments in developing plans and preparing for civil defense emergencies. At the national level, an ANRC representative was assigned to civil defense liaison work, and an ANRC consultant, by contractual arrangement, was on duty at each of the eight OCD regional offices.

A memorandum of understanding between ANRC and OCD,¹ dated August 15, 1962, provided for assistance in the National Shelter Program. In addition to permitting the use of ANRC controlled buildings for public fallout shelters, letters were sent to 3,600 local chapters urging their assistance in the program, especially in providing shelter space in buildings controlled by them.

The May 1963 convention of the ANRC adopted a resolution strongly recommending that the ANRC urge its chapters to assist civil defense, in any way consistent with Red Cross policy, particularly in training citizens in first aid, medical self-help, care of the sick and injured, and in the instruction of persons responsible for management of community fallout shelters. In addition to millions of persons already trained by the ANRC in courses universally recognized as necessary for civil defense preparedness, the widely dispersed field chapters continued to offer training in first aid, home nursing, and emergency mass feeding. During fiscal year 1963, the ANRC agreed to assist in promoting the Medical Self-Help Program and to help instruct the citizenry in it. Several ANRC chapters also assisted local civil defense organizations in training shelter managers.

ADVISORY COMMITTEES

Advisory committees previously established by the Assistant Secretary of Defense for Civil Defense continued to function during fiscal year 1963. They were:

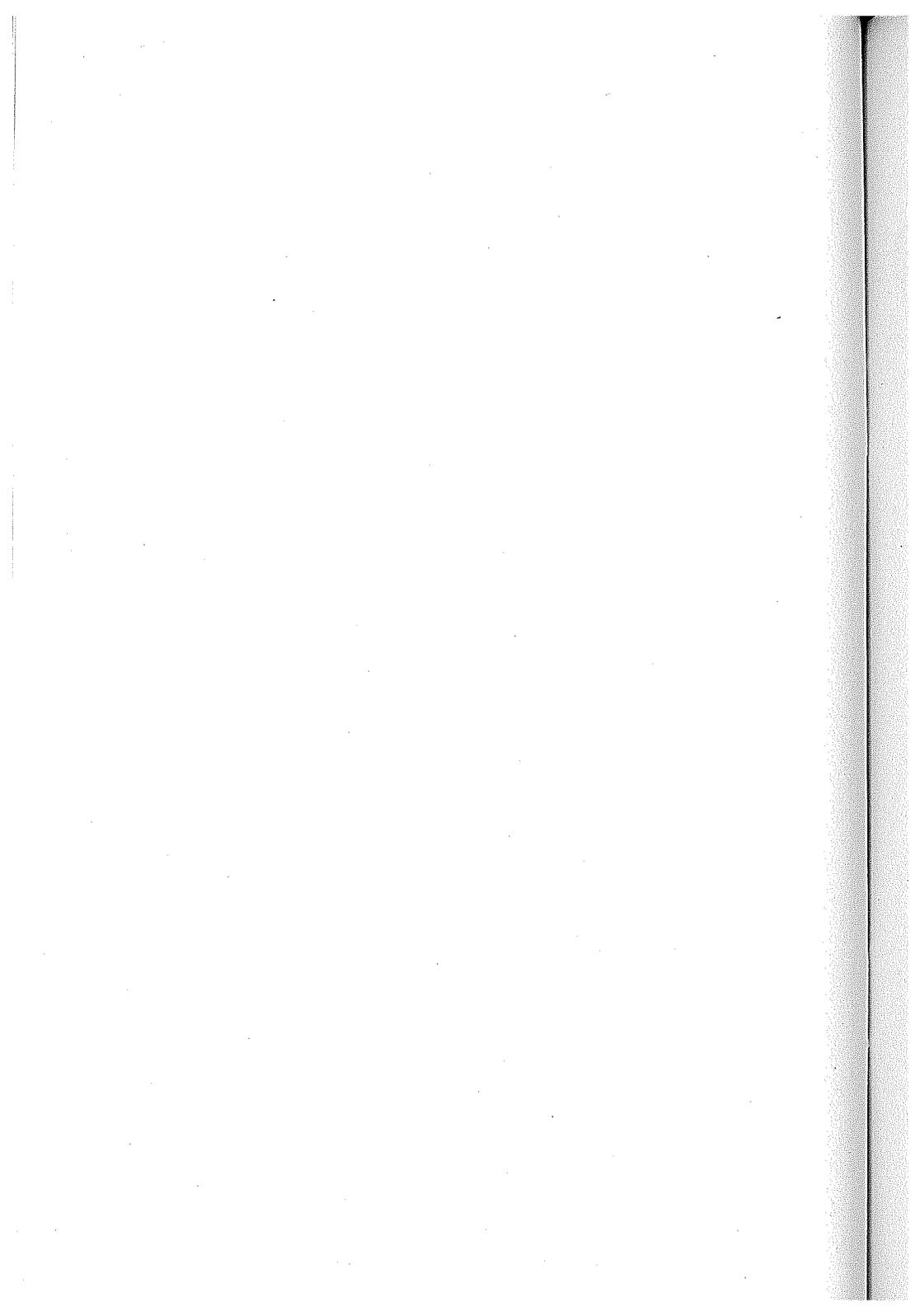
1. Advisory Committee on the Design and Construction of Public

Fallout Shelters. (See app. 8 for establishing directive, membership, and meeting dates.)

2. Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) system. (See app. 9 for establishing directive, membership, and meeting dates.)

3. Civil Defense Advisory Committee on Medical Self-Help Training Program. (See app. 6 for establishing directive, membership, and meeting dates.) Having completed its mission, this committee was terminated upon adjournment of its July 19, 1962, meeting.

The chairman of each advisory committee is a full-time salaried Government official, and the committee members are outstanding representatives in such fields as industry, business, science, engineering, education, medicine, and government. Each member is a person whose position, experience, and talent enable him to make a major contribution to achievement of OCD objectives. The function of each committee is solely to advise the Assistant Secretary of Defense (Civil Defense).



Appendix I



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

MEMORANDUM FOR THE SECRETARIES OF THE MILITARY DEPARTMENTS
THE DIRECTOR OF DEFENSE RESEARCH &
ENGINEERING
THE CHAIRMAN, JOINT CHIEFS OF STAFF
THE ASSISTANT SECRETARIES OF DEFENSE
THE GENERAL COUNSEL
THE ASSISTANTS TO THE SECRETARY OF DEFENSE
THE CHIEF, DEFENSE ATOMIC SUPPORT AGENCY
THE DIRECTOR, DEFENSE COMMUNICATIONS
AGENCY
THE DIRECTOR, DEFENSE INTELLIGENCE AGENCY
THE DIRECTOR, NATIONAL SECURITY AGENCY
THE US REPRESENTATIVE, STANDING GROUP NATO
THE CHAIRMAN, DOD-FCC EMERGENCY
COMMUNICATIONS COMMITTEE

SUBJECT: Transfer of Functions

This is to advise you of the transfer of the following responsibilities from OASD(M) to the offices indicated, effective immediately:

- a. NATO Alert System and Measures to OASD(ISA),
- b. CONELRAD to OASD(I&L),
- c. Military-Aid in Civil and Domestic Emergencies to OASD(CD).

Necessary change to the charter of the Assistant Secretary of Defense (Manpower) will be issued shortly.

Russell G. Lefrat



Appendix 2

April 23, 1963

NUMBER 3025.10

ASD(CD)



DEPARTMENT OF DEFENSE DIRECTIVE

SUBJECT: Military Support of Civil Defense

- References:
- (a) The Civil Defense Act of 1950, as amended.
 - (b) Executive Order 10952, "Assigning Civil Defense Responsibilities to the Secretary of Defense and Others," July 20, 1961.
 - (c) DoD Directive 5140.1, "Assistant Secretary of Defense (Civil Defense)," August 31, 1961.

I. PURPOSE

This directive establishes Department of Defense policies, assigns responsibilities, and sets forth general guidance as the basis for providing military support of civil defense under a national emergency involving a nuclear attack, or a condition which might precede a nuclear attack on the United States.

II. APPLICABILITY

The provisions of this directive apply to all components of the Department of Defense.

III. CONSIDERATIONS

- A. In the event of a nuclear attack on the United States the degree of military involvement in support of the civil defense mission during the attack and in the immediate postattack phase would depend upon the extent of damage suffered and the active military operations in process or required. The conditions under which the preattack and postattack military roles

in support of civil defense are developed should be those which are based on a spectrum of contingencies, including general thermonuclear attack, with minimum warning, and under conditions favorable to the attacker.

- B. Under the latter condition, Federal and State control may be minimal. Military control facilities which do exist will have a priority commitment, initially, to the mounting of offensive and defensive actions and to assist civil authorities in the assessing and reporting of damage and danger areas in the continental limits of the United States. It is possible that damage will be so extensive as to require evaluation as to the priority to be assigned to the needs of civil recovery as opposed to military requirements for military forces overseas.

IV. GENERAL POLICIES

- A. The DoD recognizes the essential interdependence of the civil and military defense efforts of our Nation in achieving the total posture of national security. Military support to civil authorities in civil defense operations is an emergency task within the mission of all Federal active duty and reserve units of the Military Services.
- B. The Armed Forces will render feasible support to local or State authorities during a war-created emergency consistent with the policies established below:
 - 1. Military assistance will complement and not be a substitute for civil participation in civil defense operations.
 - 2. Those military forces which could be temporarily furnished to assist civil authorities in a civil defense emergency will be clearly designated in area support plans. These plans will include provision for the withdrawal by the military commander concerned of military forces engaged in emergency support of civil defense operations in the event it is necessary to employ such forces in the defense of the United States and conduct military operations incident thereto, or when they are no longer required for civil defense missions.
 - 3. A military commander, in making his resources available to civil authorities, is subject to no authority other than that of his superior in the military chain of command.
- C. Military Role
 - 1. Mission
 - a. In the event of a national emergency involving a nuclear attack on the United States, the Armed Forces will employ available resources which are not required at that time for offensive or defensive operations to

- interim control of transportation, communications, power, fuel, water, and other essential facilities.
- (2) Emergency clearance of debris and rubble including explosive ordnance from streets, highways, rail centers, dock facilities, airports, shelters and other areas, as necessary to permit rescue or movement of people, access to and recovery of critical resources, emergency repair or reconstruction of facilities, and other emergency operations.
 - (3) Fire protection.
 - (4) Rescue, evacuation, and hospitalization of casualties, the recovery of critical medical supplies, and the safeguarding of public health. This may involve sorting and treating of casualties, emergency control of priorities for hospital facilities and supplies, and preventive measures to control the incidence and spread of infectious diseases.
 - (5) Recovery, identification, registration and disposition of deceased personnel.
 - (6) Radiation monitoring and decontamination to include identifying contaminated areas, and reporting information through the national warning system. Initial decontamination will, of necessity, be directed primarily at personnel and vital facilities.
 - (7) Interim traffic control to include plans and procedures for essential movements.
 - (8) Interim maintenance of law and order to include:
 - (a) General police and law enforcement operations.
 - (b) Emergency highway traffic control and supervision.
 - (c) Security and protection of vital facilities and resources.
 - (d) Enforcement of economic stabilization measures, as may be required in the immediate postattack phase.
 - (9) Interim control and issue of essential supplies and materiel to include collection, safeguarding and issue of critical items in the "initial postattack phase," until such time as civil authority is capable of assuming this function.

- (10) Interim and emergency control of food and facilities for food preparation, should mass or community subsistence support be required.
- e. Provide for the mobilization of Reserve Components and other resources to meet military requirements and carry out civil defense missions.

V. RESPONSIBILITIES

- A. The Assistant Secretary of Defense (Civil Defense) will:
 1. Coordinate within the Department of Defense the policy and program aspects of military participation in civil defense preparedness activities and emergency operations, including civil defense test exercises.
 2. Advise the Secretary of Defense on departmental policies, responsibilities, and programs relating to military support of tasks inherent in the collateral civil defense mission.
 3. Provide current information and guidance on civil defense matters in which the military has particular interest or responsibility, in order that realistic and effective preparations may be made for participation of the Armed Forces in civil defense operations in the event of enemy attack.
 4. Review military civil defense plans and programs and recommend measures for strengthening military/civil defense working relationships at the national level, consistent with the policies and principles set forth herein.
 5. Submit recommendations to the Secretary of Defense regarding the proposed use of military resources in key elements of the national civil defense program.
- B. The Joint Chiefs of Staff will:
 1. Provide recommendations to the Secretary of Defense and develop guidance for the Military Departments on organizing, equipping, training, and allocating active and reserve units for civil defense tasks, as enumerated in par. IV.C.2.
 2. Issue instructions to guide the Military Services in the allocation and assignment of military support to be utilized in support of civil defense operations during all phases of such an emergency.
 3. Review and coordinate plans for Military Service participation in civil defense test exercises.
 4. Issue instructions to commanders of unified commands which will provide for the control of emergency military

support operations within territories and possessions of the United States (Panama Canal Zone, Puerto Rico, Virgin Islands, American Samoa, and Guam) lying within those commands, and for the States of Alaska and Hawaii. Such instructions will be in general conformity with the policies announced herein. The instructions will also provide for the establishment of liaison with local civil defense authorities.

5. Provide for the coordination of civil defense plans with military defense plans.

C. The Department of the Army will:

1. Take the necessary action to provide for the execution of the tasks enumerated in par. IV.C.2, in accordance with approved guidance.
2. Assure readiness of active and reserve elements of the Army to conduct emergency civil defense support operations.
3. As the department with the primary responsibility for military support of civil defense within the Continental United States, insure effective utilization of resources made available by the Department of the Navy and the Department of the Air Force; establish joint measures for, coordinate, and control, through established Service command channels, the employment of the active and reserve forces and resources made available by all military services in the rendering of assistance to civil defense.
4. Coordinate military defense plans with civil defense plans and provide such military guidance, consistent with requirements for military security, as Federal, State, and local agencies may require in developing their plans.
5. Provide explosive ordnance disposal service, technical training and planning assistance to civil authorities in the development and operation of the program.

D. The Department of the Navy will:

1. Take the necessary action to provide for the execution of the tasks enumerated in par. IV.C.2, in accordance with approved guidance.
2. Assure readiness of active and reserve elements of the Navy to conduct emergency civil defense support operations.
3. Provide assistance as required to the Department of the Army in planning and rendering civil defense support.
4. Maintain liaison and coordinate planning with the United States Coast Guard regarding the participation of Coast

5. Provide explosive ordnance disposal service under water; for coastal areas to and including the high water mark; for enclosed bodies of water; for rivers or canals; at all Navy and Marine Corps installations, and for disposal of explosive ordnance or nuclear materials aboard naval aircraft.
- E. The Department of the Air Force will:
1. Take the necessary action to provide for the execution of the tasks enumerated in par. IV.C.2, in accordance with approved guidance.
 2. Assure readiness of active and reserve elements of the Air Force to conduct emergency civil defense support operations.
 3. Provide assistance as required to the Department of the Army in planning and rendering civil defense support.
 4. Furnish appropriate assistance to units of the Civil Air Patrol engaged in emergency civil defense missions.
 5. Conduct post-attack aerial photo reconnaissance missions for bomb damage assessment purposes. Information derived therefrom shall be made available to civil defense authorities as expeditiously as possible, in accordance with standing arrangements and procedures.
 6. Provide explosive ordnance disposal service on Air Force installations and dispose of explosive ordnance or nuclear materials in the physical possession of the Air Force at the time of any incidents or accidents.

VI. IMPLEMENTATION

- A. Formal plans and implementing directives developed under assignments herein shall be submitted to the Office of the Assistant Secretary of Defense (Civil Defense) for review.
- B. Outstanding departmental directives and instructions on military support for civil defense will be reviewed, and if not in agreement with this Directive, will be changed within 90 days from the date of this Directive.

VII. EFFECTIVE DATE

This Directive is effective immediately.



Secretary of Defense.

**ENCLOSURE 1 TO DEPARTMENT OF DEFENSE DIRECTIVE
3025.10 (APPENDIX A) DATED APRIL 23, 1963**

CONCEPT OF MILITARY SUPPORT

1. Modern warfare has created a condition wherein the entire resources of the Nation must be included in defense plans. Along with military defense and retaliatory forces, civil defense is a vital element of the Nation's total defense. Together, they not only stand as a strong deterrent to war, but constitute the greatest assurance of peace. A strong posture of civil defense is and will be a matter of increasing urgency.
 - a. A civil defense effort, balanced between the necessities of a fall-out shelter program and other corollary and supporting programs, is required to meet the following needs:
 - (1) Providing credibility to Department of Defense programs of graduated response and selective targeting.
 - (2) Providing credibility for our deterrent posture. Without protection for the civil population, threats of retaliatory action may have less impact than if an effective civil defense program were in being.
 - b. During a deteriorating military situation, a civil defense program is essential to:
 - (1) Provide the American public with the assurance required to meet the situation without panic, in an orderly fashion.
 - (2) Demonstrate that the Nation's courses of action will not be in any way inhibited during a period of increasing tension.
 - (3) Help illustrate the "national will" to the aggressor so that the military action may be limited both in geography and in magnitude.
 - c. During and immediately following a nuclear attack, a balanced civil defense program will:
 - (1) Augment active defense in limiting loss of life and minimizing casualties resulting from the effects of the attack.
 - (2) Provide a surviving population which will be available to support postattack national objectives, including continued military operations.
2. Military assistance to civil authorities is a temporary measure. It will be terminated as soon as possible, in order to conserve military resources and to avoid infringement on the responsibility and authority of civil government agencies.

Appendix 3

NUMBER 3020.29

DATE *September 28, 1962*



ASD(CD)

DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Utilization of Fallout Shelter Space at Military Installations

References: (a) DoD Directive 5140.1, "Assistant Secretary of Defense (Civil Defense)"

(b) DoD Directive 3020.27, "Department of Defense Shelter Policy"

I. AUTHORITY AND PURPOSE

Pursuant to the authority set forth in reference (a), this Instruction supplements the provisions of reference (b) by establishing a plan for using space at military installations for fallout shelters, and assigning responsibility for developing such spaces into shelters.

II. SCOPE AND APPLICABILITY

This Instruction applies to the Military Departments, and Defense Agencies, and covers facilities located only within the United States, and its possessions.

III. DEFINITIONS

As used in this Instruction, the following definitions apply:

- A. *Installation.* A military facility in a fixed or relatively fixed location, together with its buildings, building equipment and subsidiary facilities under the jurisdiction of a Military Service.
- B. *Fallout Shelter,* refers to space which meets criteria established in Inclosure 1 and which may be found in existing facilities.
- C. *Public Shelter,* refers to space which meets the criteria listed in Inclosure 1, and which is *available* for inclusion in a

- D. *Operations*, refer to essential military functions which must continue during the fallout period.
- E. *Sensitive Facilities*, refer to those military facilities housing equipment and other activities which because of their nature, must be kept closed to the public to prevent dissemination of information that could endanger the safety and welfare of the United States.
- F. Geographical Location:
 - 1. A land area under the jurisdiction of a local government such as a city, county, town.
 - 2. A land area under the jurisdiction of a Military Service.

IV. RESPONSIBILITIES

- A. Commanding officers will prepare shelter utilization plans for those military installations under their jurisdiction. The fallout shelter utilization plans (to be effective) must be developed and coordinated at the local level.
- B. Commanding officers, in the development of their fallout shelter utilization plans, and in consideration of their mobilization requirements, will closely coordinate such plans with those developed by local civil defense directors, located in adjacent geographical areas, to provide for full use of the fallout shelter spaces available. Any excess or deficit of fallout shelter space found in military installations is to be reported to local civil defense directors.

V. POLICY

In carrying out the responsibilities set forth in IV, above, the following policies will apply:

- A. Full use will be made of all available nonoperational shelter space to provide protection against fallout radiation for as many people as possible.
- B. Facilities housing only operational (see III.D, above) activities will not be classified as public shelters, since these are not to be open to other than persons required to sustain these operations.
- C. Commanders of military installations must retain control of military facilities.
- D. Only *public* shelters will be marked and stocked* under the National Fallout Shelter Program.
- E. Each military installation will be considered a separate geographical area (such as city, county) in the development of fallout shelter utilization plans.

- F. Utilization plans for military installations will be developed which provide that:
1. Public shelter space, to the extent it is available, will be allocated to troops (other than those required to sustain operations), civilian employees and dependents. Excess space will be available for use of unsheltered persons from adjacent geographical locations.
 2. Fallout shelters located at military installations, meeting the requirements for public shelters, will be marked and stocked with resources available through the National Fallout Shelter Program.
 3. Spaces and facilities of a sensitive nature will not be included in the utilization plan for public fallout shelters.

VI. IMPLEMENTATION

Each Military Department shall implement this Instruction within 60 days of its effective date. Two copies of the implementing Instructions shall be furnished to the Assistant Secretary of Defense (Civil Defense) within sixty (60) days.

VII. EFFECTIVE DATE

This Instruction is effective immediately.



STEUART L. PITTMAN,
Assistant Secretary of Defense
(Civil Defense)

Inclosure—1
Minimum Requirements for
Public Fallout Shelters

ENCLOSURE 1 TO DEPARTMENT OF DEFENSE INSTRUCTION
3020.29 DATED SEPTEMBER 28, 1962

MINIMUM REQUIREMENTS FOR PUBLIC FALLOUT
SHELTERS

1. *Shielding*—Category 4, PF-100, or above.¹

2. *Capacity*—Fifty (50) or more persons per building or facility.

This will be interpreted to mean:

a. Shelter areas that are not large enough to accommodate 50 persons should be used as shelter provided they are interconnected by shielded passageways.

b. The shelter capacity of a structure should be determined by totaling the various shelter area capacities.

c. The minimum sized shelter area within a building meeting the above criteria shall not have a capacity less than ten (10) persons.

3. *Space:*

a. *Floor area:* At least 10 square feet of net shelter space per person is required.

b. *Headroom:* A minimum of 6½ feet for at least 50% of the occupants and not less than 4 feet for the remainder is required.

c. *Volume, aboveground areas:*

(1) If naturally ventilated, use 65 cubic feet net space per person.

(2) If mechanically ventilated, or if natural ventilation is limited, use the appropriate volume from table 1 below.

d. *Volume, below ground areas:*

(1) If mechanically ventilated, use the appropriate volume from table 1 below.

(2) If no mechanical ventilation is available, use 500 cubic feet net space per person. However, if the amount of natural ventilation can be readily determined, use the volume from table 1 below.

e. When space is determined on a volume basis, either above or below ground, include the volume of areas adjacent to or surrounding the shelter area.

4. *Ventilation:*

a. If space is based on less than 500 cubic feet of net shelter space per person, the minimum ventilation required will be as shown in table 1.

b. Three (3) cfm per person allows the minimum floor area.

¹ Change 1, Apr. 2, 1963, changed line 1, par. 1, to read: "1. Shielding—Category 2, PF-40, or above."

TABLE 1

| Rate of air change (minutes) ¹ | Fresh air supply (cfm/person) | Volume of space required (cu ft/person) |
|---|-------------------------------|---|
| 22..... | 3. 00 | 65 |
| 35..... | 2. 85 | 100 |
| 60..... | 2. 50 | 150 |
| 100..... | 2. 00 | 200 |
| 200..... | 1. 50 | 300 |
| 400..... | 1. 00 | 400 |
| 600..... | 0. 75 | 450 |
| 1,000..... | 0. 50 | 500 |

¹ Computed as the ratio: $\frac{\text{Net volume of space (cu ft)}}{\text{Fresh air supply (cfm)}}$.

c. Mechanical ventilating equipment must include filters capable of removing at least 90% of 50 micron particles, or larger.

5. *Access:*

a. At least one per shelter area.

b. At least two widely separated means of access for each building except in special facilities, each of which shall be not less than 24'' wide. At least one 22'' width shall be provided for every 200 people sheltered.

6. *Safety:*

No hazards which cannot be alleviated or corrected in an emergency.

7. *Storage:*

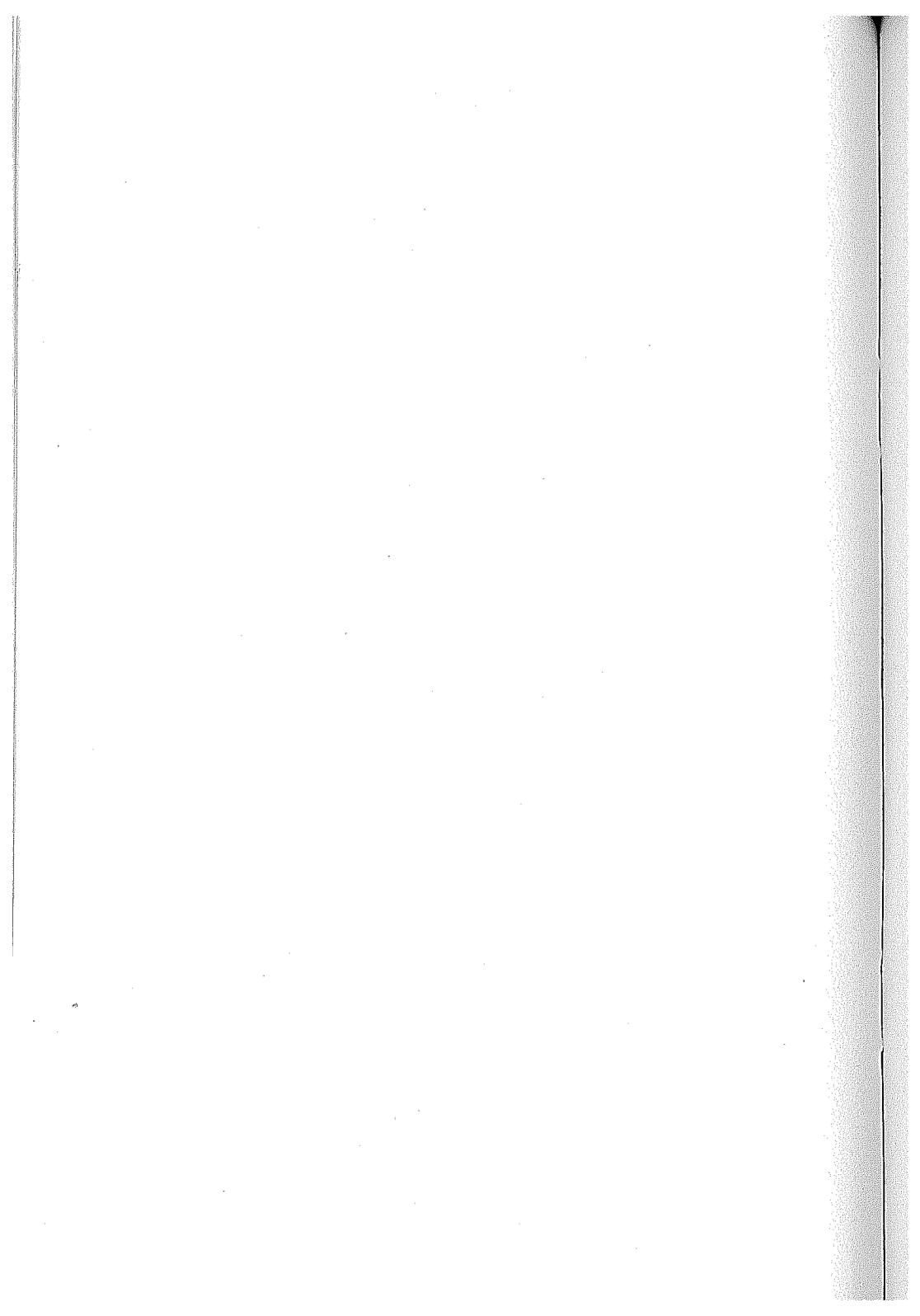
At least one cubic foot per person in or accessible to the shelter.

8. *Structural stability:*

a. Natural caves or caverns by the nature of their existence for long periods of time will be considered to have demonstrated sufficient structural stability to warrant marking.

b. Mines and other man-made underground structures, excavated in sound formations of igneous, sedimentary or metamorphosed rocks, which are presently being operated or have been in use within one year will also be considered structurally acceptable for marking. However, idle mines in limestone, dolomite and some igneous formations should only be marked if knowledge of their structural soundness is available.

c. Tunnels designed by conventional methods and lined where necessary with standard materials such as concrete, steel and brick will be considered structurally acceptable for marking unless there is evidence of obvious defects.



Appendix 4

NUMBER 3020.30

DATE *October 30, 1962*



ASD(CD)

DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Marking and Stocking of Fallout Shelters Within
Military Installations

Reference: (a) DoD Instruction 3020.29, "Utilization of Fallout
Shelter Space at Military Installations"

I. PURPOSE AND SCOPE

This Instruction, issued pursuant to and in amplification of reference (a), prescribes procedures for marking and stocking of fallout shelters at DoD installations located in the United States and its possessions.

II. APPLICABILITY

This Instruction applies to the Military Departments, and Defense Agencies, and covers facilities located only within the United States, and its possessions.

III. PLAN

- A. The commanding officer of a military installation will notify the appropriate District Engineer, Army Corps of Engineers or the Navy Bureau of Yards and Docks, that certain buildings at the installation designated as fallout shelters are ready for marking and for stocking in accordance with Inclosures 1 and 2.
- B. The District Engineer will provide and install fallout shelter signs to mark each shelter unless the commanding officer elects to have the work performed by installation forces, in which case signs will be furnished by the District Engineer.
- C. The military installation will be regarded as a "geographical area" as provided in paragraph V.E. of reference (a) and will be considered a Type I or Type II requisitioner in accordance with Inclosure 1.
- D. It is the intent of this Instruction that all available public shelters at military installations be marked and stocked in

accordance with the policy expressed in Section V.A. reference (a).

IV. EFFECTIVE DATE AND IMPLEMENTATION

- A. This Instruction is effective immediately.
- B. Each Military Department and Defense Agency shall implement this Instruction within 60 days of its effective date. Two copies of the implementing Instruction shall be furnished to the Assistant Secretary of Defense (Civil Defense) within sixty (60) days.



STUART L. PITTMAN
Assistant Secretary of Defense
(Civil Defense)

Inclosures—2

1. Procedure for Shelter Supply Distribution System Other Than Radiation Kits
2. Procedure for the Distribution of Radiation Kits for Shelters

**ENCLOSURE 1 TO DEPARTMENT OF DEFENSE INSTRUCTION
3020.30, DATED OCTOBER 30, 1962**

PROCEDURE FOR THE SHELTER SUPPLY DISTRIBUTION SYSTEM OTHER THAN RADIATION KITS

1. Elements

The shelter supplies distribution system will consist of four elements:

- a.* Local civil defense organizations serving political jurisdictions, or military installations within approximately 25 miles (drawn to county boundaries) from a warehouse (Type "1" requisitioners).
- b.* Local civil defense organizations serving political jurisdictions, or military installations further than 25 miles from a warehouse (Type "2" requisitioners).
- c.* Federal warehouses operated by, or under the control of DoD, located in or near major metropolitan areas.
- d.* National "Inventory Control Point" at DSA's Defense General Supply Center, Richmond, Virginia, hereinafter referred to as the "ICP."

2. Federal-State Financial Responsibilities for Distribution

- a.* The DoD will provide supplies at no cost to the state, local government, or military installation as the case may be, and will bear a portion of the retail distribution costs as follows:
 - (1) For Type "1" requisitioners, the DoD will pay for distribution up through loading the vehicles provided by the local government to pick up shelter supplies at the designated warehouse.
 - (2) For Type "2" requisitioners, the DoD will pay for shipment to a local receiving point or major shelter including unloading of the supplies, but excluding placement into the receiving point or shelter. It is anticipated that most such shipments will be in "truck-load" lots in order to take advantage of less costly shipping rates. Normally, a "truck-load" shipment would provide supplies for approximately 1300 shelter spaces.
- b.* The local government, or military installation, will bear the remaining cost of distribution up through the placement of supplies into the shelter.
 - (1) For Type "1" requisitioners, this includes trucking from the Federal warehouse to the shelter, unloading and placement into the shelter.

- (2) For Type "2" requisitioners, this includes placement into a local receiving point, providing for this receiving point, movement from the receiving point to shelter, and placement of supplies into the shelter; or if a single shelter will accommodate a "truck-load" shipment, only placement of the supplies into the shelter.

3. Requisitioning—Distribution Procedure

- a. The Corps of Engineers will provide OCD a list of addressees being used for distribution of the Phase II Fallout Shelter Survey printouts. Copies of this list will be mailed by OCD to each State Civil Defense Director to be validated for use in provisioning and supplying fallout shelters. One copy of the validated address list will be mailed to the ICP. This list will be used for distribution of preprinted requisitions and shipping documents. The lists will be revised as necessary to maintain their validity.
- b. The ICP will be furnished with additional data by OCD (BuCensus) giving the Standard Location, facility number, name and address, *and rated capacity for each shelter facility in categories 4 through 8 (PF 100 or greater) which is licensed, or if located* at a military installation, the use of which as a public shelter has been allowed.
- c. The ICP will prepare preprinted requisitions using the information furnished in paragraph 3.b above. These preprinted requisitions will cover the "initial issue" of provisions (See Attachment A, Inclosure 1). They will be distributed to the appropriate local Civil Defense offices and commanding officers of military installations in accordance with the validated list.
- d. The original copy of the requisition form will be signed by the requisitioner and mailed to the ICP when the shelter is ready to be stocked. Commanding officers will not be required to certify items outlined under No. 7 of the requisition form and these can be stricken before signature. It is important that the requisitioner make an appropriate entry in item (4) of the requisition if the issue desired is different from the Rated Capacity preprinted in the Shelter Identification Block on the form. In no case, however, can the issue requested exceed the Rated Shelter Capacity. Requisitions may be submitted to the ICP in quantities when it is convenient for the local Civil Defense Director or Commanding Officer to do so.
- e. The ICP will edit the requisition to determine that it has been signed and that it is from an office on the list validated by the

*Change 1, Apr. 2, 1963, changed lines 3 and 4, par. 3.b to read "and rated capacity for each shelter facility in categories 2 through 8 (PF 40 or greater) which is licensed, or if located."

- State Civil Defense Director. Incorrect or invalid requisitions will be returned for resubmission, with reason given for rejection.
- f. The ICP will compute the amounts and values of each shelter item required to meet the needs of the approved requisition and print a shipping document.
 - g. Copies of the shipping document will be mailed to:
 - (1) The Federal Warehouse which will provide the supplies.
 - (2) The Requisitioner.
 - h. On receipt of a copy (or copies) of the shipping document(s) the requisitioner will contact the designated warehouse manager (by mail, telephone, or telegram) and make arrangements for completing the transaction.
 - (1) For Type "1" requisitioners, a time will be specified for the pick-up of supplies by truck provided by the requisitioner.
 - (2) For Type "2" requisitioners, a time will be designated for shipment to a local receiving point or major shelter and assurance given that the requisitioner, or the requisitioner's agent, will be available to receive the shipment.
 - i. If no suitable arrangements are made within 90 days of the date of the shipping document, the warehouse manager will notify the ICP accordingly. The determination as to whether the shipping document will be canceled will be made at the time the list of these cases is reviewed by OCD. If after OCD review it is determined that provisioning of the shelter facility is still desired by the local civil defense organization, the ICP will be so informed. At that time a new requisition will be furnished by the ICP, if required.
4. Transfer of Title
- Transfer of title for supplies from the DoD to the local jurisdiction will be as follows:
- (1) Type "1" requisitioners, or their agents, will present a signed copy of the shipping document at the warehouse when supplies are picked up. This signed document, giving evidence that the supplies were picked up and title taken thereto, will be sent back to the ICP and made a matter of record. The requisitioner may retain the copy received from the ICP.
 - (2) Type "2" requisitioners will make arrangements with the appropriate warehouse for shipment of supplies to a receiving point (or major shelter). The shipping documents in this case may be attached to the Government Bill of Lading (GBL). Title will pass to the local jurisdiction, or military installation, when the GBL is signed.

5. Records

- a.* The ICP will maintain all stock control records including data on supplies on hand, received, due in, for shipment, and shipped or released for requisitioners. Periodic summaries to be available on the following bases:
- (1) National
 - (2) Regional
 - (3) State
 - (4) Warehouse Location
- b.* The local government, or military installation, is to maintain appropriate accountability records in accordance with local regulations, or established procedures governing other property owned by that political jurisdiction or military installation.

Attachment A

Requisition—DGSC Form 2078

REQUISITION

FALLOUT SHELTER SUPPLIES (Except Radiation Kits)

3020.30 (Att A to Incl 1)
Oct 30, 62

1. TO: DEFENSE GENERAL SUPPLY CENTER
RICHMOND 12, VIRGINIA

2. FROM:

3. FOR: Shelter No. _____, Standard Location _____, Rated Capacity _____ Spaces

LOCATED AT:

It is requested that supplies be issued for the shelter identified above. Basis for request is as follows:

4. INITIAL ISSUE
(CHECK ONE)
- Initial Issue For Rated Capacity
- Less Than Rated Capacity. Partial supply for _____ spaces.

5. REPLACEMENT OR OTHER BASIS
- Shelf Life Expired
- Loss by Fire or Other Damage
- Training
- Additional Issue for _____ Spaces due to Increased Capacity.
- Other (Explain)

6. DELIVERY INSTRUCTIONS
- Supplies will be picked up at warehouse by CD political subdivision.
- Supplies will be shipped by warehouse.

(List Items and Quantities Desired on Reverse Side)

7. CERTIFICATION

- I certify, on behalf of the political subdivision which I represent that:
- a. The property owner has agreed to provide space for installation of these supplies and such space is presently available and in condition to receive the supplies.
 - b. Legal title to the supplies will be accepted by the political subdivision and they will be used to carry out the National Fallout Shelter Program.
 - c. These supplies will be cared for, inspected and maintained by the political subdivision at no expense to the building owner.

Signed _____
Name _____
Title _____
Date _____

Type or Print _____

**ENCLOSURE 2 TO DEPARTMENT OF DEFENSE INSTRUCTION
3020.30 DATED OCTOBER 30, 1962
PROCEDURE FOR THE DISTRIBUTION OF RADIATION
KITS FOR SHELTERS**

1. PURPOSE

- a. The Office of Civil Defense, DoD, is responsible for providing each public shelter with food, water, sanitation and medical supplies. Kits of radiation detection monitoring instruments, CD V-777-1, will also be provided. However, the issuance of the radiation instruments will be separate from the other shelter provisioning.
- b. Municipal, county, and State civil defense directors may locate some of the official monitoring and reporting stations at public shelters which provide adequate communication and geographic coverage. However, emergency field responsibilities and mobile monitoring responsibilities will in most cases cause operational monitoring and reporting stations to be assigned to locations other than public shelters. Therefore, a shelter radiation kit should be requested for each available shelter and facility personnel should be trained whether or not the shelter has also been designated a station of the monitoring and reporting network. If the shelter has been designated later as a monitoring station the shelter kit should be relocated to a new shelter location.

2. OCD POLICY ON RADIATION INSTRUMENTS FOR PUBLIC SHELTERS

a. Instrumentation

- (1) OCD will grant operational instruments for public shelter use, under authority contained in Section 201(h) of Public Law 920, 81st Congress, as amended by Public Law 85-606. Each available public shelter which meets the requirements of the Requisition (Attachment A to Inclosure 2) will be furnished initially with a shelter radiation kit, Item CD V-777-1, composed of:

1 CD V-700 Radiological survey meter, geiger counter, probe type, beta-gamma discriminating, 0-0.5, 0-5 and 0-50 mr/hr.

1 CD V-710¹ Radiological survey meter, gamma only *or* 0-0.5, 0-5 and 0-50 r/hr.

CD V-715¹ Radiological survey meter, gamma only, 0-0.5, 0-5, 0-50 and 0-500 r/hr.

¹ In future procurement of OCD instruments, the CD V-710 survey meter will be replaced by the CD V-715 survey meter.

- 1 CD V-730² Radiological dosimeter, self-reading, *or* gamma only, 0-20 r.
- 1 CD V-740² Radiological dosimeter, self-reading, *or* gamma only, 0-100 r.
- 2 CD V-742² Radiological dosimeter, self-reading gamma only, 0-200 r.
- 1 CD V-750 Radiological dosimeter charger.

(2) After the initial issue, and when the Shelter Program Phase II information becomes available, additional shelter monitor kits may be requisitioned for issue to provide more adequate coverage within the facilities that have multiple shelter areas. The sample requisition (Attachment A) makes provision for the subsequent issue of additional shelter kits under Part (5) of "OTHER THAN INITIAL ISSUE." Requisitions for supplemental kits for the multiple shelter areas, as provided in item (4) should not be submitted until the information from Phase II has been evaluated by OCD.

b. *Certification.* Commanding officers will not be required to certify items outlined under No. 7 of the requisition form and these can be stricken before signature. Commanding officers are responsible for providing space for and maintaining the instruments. Instruments can be either maintained on base or shipped to the nearest DoD-GSA warehouse for servicing. Transportation cost must be borne by the Military Services.

3. PROCEDURES FOR OBTAINING SHELTER RADIATION KITS

- a. The commanding officer will requisition, receive, and be responsible for the shelter radiation kits and components thereof for use in public shelter facilities; and will secure the kits in the shelters ready for use.
- b. The shelter radiation kits will be issued out of OCD General Services Administration warehouses based on requisition, Attachment A. The preparation of the radiation kit "initial issue" requisition and their distribution will be accomplished in the same manner as in the system for supply and distribution of other shelter provisioning requisitions.
- c. Although the radiation kit requisitions may be sent to the commanding officer at the same time as the requisitions for other shelter supplies; it is not mandatory that the commanding officer submit the radiation kit requisition at the time other supply requisitions are submitted. Some time lag may be advantageous

² In future procurement of OCD instruments, the CD V-730 and CD V-740 dosimeters

- allowing a period to train or schedule training for the monitors who will use the instruments and inspect them for operability.
- d.* The commanding officer will be furnished three copies of the pre-printed requisition for shelter radiation kits. One will be returned to the Defense General Supply Center, Richmond 12, Virginia, as a requisition; the other two copies will be retained by the commanding officer. When additional blank forms are required for subsequent requisitions, requests will be submitted to Inventory Control Point, Defense General Supply Center, Richmond 12, Virginia.
 - e.* When the kit is shipped from the warehouse, a copy of the Bill of Lading will be sent to the commanding officer and to the State Civil Defense Director. The commanding officer or other authorized official will notify the State Civil Defense Director when the kits have been received.
 - f.* Each commanding officer will, whenever, possible, submit its requisitions in bulk lots in order to facilitate the processing and shipment of the radiation shelter kits.

Attachment A

Requisition—DGSC Form 2079

REQUISITION
FALLOUT SHELTER RADIATION KIT

3020.30 (Att A to Incl 2)
Oct 30, 62

1. TO: DEFENSE GENERAL SUPPLY CENTER
RICHMOND 12, VIRGINIA

2. FROM:

3. FOR: Shelter No. _____ Standard Location _____ Rated Capacity _____ Spaces
LOCATED AT: _____

It is requested that RADIATION KIT or other items be issued for the shelter identified above. Basis for request is as follows:

4. INITIAL ISSUE (Complete Kit only)

5. OTHER THAN INITIAL ISSUE

- Loss by fire
- Loss by theft
- Obsolescence Exchange
- Resupply of irreparable kit components
- Additional Issue - Multiple Shelter Areas

6. **DELIVERY INSTRUCTIONS**
 Supplies will be shipped to the CD political subdivision (see block 2)

(List items and quantities desired on Reverse Side)

7. CERTIFICATION

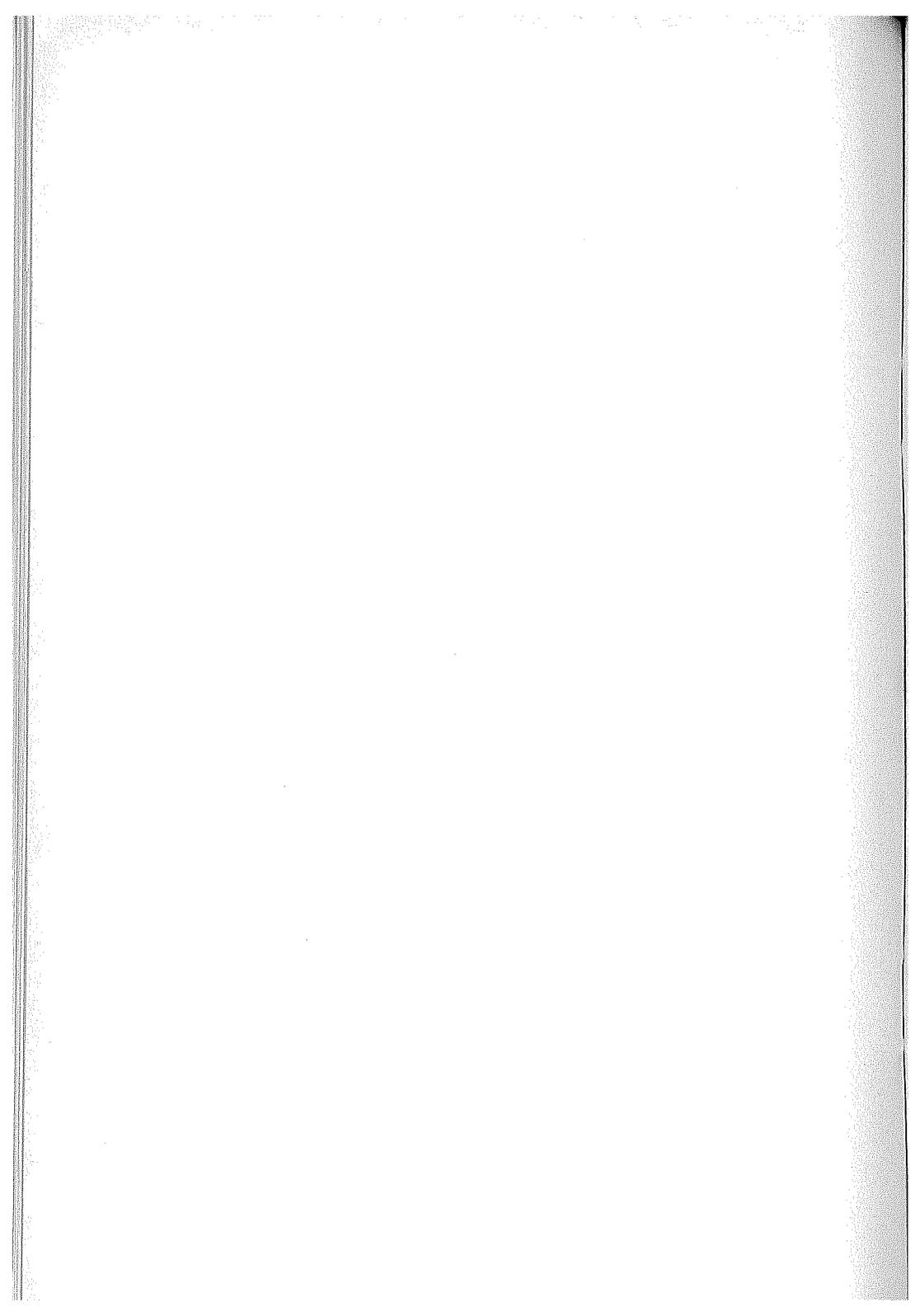
- I certify, on behalf of the government which I represent that:
- a. Space will be provided in the shelter facility for these kits and such space is available.
 - b. Legal title to the equipment will be accepted by the political subdivision acting on behalf of the State and the equipment will be used to carry out the National Fallout Shelter Program.
 - c. These instruments will be inspected periodically and maintained at no expense to the building owner.
 - d. Personnel will be or have been trained to operate the instruments.

Signed _____
Name _____
Title _____
Date _____

Type or Print —

ALSO USE REQUISITION SYSTEM

DSSC FORM 2079
6 AUG 62



Appendix 5

NUMBER 5030.25
DATE *January 22, 1963*



ASD(CD)

DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Regional Civil Defense Coordinating Boards

- References:
- (a) Executive Order 10952, "Assigning Civil Defense Responsibilities to the Secretary of Defense and Others," dated July 20, 1961
 - (b) DoD Directive 5140.1, "Assistant Secretary of Defense (Civil Defense)"
 - (c) Sec. 401 of Federal Civil Defense Act of 1950, as amended and Reorganization Plan No. 1 of 1958
 - (d) DoD Directive 3025.1, "Military Support of Civil Defense"

I. PURPOSE

- A. This Instruction provides for the establishment of an inter-departmental Regional Civil Defense Coordinating Board (hereinafter referred to as the Board) in each of the eight geographical regions serviced by Office of Civil Defense Regional Directors.
- B. It sets forth the composition, responsibilities, functions, authority of the Chairman, and relationships of the Board.

II. APPLICABILITY

- A. The provisions of this Instruction apply to all DoD Components whose functional responsibilities are involved in civil defense planning as described in Section III below.
- B. Its provisions do not preclude the joint convening of the Boards established herein and the Office of Emergency Planning (OEP) Regional Boards sitting as a single Board to be co-chaired by OEP-DoD (OCD), when appropriate and useful.

III. SCOPE

Civil Defense Planning, as used in this Instruction, encompasses:

- A. Preparation of—
 1. civil defense emergency plans by all Federal agencies, State agencies, and local government agencies.

authorities (ref. (d)) including assistance by reserve components.

- B. Means for exchanging information among responsible organizations on the locations of nuclear explosions and the patterns of fallout.
- C. Systems of assessment of damage and casualties from blast, fire, and fallout.
- D. Means for controlling, directing and coordinating the re-entry of fire, law and order, rescue, and other emergency services into areas damaged by blast or contaminated by heavy fallout for decontamination, rescue and survival operations in such areas.
- E. Provisions for organization of other emergency services, such as water, sanitation, law and order, medical, traffic control, communications, supply, transportation, and including emergency operating procedures.
- F. Participation in test exercises.
- G. Formulation of chemical and biological defense programs.

IV. COMPOSITION OF THE BOARD

A. *Membership*

1. The Chairman of the Board shall be the OCD Regional Director, who will be the senior DoD representative on the board.
2. The following departments and agencies of the Federal Government have been assigned specific emergency preparedness responsibilities and are being invited to be represented on the Board:

Office of Emergency Planning

Department of the Army (Principal Military Service Representative)

Department of the Navy

Department of the Air Force

Department of Agriculture

Department of Commerce

Department of Labor

Department of Health, Education, and Welfare

Department of Interior

Post Office Department

Atomic Energy Commission

Federal Aviation Agency

Housing and Home Finance Agency

Interstate Commerce Commission

3. The membership will be expanded as other agencies are assigned specific emergency preparedness responsibilities, or as required.
4. The Chairman may, at his discretion, invite representatives of other Federal agencies, state, substate, and local civil defense organizations, and representatives of civic organizations to sit in as observers on Board meetings.

B. *Executive Secretary*

The OCD Regional Director will appoint an Executive Secretary, from among personnel on his staff, who will be responsible for coordinating appropriate regional board matters with Federal agencies, briefing the Board, arranging meetings, maintaining records, preparing action papers for the Board, and submitting reports to the Board.

V. RESPONSIBILITIES AND FUNCTIONS

A. *Responsibilities*

1. The Board shall advise and assist the OCD Regional Director concerned, in carrying out his responsibilities (ref. (c)) in the field of civil defense, and in planning and coordinating civil defense operations.
2. The Chairman shall coordinate the work of the Board with activities of the Office of Emergency Planning (OEP) and the OEP Boards, in the field of civil defense.

B. *Functions*

Board functions will include, but are not limited to:

1. Coordination and correlation of civilian and military civil defense planning at regional, state, and local level.
2. Review of policy guidance governing implementation of plans and operational procedures on the following *priority* programs:
 - a. Identification, Licensing, Marking, and Provisioning of Shelters, in consonance with the National Shelter Program.
 - b. Increasing of Shelter Capability, by modification of existing buildings, providing shelter spaces in certain new construction, identification and utilization of shelter spaces in existing buildings, identification of the best available protection space for temporary use until full shelter capability can be achieved, development of home shelters, and development of community shelters by industry, state, and local governments, and other institutions.

- c. Development and execution of Plans for Utilization of Shelter Space, including:
 - (1) Movement to shelter plans.
 - (2) Internal shelter management.
 - (3) Acquisition of approved civil defense provisions and equipment required for shelters over and above that furnished by the Federal Government.
 - (4) Training.
- d. Development and execution of plans for:
 - (1) Warning the public.
 - (2) Radiological monitoring and reporting.
 - (3) Informing the public with regard to civil defense activities and plans.

VI. RELATIONSHIPS

- A. All significant documentation on matters under consideration at the national level will be furnished to the Chairman of the Board by the Office of Civil Defense, DoD.
- B. Arrangements will be made to transfer to the OCD Regional Offices, for use by Civil Defense Coordinating Boards, all civil defense records of the former Regional Boards for Civil and Defense Mobilization.

VII. SUPERSESSION

The *civil defense provisions* of Office of Civil and Defense Mobilization Administrative Order No. 2, dated March 12, 1959, are reissued in this Instruction, and are superseded.

VIII. EFFECTIVE DATE AND IMPLEMENTATION

This Instruction is effective immediately. Two copies of implementing regulations and of revisions to existing regulations (amended to conform to this Instruction) will be forwarded to the ASD (Civil Defense) within thirty (30) days.



STEUART L. PITTMAN
Assistant Secretary of Defense
(Civil Defense)

Appendix 6

DEPARTMENT OF DEFENSE MEMORANDUM RELATING TO CIVIL DEFENSE ADVISORY COMMITTEE ON THE MEDICAL SELF-HELP PROGRAM

June 13, 1962

MEMORANDUM FOR:

- The Secretaries of the Military Departments
- The Director of Defense Research and Engineering
- The Assistant Secretary of Defense (Comptroller)
- The Assistant Secretary of Defense (Public Affairs)
- The Assistant to the Secretary of Defense (Legislative Affairs)
- The Assistant Secretary of Defense (Manpower)
- The Deputy Assistant Secretary (Health and Medical)
- The General Counsel
- The Special Assistant to the Secretary of Defense
- The Administrative Assistant
- The Administrative Secretary

SUBJECT: Civil Defense Advisory Committee on the Medical Self-Help Training Program

Reference: DOD Directive 5030.13, "Regulations for the Formation and Use of Advisory Committees," April 20, 1962

1. *General*

A Civil Defense Advisory Committee on the Medical Self-Help Training Program is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The function, membership, and operation of the Committee are set forth below.

2. *Functions*

The Civil Defense Advisory Committee on the Medical Self-Help Training Program shall:

- a. Analyze an interim report of the initial phase of the Medical Self-Training Program.
- b. Make recommendations relative to the following major segments of the report:
 - (1) Professional content of course material.
 - (2) Methodology of instruction, including availability and effectiveness of voluntary instructors.
 - (3) Techniques of program implementation.
 - (4) Usefulness of training to the Shelter Program.

3. *Membership*

This Committee shall consist of representatives of:

Bureau of Medicine and Surgery, Navy Department

Medical School, Baylor University

Disaster Committee, Allegheny County Medical Society,
Pennsylvania

University Extension, University of California at Los Angeles

Queens College, Charlotte, North Carolina

Civil Defense State Directors Association

United Community Funds & Councils, Inc., New York

State Department of Health, Virginia

Continuing Education Division, Pennsylvania State University

Total membership shall consist of ten members.

a. There shall be a total of nine members from the organizations named above.

b. One member, a full-time salaried Government official designated by the Assistant Secretary of Defense (Civil Defense) shall be Chairman of the Committee.

4. *Operation*

a. The Committee shall be organized and operated in accordance with reference above.

b. The Chairman shall call each meeting and shall formulate the agenda of each meeting. He shall provide for taking summary minutes, shall certify to their accuracy, and shall adjourn any meeting whenever he feels that its continuation would not be in public interest.

c. It is anticipated that the work of this Committee will be completed on or about July 19, 1962. In any event, termination of the Committee shall occur not later than August 15, 1962.

d. The functions of the Committee are solely advisory, and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).



STUART L. PITTMAN

MEMBERSHIP LIST
CIVIL DEFENSE ADVISORY COMMITTEE ON THE
MEDICAL SELF-HELP PROGRAM

Meeting Dates—*July 18 and 19, 1962*

CHAIRMAN :

William P. Durkee
Director for Federal Assistance
Office of Civil Defense
Department of Defense

COCHAIRMAN :

Dr. David W. Clare
Chairman, Disaster Committee
Allegheny County Medical Society
Department of Surgery,
Presbyterian Hospital
Pittsburgh 13, Pa.

Dr. Stanley Olson
Dean, Medical School
Baylor University
Houston, Tex.

Comdr. Jack Schulte
Director, Special Weapons Division
Bureau of Medicine and Surgery
Building 7, Room 7006
Department of Navy
Washington 25, D.C.

Dr. Paul H. Sheats
Dean, University Extension
No. 71200, UCLA
Los Angeles 24, Calif.

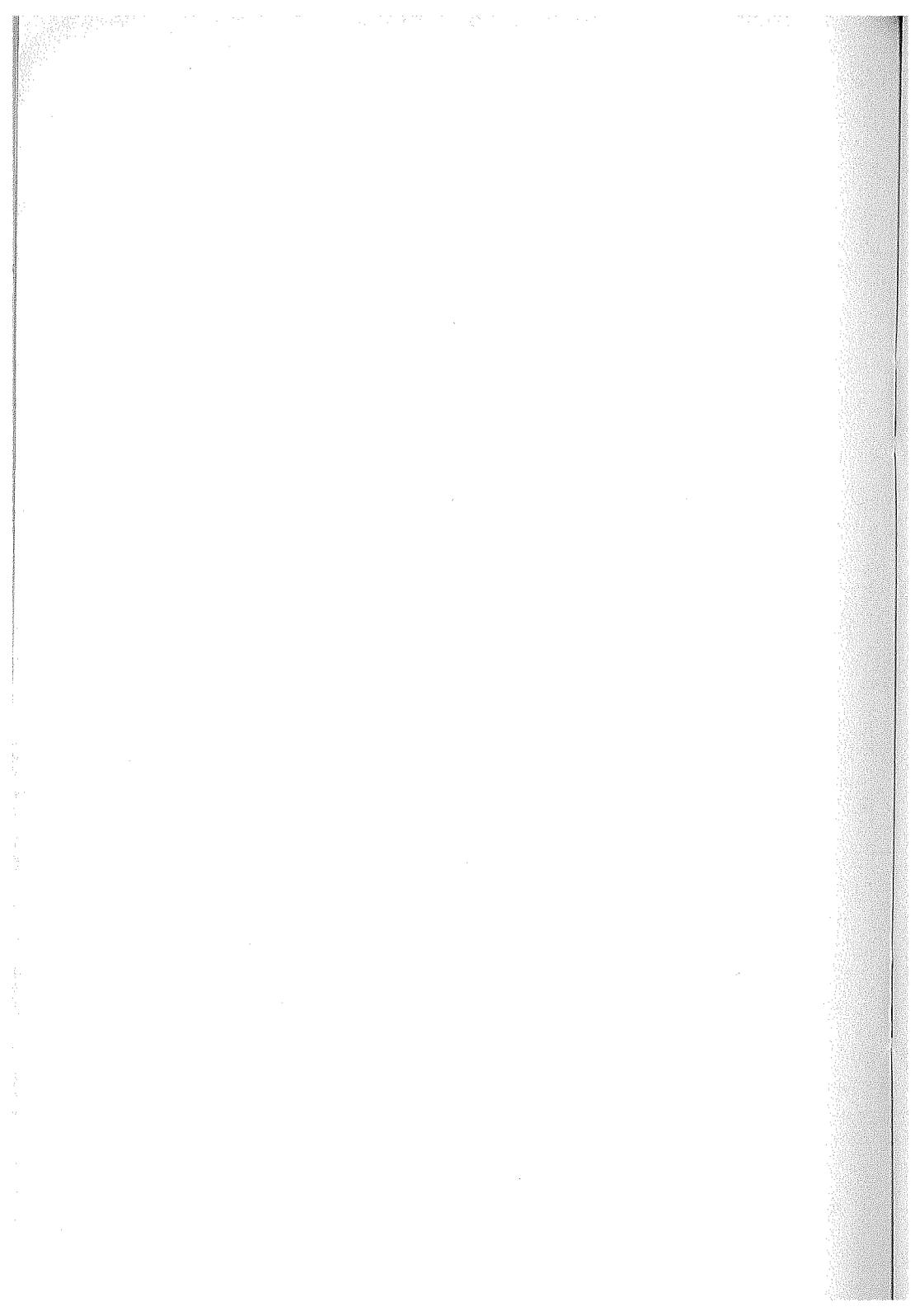
Mr. Charles F. Milner
University of North Carolina
Chapel Hill, N.C.

Mr. Edward Keller
Director of Continuing Education
Pennsylvania State University
University Park, Pa.

Mr. Edwin P. Bradley
Planning Associate
United Community Funds and Councils, Inc.
345 East 46th Street
New York, N.Y.

Mr. Robert S. D'Amelio
Michigan State Civil Defense Director
119 Washtenaw Street
Lansing 23, Mich.

Dr. Mack I. Shanholtz
State Commissioner of Health
State Department of Health
12th and Bank Streets
Richmond 19, Va.



Appendix 7

MEMORANDUM OF UNDERSTANDING

Between

**AMERICAN NATIONAL RED CROSS AND THE
DEPARTMENT OF DEFENSE**

Concerning

RESPONSIBILITIES IN THE NATIONAL FALLOUT SURVEY MARKING AND STOCKING PROGRAM

For many years the American National Red Cross has assisted government in the development of national emergency plans and preparedness programs covering civil defense programs. This Memorandum of Understanding has been developed to establish a mutual consent agreement to designate, mark and stock fallout shelters in American National Red Cross-owned or occupied buildings.

The American National Red Cross desires to cooperate to the fullest in establishing fallout shelters in buildings under its control. Therefore, ANRC agrees under the provisions of the "Fallout Shelter License or Privilege" (Annex C, National Shelter Survey, Marking and Stocking Program) :

- (1) To permit, in American National Red Cross controlled buildings selected by Office of Civil Defense, DOD the use of the basement, corridor and other common areas which by mutual agreement and consent between the local Civil Defense Director acting under DOD instructions and the building or area manager or other designated official of ANRC shall be determined to be appropriate for the sole purpose of temporarily sheltering persons during and after any and every actual or impending attack, including the rights of ingress and egress from the premises so long as there is no interference with the usual use of the premises for the carrying on of business therein.
- (2) To permit the selected buildings to be designated as Civil Defense Shelters and the placing and maintaining at no expense to ANRC such civil defense shelter and other signs as determined jointly and by mutual agreement and consent between the local Civil Defense Director and the building or area manager or other designated national officials of ANRC as appropriate, provided that the interior or exterior of the building is not marred in any way.
- (3) To provide a place in selected buildings for storage for such

shelter capacity. It is expressly understood that ANRC shall have no responsibility or liability for the care, protection or maintenance of the shelter stock.

- (4) To permit the local Civil Defense Director acting under DOD instructions during such reasonable periods as the selected buildings are opened for business to inspect the selected shelter areas, ingress and egress routes thereto, and any civil defense equipment and supplies stocked therein.

The agreements in paragraph (1) through (4) above shall be based upon and shall comply with Department of Defense, Office of Civil Defense, National Fallout Shelter Survey, Marking and Stocking Program, issued February 15, 1962, and the ANRC rules and regulations controlling the use and occupancy of general purpose space. It is also understood that space for the general warehousing of civil defense supplies is not included in this understanding and agreement.

This Memorandum of Understanding applies only to the ANRC controlled buildings in Washington, D.C., Landover, Maryland, Charlottesville, Virginia, and the four ANRC Area Office buildings at Atlanta, Georgia, St. Louis, Missouri, San Francisco, California, and Alexandria, Virginia.

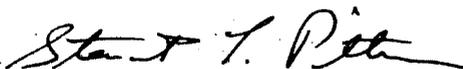
In addition to the buildings controlled by the national organization of ANRC there are Red Cross buildings controlled by local chapters in many communities throughout the United States, which may be suitable for shelter purposes.

The national organization will recommend that the authorized ANRC officials on the national, area and chapter levels cooperate with the local Civil Defense Director in making available their facilities as Fallout Shelters, and as "Grantor" execute the Fallout Shelter License or Privilege form.

The Department of Defense, Office of Civil Defense and the American National Red Cross will take the necessary steps to instruct their respective field organizations in the application of this agreement. Each shall furnish the other with copies of such instructions.



EXECUTIVE VICE-PRESIDENT
AMERICAN RED CROSS



ASSISTANT SECRETARY OF

Appendix 8

Number 5030.21

Date April 27, 1962



ASD(CD)

DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Advisory Committee on the Design and Construction of Public Fallout Shelters

References: (a) DoD Directive 5030.13, "Regulations for the Formation and Use of Advisory Committees"

(b) Executive Order 11007, "Prescribing Regulations for the Formulation and Use of Advisory Committees," February 26, 1962

I. GENERAL

A Department of Defense Advisory Committee on the Design and Construction of Public Fallout Shelters is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The purpose, membership, and operation of the Committee are set forth below.

II. PURPOSE

The purpose of the Advisory Committee on the Design and Construction of Public Fallout Shelters is to:

- A. Review and make recommendations on the operating problems of providing incentives for shelter construction and of effecting proper utilization of shelter space in existing buildings.
- B. Provide means for effective communications relating to shelter design and construction between the Office of Civil Defense, Department of Defense and the membership of the associations named below.
- C. Recommend methods of stimulating shelter construction through development of plans and designs, by reducing shelter construction costs, and by communicating to the building trades and building owners technical information conducive to shelter construction.

III. MEMBERSHIP

This Committee shall be representative of the American Institute of Architects, the American Society of Civil Engineers, the

Associated General Contractors of America, Incorporated, the National Society of Professional Engineers, the Engineers Joint Council, and the American Institute of Planners. Total membership shall consist of thirteen members.

- A. There shall be two members from each of the six professional organizations named above. One of the two members shall be an officer, the other a staff member, of the organization represented.
- B. One member, a full time, salaried Government official designated by the Assistant Secretary of Defense (Civil Defense), shall be Chairman of the Committee.
- C. If a vacancy occurs on the Committee, it shall be filled in the same manner as the original appointment.

IV. OPERATION

- A. The Committee shall be organized and operated in accordance with references (a) and (b) above.
- B. The Chairman shall call each meeting of the Committee, and shall formulate the agenda of each meeting. He shall make provision for taking minutes of each meeting, and shall certify the accuracy of summary minutes thereof. He shall have the authority to adjourn any meeting whenever he feels that its continuation would not be in the public interest.
- C. The functions of the Committee are solely advisory, and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).



ASSISTANT SECRETARY OF DEFENSE
(Civil Defense)

MEMBERSHIP LIST

ADVISORY COMMITTEE ON THE DESIGN AND CONSTRUCTION OF PUBLIC FALLOUT SHELTERS

Meeting Dates—July 19, October 25, and December 7, 1962
March 20 and May 20, 1963

| <i>Designate</i> | <i>Name, title, and affiliation</i> | <i>Address</i> |
|--|--|---|
| 1. Chairman---- | Mr. James E. Roembke, director, Architectural and Engineering Development Division, Technical Operations, Office of Civil Defense. | The Pentagon, Washington 25, D.C. |
| <i>Representatives from the American Institute of Architects:</i> | | |
| 2. Officer----- | Mr. John McLeod, board member, Washington Metropolitan Chapter, American Institute of Architects. | 1223 Connecticut Ave. NW., Washington, D.C. |
| 3. Staff member_ | Mr. William H. Scheick, executive director, American Institute of Architects. | 1735 New York Ave. N.W., Washington 6, D.C. |
| Alternate staff member. | Mr. Kenneth C. Landry, director, Public Services Division. | Do. |
| <i>Representatives from the American Society of Civil Engineers:</i> | | |
| 4. Officer----- | Mr. Howard G. Dixon, senior vice president, Johnson, Drake & Piper, Inc. | 1214 Mamaroneck Ave., White Plains, N.Y. |
| 5. Staff member_ | Mr. William H. Wisely, executive secretary, American Society of Civil Engineers. | 345 East 47th St., New York 17, N.Y. |
| Alternate staff member. | Mr. D. P. Reynolds, American Society of Civil Engineers. | Do. |
| <i>Representatives from the Associated General Contractors of America, Inc.:</i> | | |
| 6. Officer----- | Mr. John E. Healy II, John E. Healy & Sons. | 707 Tatnall St., Wilmington, Del. |
| 7. Staff member_ | Mr. William Dunn, executive secretary, Associated General Contractors of America, Inc. | 20th and E Sts. NW., Washington 6, D.C. |
| Alternate staff member. | Mr. John K. Bowersox, director, Building Division, Associated General Contractors of America, Inc. | Do. |
| <i>Representatives from the National Society of Professional Engineers:</i> | | |
| 8. Officer----- | Mr. John H. Stufflebean, president, National Society of Professional Engineers. | 211 West Pennington St., Tucson, Ariz. |

| <i>Designate</i> | <i>Name, title, and affiliation</i> | <i>Address</i> |
|--|---|--|
| <i>Representatives from National Society of Professional Engineers—Continued</i> | | |
| 9. Staff member | Mr. Paul Robbins, executive director, National Society of Professional Engineers. | 2029 K St. NW., Washington 6, D.C. |
| <i>Representatives from the Engineers Joint Council:</i> | | |
| 10. Officer | Mr. R. H. Tatlow III, president, Abbott, Merkt & Co., Inc. | 630 3d Ave., New York 17, N.Y. |
| 11. Staff member | Mr. L. K. Wheelock, secretary, Engineers Joint Council. | 345 East 47th St., New York 17, N.Y. |
| Alternate staff member | Mr. Donald A. Buzzell, executive director, Consulting Engineers Council. | World Center Building, 16th and K Sts. NW., Washington 6, D.C. |
| <i>Representatives from the American Institute of Planners:</i> | | |
| 12. Officer | Mr. Lachlan F. Blair, Blair Associates, Inc. | 36 Exchange Pl., Providence, R.I. |
| 13. Staff member | Mr. W. C. Dutton, Jr., executive director, American Institute of Planners. | 917 15th St. NW. (room 800), Washington 5, D.C. |

Appendix 9

NUMBER 5030.20

DATE: *March 12, 1962*



ASD(CD)

DEPARTMENT OF DEFENSE INSTRUCTION

SUBJECT: Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) System

References: (a) DoD Directive 5030.13, "Public Advisory Committees"
(b) Executive Order 11007 dated February 27, 1962, Prescribing Regulations for the Formation and Use of Advisory Committees

I. GENERAL

A Department of Defense National Emergency Alarm Repeater (NEAR) System Industry Advisory Committee is hereby established to advise the Assistant Secretary of Defense (Civil Defense). The purpose, membership and operation of the committee are set forth below.

II. PURPOSE

The purpose of the NEAR System Industry Advisory Committee is to provide advice to the Office of Civil Defense, Department of Defense, regarding the ongoing NEAR system investigation and implementation program. The NEAR system involves the utilization of the nationwide facilities of the power companies and introduces complex problems of installation and testing.

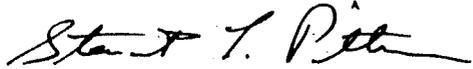
III. MEMBERSHIP

- A. The total membership shall consist of twelve (12) members; three each from the private, public, and rural electrification utilities, and three from the Department of Defense.
- B. The Chairman of the Committee shall be a full time, salaried government official, designated by the Assistant Secretary of Defense (Civil Defense).

IV. OPERATION

- A. The Committee shall be organized and operated in accordance with references (a) and (b) above.

- B. The Chairman will call each meeting of the Committee, formulate the agenda for each meeting, and have the authority to adjourn any meeting whenever he feels that its continuation would not be in the public interest.
- C. The functions of the Committee are solely advisory and any determination of action to be taken, based in whole or in part on such advice, shall be made by the Assistant Secretary of Defense (Civil Defense).



STUART L. PITTMAN
Assistant Secretary of Defense
(Civil Defense)

MEMBERSHIP LIST

INDUSTRY ADVISORY COMMITTEE ON THE NATIONAL EMERGENCY ALARM REPEATER (NEAR) SYSTEM

Meeting Dates—*December 18 and 19, 1962*

CHAIRMAN :

Mr. Walter F. Lineberger,
Jr.
Deputy Assistant Secretary
of Defense (Civil De-
fense)
Department of Defense

DEPUTY CHAIRMAN :

Mr. James Wise
Director for Technical
Operations
Office of Civil Defense
Department of Defense

Mr. John H. Scoltock
Chief, Borrowers Operation Branch
Electric Distribution Division, REA
Department of Agriculture

Mr. T. M. Blakeslee
Electrical Engineer in Charge of
Operation
Department of Water and Power
Los Angeles, Calif.

Mr. Herbert Blinder
Staff Engineer
American Power Association
Washington, D.C.

Mr. Charles Custer
Executive Director
Southwest Power Pool
Little Rock, Ark.

Mr. G. M. McDaniel
Head Systems Operating Division
American Electric Power Service Corp.
New York 6, N.Y.

Mr. H. Dean Miller
Electric Utility Manager
Office of Municipal Electric Light
Plant
City of Hagerstown, Md.

Mr. Jack E. Smith
Mecklenburg Electric Cooperative
Chase City, Va.

Mr. David C. Fullarton
National Rural Electric Cooperative
Association
Washington, D.C.

Mr. Ed Frye
Assistant to the Director, Economics
and Statistics
Edison Electric Institute
New York 17, N.Y.