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Journal of Civil Defense

Sidlinger Poll —

Question:
Do you believe that the U.S. Government has a responsibility to provide an effective program of civil defense for all its citizens?

Response from 81%:

YES!

(See editorial, back cover.)

WASHINGTON FACEDOWN

BARRIER SHIELDING

SWISS SECURITY

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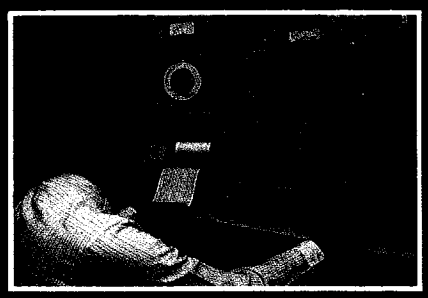

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The American Civil Defense Association

Journal of Civil Defense

Presenting the Views of Industry, Technology, Emergency Government and Concerned Citizenry

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CAPITAL COMMENTARY — Jerry Strope

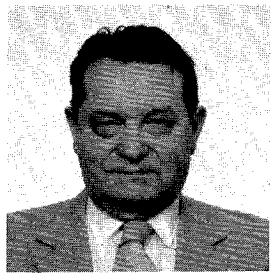
BEGINNING THE BUDGET BATTLE

On March 6th, the initial stage of a battle to save the civil defense budget from a disastrous cut engineered by the Office of Management and Budget (OMB) took place before a subcommittee of the House Armed Services Committee charged with recommending the funds to be authorized for Fiscal Year 1986, which begins this October. This year's appropriation for civil defense is $181.4 million. OMB, acting for the White House, directed that the Federal Emergency Management Agency submit a budget request based on the 1981 level, the last Carter budget. This was first thought to be $107 million but later agreed to be $119.1 million, still a one-third cut in this year's inadequate level of effort.

Realizing that FEMA Director Louis O. Giuffrida would have no option but to support the low budget request, civil defense advocates banded together to push for House action to reverse the White House decision. The American Civil Defense Association, spearheaded by Washington Chapter president Richard Sincere, and John Devaney, Executive Secretary of the American Strategic Defense Association, joined forces with the American Security Council in the name of the Coalition for Peace Through Strength. The group issued a press release the day before the hearing that called on the Congress to restore funding for civil defense to this year's level at a minimum. The release was followed by a press conference held on Capitol Hill shortly before the hearing. "The Reagan Administration is violating its own moral principles, its commitment to protecting people against enemy attack, by slashing the civil defense budget," said Sincere, a TACDA vice president. "It is no exaggeration to say that the proposed civil defense budget for 1986 means there will be no protection against nuclear attack for American citizens from now on."

The authorization hearing was chaired by Ronald V. Dellums (D-CA), who has been strongly opposed to civil defense in the past and must have relished the situation. He was, however, at his courtly best. The members of the subcommittee were nonplused at the request since for the past three years the Administration has been proposing a $250 million start on a major civil defense effort. The most they could get out of Giuffrida and his staff was an admission that the bottom line on the budget had been directed from above. In later testimony, Lacy Suiter, representing the State civil defense directors, and Richard Casanova, representing the local level, also urged that the budget be maintained at its current level, arguing that the cuts would cripple emergency preparedness in the field, especially since revenue sharing with the States was also being phased out.

The big news at the hearing, however, was made by the representative of the Department of Defense, General Richard Stillwell, who delivered a letter from Secretary Caspar Weinberger, which stated in part, "The current strategic situation, the Strategic Defense Initiative, and the intent of the Congress as evidenced by appropriations for civil defense in recent years, indicate a need for an extensive and thorough review of our



national civil defense objectives, policies, and programs. We, the National Security Council, and FEMA are undertaking such a review as a matter of priority to provide a basis for decision on the Civil Defense Program for FY 1987 and beyond." Under questioning by the subcommittee, Stillwell took the position that an "effective nationwide Civil Defense Program is an integral part of the overall strategic posture we seek to maintain" and that the President's Strategic Defense Initiative, dubbed Star-Wars by the media, must be linked with an effective civil defense. The subcommittee was left guessing why the program was being cut

"EFFECTIVE NATIONWIDE CIVIL DEFENSE . . . IS AN INTEGRAL PART OF THE OVERALL STRATEGIC POSTURE WE SEEK TO MAINTAIN"
— General Richard Stillwell

rather than frozen while the newly announced review was underway. Those present at the hearing were left with the impression that the Dellums subcommittee is likely to recommend a higher funding level than that proposed by the Administration, and quite possibly a freeze at this year's level.

SCANDAL HEARINGS CONTINUE

There was no mention at the Dellums hearing of the recent series of hearings before another House committee into charges of mismanagement, fraud, and misconduct by the FEMA top management. During hearings conducted in the last Congress, Albert Gore, Jr., now the junior Senator from Tennessee, had called on Director Giuffrida to resign. The reconstituted panel, now chaired by Harold L. Volkmer (D-MO), held a hearing on March 4th at which Giuffrida and his staff testified for the first time. Giuffrida categorically denied any intentional wrongdoing at the agency. He claimed that he had never intended to use a renovated building at the training center at Emmitsburg as a personal residence. It was designed, he said, to house visiting mayors and other dignitaries and was currently being used for this purpose. He disclaimed any knowledge that a contractor had paid for his attendance at two political fund raisers and then billed the agency for the tab. He defended taking his wife on trips to Mexico and Europe at government expense on the basis that the State Department had approved her acting as hostess for required diplomatic functions. After several hours of interrogation by the subcommittee, it was clear that they had not found a "smoking gun." Giuffrida's explanations made him appear a bit naive in some circumstances but hardly culpable.

With respect to the contractor, Triton Corporation, officials of the firm conceded that an error had been made in billing the government for the political events and withdrew the items. The matter was somehow eclipsed a few days later when the Defense Department announced that it was withholding payments to General Dynamics and the Boeing Company for much larger billings of the same nature. The Justice Department and a grand jury, however, still are investigating the mess at FEMA. □

Sam Cohen, who developed the controversial "neutron bomb" concept, should be described as a man whose efforts directly and substantially support practical peace efforts. His neutron bomb is a mini-nuclear weapon designed to be used with telling effectiveness against attacking forces on friendly soil and to spare both the population and property of defenders. Here he describes a modern nuclear "Maginot Line" which also is designed ***only to repel invasion.*** *It is a formidable threat only to attacking forces (and is incapable of being used offensively). It, of course, would be described by Soviet propaganda — and appeasement friends in the West — as inhumane, provocative and destabilizing. But this view has always been held by those who would attack us and conquer us and enslave us.*

NUCLEAR BARRIER DEFENSES*

— Sam Cohen

Nuclear warfare, even at the tactical level, has been deemed unthinkable by the nation's political leaders. As a consequence, there has been a strong political disincentive against creating coherent military doctrine or strategy. As the popular phrase goes, devising nuclear doctrine or strategy would amount to "thinking about the unthinkable." Indeed, not only has this intellectual blind spot dominated the actions of American political figures and leaders for many years, but a significant number of military leaders have accepted and endorsed the principle of not thinking about the unthinkable.

Nuclear Barriers

In the aftermath of World War I — an unbelievably bloody war where French soldiers were expended en masse in usually futile efforts to overcome German defenses and civilians were forced to flee their communities which then were turned into rubble as more communities became part of the battleground — French military planners were quick to reach a conclusion: the next war, if it came, should not be fought in France.

Sam Cohen

As a result, the French General Staff directed in 1919 that studies be undertaken to evaluate border fortifications. These studies proceeded into the 1920's, and by 1925, the Higher War Council recommended a discontinuous system of fortified regions. In 1927, an organization for Fortified Regions was established and a program was approved to establish siting, basic design, and priorities.

This defensive concept received strong support from World War I hero, Marshal Henri Philippe Pétain, and practically fanatical support from André Maginot, who was moving up in the government and became Minister of War in 1929. During the late 1920's, events unfolded which aroused concern over German intentions. As a result, by 1930 Maginot had succeeded in gaining a vote to allocate funds for full-scale work on what he named after himself — the Maginot Line. One of the main selling points of the Line was that it would permit a substantial reduction in standing military manpower.

The Line received both adulation and criticism. One of the main critics was General Charles de Gaulle who favored mobility over static defense. Another critic was Adolf Hitler who said, "I shall maneuver France right out of her Maginot Line without los-

. . . THE MAGINOT LINE, THE SIEGFRIED LINE . . .

ling a single soldier." In 1940 he outflanked the Line with a quick move through the Ardennes forest, a move which the French planners had not thought feasible. Thus, they had failed to fortify the Ardennes flank.

In 1936, the Germans started construction of their own system of border fortifications opposite France. In contrast to the Maginot Line, the Siegfried Line (or West Wall, as the Germans called it) was based on defense in depth.

When completed, the Wall stretched some 560 kilometers from the Swiss border to where the Rhine river enters the Netherlands. The fortifications consisted of some 3,000 pillboxes, bunkers, and observation posts.

By the time the Wall was put to the test, Germany had essentially lost the war. Men and equipment had been removed from the fortifications to reinforce other areas. The Germans had but a few weeks to try to re-man and reequip the fort sectors, and they succeeded only in part. Many of the troops were undertrained, too old, or too young. However, despite these weaknesses, the

*Condensation of article appearing in the Fall 1981 issue of *International Security Review* with permission of publisher the American Security Council, Boston, VA 22713.

Wall held up very well (in the Aachen area) and was a substantial impediment to advancing American forces.

With this brief accounting of two specific conventional fortified barriers, we shall now move to a general discussion of a nuclear barrier concept. We shall do this in the context of defending Western Europe against the "maximum" foreseeable ground offensive threat, namely, of the Red Army — a highly mobile, nuclear-capable offensively-oriented force.

This "maximum threat" barrier system would consist of a complex of hardened (against nuclear and conventional attack) underground fortifications, manned by conventionally armed forces; complemented by nuclear weapons in the barrier zone and to the rear; and backed up, in case of a breach or overflight by airborne troops, or in the case of amphibious outflanking, by rearward mobile forces using both nuclear and conventional weapons.

The basic purpose of such a barrier system would be to provide an effective forward defense capability, designed to engage invading enemy forces as near as possible to the defending border; to deny early and major penetrations by enemy forces in a surprise, nuclear-supported, armored attack; and to force a resolution of the ground conflict at or near the border.

The barrier zone component of the total defensive system would consist of:

a. A series of hardened (against conventional and nuclear weapon effects) underground fortifications armed with antiarmor and antipersonnel weapons.

b. Antiarmor and antipersonnel obstacles — e.g., antitank ditches, dragon's teeth, minefields, persistent chemicals, and barbed wire.

c. An extensive sensor system placed both within the barrier and to its front, to alert and direct both nuclear and conventional weapons. This sensor system would allow all-weather, day or night defensive firepower to be employed. Covering conventional fire would be provided by direct-fire weapons in the fortifications.

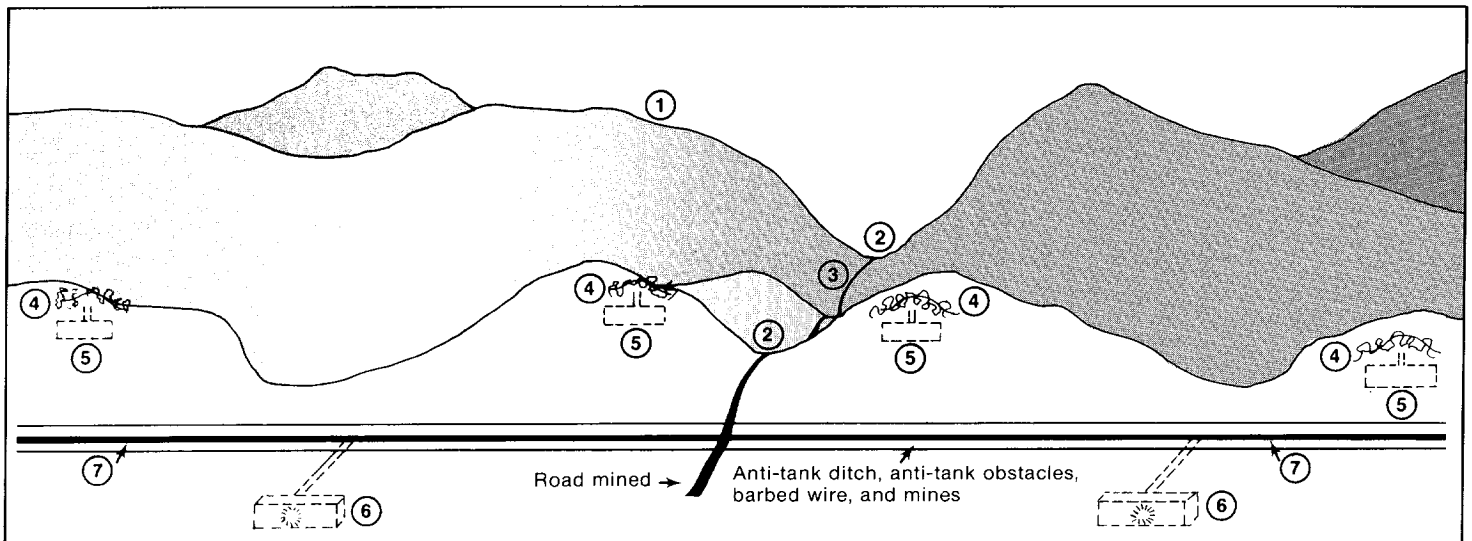
d. Hardened local air defense units, to cope with low-altitude aircraft and helicopter attacks against the fortified zone.

e. A radioactive belt in the barrier area consisting of a series of pipes at the surface filled with radioactivity. The radioactivity would be produced by neutrons from very low-yield underground nuclear explosions or low airbursts. The pipes would run through the obstacle zones; the radioactivity would irradiate intruding enemy personnel with gamma rays.

The rearward-based force would consist of:

a. A highly mobile, short-range ballistic missile system designed primarily to provide covering nuclear fire at the barrier zone, and also capable of attacking enemy units which might have broken through the barrier. The missiles would have sufficient range and thus the flexibility to cover the entire barrier length.

b. A force of lightly armored vehicles capable of high-speed amphibious and cross-country operations. This mobile force could be brought to bear quickly on enemy units which had succeeded in breaching the barrier, airborne forces dropped in the rear, and sea-



SCHEMATIC SKETCH OF POSSIBLE NUCLEAR BARRIER DEFENSE LINE

① Ridge line
② Pass
③ Road
④ Gun emplacements (pill boxes with camouflage and gun barriers) cover barrier defense line and also defend against low-level air attack.
⑤ Underground gun crew stations and quarters
⑥ Buried small nuclear explosion chambers
⑦ Pipes just below surface carrying radiation from explosion chambers

borne forces landed on the flank(s). These vehicles would be equipped with target acquisition and designation systems and would be armed with antiarmor and antipersonnel weapons.

c. Mobile air defense units to cope with aircraft and helicopter attacks against the rear echelon forces, and also for use against airborne assaults.

Attacks against targets in enemy territory could be accomplished by means of survivable theater nuclear missiles, to include the short-range ballistic missiles described above.

We shall now go into some detail on the makeup and function of the two basic components of this defensive system:

1. *The Barrier Zone.* The design features of the barrier fortifications present an intriguing problem. First, the fortifications will have to be manned on a continuous basis in peacetime, so that a surprise nuclear attack could not deny entrance to the fortifications by defensive forces. Long assignments to these fortifications would pose a morale problem for barrier personnel, which could be countered to some degree by rotating them periodically through the bunkers. Morale could be further helped by having several bunkers connected with a central housing unit containing facilities somewhat comparable to those in present peacetime casernes. At intervals of, say, once a month, the personnel at a given bunker garrison would be replaced. Indigenous reserve forces could fill much of the barrier manning need, which in turn, could allow a substantial reduction in the size of the conventional standing army of the defending country.

Second, there is the problem of designing bunkers to withstand a nuclear attack. Individual bunkers, therefore, must be so constructed as to minimize the ability of the enemy to take out more than one bunker with one nuclear warhead. The objective would be to harden and disperse the bunkers to the degree that the enemy would be forced to go to large-yield warheads to get more than one bunker per blast . . . Since the appropriate study on which to base an "optimum" bunker design does not exist, we shall simply assume bunkers which are hardened to the 100-200 psi level and spaced several hundred meters apart.

BUNKERS . . . HARDENED TO THE 100-200 PSI LEVEL AND SPACED SEVERAL HUNDRED METERS APART.

The question is, where should the fortifications be placed? The answer is: to the extent possible, where nature itself provided obstacles to slow down an armored advance; for example, in forests, along rivers, streams, and canals, in mountainous areas, and on embankments.

Certain of these locations would produce a double dividend. Not only would these natural barriers enhance the effectiveness of the fortifications' firepower, but if the enemy were to use large-yield nuclear weapons against the fortifications in those areas, the enemy would, in the process, create formidable artificial obstacles in the path of his own progress.

However, although fallout can be avoided by an air burst, what cannot be avoided is induced radioactivity in the soil beneath the burst. This is caused by neutrons from the burst being absorbed by certain elements in the soil. In many areas, a prime contributor to induced radioactivity is sodium.

Although sodium is not an abundant component of soil (sodium atoms constitute only about one percent in average soil), nevertheless, it has a high absorptivity for neutrons. This absorptive affinity can create a strong field of surface radioactivity in the vicinity of the burst of a large-yield weapon detonated close to the earth. On this basis, since most sodium compounds are very cheap, to enhance this induced radioactivity, the normal sodium content could be enriched by adding an appropriate sodium compound.

One compound which qualifies is sodium carbonate. Commonly known as soda ash, this mineral costs less than a penny a kilogram. Soda ash added to the soil around a belt of antitank obstacles placed directly in front of a line of bunkers would result in an almost negligible increase in the cost of the barrier. However, if high-yield nuclear attacks were made against the bunkers, an intense field of radioactivity would automatically be produced in the area. Calculations indicate that for a period of several days, a very high gamma radiation intensity would exist in the vicinity of the bunkers. This intensity would be sufficiently high to preclude combat engineers from emplacing demolition charges and clearing vehicular lanes through an obstacle belt without accruing a lethal dose of radiation. These engineers would be incapacitated long before they would complete their work. Similarly, if engineers used bulldozers to cover or fill in the obstacles with earth, the drivers would become incapacitated long before they could complete their task.

Radioactive sodium has a decay half-life of 15 hours, i.e., the emission of its gamma rays drops by a factor of two every 15 hours. As a consequence, there would be no long-term contamination; in a matter of weeks the intensity of gamma radiation would have died down to harmless levels.

If the existence of these soda ash strips in front of the bunker line were known to the Soviets, they might be dissuaded from attempting to destroy the bunkers with nuclear weapons. Instead, they might elect to use conventional means of clearing out or covering the obstacles. This would call for a massing of enemy forces in order to break through the fortified zones. However, if the armored units were to mass as they attempted to overwhelm individual bunkers, this tactic would play into the defense's hands. Such mass formations would be ideal targets for nuclear support fire from the rear. Armed with enhanced radiation warheads having lethal areas of a few square kilometers, the rearward-based ballistic missile force could wreak havoc on massed armored formations. Just a few such weapons would be sufficient to cover very nearly any large armored formation.

THE DEFENSE COULD PRODUCE ITS OWN BELT OF RADIOACTIVITY

There is another defensive radiological scheme which can be used. The defense could produce its own belt of radioactivity in the obstacle strip. The defense could produce radioactivity, and thereby a source

of gamma rays, by using neutrons from low-yield nuclear bursts. The bursts could be contained in a large metallic tank buried underground, on top of which would be a vessel of soda ash solution. Upon detonation, neutrons from the explosion would activate the sodium atoms in the solution. The radioactive solution would then be pumped into pipes running along the obstacle strips.

The ideal warhead for this application would be an enhanced radiation (ER) device — i.e., a neutron bomb. For a given warhead yield, such a device would provide the maximum number of neutrons, while at the same time minimizing the blast containment problem. Roughly speaking, a one-kiloton ER yield used in this fashion could effectively impede enemy passage along a ten-kilometer obstacle strip for several days. (A 0.1-kiloton ER yield would cover a one-kilometer length.)

By controlling the radioactivity, the gamma ray intensity in the vicinity of the pipes would approximate that produced by vastly higher yield enemy warheads in air bursts. Whereas the vast majority of the neutrons from high yield air bursts go where they are not needed, a substantial fraction of the neutrons from a very low-yield tank burst can be effectively utilized, thereby producing the same radioactivity with an explosion as much as 1,000 times smaller. Controlling one's own defensive nuclear burst can be far more efficient than trying to exploit the adversary's offensive burst.

An alternative to detonating the ER explosive underground would be to burst it above an extremely shallow (about one-third meter deep) tank of the soda ash solution. The explosive could be contained in an underground silo and boosted (by a rocket motor or by compressed air — a so-called "cold launch") to the desired burst height. Or it could be delivered by accurately guided missiles located behind the barrier. The burst would produce neutrons to activate the tank solution, which would then be pumped into a pipeline system.

Conventional weapons within a barrier can be substantially more effective than under normal mobile warfare conditions. The fortifications by themselves would be a formidable match for the weaponry of advancing armored forces.

Bunker personnel would remain underground — in peace and war. Periscopic devices would be used to acquire targets and fire weapons. If personnel had to come to the surface to operate the armaments, they would become vulnerable, substantially more vulnerable to enemy weapon effects than inanimate armament. In addition, by coming to the surface, they would preclude the use of defensive nuclear fire being directed at enemy forces close in to the fortifications. This would offset one of the cardinal advantages of a nuclear defense over a nuclear offense.

In the bunkers, the defenders would wait, gun turrets flush to the ground, and thus essentially invulnerable, except for a direct hit by an artillery shell — a most unlikely proposition. When enemy armored vehicles came into range, the underground gun crew would raise the turret, fire until the engagement was over, and if the engagement were won, retract the turret (to reduce its vulnerability), and await another assault. As mentioned previously, the bunkers would also be equipped with antipersonnel weapons for use against foot soldiers. These weapons (machine guns and grenade launchers) would be mounted in a second retractable turret and aimed by periscope. This scheme would have the advantage that defending personnel would be relatively immune to the advancing troops.

. . . DEFENDING PERSONNEL WOULD BE RELATIVELY IMMUNE TO THE ADVANCING TROUPS.

Such a battle — if it ever materialized, in view of the radiological threat the offense must overcome — would in fact be quite one-sided. Only the defenders' weaponry, which could be hardened to resist small arms fire, would be exposed to the advancing enemy, while the enemy would be totally exposed.

2. *The Rearward-based Force.* For providing nuclear covering fire at the barrier zone, a short-range ballistic missile would be the best candidate. To attain coverage over the entire barrier length and to be dispersed over the depth of the defending country, the missile would need a maximum range of about 1,000 kilometers. This would permit the missile to be deployed and hidden away from populated areas. Missile crews would receive targeting data from the sensor fields in front of the barrier lines plus data from direct observations made from the bunkers. When lucrative nuclear targets appered, the weapons could be fired in a matter of minutes, leaving little time for the enemy to disperse or move out of range of the effects of the nuclear burst.

The preferred warhead for the missile would appear to be an ER warhead because of its high radiation to explosive yield ratio.

The proper size and composition of a specific barrier system would depend on how a conflict, fought in a particular military framework, would progress. Analysts have experienced extreme difficulty in predicting the nature of conventional wars, despite vast experience in such conflicts. Predicting details in a nuclear-barrier oriented war where no experience exists (and even fantasizing is precarious) is even more difficult. On the other hand, although no data from experience is available for responsible analysis, what can be said is that a barrier system would cost but a fraction of a "conventional emphasis" defense — fixed or maneuverable. Moreover, it should cost significantly less than a maneuverable nuclear defense system; the reason being that the barrier system places substantially more emphasis on nuclear firepower.

Political Considerations

In practically all cases where U.S. allies and friends face land invasion by another country, the cost of maintaining a conventional force is greater than a nuclear barrier. This is especially true for threatened Western nations, which put a disproportionate fraction of their military budgets into personnel salaries, an extreme case being the United States, whose pay scale for a ground soldier is some two orders of magnitude greater than for a Soviet soldier. Nuclear barriers would allow substantial reductions in personnel requirements, resulting in substantially reduced defense budgets and sizable political gains.

It is entirely possible that a nuclear

barrier defense plan could reduce a conventionally-oriented defense budget by more than one-half. As an example, considering that the cost of defending Western Europe now is approaching $200 billion per year — the U.S. paying for about half this amount — if it were possible to reduce this investment by one-half or more, the savings would be enormous. Accordingly, the political gains would be substantial. These gains would have to be balanced against the perceived losses engendered by the symbolized separation which Western European barriers might create.

A primary (indeed, the major) objection to any nuclear weapon deployed by NATO is that it would turn Europe, especially West German, into a potential nuclear battleground. Most Europeans, especially Germans, believe that the civilian collateral damage in a nuclear exchange would be appalling, posing risks too high to be acceptable. Proponents of nuclear barrier defense would have to convince those so concerned over collateral damage that the risks would be less.

The nuclear collateral damage issue is raised here to highlight that drastic changes in NATO's military posture would be in order, in moving to a nuclear barrier defense. Specifically, all of the facilities which now present lucrative targets for nuclear attack logically would have to be disbanded. They would be replaced essentially by a system of fortifications at the border and a number of highly dispersed and concealed mobile military units far to the rear. Under these changed conditions, the most likely nuclear targets for the Soviets would be in the barrier zone itself.

Such a move would force a change in Soviet targeting strategy which could yield considerable political dividends in Western Europe. For these new conditions, NATO's great political concern over collateral damage from nuclear war could be substantially reduced. Soviet nuclear weapons would in the main form a nuclear battering ram to be hurled against the barrier fortifications. Even were large-yield weapons used for such a purpose, the location of the barrier zone would, by design, be remote from populated areas and, thereby, reduce civilian collateral damage to the west of the barrier.

Yet another reduction in collateral damage would occur if the barrier were to prevent significant numbers

BARRIERS CAN'T MARCH.

of enemy forces from overunning the defender's territory. If larger-scale conventional invasions could be prevented from succeeding, the familiar scene of extensive urban devastation in the defending country would be largely avoided — even totally, if the barrier held.

Barriers can't march. The static nature of a nuclear barrier system could represent a political plus by demonstrating decisvely the non-aggressive intentions of the country deploying such a system. Although NATO bills itself solely as a defensive alliance, and indeed it is, nevertheless, its armies have considerable potential offensive capabilities. The Soviets, therefore, long have accused NATO of aggressive intentions. Indeed, Soviet scenarios for NATO-Pact conflict are based on a NATO attack against the East.

If NATO, particularly West Germany, were to adopt a barrier defense system, involving only a small offensive mobile force and one which would have to cross the barrier it was supposed to defend in order to advance into Eastern Europe, it would be difficult for anyone to argue that such a force constituted an offensive threat. In fact, it might even be argued that the adoption of such a defensive strategy by Western Europe would be the epitome of détente. The adoption of such a scheme with its substantially smaller force requirements would also satisfy the goal of arms control (i.e., the Mutual and Balanced Force Reductions negotiations) — at least on the Western side.

For other nations which might elect to defend themselves with nuclear barriers, their action would symbolize their truly defensive intentions, thereby enhancing military stability in those areas. Would-be aggressors would be deterred to a significant degree, and the professed nonaggressors would constitute no serious threat to the would-be aggressors. □

NONE. ZERO. ZILCH.

(Excerpt from an editorial in *Reason* by editor Robert W. Poole, Jr.)

According to the government's own figures, *65 percent* of the entire defense budget (and most of those conventional forces) goes to defend Europe and Southeast Asia (Japan and South Korea). And the bulk of that is spent on NATO. In 1983 the average French citizen paid $310 in taxes for defense; the average German, $360; the average Briton, $450. But the poor American paid $920. Of that, $524 went to defend Europe, $74 to defend Japan and South Korea, and only $322 to defend this country. That's right — the average American spends more of his tax dollar defending Europe than does the average European!

But the picture is even worse than those numbers suggest. What is the threat to our own country that Americans are spending so much to defend against? A land invasion? Preposterous. An amphibious assault? Ludicrous. The only *real* threat to this country is that of a nuclear attack. And what defense do we have against that?

None. Zero. Zilch . . .

John Bex is a rare breed. He is both a successful business man and a successful bureaucrat. And he has been battling bureaucratic bungling and inertia for decades. Currently he is Director of Coordination and Liaison for FEMA's National Emergency Training Center in Emmitsburg, Maryland. Bex's bluntness may not always be easy to take, but it's good medicine.

That Old

Won't Hunt

— John E. Bex

Everybody knows that there is quite a bureaucracy in Washington and I'm not about to deny it. When you're fighting it on one front it's likely to creep in on you from the sides, and catch you unawares. One of the ways it does this is to infiltrate the language like a subtle virus infection. You're surrounded by bureaucratic language in government publications, in memos, in talk, so that you have to make a special effort to immunize yourself from it.

Not only that, but you need repeated booster shots at regular intervals too. Plain talk is almost a lost art in some circles. It is not easy. It requires effort. I've found that getting out in the field and talking with everyday citizens helps me. Another little help is things such as collections of colloquial words and phrases of certain regions. A good one is "Mountain-Ese, a Basic Grammar for Appalachia" by Aubrey Garber. In it I found this phrase: "That-old-dog-won't-hunt," which means that a story won't prove true, as used in this sentence: "You'd better make up a better tale cause that old dog won't hunt!"

Let's talk about civil defense and civil preparedness. Anytime I hear someone say something to the effect that this country doesn't need civil defense very much, that civil defense is being pretty well taken care of as it is, that we needn't waste money on such impractical matters, then I feel like shouting, "That old dog won't hunt."

There are a whole list of myths that have grown up in the field of civil defense and civil preparedness which are just as sadly in error. It's not only one old dog that won't hunt, but whole pack or kennel of them that won't.

But let's stick to the main point and use some straight talk about it. The cardinal and crucial fact is this: Our country desperately needs a good civil preparedness system and we do not have one. There is even some danger of losing more of the capability and planned programs which are being developed (such as they are).

How can we judge the adequacy or inadequacy of our civil preparedness effort? What kind of measure do we have for such a thing? Here is one very good measure I think. The Russians are now spending over ten

PLAIN TALK AND PLAIN FACTS

times as much as we are for civil preparedness and have been doing so for many years. At different times in recent years there has been some pretty heated and serious discussion of the "missile gap," the "submarine gap," and the "warship gap," and various other defense gaps. But the civil preparedness gap is and has always been far greater in degree. Some of the military defense gaps have been controversial, but there is simply no doubt whatsoever about the huge reality of the civil defense gap.

There is an even greater paradox in the current situation. We are now at peace for the first time in many years and must face the problem of maintaining a proper stand in the peacetime world. In this situation we need to be spending not less but more on civil preparedness.

The kind of passive defense measures implied in civil preparedness are the least provocative things that can be imagined. There is nothing more essential in maintaining public confidence in our government's desire and concern for the welfare of ordinary citizens than a good civil preparedness system. Passive defense measures against military attack create an enviable capability for contending with all other types of disaster. This is a remarkable bonus that can stand on its own as a needed program. The fatal mistake is sometimes made, however, that measures provided against the lesser disasters can be effective against military attack. They cannot be.

As a part of the general advance of civilization, human life becomes more precious — if progress has any meaning at all. We no longer tend to think of our population as the helpless prey of chance and natural forces and disasters, like the spawn of lower forms of life. Therefore, it is fitting that we make continually greater efforts to foresee, prevent and minimize the effects of disasters of all kinds. Many things are now being done that weren't possible or imaginable one or two centuries ago, but we need to do still more, much more.

That's the plain talk and plain facts about civil preparedness. The job has hardly been begun. □

RESOLUTIONS PASSED IN SUPPORT OF CIVIL DEFENSE

AMERICAN STRATEGIC DEFENSE ASSOCIATION RESOLUTION

WHEREAS The American Civil Defense Association (TACDA) at its annual meeting with body assembled did invite some of the national organizations whose aims included a strong civil defense program, and

WHEREAS those invited organizations who did attend did meet on November 14, 1984 and adjourn until November 16, 1984

AND DID have lengthy discussions about the Hows, Whens and Wheres, we, as separate and individual organizations could come together in efforts to increase the strengthening of the Civil Defense preparation for U.S. citizens, and

WHEREAS the organizations thus meeting did agree on certain items, to wit:

(1) There are many organizations which have as one of their purposes a strong civil defene program to protect civilians, and

(2) No one present at the meeting could identify all of the organizations with a like mission, and

WHEREAS it was agreed that it would be a meaningful start to identify all of the organizations with the common purpose of creating a strong civil defense, now therefore

BE IT RESOLVED, that we, representatives of the undersigned organizations, agree to have The American Civil Defense Association be the lead agency to identify as many as possible any and all organizations by name, address and contact person with a common purpose of establishing a strong civil defense posture in this country, and

BE IT FURTHER RESOLVED, THAT TACDA develop an organizational mailing list to be shared with aforesaid organizations for the purpose of dialogue and common purposes, and

BE IT FURTHER RESOLVED, that the undersigned organizations do agree to pursue further areas of agreement.

PASSED, APPROVED AND SIGNED THIS 27th DAY OF DECEMBER 1984

John F. Devaney
Executive Secretary
American Strategic Defense Association

AMERICAN SOCIETY OF PROFESSIONAL EMERGENCY PLANNERS RESOLUTION

WHEREAS, Civil Defense/Emergency Government as a life saving program receives less than 100% support from many areas and citizens of our Country; and

WHEREAS, we who have chosen Civil Defense/Emergency Government as our field of endeavor and we, who consistently are upgrading our skills and capabilities through training, welcome any and all support from individuals and groups whose aims and purposes are to help strengthen the roll of Civil Defense/Emergency Government in our daily lives; and

WHEREAS, two organizations serve as outstanding examples of a firm commitment to the promulgation of a strong national Civil Defense/Emergency Government program:

NOW, THEREFORE BE IT RESOLVED, that we, the members of the American Society of Professional Emergency Planners, in body, assembled at our annual conferences in El Paso, Texas October 9, 1984, do hereby commend and applaud Mr. John Fisher as President, and the organization he leads, THE AMERICAN SECURITY COUNCIL; as well as Mr. Frank Williams, President, and the organization he leads, THE AMERICAN CIVIL DEFENSE ASSOCIATION: and

BE IT FURTHER RESOLVED, that we, as A.S.P.E.P. members, collectively and individually, stand ready and willing to do our part in supporting and forwarding the cause for a strong Civil Defense/Emergency Government position as a national program of commitment; and

BE IT FURTHER RESOLVED, that properly signed copies of this resolution be forwarded to Mr. John Fisher, American Security Council, Washington Communication Center, Boston, Virginia 22713, and to Mr. Frank Williams, The American Civil Defense Association, P.O. Box 1057, Starke, Florida 32091.

Passed and unanimously adopted October 9, 1984.

Ernest J. Terrien, President
Renate C. Paulsen, Secretary

INTERNATIONAL CIVIL DEFENCE ORGANIZATION

GENERAL ASSEMBLY
6th Ordinary Session
Geneva, 9 and 10 October, 1984

RESOLUTION ADOPTED BY THE GENERAL ASSEMBLY

Granting of Consultative Status with the ICDO
A.6/R.6

THE GENERAL ASSEMBLY at its 6th Session HAVING CONSIDERED the Report of the Secretary General concerning the establishment of official relations with national and international organizations with responsibilities similar to those of the International Civil Defence Organization

WISHING to strengthen the ties with these organizations and stimulate their participation in the ICDO programmes

ON THE BASIS of the principles governing the admission of national and international organizations into official relations with the ICDO

DECIDES to grant the Consultative Status to:

the American Civil Defense Association
the Institute of Civil Defence, U.K.
the International Society of Disaster Medicine
the Sovereign Order of Malta.

The American Association of Professional Emergency Planners (ASPEP) did on November 16, 1984 pass a resolution essentially identical to the one in column 1.

SPOTLIGHT

UPCOMING SPRING EVENTS BECKON EMERGENCY PLANNERS

Among the exhibitions and conferences that may be of interest nationally in the emergency management field (strategic defense too — see "UPCOMING" on page 28) in the coming weeks are the following:

DEMEX 85, from April 28 to May 1 at the Indianapolis Convention Center. DEMEX 85 will feature programs dealing with natural disasters and major accidents, management techniques, preparedness, environmental crises, etc. Registration fee for the full program is $200, or $75 per day. Exhibits only: $10. Conference director is former civil defense coordinator Douglas L. Crichlow. For information call DEMEX 85 at 317-925-5198.

FOURTH ANNUAL INDUSTRIAL COLLEGE OF THE ARMED FORCES MOBILIZATON CONFERENCE, May 16-17 at UCAF, National Defense University, Fort McNair, Washington, D.C. The theme of this year's conference is "Mobilization: What Should Be Done? What Can Be Done?" Subject areas addressed will be: National Security and Mobilization, Manpower Resources Management, and Industrial Resources Management. Call 202-475-1887 or Autovon 335-1887.

EMERGENCY 85, May 21-24 at the Washington, D.C. Convention Center. EMERGENCY 85 comes to the United States after 1982 and 1984 successes in Europe. Conference theme is "Emergency Management for the Year 2000." One place that civil defense will be featured is in the workshop-panel hour "Nuclear War — 21st Century Threat" conducted by The American Civil Defense Association (TACDA). Full registration is $95, and for one day $40. For exhibit area only the fee is $15. EMERGENCY 85's sponsor is *Hazard Monthly,* and it offers four "Professional Improvement Grants" (portions of conference travel and registration expenses) to CD professionals submitting papers on "any topic that points emergency management professionals toward the future." For further details call 301-424-2803 or write conference headquarters.

MULTIPROTECTION DESIGN SUMMER INSTITUTE (for Architectural and Engineering faculty) at the National Emergency Training Center, Emmitsburg, MD. A two-week course from July 22nd to August 1st. Five courses will be offered: (1) Wind Engineering, (2) Flood Protective Designs, (3) Earthquake Protective Designs, (4) Designing Building Firesafety, and (5) Fallout Shelter Analysis. Sponsored by FEMA, NSF and USGS. Application deadline: May 10. For information contact: Shelter-Rad Technology, Inc., 2000 Century Plaza, Columbia, MD 21044. Phone: 301-596-6777.

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ACEP TO CONDUCT TWO CONTESTS — LIFE SUPPORT AND PHOTOGRAPHY

In conjunction with its "CLINCON" in Orlando, Florida July 12-14 the American College of Emergency Physicians (ACEP) will hold its 1985 Advanced Life Support Contest preceeding the conference on July 10-11 and a National EMS Photo Contest during the conference July 12-14. Photos are to be action prints. [For information on photo contest write: EMS Photo Contest, c/o FACEP, 600 Courtland St. (Suite 420), Orlando, FL 32804. For information on the Life Support Contest contact: Garry Briese, C.A.E., Exec. Dir., Florida Chapter ACEP, 600 Courtland St. (Suite 420), Orlando, FL 32804. (Phone: 305-628-4800).]

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SAR BOOKSTORE OFFERS MANUALS

Search and Rescue (SAR) techniques can often be applied to disasters of all kinds, including the granddaddy of them all: nuclear attack.

A center for SAR materials is the SAR Bookstore at 1819 Mark St., N.E., Olympia, WA 98506. *NSAR's School Disaster Planning Guide; Handbook . . . A Guideline for Disaster Preparedness: Survival Sense for Pilots and Passengers;* and other books are available. A complete list, including prices, may be obtained by writing the bookstore.

Manager of the bookstore is well-known dean of SAR, Rick Lavella.

SHELTER SECURITY • (1)

— Van E. Hallman

Our "Hole-in-the-Ground"

It is difficult to imagine what it would be like to live, as most Americans do, without a shelter in our yard. For the past ten years the small weather-vaned shed above the shelter has served as a symbol of the tranquility transmitted to our family through the knowledge that, if worst comes to worst, we at least have someplace to go and a plan for our survival.

I was once asked by a television cameraman about my activities in regard to the shelter. It was obvious that he felt I must be obsessed with thoughts of a nuclear holocaust and in a constant state of anxiety. Nothing could be further from the truth. Once the shelter was constructed, and stocked with the minimum of necessities, it became a useful addition to everyday living and an extremely comforting instrument for lessening the worry about the unthinkable.

Since it is relatively small, a shelter is inexpensive to decorate and furnish with attractive surroundings — including plush remnants for wall-to-wall carpeting. With the temperatures remaining below 72° F, without air conditioning, it is a wonderful place to get away from the 110° temperatures above ground and the drone of the house cooling system. For those in northern climates, it might be added that the unheated shelter remains above 57° F when temperatures hover around the freezing point. Imagine the advantages to be gained by such a shelter if a major earthquake, hurricane or other catastrophe should deprive one's home of electricity, food and water for an extended period of time.

Private home shelters that will be of value to the home owner with, or without, an emergency do not just happen. They require planning, study, work, and PERSEVERANCE. They also require a certain amount of money which varies considerably with the type and size of the shelter and the amount of self help provided. Future columns will cover these and related shelter subjects.

VITAL ELEMENTS IN
SWISS CIVIL DEFENSE:
EXPERIENCE AND LONG-RANGE PLANNING

— John R. Christiansen
— Reed H. Blake
Brigham Young University

Civil defense practitioners and theorists cite Switzerland as the most prepared country in the world to deal with emergencies, regardless of size or origin. In this article, the first of two on the Swiss system, several components are discussed which place this small country in such an enviable position.

Characteristics of Swiss Civil Defense

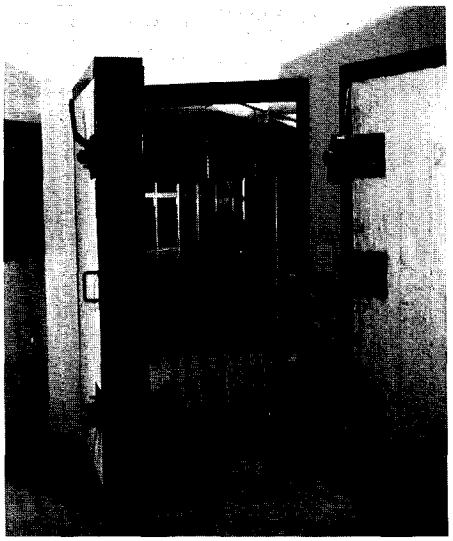
Some characteristics of the Swiss civil defense system which make it unique are its:

- — adequacy of shelter spaces available to the civilian population,
- — high per capita expenditures,
- — provisions for a broad-spectrum of care for potential shelterees,
- — heavy involvement among its population in civil defense activities, and
- — openness in dealing with civil defense issues.

Adequacy of Shelter Spaces — There is probably no other country in the world that provides emergency-shelter space for as high a percentage of its civilian population as Switzerland. Approximately 85 percent of the nearly 6.5 million Swiss population[1] is provided adequate shelter space by the government.[2] The term "adequate" means that shelters not only provide "good, but not total" protection against nuclear blast and fall-out but also against chemical and conventional warfare hazards as well. In contrast, it is a yet-to-be-realized goal of the United States to provide even fallout protection for its population.

High Per Capita Expenditures — The relatively high expenditure by the Swiss government for civil defense is likewise unique. In the U.S., the federal government's total 1984 appropriation for civil defense was $190 million, and seems destined to become lower.[3] The U.S.S.R.'s appropriation for 1984 has been reported as equivalent to $3 billion. The estimated total amount spent by the Swiss during 1984 was 200 million Swiss francs,[4] or about $80 million.[5]

THE U.S.S.R.'s APPROPRIATION FOR 1984 . . . EQUIVALENT TO $3 BILLION



View from pressure lock into shelter with standardized door.

In per capita terms, the 1984 civil defense expenditure in the U.S. was $.81. The U.S.S.R. had a 1984 per capita expenditure of $10.80[6] Switzerland, on the other hand, with a population of near 6,463,000, spent about $12.60 per capita. Explained another way, the Soviets spent about 13 times as much money on civil defense as did the U.S.A. in 1984. The Swiss spent about 1.2 times as much as the U.S.S.R., and approximately 15.6 times as much as the United States.

Care Provided in Shelters — To a certain degree, detractors of present civil defense planning in the U.S. have a legitimate argument when discussing the inadequate conditions under which U.S. populations might be sheltered and cared for.

Little, if any, provision has been made to stock U.S. shelters, or to treat the ill and injured until they are lodged and sheltered. Only then will additional food, water, and medical supplies be brought into the shelters, depending upon need.

In contrast to these plans, the Swiss shelters are presently capable of providing a high level of humanitarian care during emergencies. They are stocked with food and medical supplies. Available, or in facilities under construction, the Swiss also have sufficient beds in hospitals, first aid stations, or first aid posts *inside the shelters* for one in every 78 people. Moreover, future plans call for additional facilities that will reduce the ratio of protected beds to 1 for every 42 people.[7]

Involvement by Swiss Citizens — A further characteristic of Swiss civil defense is the heavy involvement in civil defense activities by its citizens. In 1983, for example, 310,000 Swiss citizens participated in civil defense activities of some sort. These participants were involved to the extent of giving about 2.6 days of service during that year. Part of these activities included participation in civil defense classes, which totaled 8,650 in 1983.[8]

Openness in Dealing With Civil Defense Issues — Another major characteristic of Swiss civil defense is their openness in dealing with civil defense matters. Civil defense manuals, shelter specifications, information pamphlets, and program procedures are shared freely with citizens and others. An interview by one of the authors with Fritz Sager, Associate Director of the Federal Office of Civil Defense, Berne, Switzerland, provided not only a further indication of the willingness to candidly discuss civil defense matters but also some reasons for the relatively unique status of civil defense in Switzerland. It further clarifies why the Swiss are anxious for others to develop similar protection for their civilian populations. Sager's responses, together with observations and independent research on the part of the authors, provided the following tentative conclusions.

Reasons for the Swiss Civil Defense System

As mentioned, the Swiss civil defense system differs markedly from, and appears to be much superior to, that of the United States. Moreover, it seems better than that of any other country in the world. Why is this so? The answer seems to involve the basic values of the Swiss people. In turn, those values are likely generated from centuries of experience and understanding.

THE SWISS HAVE A LONG HISTORY OF WAR

Experience of the Swiss — Contrary to some people's view, the Swiss have a long history of war and civil chaos. By the early 1500's, for instance, when Switzerland was still a loose confederation of cantons, the Swiss were a military power in Europe.[9] As a collectivity, and as individual soldiers and mercenaries, the Swiss developed a reputation for being fierce, skilled, and effective warriors. Swiss guards were used by the Vatican (their present uniform remains virtually unchanged from those when first their services were requested) and Swiss mercenaries were used by governments throughout Europe.

Indeed, between 1315, when they defeated the Hapsburgs at Morgarten, and 1512, when they conquered Milan, the Swiss had won almost every war in which they had been engaged. But in 1515 — at Marignano in Italy — the guns-and-firearms equipped French decisively defeated the Swiss, who were still depending heavily on the long spear, the halberd, and the spiked club. It was then that the cantons of the Swiss Confederation decided they would no longer wage war.

A NEUTRAL STATE . . . AN ARMED NEUTRALITY

This attitude was further solidified in 1674 when the Diet — the Swiss Parliament prior to 1848 — declared unanimously that the Swiss confederation would thenceforth be a neutral state.

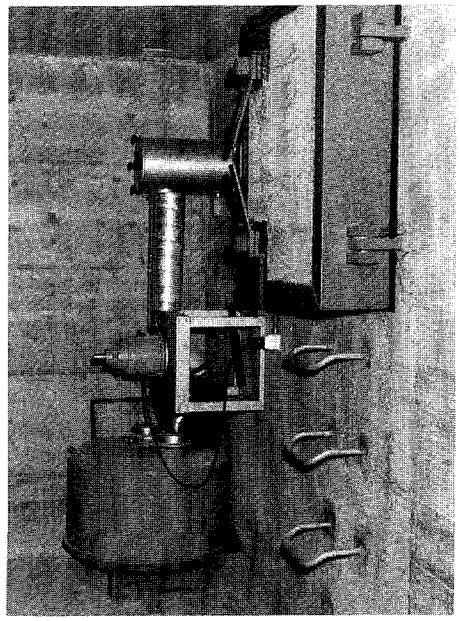
But it would be an armed neutrality. "Switzerland would defend its independence, its territorial integrity, and its neutrality by every means at its disposal. It would defend its borders against penetration by the armies of any foreign power. Force would be met by force. And the policy would be as permanent and enduring as the fatherland itself."[10]

Thus, with exceptions generated out of the French Revolution and the Napoleonic upheavals, Switzerland has not used its weapons or armies for aggressive warfare.

The more recent experience of World War II, in which approximately 50 aircraft crashes occurred inside its borders and another 150 incidents of bombings or anti-aircraft activity took place, has furthered the resolve for a neutral, but defensively strong, Switzerland.

In another major way, too, the Swiss have experienced the trauma of aggressive war. This is through their banking and insurance enterprises. In a nation that worships private enterprise, it is somewhat surprising to find about half the Swiss banks either state-owned or state-controlled.[11] This close tie of banking to government has caused governmental officials to be aware of the effects of war and political turmoil throughout the world in various subtle and not so subtle ways. The effort to maintain neutrality in banking while various countries and individuals have tried to compete with one another for the rich financial resources maintained in Switzerland's banks continues to challenge the ingenuity of both governmental and private banking officials.

The Basic Value of a Defensively Strong Neutrality — As one of a few developed countries noted for its practice of continuous and successful neutrality, Switzerland's reasons for this practice are not generally



Emergency exit and ventilator.

known in the United States. Neutrality is mentioned only twice in the Swiss constitution — but it is the very bedrock on which Switzerland's foreign policy rests.[12] As viewed by the Swiss, however, neutrality means security, territorial integrity, and independence.

Accordingly, a considerable expenditure of resources has been made to protect and involve Swiss citizens in building a unique defensive capability. This effort, together with the maintenance of a relatively strong civilian army, results from the decision made centuries ago, the commitment to which has grown stronger in the intervening years.

Compatible with these values are some recently acquired beliefs. These are that (1) until other countries adopt similar beliefs relative to the counterproductive conseqences of international wars, wars among those countries are inevitable; (2) despite well-meaning efforts to limit the effects of these wars to those directly involved, these effects will be felt by others; (3) the "ripple-effects" of international wars are, on balance, undesirable; (4) governments have an obligation to do all in their power to protect their populations from direct as well as indirectly military actions of other countries; and (5) the greater the involvement of all governments in providing adequate and total protection to their civilian population from aggressive actions by other governments, the less likely it is that those actions will take place at all.

The Swiss perspective is provided in this overview by Sager.

"Our civil defense system is part of what we call General Defense. This is a vital part of the state of neutrality which we have maintained for more than 150 years. We have a strong, active defense in the form of the army. But weapons' effects have gotten more complicated, touching not only the fighting part of the population — the army — but more and more the civilian population. We have seen very clearly since World War II that the army alone cannot do the job.We have to have something for protection of the civilian population.

FIRST LINE OF DEFENSE . . . A SHELTER SYSTEM.

"During World War II, when the civilian population was surrounded by Fascist countries and overflown by Allied bombers, we decided to build up the civilian defense organization with its first line of defense being a shelter system.

"We began a crude shelter system during World War II. This gave us experience. We continued this effort after World War II for a while and then eased off. At that time, we hoped that wars would end. The Korean War convinced us otherwise. Since then we have been building shelters with increased capacity and sophistication.

An underground hospital ward.

"The United States is a country that has seen only one or two major wars waged within its borders. Switzerland has seen wars outside its borders for hundreds of years; and prior to that, inside its borders. This continent (Europe) has been full of bloody wars for, say, 2,000 years. We believe it can happen again.

A HIGH DEGREE OF CIVIL DEFENSE EFFECTIVENESS MUST BE MAINTAINED

"If a war breaks out between the two major blocs, there is a high probability the first bombs will fall in middle Europe. This is why we believe civil defense is an excellent program for us. Having a first-rate program is the only way we can go on with our lives in this age of threat and anxiety."

Summary

In summary, the Swiss civil defense system is unique. It is characterized by relatively high numbers of shelters and expenditures for its civilian population, provisions for a broad spectrum of care in the shelters, heavy involvement of the population in civil defense activities, and openness in dealing with civil defense issues.

These, and other, features of the Swiss system derive from the nation's active, but neutral stance in world politics and economics. The nation's population maintains actions that are compatible with the belief that war is counterproductive, but that since other nations do not share that belief, and are prone to initiate wars, a high degree of civil defense effectiveness must be maintained to protect the civilian population from the "ripple-effects" of those alien wars.

In the Swiss civil defense system, as well as in that country's belief and value systems, the Swiss offer to the world an example that appears to deserve careful consideration. Two other major components of this system, mandated private shelter building and compulsory civil defense training, will be discussed in the second of this two-part series. As with the components reviewed here, these two programs are an outgrowth of long-standing values and customs.

REFERENCES

[1]Estimates of the 1983 population of Switzerland reported by *The World Almanac and Book of Facts, 1985,* Newspaper Enterprise Association, Inc., New York, N.Y., 1985, p. 584, were 6,463,000.

[2]*Civil Defense (Civil Protection): Figures, Facts, Data: 84/85,* Federal Office of Civil Defense, Berne, Switzerland, FOCD-Info 203.

[3]Walter Murphey, "Attack on Civil Defense," *Journal of Civil Defense,* Vol. XVII, No. 4 (August, 1984), postscript.

[4]*Civil Defense (Civil Protection): Figures, Facts, Data: 84/85,* FOCD-Info 304.

[5]Based on 1984 exchange rates of 2.50 Swiss francs per $1.

[6]Based on an estimated 1984 population of 277,000,000. See *The World Almanac and Book of Facts* for 1979, 1982, and 1984, under "Nations of the World."

[7]*Civil Defense (Civil Protection): Figures, Facts, Data: 84/85,* FOCD-Info 204.

[8]*Ibid.,* FOCD-Info 404.

[9]Hugh R. Wilson, *Switzerland: Neutrality as a Foreign Policy,* Dorrance and Company, Philadelphia, 1974, p. 7.

[10]J. Murray Luck, "Of Men and Arms," *The Stanford Magazine,* Vol. 12, No.3 (Fall, 1984), p. 48.

[11]George Soloveytchik, *Switzerland in Perspective,* Oxford University Press, London, 1954, p. 121.

[12]Luck, p. 51.

Soaring peacetime uses for radiological monitoring can be organized and utilized in helping to gain a capability for wartime radiological monitoring — and thereby make a contribution to deterrence. Oak Ridge National Laboratory scientists Gant and Adler explain how.

RADIOLOGICAL DEFENSE RESOURCES: ASSETS IN PEACETIME EMERGENCIES*

— Kathy S. Gant
— Martha V. Adler

The radiological defense (RADEF) programs‡ were developed to save lives, minimize radiation injuries, and reduce property losses due to radioactive fallout that might result from a nuclear attack on the United States. As such, RADEF is an integral part of the U.S. civil defense program. RADEF systems at the national, regional, state, and local level have been developing the capability to detect, measure, evaluate, and defend against the expected attack-related radiation hazards. These capabilities are supported by trained Radiological Defense Officers (RDOs) and Radiation Monitors (RMs) and radiation detection equipment in each state.

As more radiological materials have found application in power generation, industry, and medicine, the probability of peacetime incidents involving radiation has increased. Planning for accidents at nuclear facilities has been emphasized, and transportation accidents have often posed response problems. Many states have developed plans and chosen organizations to handle the response to incidents involving radioactive materials. The plans and organizations vary from state to state. Often the responsibility is split within the state, with a disaster preparedness group being responsible for planning and managing the response and with another agency, such as radiological health or environmental quality, providing the technical response capability.

The states' development of response capabilities has produced two parallel systems for response — one geared to hazards from nuclear attack and the other geared to peacetime use. The relationship between the two groups is not always close. The RADEF personnel are frequently located in an entirely different agency from the people who are responsible for the technical response to peacetime radiological accident.[1] The Federal Civil Defense Act of 1950, as amended in 1981, allows the funds and resources for attack preparedness to be used in preparing for peacetime disasters to the extent that such use contributes to, and does not detract from, attack preparedness.[2] The Federal Emergency Management Agency's (FEMA's) Integrated Emergency Management System emphasizes the comon capabilities that increase readiness for any kind of emergency. How, then, might the RADEF resources find broader use? People who have been well trained in wartime radiation protection can apply their skills in peacetime emergencies. The state and local RDOs may be able to assist with training, exercises, and emergency responses. On the local level, the civil defense director may already be in charge of responding to peacetime disasters. Radiation monitors trained under the civil defense program are often the same people (policemen, firemen, emergency medical technicians, etc.) who respond to peacetime incidents. They frequently use the RADEF training and instruments to determine whether a radiological hazard exists. Other RADEF personnel could assist in recording and analyzing radiological data. Civil Air Patrol volunteers, who have usually completed the RM's course, as well as the training for aerial monitoring, could serve as monitors or could use their aircraft for surveying traffic, locating accidents, or transporting samples.[1]

The RADEF program has purchased and given a large number of radiation monitoring devices to the states for their use. The most common of these instruments are the CD V-715, an ionization chamber with a maximum range of 500 R/h; the CD V-700, a Geiger-Mueller counter with a maximum range of 50 mR/h; and two, self-reading, pocket, ionization chamber dosimeters, the CD V-742 and the CD V-138, and a charger. The CD V-742 has a maximum reading of 200 R, while the CD V-138 will record exposures up to 200 mR.

The CD V-715 and CD V-742 are designed to measure such high radiation levels or exposures that their use will be limited in peacetime emergency response. The CD V-700, on the other hand, may prove useful if the RADEF-trained responders understand the limitations of the instrument; these meters are already distributed throughout the country. The CD V-700 can measure gamma radiation of appropriate energies and can detect, but not measure, energetic beta radiation. An evaluation of the usefulness of the civil defense ratemeters in responding to various radioactive isotopes has been published by the U.S. Department of Transportation.[3] The low-range dosimeter can be used for

*Research sponsored by the Office of State and Local Programs, Emergency Management Systems Development Division, Federal Emergency Management Agency, under Interagency Agreement No. DOE 40-680-78 and FEMA EMW-E-0447 under Martin Marietta Energy Systems, Inc., Contract No. DE-AC05-84021400. The views expressed are those of the authors and do not necessariy reflect the views and policies of the Federal Emergency Management Agency.

‡Since the completion of this study, the Radiological Defense Program has become the Radiological Protection Program. Radiological Defense Officers are now Radiological Officers.

exposure control if gamma radiation poses a hazard. None of the instruments, however, have the capacity to detect alpha radiation or airborne contamination,[4] capabilities that might be important in responding to radiological accidents. Possible peacetime applications of the instruments, people, and other assets of the RADEF program are summarized in Table 1.

GREATER INTEREST . . . MORE AND BETTER QUALIFIED PERSONNEL . . . MORE FREQUENT EXERCISES

Changes in the RADEF program would make the RADEF resources more useful if a state decides to incorporate them into its peacetime radiological response. RADEF training programs must offer more basic radiation science and must include information on dealing with accidents involving radioactive materials. Civil defense training programs are currently being revised to reflect this need. More versatile instruments and instruction in their use would be helpful. Radiation meters that could detect and measure low levels of gamma radiation as well as the higher levels that might be expected after a nuclear attack would be better for a dual-use program. More, and possibly improved, dosimeters for personal radiation monitoring would be needed because, in a peacetime situation, more care must be given to controlling the low-level radiation exposure of the response personnel.

How would peacetime use of the RADEF resources affect the preparations for their use after a nuclear attack? Most of the people we questioned felt that integrating the peacetime and attack-related response capabilities would strengthen both.

The greater interest in training for response to peacetime emergencies would allow the RADEF program to recruit more and better qualified personnel who would be able to keep their training current through more frequent exercises, refresher courses, and the practical experience gained from actual response activities. At the same time they were being trained for peacetime response, more people would be taught about the effects of nuclear weapons and about how to deal with the radiological hazards weapons can produce. The expanded training and increased general knowledge of radiation would strengthen the program and lead to more visibility and a more professional status for the RADEF personnel. Although fewer people might complete the training because the courses would be longer and more detailed, those who did would be more knowledgeable and better able to assist with crisis training and decision making.

IN FREQUENT USE, THE INSTRUMENTS ARE MORE LIKELY TO BE OPERATING WELL AND TO BE USED CORRECTLY IN THE EVENT OF A NUCLEAR ATTACK.

Dr. Kathy S. Gant

When the radiation detection equipment is in the field and in frequent use, the instruments are more likely to be operating well and to be used correctly in the event of a nuclear attack. Even if no new instruments are acquired, many states can benefit from the use of the existing instruments in peacetime emergency response.

With a broadened RADEF program, coordination among the different state agencies involved with radiological protection would probably improve because of more frequent peacetime interaction. The civil defense organizations in many states have already benefited from the increased interagency contacts that have resulted from emergency planning for the areas around nuclear power plants. Good working relationships are a great advantage in a crisis.

Martha V. Adler

It is possible that allowing the state RDO to become more involved in planning for peacetime incidents could limit the time available to do the attack-related planning. The duties of the state RDO are determined by the management of the agency in which he or she is located. But as long as FEMA controls the funding for the RDO, it should be possible to specify the attack preparedness functions that must be included in the RDO's duties. The independence of the state in determining the appropriate peacetime use of the RDO must be maintained.

Although the details of a dual-use RADEF system and its optimum use by each state are still being worked out, the advantages of integrating the two response systems far outweigh the disadvantages. □

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TABLE 1

Possible Applications of RADEF Capabilities to Peacetime Radiological Accidents

RADEF Capabilities	Fixed Nuclear Facilities	Transportation	Nuclear Weapons[a]	Other
Shelter Monitoring	Some shelters might serve as congregate care centers for evacuees Little application for shelter instruments Use of trained monitors	Some shelters might serve as congregate care centers for evacuees Little application for shelter instruments Use of trained monitors	Use of trained monitors	Use of trained monitors Possible applications of shelter instruments in high gamma radiation fields
Radiological Monitoring for Emergency Workers	Use of trained monitors (normally emergency service workers) Dispersed instruments, including CD V-700 and sometimes low-range dosimeters, can be used	Use of trained monitors (normally emergency service workers) Dispersed instrument sets, including CD V-700, can be used	Use of trained monitors (normally emergency service workers) Modified or non-standard instruments with alpha capability may be of some use	Use of trained monitors (normally emergency service workers) Dispersed instrument sets, including both CD V-715 and CD V-700, can be used
Monitoring and Assessment	Use of trained monitors and personnel to assist in data analysis and assessment Use of resources of Emergency Operating Center Access to communications systems Limited use of CD V-700 survey meter Aerial survey of traffic flow or aerial courier service	Use of trained monitors Access to communications systems Limited use of CD V-700 survey meter Aerial survey of remote accident sites or traffic flow; aerial courier service	Use of trained monitors Access to communications systems Aerial survey for accident involving downed plane	Use of trained monitors Access to communications systems Analytical assistance Aerial monitoring above high gamma radiation fields
Radiological Decontamination and Countermeasures	Use of personnel trained in decontamination and countermeasures	Use of personnel trained in decontamination and countermeasures	Use of personnel trained in decontamination and measures	Use of personnel trained in decontamination and countermeasures

[a]Nuclear weapons accidents may involve a chemical explosion that spreads radioactive materials over an area, but no nuclear detonation occurs.

REVIEWS

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING PROGRAMS by Dr. Leon Goure. Order from U.S. Dept. of Commerce, National Technical Information Service, Springfield, Va., 22161, Attn. Sales Dept. Report ADA-144834. Price $13, 116pp. (Final report prepared for FEMA by Center for Soviet Studies, Science Applications, Inc., McLean, Va., Aug., 1984.)

— Reviewed by Dr. James M. Ridgway

This report should be read and weighed by legislators working on civil defense matters, and by the planners and managers of the national CD program in the U.S. It is a "buy" for local and State directors who need material for speeches and with which to update "strategic briefings" in instructional programs.

Russia has 273.8 million people. Of these 160 million are required to take annual civil defense instruction. The effort uses at least 250,000 part-time instructors. The program has been going since 1955 and is now in its eighth revision or modification.

Editor's note: *Soviet Civil Defense Public Instruction and Training Programs* was reviewed in the Journal's February issue by Dr. Max Klinghoffer, a physician. A different slant on this important volume — which it richly merits — is presented in this second review requested of and received from educator Dr. James M. Ridgway. It underlines clearly the major emphasis placed by the USSR on civil defense education and its uncanny neglect in the United States.

The Soviet CD public instruction program has 3 major prongs. First, instruction is incorporated into the school curricula. Second graders get 5 to 8 hours; fifth graders get 15 hours. Freshmen and sophomores in high school get a total of 32 hours more. Students in technical schools get 32 hours and those in universities get 40 hours. This is supplemented by practical training in summer camps for the youngsters.

Second, workers in offices, plants, and enterprises get a minimum of 20 hours annually on their free time. Instruction is done, or is arranged, by the enterprise management. Third, other adults (retirees and housewives) get 12 hours of instruction in or near their residences. Instructors in this activity come from a variety of organizations. All instruction is reinforced by an extensive mass media campaign.

Content is not based upon any particular attack scenario. Emphasis is upon imperialist weapons of mass destruction — nuclear, chemical, and biological. In addition to protecting self and family, Russian workers are supposed to stay on the job no matter what happens, and the average Ivan is trained to render assistance to damaged areas in a post-attack operational sense. The instruction speaks to all these matters.

The school prong appears to function best. The plant program sometimes falters because workers don't like to take instruction on their own time and managers are more interested in meeting their quotas than in CD. Overall, after 30 years of such instruction, Ivan gets a bit bored.

The report is succinctly written, amplifies and documents the points above, evaluates the programs, and discusses the dilemmas inherent in such a program, and draws some conclusions on what the U.S. can learn from the Soviet efforts.

PREPAREDNESS AND RESPONSE IN RADIATION ACCIDENTS, by Bernard Shleien. Published by the National Center for Devices and Radiological Health (NCDRH), Food and Drug Administration, U.S. Department of Health and Human Services, Rockville, MD 20857. HHS Publication FDA 83-8211. 8½-in x 11-in paperback, 282 pages, indexed. 1983. Order (PB 84-104736) from National Technical Information Service, 5285 Port Royal Road, Springfield, VA, 22161 (ATTN: Document Sales). $23.50, postpaid.

— Reviewed by Kathy S. Gant, Oak Ridge National Laboratory.

There are many Civil Defense Directors who now find that they are "emergency managers". In addition to attack preparedness, they must worry about the nuclear power plant in the next county and radioactive materials being transported through their city, as well as a variety of natural hazards. Bernard Shleien's book will be a great help in understanding and planning a response to an accident involving radioactive material.

There is little information in this book that is new. Shleien's greatest service has been collecting pertinent material (references are given) and putting it into one volume. The book is divided into three parts. The first part deals with emergency planning for radiation accidents and discusses the characteristics of different kinds of accidents. The second section discusses response organizations and how they would function in a radiological incident. Part 3 reviews needed skills.

The discussions in Part 3 are extremely diverse. They include principles of radiation protection, radiation bioeffects, dealing with contamination, radiation monitoring, protective actions, medical response, training and exercises, and public information. Much of this information is also valuable to those worrying about nuclear attack, as the principles of radiation protection are the same.

Shleien includes descriptions of the standard Civil Defense radiation monitoring instruments and gives methods for such procedures as screening for thyroid uptake of radioactive iodine, checking milk for radioactive iodine, estimating contamination from a release, and estimating exposure rates from ground contamination.

In a peacetime accident, many of the measurements and calculations described will eventually be performed by radiological experts from state or federal agencies. There is plenty of information here for radiological "first aid" or for those times when expert help is not available. Subjects, such as the use of anti-contamination clothing, establishment of "hot lines" for contamination control, and medical treatment of victims, are discussed.

Organizations that are developing radiological emergency plans will find much useful information in this book. Samples of recording and re-

porting forms, standard orders, material lists, procedures, and public information messages are given in the appendices. *Preparedness and Response in Radiation Accidents* is a valuable reference for anyone interested in emergency response.

LAW AND THE GRENADA MISSION, by John Norton Moore. Center for Law and National Security and Center for Strategic and International Studies, 1984. 129 pages, $9.45.

— Reviewed by Richard E. Sincere, Jr.

Oddly, the *New Republic,* in its editorial endorsing Walter Mondale for president (October 22), credited Ronald Reagan with invigorating U.S. foreign policy. Reagan, the magazine said, "dispelled the post-Vietnam jinx on the successful use of American military force. The invasion of Grenada not only left the people of that island indisputably freer and safer than they were before the troops landed, it also made the salutary announcement to the world that the United States is once again prepared to use force when it deems the cause necessary and just."

Eighteen months ago, in response to a request for help by the independent states of the Eastern Caribbean and an urgent plea by the head of state of Grenada, the U.S. government deployed its troops to bring an end to an anarchy, rescue American civilians quarantined by a thuggish military regime, and restore peace and security to a small island nation of 110,000 people. In *Law and the Grenada Mission,* Ambassador John Norton Moore, a distinguished professor of international law at the University of Virginia, has compressed the facts and opinion about the case into a slim volume designed to affirm the author's belief in the rule of law as a means to peace, stability, and security.

Even after last December's first free elections in Grenada since Maurice Bishop suspended the country's constitution in 1979, Americans draw bizarre analogies to the Soviet invasion of Afghanistan five winters ago or of Czechoslovakia in the spring of 1968. The differences are numerous, as Ambassador Moore shows. We all know that after five years of occupation, Soviet troops are still engaged in combat and terrorism in Afghanistan; U.S. combat troops left Grenada in December 1983. The Soviets invaded Afghanistan to replace a government which the Kremlin felt it could no longer adequately control; the United States and the Eastern Caribbean democracies acted to restore order in a country that had no functioning government. Afghan refugees continue to crowd neighboring states, such as Pakistan; today refugees from the Bishop regime are able to return home to Grenada with a sense of honor and optimism for the future.

Ambassador Moore notes: "The Soviet action in Afghanistan is completely counter to self-determination for the people of Afghanistan and can never permit free elections or other forms of political freedom." The Soviets claim that the Afghan people, by implementing a Marxist revolutionary system, have made the doctrine of self-determination no longer relevant. In contrast, "91 per cent of the people of Grenada welcomed the Organization of Eastern Caribbean States mission, 76 per cent said they believed Cuba sought control of their government, and the OECS states are pledged to free elections."

The "Brezhnev Doctrine," which undergirded the 1968 Soviet invasion of Czechoslovakia, states that once in the socialist camp, no nation may leave it. Moore calls it "a blatant violation of the non-use of force, self-determination, and human rights provisions of the United Nations Charter." Unlike Grenada — where the people praised the rescue mission led by the U.S. military — "in no country where the Brezhnev Doctrine has been applied have the people who lived there welcomed its application."

The comparisons of these events shed light on a statement made by U.N. Ambassador Jeane Kirkpatrick in another context. At a dinner in 1983 honoring Polish labor leader Lech Walesa, she said: "Though Marxism itself had some roots in the European liberal socialist tradition, Marxism-Leninism and Soviet state power and the political organization ruled in their name are to the liberal-democratic tradition as antithesis is to thesis. Marxism-Leninism does not incorporate either the theory or the practice of liberalism, democracy, nationalism, or socialism; indeed, it denies all the essential elements of Western liberal-democratic, democratic-socialist, tradition." In short, there is no respect for law, international or otherwise, in the Marxist-Leninist order, unless it furthers the cause of Communist expansion. Thus, there are no moral or ethical restraints to prevent more numerous and more brutal takeovers of small but strategically placed nations like Grenada, Nicaragua, or Vietnam.

In his monograph, John Norton Moore furnishes the documents which make the legal case for U.S. participation in the Grenada mission. Among them are a letter from Sir Paul Scoon, governor-general of Grenada, to the prime minister of Barbados, formally but diplomatically requesting assistance "in stabilizing this grave and dangerous situation;" the statement by the Organization of Eastern Caribbean States explaining the decision to take military action "to remove this dangerous threat to peace and security"; and statements by President Reagan and Prime Minister Eugenia Charles of Dominica announcing the action after it had taken place.

In an editorial the day after the successful invasion, the *New York Times* challenged the legal basis for the U.S. participation, saying that Secretary of State George Shultz "strained the language" of the OECS treaty and that the law binding on the U.S. was in fact the 1947 Rio Treaty. Yet Professor Moore amply demonstrates that the U.S. role was "in full accord with the United Nations, OAS, and OECS Charters and United States national law. Most importantly, by serving human rights, self-determination, and international peace and security, the mission serves the core purposes of these great Charters."

If the lessons of Grenada still need to be studied, this book is a good

REVIEWS (Cont.)

place to begin the examination. History will show that the prompt legal action taken in October 1984 was a blow struck for freedom and against the American malaise of the past decade.

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Richard Sincere, a graduate of the School of Foreign Service at Georgetown University, writes from Washington on world politics.

INDIVIDUAL CIVIL DEFENSE FOR NUCLEAR WAR, by Michael Wilhelm. Published by Seahawk Civil Defense Company, 236 South Rainbow Blvd., Suite 102, Las Vegas, Nevada 89128. 17 pages. $3.00.

— Reviewed by Betty Nice

If the characters personified in the nuclear horror movies, *The Day After, Testament* and *Threads* had had access to a copy of Mr. Wilhelm's pamphlet (its 17 pages including references and order forms can hardly be called a book) their chances for survival would have been better. It tells you in a nutshell, in easy to read language, what could happen and what to do about it. This is the type publication that should be published and promoted by a government or altruistic agency for FREE distribution through post offices, schools, libraries and other public distribution points. If your life is at stake, it's worth $3.

PORK BARREL — The Unexpurgated Grace Commission Story of Congressional Profligacy, by Randall Fitzgerald and Gerald Lipson. Published by Cato Institute, 224 Second Street, Washington, D.C. 20003. 116 pages, $7.95.

— Reviewed by Don Hanks

The celebrated *Grace Commission Report,* reviewed by Walter Murphey in the February *Journal of Civil Defense,* was published with the names of the wastrels deliberately left out. The censorship was obviously pressured by sundry Senators and Representatives, and perhaps by a profligate agency head or two.

Two of the commission's numerous investigators have corrected the omission. Messrs. Fitzgerald and Lipson, apparently as permitted under a pre-employment agreement with the commission's editors, exercised their right to tell the full story as they perceived it. So they wrote *Pork Barrel* wherein they named Congressional names and disclosed previously unpublished details of major infractions.

Both co-authors are former newsmen, one a reporter for Jack Anderson who revealed recent wastes by the FEMA leaders and was uncovering spectacular profligacies long before the Grace discoveries.

Old-timers in civil defense, especially former employees of FEMA's ancestor agencies, will recognize some names. For instance, the authors talked to the Department of Energy's assistant secretary for administration, Bill Heffelfinger, who was federal CD's director of administration in the 1950's, and they quoted Alabama Congressman Jack Edwards who said Secretary McNamara's plan to close some southern military bases in the 1960's was a conspiracy "to disarm the nation unilaterally." Edwards' Mobile office manager later became director of FEMA's Region 4 at Atlanta.

Anyone who thirsts for more names and details can order *Pork Barrel* from the Cato Institute, a research and publishing agency supported entirely by contributions and sales of its publications. The book can probably give you more information than you need to know about federal waste and who is to blame.

GUIDE TO COPING WITH NUCLEAR WAR, by Richard F. Vance. Published by Vantage Press, Inc., 516 West 34th St., New York, NY 10001. 152 pages. $10.95.

— Reviewed by Robert Kohler.

A timely and easily read book that brings back memories of the old OCD "Radiological Monitoring for Instructors" and "Radiological Defense Officers" courses.

The book contains nothing new or startling to those who have been in the "business" since the early 60s, but I am sure that it is reassuring to others whose knowledge of these matters comes only from the *opinions* of the anti-nuclear claque that monopolize what has appeared in our news media for so many years.

The *Effects of Nuclear Weapons* edited by Sam Glasstone presents the same technical material but in greater detail than Vance.

However, great detail is not necessary to achieve the stated objective of this book, to provide "the means of independently coping with a nuclear catastrophe".

Vance does not dwell heavily on radiation measuring instruments and their use. As the existing stocks of civil defense instruments becomes older, they become less reliable, fewer in number, and tend to be concentrated in central locations unavailable for quick use. The instruments themselves are well designed and well built, but time and neglect take their toll as they do with those who have been trained in their use.

Little mention is made of local civil defense. In most cases, these agencies would be delighted (even flattered) to furnish assistance in the form of publications, training, and even instruments under certain conditions.

Current wisdom has it that surviving a nuclear war is impossible. Those who understand nuclear weapons know that such a defeatist attitude is nothing but a means of soothing ones conscience while doing nothing to solve the problems nuclear war would bring.

Granted, a nuclear war would be devastating to our way of life but it would not be the end of the world for mankind.

Hopefully, Vance's book will help re-kindle interest in this vital area and will motivate people to learn enough about the subject to replace often political *opinion* with a little *fact.*

THE SOVIET ARMED FORCES: A HISTORY OF THEIR ORGANIZATIONAL DEVELOPMENT (A SOVIET VIEW), by S. A. Tyushkevich (and others), Moscow, 1978. Published under auspices of the U.S. Air Force. Translated by the CIS Multilingual Section, State Department, Ottawa, Canada. For sale

by Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 508 pages. $14.

— Reviewed by Don Hanks.

Military types who are professionally interested in Russian military history, and particularly those who want an authentic Soviet view of Russo-American relations from 1917 to 1977, will welcome this Canadian translation of a Russian military manual just published by the U.S. Air Force. It is volume 19 in a series of translations of Russian writings on military and political thought.

Americans who are into civil defense, however, will find little in it to serve their special interest. The book, in fact, dismisses civil defense in a single paragraph noting its entrustment "to special command and control elements" designated "the Civil Defense Force" which "consists of military units, non-militarized formations, and various establishments (medical, municipal, and so forth) requisitioned to perform special tasks."

Russians who want details of their passive program probably study an earlier manual, *Civil Defense,* which purportedly provides an overview of the civil defense subject. As the tenth in the Air Force's 19-volume series, that too is available from the GPO at Washington (at $7, which is half the price of the just released history).

Readers who are deeply concerned both with passive and active defense will encounter an immense body of information in the two books.

THE HEALTH PHYSICS AND RADIOLOGICAL HEALTH HANDBOOK, compiled and edited by Bernard Shleien and Michael S. Terpilak. Published by Nucleon Lectern Associates, Inc., 3414 First Avenue, Suite 7, POB 430, Olney, MD 20832. 8½-in x 11-in paperback, punched for three-ring loose-leaf binder, 460 pages, indexed. $36 (includes shipping and handling within continental U.S.), binder available for $10.

— Reviewed by Carol D. Berger and Kathy S. Gant, Oak Ridge National Laboratory.

For many years, *The Radiological Health Handbook* (published by the Bureau of Radiological Health) has been almost standard equipment for the practicing health physicist. Often used, but seldom remembered, physical constants, equations, rules of thumb, etc., are available in one volume. However, to use this handbook efficiently, one needs to be familiar with its unusual format and organization. Additionally, some needed information, such as regulations for transporting radioactive material, is missing.

Now Shleien and Terpilak, former employees of the Bureau of Radiological Health, have made a valiant attempt to make a more comprehensive compilation of the available health physics information. Their new volume, *The Health Physics and Radiological Health Handbook,* is only two pages longer than the old handbook, but it omits the 200 pages excerpted from *Table of the Isotopes* (C. M. Lederer, J. M. Hollander, and I. Perlman, 6th Ed., John Wiley and Sons, New York, 1967).

Instead, the new book contains chapters on radiobiological data (health effects, risks, metabolic information, etc.), shipping of radioactive materials (packaging, radiation limits, accident call lists, etc.), nonionizing radiation (ultrasound, ultraviolet light, lasers, etc.), information useful for estimating environmental exposures from a radioactive plume, and more. Other information found in the previous handbooks (rules of thumb, expanded radiation protection guidelines, interactions of radiation with matter, etc.) is still included.

There is little information specifically on nuclear weapons fallout in the handbook, but the included data, such as that on shielding, are applicable regardless of the source of the radioactive material. The newer information related to emergency preparedness would be useful to civil defense personnel with responsibilities for response to peacetime radiological emergencies. The glossary and list of useful references contained in this volume might also come in handy for these users.

The bad news is that information in this handbook is still arranged in the same awkward, difficult-to-locate format as the older handbook. (It took one of the reviewers over five minutes to locate all of the information needed to do a simple calculation of the internal dose resulting from inhalation of a medical isotope, because the needed tables and equations were scattered through four chapters.) Users of the book should review it thoroughly and mark the frequently-used material. The loose-leaf format might make it easier for the user to index.

The new handbook would benefit from the omission of the confusing listing of conversion factors and the correction of a significant number of typographical errors. The publisher plans to issue supplements to the volume, and the editors encourage the users to identify omissions and errors and provide suggestions for additional material.

The Health Physics and Radiological Health Handbook contains just about "everything you wanted to know about health physics" between its covers; however, this is not a textbook. It is a reference volume for someone with a basic understanding of the material and its proper use.

REFUGEE — U.S.A. (Wild Plant Food), No. 3 in "The Civilian Survival Series." Published by Survival Ink, 914 Pinehurst Dr., Arlington, TX 76012. Paperback, 8½-in. format. 100 pages, double-column manuscript form. 1985. $10 (includes postage and handling — in Texas add 44¢ tax).

— Reviewed by Kevin Kilpatrick.

Richard Oster's third book in his survival series zeroes in on a full-blown study of how to obtain food from *wild* plants in the forests, prairies and mountains (and deserts).

Knowledge in this field hardly needs to be emphasized as important to people who may suddenly be deprived of normal sources of food.

What it takes is prior assessment of the need in order to be armed with the art (or science) of evaluating nature's earth cover as food. A lot of it is definitely *not* food. Proper selection is vital to survival.

YOUR CONTACTS WITH YOUR CONGRESS *COUNT*!!!!!!!

(The March *TACDA Alert* and the Spring 1985 DDP *Triage* carried this appeal to Congress. We publish it once more because *THERE IS STILL TIME.* Act without delay!)

Messages by letter, telegram, telephone and personal visits to your representatives and senators in Congress and to key committee members (see lists below) are vitally important *now*. Following is a suggested message, although it is recommended that you use your own words and context, be brief and to the point. Include committee or subcommittee positions in address where appropriate.

THE HONORABLE _____ (SENATOR OR CONGRESSMAN FROM _____)
UNITED STATES SENATE, WASHINGTON, D.C. 20510 — OR UNITED STATES HOUSE OF REPRESENTATIVES, WASHINGTON, D.C. 20515.

AT A TIME WHEN, IN THE INTERESTS OF NATIONAL AND INDIVIDUAL SURVIVAL, FUNDS FOR CIVIL DEFENSE SHOULD BE SHARPLY *INCREASED* OMB HAS PROPOSED THEY BE *DRASTICALLY CUT.*

YOU ARE URGED TO ANSWER THE EXPRESSED CONVICTIONS OF AMERICANS, TO IMPLEMENT BASIC CONSTITUTIONAL GUARANTEES AND TO CONTRIBUTE TO AMERICA'S ABILITY TO RIDE OUT THESE HYPERCRITICAL TIMES BY ACTIVELY SUPPORTING ADEQUATE FUNDING FOR MEANINGFUL CIVIL DEFENSE MEASURES SIMILAR TO THOSE IN COUNTRIES ALERT TO SURVIVAL PROBLEMS (e.g. THE SOVIET UNION, SWEDEN, SWITZERLAND, CHINA AND MANY OTHER COUNTRIES) — AND SIMILAR TO THOSE MEASURES PROVIDED UNITED STATES LEADERSHIP ELEMENTS.

PATRIOTISM AND HUMANITARIANISM AND COMMON SENSE DEMAND POPULATION PROTECTIVE MEASURES (ACTIVE AND PASSIVE) AS AN IMMEDIATE AND SUSTAINED NUMBER ONE PRIORITY.

WITHOUT RESERVE, WE HOLD THAT FULL ATTENTION TO NATIONAL SURVIVAL AND COMMUNITY AND FAMILY PROTECTION TAKES PRECEDENCE OVER ALL OTHER MATTERS.

RESPECTFULLY,

The above telegram was signed by TACDA President Charles E. Badley and presented to the "Dellums" Subcommittee on March 6, 1985.

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Floyd Spence (R-SC)
John M. Spratt, Jr. (D-SC)
Samuel S. Stratton (D-NY)
Bob Stump (R-AZ)
G. William Whitehurst (R-VA)

TOO GOOD TO FILE

DEFENSE: A "MORAL RENOVATION"

The national debate currently raging over the shift in national strategy away from offensive "retaliatory only" systems towards a defensive strategy, which, in the words of President Reagan, in March, 1983, would "save lives, rather than avenge them", has proponents and opponents sharply divided.

Opponents fear the defensive shift will "destabilize" the strategic balance they perceive as being adequate for deterrence; would create a "new round in the offensive arms race", and "preclude any chances of reaching arms control agreements with the Soviets". Proponents believe the shift is a long overdue recognition of a "defensive gap" in an already destabilized offensive balance, which had been overlooked by U.S. arms controllers and strategic planners alike. Failure to address this "defensive gap" is in itself destabilizing, and commits us to a never-ending, offsetting-offensive posture that makes future arms control agreements more difficult to negotiate and ever more dangerous to conclude. In addition, it is argued that in "proposing what the laws of warfare and longstanding, internationally recognized traditions of population protection have sought to promote", the renewed emphasis on active and passive defenses constitute a "moral renovation of American policy".

During the period of "Mutual Assured Destruction" (MAD), and supposedly adequate arms control treaties, the United States deliberately and *unilaterally* divested itself of air defenses, missile defenses AND civil defenses while building an overwhelmingly offensive strategic force structure. This over-reliance on offensive systems can be viewed as an aberration of the *fundamental principles* of arms control which regard *civilian* protection as the *first moral obligation* of any government.

[A quotation from an article by John T. Bosma points out that "active and passive defenses for protecting populations and national territories are very much encouraged if not required, by customary international law, customary state behavior, and formal laws of warfare such as the 1977 protocols to the 1949 Geneva Conventions." Bosma writes that even the Soviets proposed limiting offensive weapons and accenting defense.]

To this day the Soviet Union still adheres to its commitment to a comprehensive, offensive-defensive arms strategy. It has never wavered. Development *and* deployment of both active and passive defenses continue intensively, while at the same time attempting to prevent and delay similar systems in the United States through the employment of disinformation and propaganda, and the manipulation of various "peace groups", some of whom may be unsuspecting. Sophistication of Soviet methods is such that it is not easy to separate fact from fiction and truth from propaganda . . .

— from January 1985 issue of *HUMINT Network Report*, publisher and editor: N. D. Greene. (12077 Wilshire Blvd, Suite 635, West Los Angeles, CA 90025.)

TO AMERICA WITH LOVE

When a country is selected for attack, we must first set up before the youth of that land a mental barrage which will forever prohibit the possibility of that youth being moulded into an armed force to oppose our invading armies. This can most successfully be done through creating "war horror" thought and by teaching of pacifism and non-resistance. It will be found that powerful organizations of non-communists can be created for this purpose particularly with the aid of liberal minded ministers, professors and lecturers.

— Lenin

UPCOMING

Apr 11-14	Stress & Behavioral Emergencies Conf, U. of MD Baltimore Co. Campus, Contact: Jeffrey T. Mitchell, Ph.D Em Health, Services Dept., U. of MD Baltimore Co. Catonsville, MD 21228, (301/455-3223).
Apr 23-24	Div of Em Gov, 19th Annual Governor's Conf on Disaster Preparedness, Concourse Hotel, Madison, WI, Contact: Carol Z. Hemersbach, PO Box 7865, Madison, WI 53707.
Apr 28-May 1	DEMEX 85 World Congress & Exposition for Disaster & Emergency Management, Indiana Convention/Exposition Ctr., Indianapolis, IN. Contact: Patrick Carr, 101 N. Seventh Street, Louisville, Kentucky 40202.
Apr 29-May 1	Texas Emergency Medicine Symposium, San Antonio Convention Center, San Antonio, TX. Contact: Ruth Hargrove, Texas Chapter, ACEP, PO Box 610717, Dallas, TX 75261-0717.
May 8-9	1985 Industrial Emergency Preparedness Conf, Mobile, AL, Contact: Rose Young, Dir., Mobile Co. Civil Defense, 348 N. McGregor Ave., Mobile, AL 36608.
May 11	CIVIL DEFENSE EXPO 85, North Shore Civil Defense Council and Massachusetts Civil Defense Agency, Topsfield Training Academy, Topsfield, MA 01983, Contact: Ken Murphy (617/887-5775).
May 16-17	Fourth Annual ICAF Mobilization Conf, Industrial College of the Armed Forces, National Defense U., Fort McNair, Washington, DC., Contact: Office of Academic Administration, Industrial College of The Armed Forces, Washington, DC 20319.
May 21-24	University Association for Emergency Medicine, Fifteenth Annual Meeting, Radisson Muehlebach Hotel, Kansas City, Missouri, Contact: Judith E. Tintnalli, 900 W. Ottawa, Lansing, MI 48915, (517/485-5484).
May 21-24	Intelligencia 85-Intl. Congress & Exhibition, Paris, France. Contact: Charles A. Pratt, SCS Exec. Dir., PO Box 2228, LaJolla, CA 92038, (619/459-3888).
May 21-24	EMERGENCY 85, Washington, DC. Contact: Research Alternatives, Suite # 31, 966 Hungerford Dr., Rockville, MD 20850, (301/424-2803).
May 29-Jun 2	8TH ANNUAL NATIONAL EDUCATION CONFERENCE (Nat. Assn. of Em. Med. Technicians; Nat. Soc. of EMS Administrators; Nat. Assn. of EMT Instructor/Coordinators; Nat. Soc. of EMT-Paramedics), MGM Grand Hotel, Las Vegas, NV. Contact: Nat. Assn. of Em. Med. Technicians, PO Box 380, Newton Highlands, MA 02161-0380, (617/894-7179).
Jun 5-8	National Association for Ambulatory Care Conf, Hyatt Regency Embarcadero Center, San Francisco, CA. contact: NAFAC, 5151 Beltline Rd., Suite 1017, Dallas, TX 75240.
Jun 6-8	Ohio EMS Combined Assembly, Hyatt Regency Hotel, Columbus, OH. Contact: Ohio EMS Combined Assembly, 1395 E. Dublin Granville Rd., Suite 310, Columbus, OH 43229.
Jun 10-14	Planning for Nuclear Emergencies, Harvard School of Public Health, Boston, MA. Contact: Office of Continuing Education Harvard School of Public Health, 677 Huntington Ave, Boston, MA 02115, (617/732-1171).
Jul 12-14	1985 Clinical Conference on Pre-Hospital Emergency Care (Clincon '85): Hyatt Orlando, Orlando, Florida. Contact: REGISTRAR: 600 Courtland Street, Suite 420, Orlando, FL 32804, (305/628-4800).
Jul 22-Aug 2	2-Week Multiprotection Design Summer Institute, for Architectural and Engineering Faculty, NETC, Emmitsburg, MD. Five Courses offered: Wind Engineering, Flood Protective Designs, Earthquake Protective Designs, Designing Building Fire Safety, and Fallout Shelter Analysis. Application deadline: May 10. Contact: Shelter-Rad Technology, Inc., 2000 Century Plaza, Columbia, MD 21044. (301/596-6777).
Nov 2-3	DOCTORS FOR DISASTER PREPAREDNESS THIRD ANNUAL SEMINAR, LOS ANGELES, CA. HYATT AT LOS ANGELES AIRPORT, CONTACT: DDP, PO BOX 1057, STARKE, FL 32091. (904/964-5397).
Nov 3-6	THE AMERICAN CIVIL DEFENSE ASSOCIATION SEMINAR, HYATT AT LOS ANGELES AIRPORT, LOS ANGELES, CA. CONTACT: TACDA, PO BOX 1057, STARKE, FL 32091. (904/964-5397).
1986	
Mar 4-7	Third Annual International Automobile Extrication Competition and Learning Symposium, Application deadlne: September 4, 1985. Contact: EXTRICATION 86, c/o Orange Co. Fire Dept, 4700 Lake Underhill Rd., Orlando, FL 32807. (305/273-9001).
Apr 24-30	PARISFEU INTERSECURITE: International security and safety conference, Le Bourget Exhibition Park, Paris, France. Contact: Comité des Expositions de Paris, 7 rue Copernic, 75016 Paris, France.

MARKETPLACE

DO YOU HAVE SOMETHING YOU WANT TO SELL OR BUY????
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SURVIVAL HOME — new 83 NW Wisconsin attached fallout shelter & garage. Hunt, fish, trap. Big garden. On 5 acre wood. (715/635-8458 even.) $48,500. Box 27, Spooner, WI 54801.

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"YOUR KEY TO SURVIVAL" — 20 minutes, ½-in. VHS or Beta. Rental: $10 per week (from date of arrival to date of reshipment). Purchase: $52. Narrated by disaster-response veteran Bob Blodgett (METTAG originator). A close-in look at METTAG utilization in disaster, details of application, and transport techniques.

(2)
"MANAGING MASS CASUALTY INCIDENTS" — 30 minutes, ½-in. VHS or Beta or ¾-in. Rental: $10 per week (from date of arrival to date of reshipment). Purchase: $52. Directed and narrated by prominent disaster planning consultant Roger E. Herman. Compares good and bad disaster response methods, emphasizes proper management procedures, effective teamwork, and METTAG's role in handling mass casualties effectively.

From: METTAG, PO Box 910, Starke, FL 32091 (Phone: 904/964-5397).

INDIVIDUAL CIVIL DEFENSE FOR NUCLEAR WAR. Send $3.00 for booklet to Seahawk Civil Defense Co., 236 So. Rainbow Blvd., Suite 102, Dept. JCD, Las Vegas, Nevada 89128.

Storm Shelters. 10 years experience. Steel construction. Completely assembled. Four sizes. Dealer inquiries invited. Midwestern Shelters, Inc. Box 362D, Chanute, KS 66720 (316/431-9661).

"My Administration firmly believes that the purpose of our country's defense capability should be to protect the lives and property of the American people."
— President Ronald Reagan

LATELINE ....

TACDA ON "THE HILL" — Walter Murphey

ON MARCH 6 TACDA'S WASHINGTON DC CHAPTER -- IN CONCERT WITH THE AMERICAN SECURITY COUNCIL AND THE AMERICAN STRATEGIC DEFENSE ASSOCIATION -- appeared before the House Subcommittee on Military Installations and Facilities to protest the proposed 40% cut in the civil defense budget (see: Capital Commentary, page 5). Although time permitted submission of written testimony only, TACDA's Richard Sincere presented hard-hitting evidence for restoration of the cuts. Bolstering Sincere's appeal were telegrams from TACDA President Charles Badley, Immediate Past-President Frank Williams, TACDA Board member Eugene Wigner and others.

WITH THE FAILURE OF PAST "POLITE REMINDERS" AS STERN OBJECT LESSONS pro-CD evidence was forthright and cutting. "The significance . . . of protective measures is broadly and greatly underestimated," said Wigner's telegram. Badley's strong message is reprinted for Journal readers on page 24. Williams could hardly be accused of being overly gentle (see his telegram below in column 1).

AT A PRESS CONFERENCE HELD IN CONJUNCTION WITH THE HEARING, Sincere said: "The Reagan Administration is violating its own moral principles." At the hearing itself DOD's General Richard Stilwell called for a revitalized civil defense.

ALL THIS POINTS TO an increasingly positive approach to the need for a solid homeland preparedness -- a no-holds-barred posture vis-à-vis those who would, innocently or not, trade American security for social handouts and eventual foreign domination.

WILLIAMS: "FRUSTRATION, RESENTMENT AND ALARM"

In support of the TACDA/ASC/ASDA initiative before the Dellums Armed Forces Committee Subcommittee on Military Installations and Facilities, immediate past-president Frank Williams sent the following telegram to spokesman Richard Sincere:

The American people have incessantly and overwhelmingly shown support for civil defense protective measures. Government failure to act meaningfully in their expressed vital interests is unforgiveable display of contempt. This condemning of citizens to nuclear hostage roles while providing political and military leadership with hardened attack refuges is epitome of blind irresponsibility. Urge you to convey to membes of armed forces subcommittee the sense of frustration, resentment and alarm I and other Americans feel at failure of Congress and the administration to discharge this primary duty of government. Urge subcommittee to act now to salvage this bureaucratic and political nonfeasance.

Civil defenders and survivalists can (they must!) work hand-in-hand. Survivalist James C. Jones proves it here.

OPERATION GREEN SHIELD

"TOGETHER WE CAN SAVE MORE"

— James C. Jones

A clear demonstration of what can be accomplished when a dedicated civil defense organization and a responsible survivalist group work together was provided at "Operation Green Shield" conducted at Indiana's Tippecanoe River State Park last September. The North Central Region Group of Live Free, Inc.* a national not-for-profit survival education and service organization has been conducting educational programs at the Tippecanoe River State Park for 12 years.

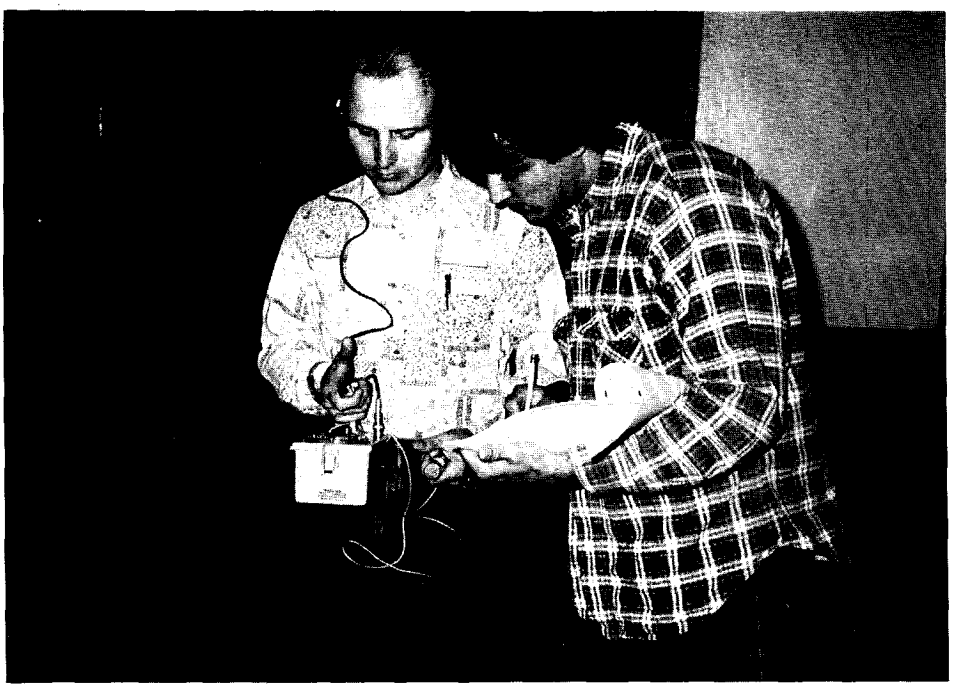
At "Operation Lifesaver" in April of 1984 it invited the local Pulaski County Civil Defense organization to make a presentation. After the presentation there followed a lively and candid dialogue among survivalists and the local civil defense officials. In the course of the discussions a number of points became clear to everyone:

1. Though our approaches and priorities may not be identical survivalists and civil defense proponents have the same objective: saving lives in the event of a national or regional catastrophe.
2. Survivalists have a sincere interest in being able to help others.
3. Survivalists constitute a source of competent and highly motivated civil defense students.
4. Civil defense training would significantly improve survivalists' chances of survival.
5. Survivalists, being trained, equipped and supplied, complement and support local civil defense operations.

SURVIVALISTS . . . COMPLEMENT AND SUPPORT CIVIL DEFENSE OPERATIONS.

Since Pulaski County is the designated host area for many of the survialists the Pulaski County Civil Defense organization conducted a FEMA Radiological Monitoring Course as part of Live Free's September exercise.

The overall objective of the two-day operation was to introduce participants to the skills necessary for individual family and group survival in the event of a nuclear war or other large scale catastrophe. It was also the intention of the operation that all participants become better able to aid neighbors and the community in the event of catastrophe. The operation was publicized through flyers and a news release. "Operation Green Shield" was open to the public and was attended by Live Free members and guests from six states. Participants were housed in cabins at the park's "Group Camp" facility. Additional training at the park included: Home and Shelter Defense, Pioneer Survival Crafts, Map and Compass practical work



Before participating in Operation Green Shield survivalists go through radiological monitoring training (conducted by civil defense instructor).

*Live Free, inc., 1123 St. Lawrence Ave., Chicago, IL 60628. ("Dedicated to the preservation of life and freedom through survival education and research.")

Camera catches survivalists as they gather for morning briefing prior to a day's field training.

and a demonstration of other nuclear war survival devices and techniques. The operation was covered by television, local newspapers and national radio. The media were able to find little to be critical of.

The objectives of "Operation Green Shield" were accomplished and the region's survival capacity was significantly improved.

Future cooperative operations will include emergency shelter construction practice and decontamination training. The theme of the exercise was "Together We Can Save More." With this goal in mind more communication and cooperation between survivalists and civil defense people should result. This will lead to a stronger national survival potential. □

MORE COMMUNICATION AND COOPERATION BETWEEN SURVIVALISTS AND CIVIL DEFENSE

TV crew films Operation Green Tree group as it watches decontamination demonstration.

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Editorial . . .

WHAT'S GOING ON?

— Sam Cohen

In 1982, a reputable polling organization (Sindlinger & Co.) asked the American people: "Do you believe that the U.S. Government has a responsibility to provide an effective program of civil defense for all its citizens?" Eighty-one percent of those polled answered "Yes".

The same year, the administration proposed to establish a civil defense program based on a crisis-relocation strategy. Plainly implied was that in the event of nuclear war major U.S. population centers would be threatened. The best civil defense strategy would be to evacuate the cities and go to areas not expected to be directly attacked. Here the evacuees could take adequate protective measures. This proposal for disaster preparedness quickly turned into a disaster.

The administration, under fierce attack by Congress and the media, was forced to back away. A ranking Pentagon official sounded like the opposition when he stated: "We do not seek, nor do we believe that it is possible to obtain, levels of protection from the effects of all-out nuclear war that would reduce significantly the unspeakable horror of such an event." Not only was the proposal defeated, but the Congress slashed civil defense funding to a level below what it could have been in the absence of the ill-fated proposal. Today, to all intents and purposes, civil defense is a dead issue. What the American people overwhelmingly wanted their government to provide will not be provided.

In 1983, President Reagan made his famous "Star Wars" speech, in which he held forth high hope that U.S. cities could be effectively defended against nuclear attack. "Would it not be better to save lives than to avenge them?" asked the President. "Are we not capable of demonstrating our peaceful intentions by applying all our abilities and our ingenuity to achieving a truly lasting stability? I think we are — indeed, we must!"

On this high moral plane, the administration proposed a massive research program to explore the Star Wars potential. Predictably, the proposal, known as the Strategic Defense Initiative (SDI), came under intense fire, from essentially the same critics who succeeded in demolishing the administration's civil defense proposal. Thus far, however, they have not been fully successful. But they have forced the administration to fiercely defend its proposal. Very recently, to keep SDI alive, the administration drastically changed its position, as it had done to keep the MX program alive. Now the position is that SDI is not intended mainly to defend U.S. cities because the Soviets do not intend to directly attack them.

On January 17 a letter from Lt. Gen. James Abrahamson, the director of the SDI organization, appeared in the *Wall Street Journal.* Answering the charges that anything short of an impermeable defensive system tends to undermine, not improve U.S. national security, Gen. Abrahamson asserted: "Because the Soviet goal in time of war would be the destruction of U.S. and allied military forces, not population centers, which themselves have little immediate military value, defenses need not be perfect to be highly effective in enhancing deterrence and stability."

WHY DOESN'T THE ADMINISTRATION NOW SET THE RECORD STRAIGHT BY DEFENDING THE CREDIBILITY OF CIVIL DEFENSE . . . ?

Why the administration took almost two years to bring out this fundamental Soviet doctrinal tenet of nuclear warfighting is puzzling. It has been known for many years that the Soviets have no intention of deliberately destroying U.S. cities, which would go completely against the grain of their objectives in the event of nuclear war. For example, in 1967 an article appeared in *Military Thought,* the official journal of the Soviet General Staff, stating: "The objective is not to turn the large economic and industrial regions into a heap of ruins . . . but to deliver strikes which will destroy strategic combat means . . ." The basic Soviet objective in a nuclear war is to spare the U.S. urban population and economy so that they can be harnessed to promote socialism, which has always been the Soviet objective for capitalist countries. They seek to destroy the capitalist system, not the workers and their industries.

Why wasn't this critical factor brought out in 1982, to put civil defense in a rational and credible perspective, to secure the support of Congress? Why wasn't this brought out for the benefit of the American people, to be able to provide them with a truly effective civil defense program they overwhelmingly want? But water over the dam is water over the dam. Why doesn't the administration now set the record straight by defending the credibility of civil defense in the same rational fashion it now defends SDI?

What makes this last question so critical is that we do know that civil defense will be extremely effective in saving American lives if the Soviets don't deliberately try to take these lives. What we do not know is how effective SDI will be. This remains to be seen and it will be years before we know. But on the basis of the moral stance taken by President Reagan — "Would it not be better to save lives than to avenge them?" — the morality of civil defense is clearly more, far more, demonstrable. On this basis, one final question can be asked:

Is it not immoral for the U.S. government not to provide the American people with an effective civil defense? □

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