

Fallout Shelter Survey: Civil Defense Says There Is No Place Like Home

There is no place like home during a nuclear attack, if your home has a basement.

In essence, that is the argument now offered by the planners in the Office of Civil Defense (OCD) in the Pentagon. The current home fallout-shelter drive can trace its origin to 1962 when Congress rebuffed the Kennedy administration's effort to promote a crash program of fallout shelter construction, and the OCD was forced to switch over to a slow and steady strategy. Prior to 1962, the OCD had endorsed a wide variety of programs, most of which enjoyed only brief moments of glory. One of those which flourished briefly was a plan that called for mass evacuation of the cities. Since Congress stifled the massive shelter construction plan in 1962, the major effort in civil defense has been directed toward locating shelter space in large existing structures, such as apartment houses and public buildings. By the end of last year, space for some 155 million people, in 172,000 structures throughout the country, had been located. An additional 2 million spaces were found through a Smaller Structures Survey.

Now that those efforts have been nearly completed, the main effort in the fallout-shelter field has switched to the private home. The official reason given for the tactical change is that in many metropolitan areas the majority of public shelters are located in downtown areas, while most of the population lives in the suburbs. Since the Home Fallout Protection Survey was initiated 18 months ago, the surveys have been completed in nine states,* are under way in 11 others, and have been requested by the governors of an additional 10 states. The survey is designed simply to find out which homes have basements, and

then to advise homeowners how they can upgrade the fallout protection features of their basements. Prior to the beginning of any of the surveys, a request for the survey must be directed by the governor of the state to the OCD. According to Joseph Romm, acting head of the OCD, the purpose of the program is both to inform people how they can substantially reduce the radiation hazards in their homes and to find out how many people in a given locale could be protected in homes during a nuclear attack. That data is provided to local civil defense planners, after survey completion, as an aid for total community planning.

The surveys are conducted by the U.S. Bureau of the Census under contract to the OCD. In most localities, questionnaires are mailed to residents, if up-to-date mailing lists are available. Generally, in towns where the population is below 10,000 or where current mailing lists are not available, census enumerators conduct the survey on a door-to-door basis.

Residents receive a cover letter, usually signed by their state governor, and a questionnaire with 12 questions. The questions concern the number of people who reside in the household, the kind of housing unit—whether single-family or multiple-unit structure—and the type of construction of the building. Residents are instructed to return the questionnaire in a postage-paid envelope to a census office in Jeffersonville, Ind. In Jeffersonville, the data is programmed into a computer which, in turn, prepares an analysis of what the homeowner should do to his basement to obtain maximum protection from radiation. The computer designates the "safest" corner, and gives instructions for shielding it. The computer's recommendations are then mailed to the resident. Civil Defense officials are aiming at a protection factor (PF) of 40 for the "safest" corner. An area with that rating would receive one-fortieth the dose of radiation that an unprotected area would receive from an equivalent

source. A PF of 40 is the same level of protection that OCD requires for large structures before they are marked as public fallout shelters.

Data compiled by the OCD indicates that, of the homes with basements in the states in which the survey has been completed, about 8 percent meet the PF-40 criteria. Of the remaining homes, about 85 percent have protection factors between 20 and 40. Romm said the majority of those could be brought up to the PF-40 level with little effort.

The response to the survey has been good, perhaps because persons believe that, as is the case with the taking of the U.S. census, cooperation is mandatory. Neither the letter nor the questionnaire states otherwise. Where surveys have been completed, about 78 percent of the questionnaires were returned for analysis. In areas where enumerators hand-carried the forms, the response was somewhat higher. Romm stated the cost of the survey is, on the average, \$1 for each home surveyed. However, because no follow-up is planned to determine how much of the advice is actually followed, the value of the survey is unknown.

One of the limitations of the Home Fallout Survey as the basis for a civil defense program is that it can be aimed only at the northern two-thirds of the nation. Most of the homes below the Mason-Dixon Line lack basements and thus are not being included in the surveys. Instead, a community-shelter survey program is under way in some areas in the South. Under that program the OCD provides funds for state civil defense officials to hire engineers to look for the best available shelter space in a community and then to develop a plan for getting people to the space should the need arise.

Civil defense programs have taken a hard pounding over the past several years. Obviously the government feels it must maintain some semblance of a civil defense program at a time when it is spending billions of dollars annually on offensive weapons. Yet, despite expansive statements by top officials in the executive branch of the government regarding the merits of a civil defense program, Congress has shown little of the same enthusiasm. For the last seven budgets, annual appropriations for the OCD have steadily declined.

In many ways, the OCD appears to be an ugly stepchild with whom no one knows what to do. Even though it is under the Department of Defense,

*States in which the survey has been completed are Colorado, Iowa, Kansas, Maine, Minnesota, Nebraska, Rhode Island, Utah, and West Virginia. The survey is currently under way in Alaska, Idaho, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Washington, Wisconsin, and Wyoming; in addition, Nassau and Suffolk counties in New York are also being surveyed.

its budget is handled by a congressional committee other than the one through which most Defense Department budgets are channeled. For the 1968 fiscal year, the OCD has just been appropriated \$86.1 million compared with the \$207.6 million it received during the 1962 fiscal year. Secretary of Defense McNamara has stated, "Civil Defense is an integral and essential part of our overall defense posture." Nevertheless, even in the face of such assertions, it is perhaps an indication of the esteem in which the program is really held that it is annually growing smaller instead of larger.

About one-third of the 1968 OCD budget is earmarked for shelter surveys. The rest of its expenditures will be for the operation and maintenance of the civil defense warning and communications systems, matching funds for state and local civil defense operations, research and development, training, and dissemination of information.

One idea that has often been proposed by civil defense officials to increase the number of fallout shelters would be to create incentives for the inclusion of shelters in all new construction projects. That idea, for all practical purposes, seems to be dead. In its place, OCD officials are now attempting to persuade architects and owners of proposed construction projects to voluntarily include fallout shelters. The objective is to be achieved by convincing them that, with a few architectural tricks, shelter space can be provided at little or no cost. The OCD is currently testing its persuasive ability by mail in Arizona, Florida, Louisiana, Massachusetts, Tennessee, Texas, and Wisconsin. Letters will be followed up by in-person salesmanship on the part of local civil defense officials. The survey test began in May and could continue for as long as 1 year before results are evaluated.

No one seems willing to guess whether the fallout-shelter program will continue to be in such low favor as the U.S. strengthens its antiballistic missile (ABM) system. Skeptics who believe that dangerous levels of fallout would be produced when an ABM came into contact with a nuclear warhead are sloughed off by OCD pronouncements that there would be no large doses of radiation produced under such circumstances. OCD officials claim, that since ABM's are supposed to intercept warheads at least 15 miles above the earth, fallout would be minimal.

—KATHLEEN SPERRY

APPOINTMENTS

Edwin D. Etherington, former president of the American Stock Exchange, to president, Wesleyan University. . . . **Paul Hardin, III**, professor of law, Duke University, to president, Wofford College. . . . **Sharvy G. Umbeck**, president, Knox College, to chairman of the American Council on Education. . . . **Mark G. Birchette**, director, National Defense Student Loan Program, Office of Education, to president for administration, United Negro College Fund. . . . **John Parks**, dean, George Washington University School of Medicine, elected president, Association of American Medical Colleges. . . . **Donald L. McElroy**, professor of oral diagnosis, University of Illinois College of Dentistry, Medical Center Campus, to associate dean of the college. . . . **Bernard J. Fogel**, assistant professor of pediatrics and director of the Birth Defects Center, University of Miami School of Medicine, to assistant dean for curricular affairs at the university. . . . **Frank Moya**, chairman of the department of anesthesiology, University of Miami School of Medicine, to associate dean for hospital affairs at the university. . . . **James V. Dooley**, associate clinical professor of medicine, University of South Carolina School of Medicine, to director of programs, continuing education, Postgraduate Division of the school of medicine. . . . **Edwin T. Prothro**, dean of the faculty of Arts and Sciences, American University of Beirut, to provost of the university. . . . **Harold M. Mazur**, medical director, Los Angeles County Harbor General Hospital, and associate dean, University of California, Los Angeles School of Medicine, to associate dean for clinical facilities and professor of community medicine and public health, University of Southern California School of Medicine, and **Paul R. Saunders**, director of the marine sciences program, Allan Hancock Foundation, University of Southern California, to associate dean for education and research and professor of physiology, at the School of Medicine. . . . **Gerry A. Rechnitz**, chemistry department, State University of New York at Buffalo, to associate provost for the natural sciences and mathematics at the university. . . . **Philip M. Burgess**, professor of political science, Ohio State University, to director, Behavioral Sciences Laboratory at the university. . . . **Lt. Gen. August Schomburg**, commandant of the In-

dustrial College of the Armed Forces, to consultant for James E. Webb, Administrator of NASA. . . . **Gordon P. Larson**, private consultant on air pollution control systems, to head of the newly established Environmental Resources Center, Franklin Institute Research Laboratories. . . . **Armistead M. Lee**, foreign service officer, to director of economic research, Pharmaceutical Manufacturers Association. . . . **Marvin Cornblath**, professor of pediatrics, University of Illinois College of Medicine, to head of the department of pediatrics, University of Maryland School of Medicine. . . . **George W. Fischer**, director of resident instruction of the College of Agriculture, Wisconsin State University, to the University of Washington as executive director of the Eleventh International Botanical Congress which will be held on the university campus in 1969. He will hold the title of professor of botany. . . . **Robert D. Huntoon**, director of the Institute for Basic Standards, National Bureau of Standards, to head, Office of Program Development, NBS; **George S. Gordon**, chief of the Office of Engineering Standards Liaison and Analysis, NBS, to chief, Office of Industrial Services, NBS; he will be succeeded by **A. Allan Bates**, who is chief of the Building Research Division, NBS. . . . **Alan S. Teleman**, associate professor of materials science and engineering mechanics, Materials Science Center, Stanford University, to deputy director, Materials Sciences Office, Advanced Research Projects Agency, Department of Defense. . . . **Robert R. Wagner**, professor of microbiology, Johns Hopkins University, to chairman of the department of microbiology, University of Virginia School of Medicine. . . . **Thomas M. Devlin**, director of enzymology, Merck Institute for Therapeutic Research, to chairman of the department of biochemistry, Hahnemann Medical College and Hospital of Philadelphia. . . . **Terence H. Williams**, senior lecturer, University of Manchester, to visiting professor of anatomy, University of Virginia School of Medicine. . . . **Norman Levinson**, professor of mathematics, Massachusetts Institute of Technology, to head of the department of mathematics at M.I.T. . . . **Russell W. Schaedler**, associate professor, Rockefeller University, to head of the department of microbiology, Jefferson Medical College. . . . **Johannes van Overbeek**, chief plant physiologist, Shell Development Company, to head of a newly established Institute of Life Sciences, Texas A&M University.