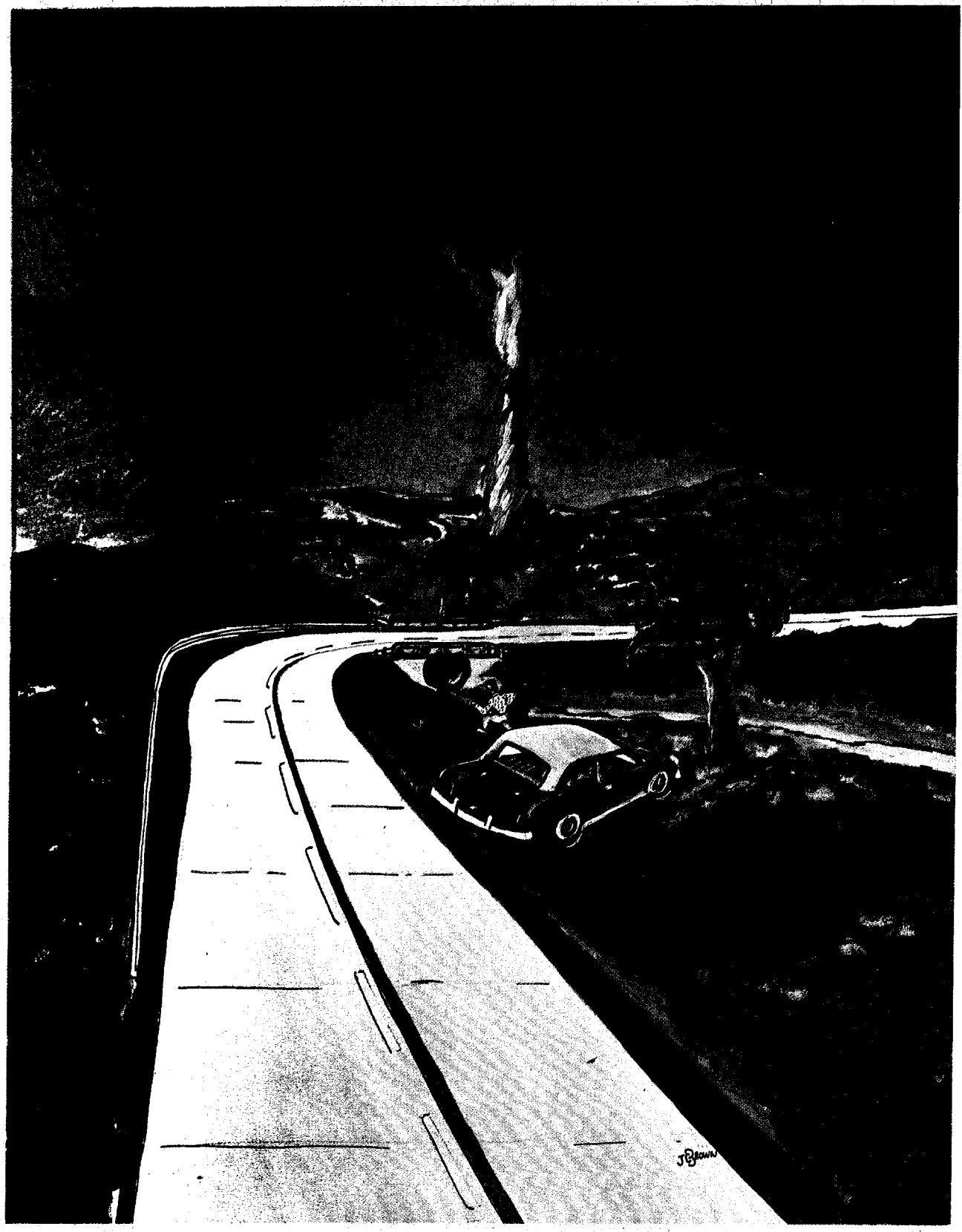
THE AMERICAN JOURNAL OF CIVIL DEFENSE

SURVIVE



MARCH
APRIL
1973

SURVIVAL SOLUTION: EDUCATION!

See Page 8

"There is nothing that can be swept under the carpet simply because it is unattractive. The only things that were ever successfully swept under history's carpet were the fragments of those societies which, instead of facing responsibilities or thinking problems through, reacted by closing their minds."

– Melvin R. Laird

SURVIVE

VOL. 6, NO. 2 MARCH - APRIL 1973

CONTENTS

From "An Ounce of Prevention" by Brian Bex in *The Brian Bex Report* –

Some say, "people are apathetic toward civil defense and don't really care about whether they survive a nuclear attack or a natural disaster."

Don't you believe it!

Granted people don't march for civil defense; and sometimes they balk at paying their premiums on this form of nuclear life insurance. This is particularly true when the international scene is relatively calm.

But think back to the Cuban missile crisis, when it appeared that nuclear war might really happen. People who had "pooh-poohed" preparedness for years were the first in line to stock up at the supermarkets. Phones were ringing off the hook in every civil defense office in the country as people sought survival information.

The real problem of civil defense is NOT apathy. . . The real problem of civil defense is a lack of knowledge of what to do, which leads to a despair that one can do anything meaningful to survive in the nuclear missile age.

SURVIVE

THE AMERICAN JOURNAL OF CIVIL DEFENSE

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The Civil Defense Forum
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Survive presents authentic information relating to civil defense–to the survival of free government, the United States, and its people in the nuclear age. Its aim is public education in this field and service as a forum.

Authors are encouraged to submit manuscripts for consideration by the advisory board for publication. Articles (preferably illustrated) should be 1,000 to 1,500 words in length, slanted to the non-technical reader, and oriented toward the civil defense field. Views expressed in contributions to *Survive* are those of the authors and do not necessarily reflect *Survive* policy.

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Editorial . . .

MONUMENTS TO PACIFISTS

Certainly peace is the most precious of human goals. In an era of weapons of mass destruction and the possible silent sweep of deadly radiation, peace is at least a number one *requirement.* Its *attainment* must be the most serious of pursuits.

If Pacifism were to lead in the direction of peace, like peace it would be morally a requirement. Unfortunately it does not. Its beauty is deceptive, false, deadly. Historically, and in the light of cold logic, Pacifism can only encourage war by providing the opportunist and the aggressor with attractive war victory odds.

Pacifism, therefore, is not a means for achieving peace. It matters not that its proponents are pious and humble and persuasive and kind. What matters is that Pacifism, for all its ideological trappings, is truly a road to war.

Looking across unending rows of crosses that stretched to the horizon in a European military graveyard, General George S. Patton, during a battle pause in World War II, called them

"monuments to pacifists."

So they were. Without pacifists World War II would have been an impossibility.

This kind of thinking molds the deep convictions of many *Survive* writers. And they embrace the philosophy of Sweden and Switzerland: *Peace through preparedness.* Becauses it works.

A cornerstone of this concept – perhaps *the* cornerstone – is civil defense, civil protection, civil preparedness, or whatever name we choose to call the shielding of our homeland and its people. It is in stark reality a cornerstone because through it aggression can effectively be discouraged, peace can seriously be programmed, and survival in the event peace should fail can be assured.

Only in the lurid light as a spoiler of plans of conquest can civil defense be viewed as a threat, and then certainly it is to the overwhelming advantage of the aggressor that it be so construed by his intended victims.

If we are to level with ourselves we must avow that today in the United States this cornerstone of peace is as yet tragically undeveloped and viewed with suspicion and ridicule, that in lieu of a strong civil defense buffer affording a shield for us a weak civil defense exposes us and offers up our people and resources as rewarding nuclear targets.

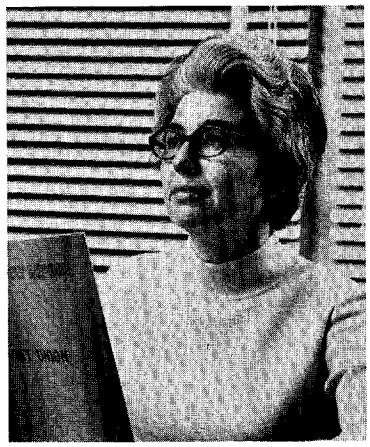
In this way our present indifference to preparedness contributes not to the prospect of peace but to the danger of war –

To a vision of rows of destroyed cities in World War III – to tomorrow's

"monuments to pacifists."

Soviet civil defense research in the USA is conducted principally by two long-time USSR analysts: Leon Goure of the University of Miami and Joanne Gailar of the Oak Ridge National Laboratory. In its January-February issue, Survive *featured Goure's "Evacuation Timing in the USSR." Here, as a follow-up and companion article, Joanne Gailar unveils all-around Soviet progress in civil defense during the past two years.*

WHAT'S NEW IN SOVIET CIVIL DEFENSE?



by Joanne Gailar
Civil Defense Research Section
Health Physics Division
Oak Ridge National Laboratory*

The Survival Gap

Have any significant developments occured in Soviet civil defense during 1971 and 1972 that should concern us as Americans? The answer to this question is short, yet disturbing: the survival gap between the Soviet Union and the United States has continued to widen in favor of the Russians. Professor Eugene P. Wigner, Nobel laureate, has estimated that a retaliatory strike by the U.S. against the USSR, made after Russian cities had been evacuated and the population were in their expedient shelters, would not kill more than 6% of their population, whereas 60% of ours would probably die. It is this discrepancy between the percentages of the two populations likely to be killed – less than 6% in the Soviet Union, about 60% in the U.S. – that constitutes the survival gap. Or put in another way, in a nuclear exchange in which the Soviets had evacuated their cities and we had not, Soviet losses would be less than 10% of ours.

But what is the reason for the survival gap? What particular set of circumstances allowed it to come about? There are essentially two contributory factors to the present situation: one is the growth of Soviet offensive forces, which have managed to catch up with ours in the years following the Cuban missile crisis; the other is the high state of civil defense readiness that the Soviets have achieved over the last few years, a period during which our own civil defense profile, at no time a very bold one, has remained static. This is not to say that the Defense Civil Preparedness Agency (DCPA), our U.S. civil defense organ, has been idle. It is even now working on contingency plans for crisis evacuation, but its efforts while highly commendable, are limited by budgetary considerations.

**Operated by Union Carbide Corporation for the U.S. Atomic Energy Commission.*

Position of Soviet Civil Defense Chief Now Upgraded to Deputy Minister of Defense

Meanwhile, there is no question that the Russians have upgraded the importance of civil defense in their country during the past two years. Most significantly, in October 1972, it became general knowledge that the Soviets had selected a new Civil Defense Chief, Col. Gen. Aleksandr T. Altunin, and had elevated this position to that of Deputy Minister of Defense. Since former Civil Defense Chief Marshal V. I. Chuykov had never attained so high a rank, it appears that the Russians are boosting the status of civil defense in their country. There have also been a number of changes in the program, as well as innovations, shifts in emphasis, and progress in improving quality.

Changes, Innovations, and Progress in Soviet Civil Defense

To cite some examples of the foregoing, compulsory civil defense instruction in the schools throughout the Soviet Union is now started in the second grade, where seven-year-old school children learn how to put on and wear gas masks and respirators and how to conduct themselves in shelters. New civil defense standards, which are being applied more and more frequently to all aspects of the program, have been created by two recently established organizations: (1)

the Administration of Combat Training of Troops and Training of the Population in Civil Defense and (2) the New "all-union complex," Prepare to Work and to Defend the USSR. These standards are both comprehensive and highly specialized, the standards for urban people, who would be evacuated, for example, differing from those for rural people, who would receive them.

A great deal of emphasis is being placed on decreasing the vulnerability of vital industries throughout the entire country so that they may continue to function during wartime. For example, in Kazakhstan, a "primary mission of the current training year [1971]" was listed as "improving the control and stable operation of industrial units during war time"; and in Latvia, an important goal "in the new academic year [again, 1971]" was to emphasize "the special features of production" in the universal compulsory training program.

One way of reducing the vulnerability of industry is to disperse it, locating it in medium-sized and small towns. Soviet industry, we are informed, is already dispersed, with continuing emphasis in this direction: "Even in the Eighth Five-Year Plan, around four-fifths of the newly constructed industrial projects were located in such [medium and small] towns." Another way of reducing the vulnerability of industry is to assess it in each individual case with regard to location and then take whatever steps are possible to reduce it *in situ.* The Soviets are doing just this. One article in the Russian literature, for example, delineates the preparations for an actual exercise on improving the stable operations of a specific textile plant during wartime. It is significant that this exercise is described as "typical" – so "usual," in fact, "that there is no need to discuss [it in] detail." And yet considerable details are given. We learn, for example, that efforts to assess the "initial situation" took into account such factors as "[1] the probable zone of destruction in which the installation would be located, [2] the magnitude of the thermal radiation intensity and, based upon this figure, the scale of the possible fires that would break out, [3] the possible secondary effects of a nuclear explosion, [4] the meteorological conditions based upon data obtained through many years of weather observation in the region where the plant is located, and [5] reference data on the magnitudes of excess pressure which would cause damage or destruction to buildings, installations, technological equipment or lines of communication."

The effort to strengthen such industrial enterprises seems to be second in importance only to protecting the population from weapons of mass destruction. At the same time, there is also increased emphasis on improving other aspects of the program – (1) more rigorous civil defense training for managerial types (plant supervisors and foremen, state farm directors, etc.); (2) a heightened effort to provide civil defense training for the non-working element of the population; (3) the introduction of shelter-building training as part of the twenty-one hours of civil defense instruction, included within the compulsory, universal pre-military training program; etc.

Civil Defense Exercises

Perhaps the most convincing evidence that the Soviets are increasing their state of civil defense readiness lies in their ambitious and detailed civil defense exercises. These include, for example, (1) the evacuation of an entire fishing village, as well as the personnel of the number of industrial enterprises – all by refrigeration fleet – from the port of Sevastopol on the Black Sea, (2) an exercise in shelter building for the collective and state farm directors throughout the Turkmen Republic, (3) an exercise in sealing various farm buildings against fallout on a collective farm, and (4) a civil defense winter exercise in the snow.

Evacuation and Dispersal of Urban Population

The keystone of the Soviet civil defense program continues to be comprehensive *evacuation* and *dispersal* plans. According to these plans, the personnel – both operational and supervisory – of essential industries are to be *dispersed* with their families to small towns and villages outside the cities. The zones in which these towns and villages lie are selected on the basis of being far enough from target areas to be safe from the blast effects of nuclear weapons, but near enough that the workers and staff members could commute to work inside the cities – a distance of between 35 and 50 miles. Retired people, educators, and workers in nonessential industries, and sometimes these industries as well, would be *evacuated* from large cities to rural areas, where they would remain until the cessation of hostilities. Both evacuated and dispersed persons would be quartered with the rural residents and would be protected from fallout in hastily constructed shelters, which they would help their rural hosts to erect, or in reinforced cellars. (In this connection, it is instructive to note that Col. Gen. V. F. Chizh, civil defense chief of the Ukraine, on October 4, 1972, in a live radio broadcast announced: "Our goal is for all workers, collective farmers and employees to be able to build new, or renovate present, refuges and shelters. In particular, civil defense staffs pay attention to teaching the inhabitants of villages and suburbs how to convert basements and cellars into shelters.") Substantial blast shelters in or near urban installations would provide protection for on-shift workers in vital industries. According to Marshal V. I. Chuykov, former Chief of Civil Defense of the USSR, the number of such industrial shelters is growing.

Protecting the population from weapons of mass destruction by means of shelters and dugouts and by providing them with gas masks or respirators is the primary goal of Soviet civil defense. Other important objectives continue to be to protect industry and maintain production (as we have mentioned), to protect agricultural crops and animals, to perform massive rescue-repair operations in centers of destruction as soon after nuclear attack as possible.

Books, Pamphlets and Films on Civil Defense

Books on all of these subjects have appeared during the past two years. Foremost among them is the comprehensive 544-page manual, *Civil Defense,* by N. I. Alabin *et al.,* November 4, 1970. A more specialized civil defense book, *Operation of Civil Defense Shelters,* by Yu. Yu. Kammerer and A. Ye. Kharkevich, October 12, 1970, describes the construction of shelters as well as their operation. Still other civil defense books on specialized subjects include: V.M. Senchikhin, *Protection of Agricultural Animals and Plants from Weapons of Mass Destruction,* 1971; Col. Gen. D. F. Alekseyev, ed., *Organization and Methodology of Conducting Classes on Civil Defense with Command and Supervisory Personnel of Formations and the Population,* October 15, 1970; *Organization and Conduct of Training Exercises in Civil Defense at National Economic Enterprises,* produced by Civil Defense Headquarters of the USSR, 1971; D.I. Lazarenko, *Instruction on Public Conduct Rules in Areas of Biological Contamination,* 1971; F. I. Manets *et al., Protection from Weapons of Mass Destruction,* second edition, revised and supplemented, 1971.

In addition to these books is the popular civil defense brochure, *Everyone Must Know This,* of which 60 million copies are reported to have been issued, including a newly revised and supplemented 1972 edition. Moreover, about forty different films are available and include such titles as "Protecting the Population through Evacuation and Dispersal," "Four Destructive Factors of Nuclear Weapons," "Protecting Animals," "Protecting Crops against Biological and Nuclear Weapons," "First Aid," "Combatting Fires," "Rules for Using Population Shelters," and "Civil Defense at an Industrial Installation."

The Importance of Civil Defense

This wealth of new materials on Soviet civil defense is one important indication that civil defense is alive and well in the USSR. Even more direct evidence of its vitality is available in the words and actions of Soviet leaders, who have always regarded Civil Defense as an essential component of the overall defense of the country and, in the event of nuclear war, "vital" to the "achievement of victory." It was L. I. Brezhnev who gave impetus to civil defense in 1966 by issuing a mandate to the 23rd Party Congress to strengthen it. However, even before Brezhnev's time, none other than V. I. Lenin himself advocated civil defense. His words are used afresh in the 1970 handbook, *Civil Defense,* to underscore the significance of the subject: "The primary productive factor of all humanity is the laboring man, the worker. If he survives, we can save everything and restore everything. . . but we shall perish if we are not able to save him."

The new arms accords notwithstanding, the need for civil defense is still seen to exist. For example, on October 4, 1972, over four months after the signing of these accords by President Nixon and Secretary Brezhnev, Col. Gen. V. F. Chizh in a live broadcast cited both the reasons for and importance of the current Soviet civil defense program: ". . . the growing conflict between the forces of socialism and imperialism, the increased aggressiveness of imperialist reaction and its open war operations in a number of areas of the globe require from the Soviet people constant attention to strengthening the country's defense potential. This important task has been levied on the Civil Defense. A system of nationwide measures is involved, aimed at insuring the reliable defense of the people and of the country's national economic targets in case the adversary uses mass destruction weapons."

The current civil defense slogan, frequently repeated, comes direct from the 24th Party Congress: "Everything that our people have created must be reliably defended." One sign of the prestigious position of civil defense in the Soviet Union, even before its recent upgrading in October 1972, is the inclusion of former Civil Defense Chief Chuykov as a speaker at a "conference of the leading staff of the Soviet Armed Forces," addressed also by Brezhnev and Grechko. According to a Moscow radio broadcast, "speeches were made at the conference by commanders in chief of the armed forces, the chief of the General Staff of the USSR Armed Forces, the chief of the Main Political Directorate of the Soviet Army and Navy, the chief of rear services of the USSR Armed Forces, the chief of USSR Civil Defense. . ."

Civil Defense Possible – *If* You Know What To Do

Not only do the Russians consider civil defense important; they also believe that it is possible–*if* you know what to do. According to General Altunin, new Chief of Soviet Civil Defense and Deputy Minister of Defense of the Soviet Union, in an article (in *Krasnaya Zvezda,* October 4, 1972), commemorating the 40th anniversary of USSR civil defense, "We must strive to insure that every Soviet citizen is firmly convinced that there is protection against any weapon, even the most modern. But this protection will be all the more effective and reliable if everyone masters its ways and means." Or put more simply, in the words of M. Kachulin, "Everyone must understand the simple truth in our age. . . when the main striking power of the Armed Forces has become nuclear missile weapons, you can protect yourself against the effects of its damage-causing factors. But under one indispensible condition: if you know how to do this. . ."

In the light of such sentiments as these, it is little wonder that the Soviet Union persists in strengthening its civil defense program and in teaching its population how to survive a nuclear war – or, in view of the continuing low level of civil defense activity in the U.S., that the survival gap has grown each year. ■

NOTE: Mrs. Gailar uses 41 references in supporting her article. These references may be obtained from Survive *upon request (Please forward $1 for printing and handling costs).*

Q & A CORNER

Q News reports of the termination of OEP [Office of Emergency Preparedness] do not say what functions are being transferred to DCPA [Defense Civil Preparedness Agency]. Can you set us straight on this point?

A Apparently no OEP functions are being transferred to DCPA (see *Vivere Pericolosamente*, back cover).

President Nixon's "executive reform" message to Congress of January 26, 1973 states in part (italics added):

The organization within the Executive Office of the President which has been known in recent years as the Office of Emergency Preparedness dates back, through its numerous predecessor agencies, more than 20 years. It has performed valuable functions in developing plans for emergency preparedness, in administering Federal disaster relief, and in overseeing and assisting the agencies in this area.

. . . In the interest of efficiency and economy, we can now further streamline the Executive Office of the President by formally relocating those responsibilities and closing the Office of Emergency Preparedness.

I propose to accomplish this reform in two steps. First, Reorganization Plan No. 1 would transfer to the President all functions previously vested by law in the Office or its Director, except the Director's role as a member of the National Security Council, which would be abolished; and it would abolish the Office of Emergency Preparedness. . . .

The Civil Defense Advisory Council within OEP would also be abolished by this plan, as changes in domestic and international conditions since its establishment in 1950 have now obviated the need for a standing council of this type. Should advice of the kind the Council has provided be required again in the future, State and local officials and experts in the field can be consulted on an ad hoc basis.

Secondly, as soon as the plan became effective, I would delegate OEP's former functions as follows:

- *All OEP responsibilities having to do with preparedness for and relief of civil emergencies and disasters would be transferred to the Department of Housing and Urban Development. This would provide greater field capabilities for coordination of Federal disaster assistance with that provided by States and local communities, and would be in keeping with the objective of creating a broad, new Department of Community Development.*
- *OEP's responsibilities for measures to ensure the continuity of civil government operations in the event of major military attack would be reassigned to the General Services Administration, as would responsibility for resource mobilization including the management of national security stockpiles, with policy guidance in both cases to be provided by the National Security Council, and with economic considerations relating to changes in stockpile levels to be coordinated by the Council on Economic Policy.*
- *Investigations of imports which might threaten the national security. . . would be reassigned to the Treasury Department, whose other trade studies give it a ready-made capability in this field; the National Security Council would maintain its supervisory role over strategic imports.*

President Nixon states near the close of his 5-page message that the proposed reorganization *"would mean better preparedness for and swifter response to civil emergencies, and more reliable precautions against threats to the national security."* (Italics added.)

COMMENTARY

Editor, *Survive*

Reports from China relating to tunnel shelters built in the last three years or so are surprising enough. But your claim that they were constructed from designs by or similar to those of American engineers (whose plans *we* turned down) is unbelievably weird. And it would seem to me that news of such an extensive project and shelter for all the cities of China on such a crash basis would have had to leak out before this.

Mark O. Cohan

Unbelievably weird or no it is so. And news *did* leak out. Over three years ago (January-February 1970 issue, page 13) *Survive* reported:

CD PROGRAM ZOOMS (IN CHINA)

Rising tension and border incidents between China and the Soviet Union have stimulated defense preparations in both countries. Overt signs of snowballing Chinese civil defense activities, according to reports coming out of China during the past three months, include these:

a. *Shelter construction.* Tunnel complexes, both urban and rural, are being built on a crash basis. One such complex is the extensive network spreading under Canton. Other types of public shelter are also being pushed hard. Expedient shelter comes in for special emphasis. . .

And so on. –Ed.

(Survive photographs show the Apollo 17 Launch – the Last of The Apollo Series – on December 7, 1972.)

SKYLAB

by Danny Brown

With the end of the Apollo moon program, the United States enters a new era of space exploration, turning its attention back to earth and the projects intended to bring the benefits of space to mankind and agencies such as Civil Defense.

The first step in these projects is "Skylab", a two-story space station which will accomodate three different three-man crews for a total of five months in orbit this year.

Skylab, which is about the size of a medium sized house, is to be launched unmanned in early May by a Saturn 5 moon rocket. The first crew, commanded by astronaut Charles "Pete" Conrad, will be launched the next day in a modified Apollo capsule atop a smaller Saturn 1B rocket.

The astronauts will link up with Skylab 270 miles above the earth and enter it for a 28-day stay. About August 1 a second three-man crew will rocket up to the same Skylab and stay for 56 days. A third crew will go up in October for another 56 days with the project ending in December.

Photos by J.C. Brown of Survive.

The Skylab astronauts will conduct 87 different experiments aimed at developing techniques for surveying the earth's resources from space, determining man's ability to live and work in space for long periods of time, and extending solar astronomy beyond Earth's dense atmosphere.

These experiments will be most valuable in areas like Civil Defense by helping to predict and follow more accurately destructive weather disturbances such as hurricanes and tornadoes. Also, in a military sense, the Skylab experiments could aid in the National Early Warning System.

The first crew will include a medical doctor to evaluate the crew's health, and the second and third crews will have solar physicists to operate the mammoth telescope which will be aboard Skylab.

Also the astronauts will evaluate several sensors designed to locate such things as mineral and oil deposits, arable land, good fishing grounds, sources of air and water pollution, diseased crops and water resources.

In this way, the spacemen hope to determine which sensors are best automated and which are best operated by man. Future operational missions intended to locate yet undisclosed resources can be planned. They will help develop a global management system to meet a growing world-wide demand for these resources and to aid key agencies such as Civil Defense. ■

Over 25 years as a teacher, principal and educational specialist in the civil defense field have give Rex Wright a keen insight into the many knotty survival problems which beset directors, educators, and politicians. Wright's 13-year battle for CD education has paid off in his state – Florida – with a growing awareness among school administrators and teachers of the importance of courses during formative years. Statistics bear this out.

SURVIVAL SOLUTION: *EDUCATION!*

by Rex Wright

You are driving along a recently completed highway in rural USA. On each side of the highway, there are trees – no houses or other buildings. Only trees.

Ahead of you is the open road.

Overhead there are ominous, heavy, dark gray clouds.

There is a brisk wind whipping through the tree tops.

The low-hanging clouds begin to turn black. A downward bulge develops and it swiftly sprouts a tail. The tail expands into a funnel. The funnel sweeps down and touches the ground.

Then, ahead of you, maybe a mile away, is a full-blown tornado, one of the most fearsome meteorological phenomena in man's experience.

The tornado is moving directly toward you – rapidly.

You look again to each side of the highway. Still nothing to offer shelter.

The tornado is suddenly much closer. It's time for action. But what action? The car would be a sitting duck for the tornado.

Ahead, less than the length of two football fields, you spot the end of a big culvert sticking out from under the edge of the highway. Quickly you pull your car off onto the shoulder of the highway, get out, make a mad dash for the culvert and scramble into it.

While you're in the security of the culvert, the tornado passes, sounding much like a hard-pulling freight train. You wait a minute to be sure all is clear, then you come out of the culvert. Your car has been flipped over and lies smashed up against a tree fifty yards away. It is demolished. But you are safe. It could have been a much different story.

But it wasn't. Why? Because you took the proper evasive action – action you had learned in a little-noted social studies class in high school.

It was this same type of instruction which probably helped thousands of persons along the paths of the killer hurricanes "Camille" and the more recent "Agnes" protect themselves from the ravages of vicious winds and high waters, torrential rains and flooding, and the many spawned tornadoes. Unfortunately, others didn't know what to do, or perhaps ignored the warnings. Many were killed.

Scenes much like the tornado incident could be portrayed almost anywhere and adapted to such disasters as floods, blizzards, earthquakes, fires, explosions, nuclear accidents and yes, even the real monster, *fallout* – and the answers would be the same. *Knowledge* of what to do and how to react in disasters is the key to survival. *Education is the answer!*

Since 1959, a national program of Survival Education has evolved from an original plan to train adults (Civil Defense Adult Education) to encompass the training of boys and girls from kindergarten through high school with no less emphasis upon the continuing training of adults. Every state has participated in this program, now entitled "Civil Defense Education" (CDE), and literally millions (over 10½ million to date) have been trained in this program via an original twelve-hour course, "Personal and Family Survival" (PFS). No skills are taught in this course as the emphasis is upon knowledge and understanding and the changing of attitudes – from apathy and misunderstanding to positive approaches and knowledge. Products of this training and education are

equipped to *react intelligently in a disaster!* Even though no skills are taught in PFS, participants are urged to take other special courses such as Shelter Management Training, Radiological Monitoring, and Medical Self Help. *Education is the answer!*

Civil Defense officials continue to bemoan the lack of acceptance and support of sound principles of survival planning from elected officials, school administrators, and the public in general.

Could it be a lack of understanding?

Is it possible that a county commissioner who had a PFS course as a high school senior might fight for a sound civil defense program in his county? Or, substitute a school board member or a school superintendent. Would he fight for well-constructed school plants that would serve as shelters during hurricanes or in fallout situations? And, would the curriculum provide for survival education? Would a third-grade teacher trained as a PFS instructor know what to do with her group if a tornado threatened?

The answers are obvious.

Examples are plentiful: A high school boy in a North Florida school took the PFS course and persuaded his parents to enroll in an adult course, and as a result they changed the plans for their new home to include a multi-purpose room that was so well built that it doubled as a fallout shelter and was the safest place in the house for protection from a tornado. A group of Central Florida teachers were trained as PFS instructors in 1960. Later, they met with the city commission and persuaded them to appoint a director and develop a plan. A crippled civil defense director in a small Gulf Coast county took a PFS course and persuaded his Board of Commissioners to back a sound civil defense program that became a model for other counties. He was instrumental in getting the local School Board to build two new schools (now, the only two schools in the county) with specially designed fallout shelters. In national meetings with other Civil Defense Education Coordinators, the author has heard of many similar incidents from all over the nation.

It has been said that if you give a man a fish he can feed himself for a day but if you teach him how to fish he can feed himself for life! *Education is the answer!**

The Civil Defense Education Program today deals primarily with the training of teachers in grades 1-12, who in turn provide the principles of survival in the daily curriculums of students they teach. The recent development of special civil defense publications that may be adapted to elementary and middle school levels has opened up exciting new ways of survival education for this group. One special publication, *Games That Teach,* provides experiences that "should motivate and interest students so that they will have fun while learning important concepts." Films, filmstrips, textbooks, etc., have been available for the junior and high school programs. However, there is a constant need to develop new materials, upgrade others, replace old films, etc., to meet the changing needs. *Education is the answer!*

The major problem of the CDE Program is getting the classroom teacher into special workshops. Teachers are pressed for time, they work extra hours to prepare for their daily classroom activities, and most of their in-service training is composed of required academic refreshers such as methods, subject areas, etc. In Florida, we have been fortunate in developing special component plans for survival training that may be adapted into county school "Master In-service Plan" programs. Teachers participate in these workshops and earn points toward the extension of certificates. However, only a small percentage have been reached due to the problems mentioned above. Other states have their own methods of training teachers; some have had great success, others not so great. However, the major problem remains nation-wide – training enough teachers so that every student benefits. *Education is still the answer!*

One avenue of training teachers has not been explored here and that is where substitutes are provided so that regular teachers may take the eight-hour PFS course during the regular school day. In Florida, the main problem is the lack of funds at the local level to pay the substitute teachers. What would it cost to train teachers in the State of Florida in this matter? It is estimated that approximately four thousand (4,000) teachers (roughly two teachers per school) could be trained in a school year by our CDE staff if such funds were available. Broken down, a conservative estimate of students who would be recipients of the training provided by these teachers is 62,500 elementary and 30,000 high school students (a total of 92,500) the first year. Supplementary training of teachers each year would provide adequate replacements for those teachers lost by attrition. What would this cost in the State of Florida? Based on an estimated average pay of $25 per day for substitute teachers this would be $100,000 to train 4,000 teachers. Expensive? What about the cost per student? – Approximately $1.08 the first year and it would drop to an extremely low figure afterwards as the supplementary training would be just a small percentage of the initial training program. This approximate cost can be applied with appropriate varations to other states in making an analysis of what it would cost nation-wide to provide survival education for all students in our school system.

What about it civil defense directors, school officials, public officials, and other citizens?

Education (+$$) is the answer! ■

MARCH - APRIL 1973* *The author makes no attempt to claim that the CDE program in the schools is the sole answer. Civil defense officials, local, state, and national, use all types of methods and techniques to educate the public. They are probably the most dedicated and unappreciated people in the nation. However, CDE does have a significant role in providing the principles of survival in the curriculum of the many school systems.*

SPOTLIGHT

NASRC EXPANDS

At the last annual meeting of the National Association of Search or Rescue Coordinators (NASRC) in Sacremento, California in December attendance was nearly double that of the previous year. Over 75 representatives from federal, state, community and private search and rescue agencies from across the nation attended. NASRC, however, has its roots in the Northwest, and member states* at present are from the Rocky Mountain-Pacific Coast region.

"By the nature of our role," explains NASRC President Hal Foss, "we usually deal with 'ones' and 'twos' rather than hundreds or thousands, and we usually carry all of our equipment on our backs as roads are usually scarce where we are utilized. However, much effort, planning and training goes into the idea that a large aircraft with many passengers on board may go down in the back country. Obviously the effective handling of mass casualties would depend on many outside factors: weather, helicopters, time-distance and similar items. As a matter of course, a disaster we could drive to, or which would be within a few minutes walk, would be easily adaptable to our mode of operation. We have intra- and inter-unit portable communications, and have Advanced First Aid and beyond, and many are EMTs. Search and rescue organizations are set up on the staff basis so they can work independently or with others as the case may demand. Flexibility is one of the important criteria of their training concept."

Foss, who has pioneered NASRC, is Search and Rescue Coordinator for the State of Washington. In that state alone rescue missions into the mountains and backwoods average one a day.

The 1973 Search and Rescue conference is scheduled to be held in Nevada November 30-December 2. It is anticipated that snowballing interest will bring another increase in participation and further consideration of mass casualty operations.

**NASRC member states are: Arizona, California, Colorado, Nevada, North Dakota, Oregon, South Dakota, Utah, and Washington. Idaho, Montana and Wyoming also sent representatives to the December conference. Other organizations represented included the U.S. Forest Service, Defense Civil Preparedness Agency, Associated Public Safety Communications Officers, Inc., U.S. Air Force, U.S. Coast Guard, U.S. Army, U.S. Navy, National Park Service, National Jeep SAR Association, National Sheriffs Association, National SAR School, Aircraft Owners and Pilots Association, Civil Air Patrol, Explorer SAR, Mountain Rescue Association, National Ski Patrol, and two dog rescue clubs – SAR Dogs and Bloodhounds.*

* * *

DIDS GETS OFF GROUND

The Decision Information Distribution System (DIDS) promotes a device which will – when developed in its final phase – trigger a "yelper" (by radio) to give immediate warning of an emergency and automatically turn on radio and television sets.

In January the first experimental segment of the system became operational in states along the central Atlantic Coast from North Carolina to Massachusetts (less Rhode Island) and the two inland states of West Virginia and Ohio. The points selected for this phase now total 150 but will reach 500 later.

When DIDS is expanded to include homes throughout the nation it is contemplated that the average cost per home will be in the neighborhood of $15. When the expansion is achieved DIDS will also be able to survive EMP (electromagnetic pulse – a nuclear weapons phenomenon capable of knocking out conventional electrical circuits.)

The charge that DIDS is an invasion of privacy – because it loosely resembles a fictional "big brother" gadget which allowed government to spy via TV into homes – continues to cause official headaches. DIDS has only a one-way capability. Furthermore, it would only go into homes where it was accepted.

A recent survey showed that 69% of those questioned approved of DIDS.

An example of what DIDS could do in natural disaster was dramatically illustrated by *The Christian Science Monitor* in a December feature article which cited the Rapid City, South Dakota flood of last June. 212 died. Rapid City Civil Defense Director Ron Stephenson was quoted as saying that with a way of warning the people he "could have saved almost all of them."

DIDS could have done it.

* * *

CD METAMORPHOSIS?

On January 21st the *Denver Post* gave just praise to Colonel William J. Allen's Denver civil defense organization. The illustrated article spread over four full pages of the paper's Sunday magazine. Its subtitle read:

"Remember Civil Defense? It's alive and well in a new role and a tough-minded colonel is making sure Denver will be ready if trouble comes."

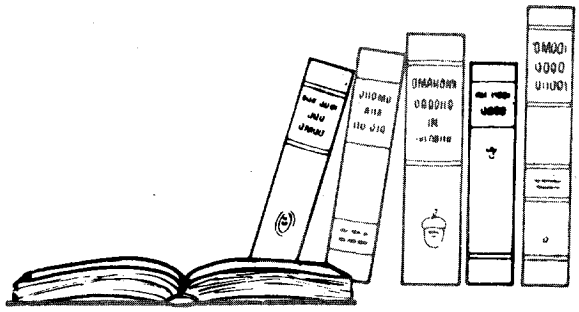
Denver Civil Defense, the article says "ranks as the best in the nation." Allen's emphasis on communications, training and disaster exercises appears to be the reason. Bombs, fires and major traffic accidents get the spotlight in practice.

"Although coping with disaster is now the main job of Denver's Civil Defense," says the *Post*, "it's still in the biscuit business. In fact it has enough 'survival ration biscuits' stashed away to feed 550,000 people for two weeks.

"The biscuits date from the days when Civil Defense's main function was to safeguard the citizens against possible nuclear attack."

Civil defense's main function seems to have changed quite a bit in the eyes of the *Denver Post.*

REVIEWS



ABO REVISITED, An Evaluation of the Abo Elementary School and Fallout Shelter (FINAL REPORT). DCPA contract No. DAHC20-72-C-0115. By Frank W. Lutz, Patrick D. Lynch, Susan D. Lutz. (1972)

In 1962 the underground Abo Elementary School in Artesia, New Mexico opened its doors. It was an experiment, and it was controversial. Many of those associated with it had serious doubts. Some had outright objections. Proponents felt that time would prove its worth.

With a 10-year experience factor to work with, researchers Lutz, Lynch and Lutz tackled the job of evaluation and dutifully made their report, ABO REVISITED. The report is disappointing because it is in some important ways "inconclusive." Due to widely varied factors no valid comparative costs could be made. Perhaps this was too much to expect. Perhaps local schools provided no good statistics because of their dissimilarity. The best that Lutz-Lynch-Lutz can say on this score is:

> "Judgments as to whether or not to utilize school-shelter construction in a particular school district cannot be made on cost data alone. To begin with, our data are inconclusive. They may be interpreted to whatever advantage or bias one wishes."

We are reminded that *Cost Benefits in Shelters,* TR-69, a 1971 study prepared by Pennsylvania State University, did very clearly indicate substantial savings over a period of twenty years in high schools built as shelter. (See review in *Survive,* March-April 1972.)

In other ways the Abo School is given definite advantages by the researchers. For instance, the community now roundly approves of the underground structure and recommends more of them. Instead of having adverse psychological effects on children (feared to begin with) the underground school had just the opposite influence. Students there were better adjusted. They were also less prone to respiratory diseases, and allergy cases from other schools were sent to Abo for relief – which they found. School attendance at Abo was better than elsewhere. Scholastic achievement was not affected by school construction.

This evaluation is summed up by the following statement of the authors:

> *"What our studies of the Abo School do show conclusively is that this school is well accepted in the school district in which it has been operating for ten years. It has had no apparent ill effects on the pupils who have attended it. In fact, the data show some significant benefits."*

School boards, however, are apt to overlook approval in principle, long-term economy and psychological, health, and safety advantages of children and to focus on the question of initial cost savings – to them the one completely tangible consideration.

Nuclear Power Plant Safety. Published by Southern Interstate Nuclear Board, Suite 104–7 Dunwoody Park, Atlanta, Georgia 30341. Price $2.00

Part of the introduction to *Nuclear Power Plant Safety* reads as follows:

> "In increasing numbers, electric companies are recognizing nuclear reactors as an economical clean source of heat for meeting their generating requirements. Since nuclear power adds another dimension to conventional electric generation, namely, radiation, many questions have been asked concerning both local plant safety and environmental effects. Nuclear Power Plant Safety provides a nontechnical discussion of topics covering the full range of nuclear power plant operations."

Readable, incisive and thorough, the 95-page exposure to basic nuclear reactor information is a welcome nuclear reactor primer. It succeeds admirably in parting the curtains of reactor technology in clear and simple terms.

Among the subjects covered are reactor types (with drawings), numbers and locations of reactors in the United States (operational, under construction and planned), shielding considerations for gamma radiation and neutrons, the environmental impact, transportation of nuclear fuels and nuclear wastes, the fuel cycle, accident prevention, accident containment, and advantages of fusion reactors over fission reactors once they are achieved.

The many nonscientists in civil defense, industry and elsewhere who have long wanted to possess a working understanding of nuclear reactors now can do so without endless research into technical publications. *Nuclear Power Plant Safety* arms the layman with the knowledge he needs to approach nuclear reactor planning intelligently.

SO BE IT!

by Kevin Kilpatrick

IS ON-SITE ON TARGET?

On-Site Assistance is a new federal civil defense program wherein federal and state teams of planning experts converge upon localities and stimulate them to unmask civil defense difficulties and deficiences. The idea is that local officials will then become aware that much more should be done to give the community a fairer shake on disaster preparedness. This in turn, if all goes well, will result in actions at the local level to bring about improvements that pay off in saving lives and property. All with the sustained help of the federal-state teams, who return after the initial exposure-remedy period to monitor progress and offer counsel.

It's a seductive concept. In general, local civil defense postures are as poor as those of the states and the nation as a whole. Which certainly follows. And this establishes a need for something that will foment corrective action. On-Site Assistance is a good vehicle.

There have been what have appeared to be good vehicles in years past, however. The Direct Mail Shelter Development System was one. Congressman Hebert's subcommittee that gave civil defense a green light was another. There was the shelter stocking program. The evacuation puzzle. Community Shelter Planning. These and other programs had auspicious starts and bogged down.

As a result, many local directors have a kind of "primrose path" complex when it comes to facing shiny faces and glib tongues explaining the newest panacea for their preparedness ailments. On-Site would be more popular and more useful if it could shed the image of another potential boondoggle.

Chapter 1 of the manual, *On-Site Assistance,* says:

> The goal of on-site operational readiness assistance is to help local communities develop and maintain maximum capabilities in order to actually conduct coordinated lifesaving operations in extraordinary emergencies.

Note the use of the word "local". In the first three paragraphs of the preface to this same manual "local" is used seven times. Is this a hang-up? Experts from the state and federal civil defense offices – precious few who have ever struggled at the local level – seem somehow to be in the business of hatching new programs to prod the *locals* with, and then scuttling these programs for new ones.

All this makes the new South Carolina *state* on-site assistance project of unique significance. Here the *state* disaster-response machinery has been analyzed. Perhaps here *state* agencies will now place a new emphasis on civil defense, even to the extent of working into state building programs the concept of shelter slanting – the real core of any effective civil defense program. If this is so then the *state* will be setting the example instead of merely fostering a federal civil defense prescription aimed at the *local* operation.

Pennsylvania and West Virginia are also flirting with wide-angle analyses of their disaster programs. With the possibility of other states following this lead the On-Site Assistance program could be a real break-through in civil defense promotion.

Example from above is an innovation that might really put On-Site on target.

> *The best On-Site assistance each of us can give ourselves is a good wholesome dose of belief in what we're doing.*
>
> *– Georgiana H. Sheldon*
> *Deputy Director, DCPA*

Civil Defense Abroad

BLAST SHELTERS IN HAMBURG, WEST GERMANY TRANSPORTATION SYSTEM CONSTRUCTION
(From *ZS MAGAZIN)*

Autumn 1973 is the target date for completion of two underground public shelters in Hamburg, West Germany. Part of the city transportation system, the shelters will accomodate a total of 6,700 persons in attack situations involving either conventional or nuclear weapons.

The larger of the two shelters is the Hamburg City Hall station where the shelter capacity is 4,500 persons. Both shelters will have blast doors and will otherwise be equipped for a two-week shelter stay by occupants.

For West Germany the Hamburg shelters mark another notch in the difficult recovery road from the shelter program set-back suffered in 1967 when the comprehensive 1965 West German shelter law covering public and private construction was set aside by parliamentary funding machinery.

ANCIENT TURKS WENT UNDERGROUND FOR SHELTER

The Turkish towns of Kaymokli and Derinkuyu should not have to worry about fallout shelter. Each town – they are six miles apart – sits astride its own ancient underground city built over 1200 years ago by inhabitants seeking to protect themselves from invaders. Each city is built in eight levels and is suitable for a population of 10,000. Narrow passages between levels are equipped with movable stone barriers. Mazes of corridors, stairwells, alleys and doorways present the intruder only with the prospect of becoming quickly and completely lost.

Equipped with extensive storage facilities, water supplies, churches, and towering ventilation shafts connected to each level, each city is capable of buttoning up and hibernating for long periods of siege. Some of the areas near the surface are currently used for food storage sites (the temperature remains nearly constant the year around) and space for local youth entertainment. The underground towns are also tourist attractions, but there is one warning to tourists: start out with a good guide – the design is purposely intended to confuse strangers.

Archeologists say that the towns were built underground because of the flat terrain and the unsuitability for defense in any other manner. Signs indicate that construction of the towns took over three hundred years and that the work passed on from generation to generation.

Protection from attack was not always easy, even a thousand years ago.

Vivere Pericolosamente - Washington Comment

Four years ago at a Washington press conference the then-new American President, Richard M. Nixon, answered a question about the civil defense shelter program by saying:

> "Congressman Holifield. . . strongly urged that the Administration look over the shelter program, and he made the point that he thought it has fallen somewhat into disarray due to lack of attention over the past few years. I have directed that General Lincoln, the head of the Office of Emergency Preparedness, conduct such a survey. We're going to look at the shelter program to see what we can do there in order to minimize American casualties."

The "look at the shelter program," however, produced silence. The "disarray" remains. The Lincoln Report, despite a good bit of curiosity, has been swept under the carpet along with the Rockefeller and Gaither reports – both former civil defense analyses which have remained secret for years.

Now the *New York Times* announces that the 1957 Gaither Report has been declassified – although, as of this writing (February 20, 1973), official notice of the declassification has not yet been given. According to the *Times* the Gaither Report concluded that the civil defense program of that time "will not give adequate assurance of protection of the civil population." The report also recommended (to President Eisenhower) a 5-billion dollar civil defense program over a five-year period. It was titled "Deterrence and Survival in the Nuclear Age."

General Lincoln left his White House post in December, and his Office of Emergency Preparedness is being abolished. Its disaster responsibilities – instead of being returned to civil defense (currently the Defense Civil Preparedness Agency), where they originally came from, where the business at hand is disaster, and where the overall capability to come to grips quickly and effectively with emergency situations exists – go to the Department of Housing and Urban Development, which is short on disaster expertise and busy with its own programs.

*

A chilling view of our defense predicament is published in the January 1973 issue of *Foreign Affairs.* It is "Can Nuclear Deterrence Last Out The Century," by Fred Charles Iklé. Iklé deals gingerly with the "hostage concept" whereby urban populations are exposed to annihilation ("assured destruction") in the event of nuclear war. He likens the situation to Benito Mussolini's motto: *vivere pericolosamente* (live dangerously). He writes: "What a sad irony that the nations that had to fight Hitler to his last bunker should now rely on an interlock of their military postures, making survival depend on the rationality of all future leaders in all major nuclear powers."

President Nixon's press conference remarks appeared in 1969 to promise a change in attitude toward protection for American cities. They didn't. Is it too much to hope that the American urbanite, like the Soviet urbanite, can one day become something less than a sitting duck? As Iklé points out the "assured destruction" concept of deterrence is obsolete. "Over the decades to come," he says, "we can develop and put into effect a safe and more humane strategy to prevent nuclear war."

Were we really to do so our modern *vivere pericolosamente* philosophy would fade out. President Nixon's statement that we are going "to look at the shelter program to see what we can do there in order to minimize American casualties" would then have real meaning in terms of real protection and real deterrence for the United States and its people.

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Kit Haaland of the Oak Ridge National Laboratory takes a new look at a new-old menace: *Initial* radiation.

John E. Davis, United States Director of Civil Preparedness, looks at Deteriorating Shelter Food Stocks.