

The American Civil Defense Association





The American Civil Defense Association

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

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CAPITAL COMMENTARY

NEW YEAR PROJECTIONS

As the year 1982 ended, in Washington the economy and the forthcoming budget battles between the Reagan Administration and the new 98th Congress were the main focus of attention. The lame-duck 97th went home at Christmas time, having socked the President on his national-security nose (after all, he wears three hats; why not three noses?) by withholding production funds for the MX missile. Predictions are that things will get pretty rough on Capitol Hill during the coming year. For one thing, the recognition on all sides that uncontrolled government spending in the past has resulted in runaway inflation, high interest rates, and, ultimately, recession and unemployment has forced politicians to choose between guns and butter. In the past, liberal Democrats, for example, could vote for higher benefits and entitlements and still support a strong national defense. Now, they are being forced to choose sides. The Coalition for Peace through Strength is losing some membership on both sides of the aisle and the Administration is losing even more votes on key defense issues. Unless the economy picks up rapidly, the Administration is facing a deficit approaching \$200 billion. That will make matters even worse.

President Reagan will submit his budget request for fiscal year 1984, which begins next October, to the Congress any day now. But, the content of that budget request is less important these days than it was a few years ago. Administration officials will still defend the budget request before an authorizing committee (Armed Services for defense and civil defense) and deal with a subcommittee of the Appropriations Committee for actual funds. Meanwhile, the House and Senate Budget Committees, relatively recent creations, will fashion a budget based on their own priorities and, once the budget resolution has been passed, it will control what the authorizing and appropriating committees can do. This is the new game in town and, with the deficit mounting, it is the only game in town. Generally, the House Budget Committee has been more "liberal" than the House as a whole. For example, Les Aspin of Wisconsin, a persistent defense critic, has represented the Armed Services Committee on the Budget Committee. Last year, the proposed budget resolution contained a big cut in the President's request for defense spending. However, defense stalwarts, such as Phil Gramm (D-TX), were able to amend the resolution on the House floor. We will find out whether it can be done again sometime in April.

The military services have a great pitch: they are trying to correct for 15 years of neglect during which defense spending declined drastically as a percentage of GNP and as a percentage of the federal budget. (Some conservatives say that resulted from a spending spree on social



welfare and what used to be called "transfer payments", now "entitlements." They don't mention that half the decrease since 1967 has been due to getting out of Viet Nam.) With the President placing the need to rebuild our military capabilities at the top of his priority list, the Department of Defense hopes to repeat the success that resulted in increased defense spending in fiscal years 1982 and 1983. But the road will be rough. The nuclear freeze coalition is on a roll now. They are organized and networked together. Ground Zero will roll into Washington and virtually every city in the land in April (during the budget debate) with FIREBREAKS: A WAR/PEACE GAME. Participants in this educational event will follow the development of a simulated international crisis situation and join a "panel of experts" in giving advice to the decision-makers in the crisis. Civil defenders might enjoy playing along.

Civil defense does not have the pitch that serves the military. Last year's appropriation had about the same buying power as the first appropriation in 1951 and, except for a brief push by John F. Kennedy in the early 1960s, CD has lived that way ever since; that is, barely. Last year, Ronald Reagan acted a bit like Jack Kennedy but he didn't have the Berlin crisis and the Cuban crisis to keep his attention on civil defense. He approved a \$4+ billion, 5-year program that was virtually Jimmy Carter's Program D Prime and then worried about other things while the OMB stretched the program to seven years and connived with the Senate Armed Services Committee staff to limit the authorization to about the same level as the year before. Later, the nuclear freeze movement

PRESIDENT REAGAN HAS NEVER COMMENTED PUBLICLY ON WHAT HAPPENED TO HIS CIVIL DEFENSE INITIATIVE.

reached the House Appropriations subcommittee, where the reduction was confirmed. President Reagan has never commented publicly on what happened to his civil defense initiative.

This year, FEMA will be allowed to once again try to sell the Reagan civil defense initiative. The task will be gigantic and probably impossible without the President's personal attention. OMB won't help and the FEMA leadership is suffering from psychic shock over the savaging of civil defense in the media. The latest thing at FEMA is Integrated Emergency Management System, a close relative of John Macy's comprehensive emergency management, which was a code word phrase for anything but civil defense. The current intent seems to be to attempt to sell the \$4+ billion Reagan initiative not as civil defense but as an integrated assault on all the bad things that can happen to people including nuclear attack and, you wouldn't want to throw the bath water out with the baby, would you? That will go over well with many State and local emergency coordinators but is most likely to result in failure in the Congress.

As the new year begins, there is a persistent rumor in Washington and in Sacramento that FEMA Director Louis O. Giuffrida is leaving the agency to return to California. Of course, that rumor may be on a par with the many others floated in the capital city. Among these others are that Secretary of Defense Weinberger is on his way out due to the Dense Pack disaster and that Senator John Tower (R-TX), who scuttled the civil defense authorization this year, will replace him in the Reagan cabinet.

ACCEPTING OUR NUCLEAR AGE

- Laurence W. Beilenson

The opening words of the 1848 treaty of peace between the United State and Mexico closing the Mexican War are: "In the name of Abrighty Soo Article I provides: "There shall be a firm and university sease between is United States of America and the Mexican Republics of the XXI and however, stipulated: "If (which is not to be experied and which God forbid) war should unhappily break out between her worepublics, they ... pledge ... themselves to observe the lotte hard of the states of the s

The United States should do everything to us power to prevent au war. But if a nuclear war should unhability break out which close then it is the duty of the government of the United States to save of as many Americans as possible by out defense. And since civil defense takes a long time for preparation in the name of God, its duty of our government to begin now

Civil defense is such an obvious necessity for the United States that the idea and its execution should be able to prosper in any climate of opinion. But it has not. Certainly civil defense is not popular among those who most vociferously trumpet our nuclear peril. The leaders of the nuclear peace movement either oppose or are indifferent to civil defense. They assert it is unnecessary For understanding the dual aspects of our age — first as an age in a long succession of ages, and second in its nuclear context — a reflective visit to the Air Force Museum at Dayton, Ohio is an eyeopener. On display is the first aeroplane of the Wright Brothers, using the bicycle chains that were the emblem of their trade. Arrayed in sequence is every Army and Air

together in peace. As the culmination of his tour, the visitor sees, standing like sentinels

the dawn of history mankind has

made small progress in how to live

visitor sees, standing like sentinels at the portal, models of our intercontinental ballistic missiles. The vagrant thought may cross his mind: What price invention? He may wish that human ingenuity somehow had been arrested before it reached this point. Such wishes, however, are vain. With nuclear knowledge in so many heads, there is no way to ban or abolish the weapons nuclear knowledge has created. Were they all demolished, phoenix-like they would rise again.

The visit to the Museum ought to teach an acceptance of our nuclear age. The first step is to understand that our age is only the latest in a long succession of ages since the beginning of history. The advent of nuclear weapons did not alter the ineluctable continuity of our present with the past. Even an optimist must concede that the nature of men and governments has not changed appreciably enough to alter the

... OUR FAILURE TO ACCEPT THE REALITY OF THE NUCLEAR AGE.

and diverts attention from their proposed remedies to bring nuclear peace. Nor has civil defense done much better among our so-called hawks, as our dismal record testifies. The reason for the contradiction between the necessity for civil defense and its absence may be found in our failure to accept the reality of the nuclear age in which we live. That reality consists of the sameness of our age to all others and to its vital difference.

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Force plane since. The Museum is a monument to our material progress.

Pictures along the walls illustrate the four wars the United States has fought since that day in 1903 when the "crazy" — according to the pundits of the time — Wright brothers first flew a heavier-than-air machine. Proud as the visitor may be of the valor and skill of his countrymen, the pictures testify how little advance man has made in sparing his fellowman the curse of war. From major patterns of conduct that governments have pursued throughout the ages.

The nature of governments composed of men has woven patterns which bear heavily on the likelihood of nuclear war. Whatever have been the causes of war, its constant has been its recurrence. Add another pattern to which there is not a single exception to and including atomic weapons: Man has used every type of weapon he has ever devised. The sum predicts nuclear war somewhere sooner or later.

Nobody can say for sure that the first atomic-nuclear war since World War II will be between the Soviet Union and the United States. But as one of the possessors of the two most formidable nuclear arsenals, each seems a probable belligerent.

Those who proclaim the dangers of nuclear war and the necessity of doing something to prevent it are correct in saying that with so many nuclear weapons in existence somebody is apt to use one. War by accident could happen, especially with the short time for reaction, the dangers of launch on warning, and the propensity to error of humans and the machines they manufacture and operate. The so-called firebreak between a Soviet-American conventional and nuclear war is illusory. To suppose that adversaries with deep anomosities will both refrain from using their most effective weapon in a war between them beggars experience. Anything is possible, but it is hardly credible to believe that the Soviets, who emphasize the advantage of a cause that was the length of a treaty between Athens and Sparta ending the first phase of the Peloponnesian War. The treaty banned resort to war by either side and under the treaty Athens and Sparta became allies. Both sides broke the pact almost before the ink was dry. After a cold war of seven years, each resumed open hostilities against the other.

ALL NATIONS HAVE HABITUALLY BROKEN THEIR TREATIES ...

first nuclear strike, would risk being the recipient of one from the United States by failing to hit us first. By our own doctrine of flexible response, we have long announced that we would use nuclear weapons if the allied forces were losing in Europe. The USSR is not likely to conform to our doctrine which confines the war to conventional weapons if the United States is winning and gives us the edge of a first strike if we are losing. Even if we renounced flexible response, the Soviets would not believe us, and they would be justified. In war, promises become scraps of paper.

The USSR has said that it would not make a first nuclear strike, that

... ONLY A MADMAN WOULD START A NUCLEAR WAR. SUCH AN ASSURANCE PREDICTS NUCLEAR WAR.

Our reassurers comfort us that the capability of each side to damage the other creates a situation where only a madman would start a nuclear war. Such an assurance predicts nuclear war. Many crazy rulers have presided over the affairs of nations. In addition to that ilk are the gambling rulers of the type of Napolean III and Kaiser William II, ideologues such as Mao Tse-tung (Mao Zedong), and just plain fools. Any of these types is a candidate for the first to push the button, but the pusher may be a lamb turned lion ---or who knows?

Reading the military, diplomatic, and political history of the world is a melancholy task; for it is an idiot's tale washed with blood and steeped in chicanery. The ideological contest between the communist-ruled states and the coalition led by the United States is not a departure from the sad story; it is an added cause of war. is, it has forsworn first use. The Soviets can enjoy that propaganda value because their ethical standard from V.I. Lenin through Leonid Brezhnev has always affirmed, and still does, that anything which helps communism, including lying is right. In the Soviet lexicon, deceit becomes a virtue if it promotes a communist end.

As a means of averting nuclear war, a quartet of American elder statesmen - George F. Kennan, Robert S. McNamara, Gerald Smith, and McGeorge Bundy --- have urged the United States to join the Soviet Union in a no-first-nuclear-use pledge. At worst such a pledge would be merely a declaration to be abandoned whenever expedient; at best parallel pledges would constitute a treaty. To give the declarations their maximum weight, let it be granted that they are translated into a formal treaty of fifty-years duration. I have chosen fifty years be-

Lenin derided those who believed a treaty would be kept in time of war. He said that a statesman who relied on a treaty was a fool. Without emulating his lack of politeness, he was basically right. It is not only Soviet perfidy that condemns treaties as instruments for our security. All nations habitually have broken their treaties, including the United States from the Revolutionary War to now. Kennan himself put the proposition well in his American Diplomacy 1900-1950 in which he said: "The most serious fault of our past policy formulation [lies] in . . . the belief that it should be possible to suppress the chaotic and dangerous aspirations of governments in the international field by the acceptance of some system of legal rules and restraints.'

Nevertheless, the conventional wisdom is that the best barrier to nuclear war lies in arms-control agreements between the United States and the Soviet Union. With all proper deference to the many distinguished statesmen and members of the Fourth Estate who have articulated such a point of view, it is belied by experience. Strategic arms limitation talks (SALT) were started by President Lyndon B. Johnson, and the first SALT treaties were concluded by President Richard M. Nixon under the sponsorship of Henry Kissinger. That was ten years ago. Are there less nuclear warheads in existence now than then? No, there are more. Has the nuclear strength of the United States compared to the USSR improved from 1972 to 1982? No, it is drastically declined. Why did we allow the deterioration? Because we were victims of treaty-reliance which always has been an occupational disease of statesmen. And since the prevalent opinion in the United States is still suffering from the same malady, we are likely to repeat our error.

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Most of the advocates of armscontrol by treaty say: Of course, we don't depend on Soviet promises; we are too smart for that. We are only for "verifiable" treaties. To be truly verifiable any effective armscontrol treaty would have to provide for an army of Soviet legal spies in in the United States and an army of American legal spies in the USSR with complete access to every installation without notice day or night. The Soviets are hardly likely to agree to such an arrangement. So what the arms-controllers are really putting their faith in is the American intelligence arm. As a tool, intelligence has been almost as untrustworthy as treaties. Despite the many billions we spend on intelligence, we have been regularly surprised by every important event since World War II, which began with our surprise at Pearl Harbor despite our having broken the Japanese code.

This failure of intelligence has not been confined to American intelligence. It has been common to all countries; for intelligence is a guessing game. The ingredients of intelligence are uncertain information plus imperfect analysis, which produces surmises, sometimes correct, sometimes far off the mark.

But, the arm controllers assert, we now have those wonderful eyes in the sky and other national technical means of verification. National technical means of verification are a pig in the poke sold to the American people to justify a trust in armscontrol agreements. Our intelligence failures have continued long after our national technical means of verification were in operation. To discover the failures, one only has to read successive Defense Department Reports which admit previous gross errors, occasionally explicitly; more often by comparison.

We got around the difficulty by tailoring SALT I according to our ability to count rather than to our need to know; by counting silos instead of missiles and warheads. But missiles can be fired from cannisters not housed in silos. The cannisters and the missiles can be concealed underground or even in warehouses above ground. Any honest advocate of arms control must admit that there is no way for us to count missiles or warheads, a count which goes to the very essence of our need to know, not to mention our inability to count cruise missiles, or to measure their range, or whether they are nuclear or conventional.

A verifiable nuclear freeze is a contradiction in terms; for it would freeze — if it meant anything — not only the number of missiles and warheads, which we can't count, but also manufacture, research, and development, which only a knave or a fool would assert are truly verifiable by national technical means of verification.

Not only such enthusiasts for arms control as Herold Willens in California, but organs of opinion that should know better are deluding themselves. Whatever be the form - SALT treaties, freezes, promises of no first use - we are placing our dependence for our survival on two tools which have been thoroughly unreliable throughout history - treaties and intelligence. To compound our error we are dealing with an opponent which regards lying as a virtue and which glorifies and supports deception as an ordinary means of statecraft. The error is doubly compounded when we read the history of diplomacy. The USSR is only magnifying somewhat the conduct of its precursors. Diplomatic history has been a long tale of deceit. And lest we become self-righteous, let us remember that the United States under Dwight D. Eisenhower deliberately misrepresented to the United Nations Security Council our preparing armed bands to invade Cuba, and John F. Kennedy continued the deception. That is not to say that there is no difference between the ethical United States and the USSR. There is. But if we have deceived, if deceit has been customary among all

echoed since by the World Federalists, and more recently by the bestselling author Jonathan Schell. Parenthetically, let me add that my friend David Lilienthal later confessed his earlier error. Even such a professed realist as Professor Hans Morgenthau had a kind word to say for world government to prevent nuclear war. But a world government is still a government. A government is not an abstraction, but an institution run by human beings. and subject to their frailties. Like all governments, a world government might be seized through a coup by a Josef Stalin or an Adolf Hitler, thus producing the possibility of the greatest tyranny and terror yet experienced by mankind.

We need not, however, dwell on the perils of world government, for such a government is an idle dream. The thirteen American colonies were contiguous geographically and united by a common religion and institutions. Their people were mostly from the same stock and all of the same color - except the slaves, which as Alexis de Tocqueville predicted were a future source of conflict. The colonies had a common language, literature, and tradition, and the further bond of a revolutionary struggle successfully waged. But it still took a bloody civil war to seal the Union. The attempt to assimilate to the American federal experience the many guarreling nations of this globe, disunited in all the respects that the thirteen colonies were united, is an exercise in futility.

The underlying mistake of all the remedies to which I have adverted lies in the failure to give proper weight to the word "age" in "nuclear

... IF DECEIT HAS BEEN CUSTOMARY AMONG ALL GOVERNMENTS, AS IT HAS BEEN, WHAT CAN WE EXPECT OF A GOVERNMENT WHICH REGARDS DECEIT AS A VIRTUE?

governments, as it has been, what can we expect of a government which regards deceit as a virtue?

Many earnest persons seeking a remedy for our nuclear ills have recognized the fragility of treaties and have turned to a supra-national institutional device. The Baruch-Lilienthal plan for an international agency to solely possess and control the bomb was the first manifestation of the institutional solution, age". Although we are in a nuclear age, it is still an age operated by people, and human nature has not appreciably changed. If anybody doubts that truth, a reading of the daily newspaper should dissipate the doubt. The same message is conveyed by the pictures along the walls of the Air Force Museum showing our four wars since 1903.

In The Influence of Sea Power Upon History, Alfred Thayer Mahan said about the study of history: "While it is wise to observe things that are alike, it is also wise to look for things that differ." If our doves have neglected the word "age," our hawk strategists have in the main neglected the word "nuclear." Practically all differences resolve into differences of degree, and while

... IF A NUCLEAR WAR OCCURRED OUR LOSS OF LIFE AND DEVASTATION WOULD BE SO GREAT THAT, WIN OR LOSE, WE WOULD HAVE LOST EVEN THOUGH NOT DEFEATED.

nuclear weapons are only another means of delivering explosives on a target, their destructive power is so great that the difference in degree becomes almost a difference in kind.

The nuclear difference requires a re-examination of the carryovers from conventional war which are the basis of our present so-called defense posture.

Traditionally states have aligned themselves into defensive alliances against a threatening country. The object was either to deter an attack or to win the war if it occurred. But in our present exposed condition, if a nuclear war occurred, our loss of life and devastation would be so great that, win or lose, we would have lost even though not defeated: Historically an alliance frequently has brought into existence an opposing coalition. Presently the NATO alliance faces the Warsaw Pact, and the balance of power between the two is supposed to avert war. Yet attention to history would hardly lead us to

tente in World War I, and in World War II it was the alliance against the Axis.

Our forward strategy is another example of our failure to accept our nuclear age. Posture Statements and Defense Department Reports justify the deployment of our troops all over the world by saying it is better to fight on foreign soil than on our own. But this assumes a conventional war with the USSR, in which nuclear weapons are not used. We are in no danger of a Soviet conventional invasion, and nuclear weapons can hit the United States despite our forward deployment. Indeed they are more likely to hit us because of our forward deployment.

... A SHOCKING DISREGARD OF DEFENSE.

Deterrence of nuclear war by offensive strength seeks to scare our enemy about the consequences of a nuclear war and thus prevent one. That part of our nuclear strateav is sound as far as it goes, but it has been accompanied by a shocking disregard of defense. Over and over our military men have repeated the cliché that the best defense is an offense. That wasn't true even in conventional war, but it becomes completely erroneous in the nuclear age. The best attack or counterattack will not bring back to life the many millions of Americans who will die in a nuclear war.

A realistic acceptance of our nuclear age will entail the grasp of the following simple theses:

nuclear war, and if war comes, millions of Americans will die.

What is left for our protection can be stated in one word: defense. We have none, either active or passive. As Leon Goure, among others, has shown, defense and attack interact: hence defense - including civil defense - vitally affects the strategic balance even under a strategy that relies wholly on deterrence. But such a strategy based on the assumption that defense against nuclear weapons is impossible, denies both the central message of the Air Force Museum and the history of weapons. The successive development of weapons portrayed by the display in the Museum teaches that while man's spiritual progress has been small, his material progress has been tremendous. The outstanding feature in the history of weapons is the slowness of change until the middle of the nineteenth century, the rapidity of change from about 1860 to the end of World War II, and the geometric rate of progress thereafter. These patterns predict a successful nuclear defense if we dedicate a sufficient effort to its attainment. An acceptance of the nuclear age would stress defense; for we shall never be as secure as we can be in a dangerous world until we invent and deploy defensive weapons to prevent offensive nuclear weapons from hitting us. In the meantime civil defense is a necessity to ameliorate casualties if nuclear war comes despite our efforts to divert it. And civil defense to take care of leaks always will be necessary even if we perfect a nuclear defense.

... NONE OF THE REMEDIES PROPOSED BY THE DOVES WILL PREVENT NUCLEAR WAR.

... REMEDIES PROPOSED BY THE HAWKS WILL NOT INSURE AGAINST NUCLEAR WAR.

WHAT IS LEFT FOR OUR PROTECTION CAN BE STATED IN ONE WORD: DEFENSE.

expect a peaceful outcome. Power has rarely stayed in balance, and the classic way to restore the balance has been war. In the end opposing coalitions have generally collided in war. In ancient history, the opposing Athenian and Spartan coalitions fought the long Peloponnesian War. In Europe the Age of Louis XIV was a series of coalition wars. Successive coalitions fought the wars of the French Revolution and of Napoleon. Triple Alliance fought Triple EnFirst, people and governments have not changed appreciably through the ages to alter the patterns on war and peace among nations. Hence, nuclear war is reasonably possible sooner or later. Indeed it is likely.

Second, for the same reason, none of the paper or institutional remedies proposed by the doves will prevent nuclear war.

Third, the remedies proposed by the hawks will not insure against It is possible to differ from some of the theses I have advanced. But is it difficult to understand how our government, whose first duty is to protect the American people, can fail to bend its utmost endeavors to developing an active nuclear defense and to spend whatever is required for the best civil defense that we can devise. Only when our government has taken these steps will it have begun to accept the nuclear age in which we live.

SPOTLIGHT 🖓

FRANCE FRONTRUNNER IN NUCLEAR POWER OUTPUT

Nuclear News Buyers Guide reports that France, in spite of freewheeling anti-nuke demonstrators, not only leads the world in nuclear power production but is hell-bent to increase that lead. Socialist President François Mitterland, an erstwhile critic of nuclear power, is now caught up in France's march to energy self-sufficiency.

In 1982 right at 40% of France's power was nuclear. One reason is that nuclear plants in France, not hamstrung by overregulation and meddling by self-styled environmentalists, operate at less than onethird the cost of oil-fired plants. Figures are:

ures are.	centimes/kWh
nuclear	16.49
coal	28.97
oil	58.20

This results in:

- (1) improved industrial muscle
- (2) a stimulated economy
- (3) clean air
- (4) improved public health
- (5) ecology recovery
- (6) improved industrial safety
- (7) world trade benefits

Who was it said "Fifty million Frenchmen can't be wrong"? Well, it appears they're right on the button with nuclear power and that the rest of the world could take a cue from them.

SEX AND CIVIL DEFENSE

In the early sixties when our headin-the-sand pseudo-ecologists were bemoaning fallout from nuclear tests and predicting generations of freaks from the resultant radiation one clear voice was that of Edward Teller. The habit of wearing trousers, said Teller, long indulged in by the male population, results in 100 times the mutations than all the fallout produced by nuclear testing. We all smiled, and no one shed his pants, not even Edward Teller. It was a way of saying that both threats to posterity were a little silly.

Now comes Petr Beckmann, energy expert par excellence, to face down the caterwauling today prevalent about how nuclear power plant radiation will give us children with two or three heads. Beckmann cites a study by Professor Bernard Cohen. Says Beckmann: "Wearing pants increases the temperature of the male sex cells, which in turn is known to increase the chances of mutations. Under certain simplifying assumptions, Prof. Cohen finds that the male custom of wearing pants is 800 times more effective for genetic mutations than 100% nuclear US electric power would be; the genetic effects of the latter could be compensated if the average male would reduce this habit by 80 pant-seconds per day."

Obviously, doing without pants altogether would be a good bit better. The traditional breadwinner could then be described as the guy "who wears the skirt in the family."

\$200 CASH PRIZE OFFERED FOR SIGNING MOST TACDA MEMBERS

Dr. Wayne Blanchard, young Washington CD professional, came out of TACDA's Wichita seminar with this offer: He will donate a cash prize of \$100 to the person who signs up the most TACDA members between the close of the TACDA seminar on October 9th and the opening date of the 1983 TACDA seminar (September 29, 1983).

With the pledge of \$100 by another TACDA member the "Wayne Blanchard Award" now stands at \$200. It is predicted that the award will further increase.

SHAY NEW ASPEP PRESIDENT

The American Society of Professional Emergency Planners (ASPEP) is America's prestige CD organization. Its membership is restricted to CD pros who have completed the eight-week Career Development Program. Officers for 1983 are:

John J. Shay, President

Robert G. Roman, President-Elect Ernest J. Terrien, Vice-President E. Kay Harmon, Secretary

ASPEP, currenty with 250 members, is inviting all Career Development eligibles — 800 in all — to join and support the organization. ASPEP contact is:

Ernest J. Terrien, Vice-Pres. Zone "C" Milwaukee County 7525 W. Greenfield Ave.

West Allis, WI 53214

Like the United States Civil Defense Council, ASPEP has passed a resolution calling for USCDC, ASPEP and TACDA to work out a program of coordination in the interests of American preparedness, to include joint meetings.

SOVIET BOOBOO

In *The Apocalyptic Premise* (see review on page 26) John Barron tells the story of KGB officer Vadim Leonov who worked under the guise of a TASS correspondent and was closely associated with the Dutch peace movement. His effectiveness was compromised, however, by the fact that he often took to the bottle.

One of Leonov's drunken boasts (to a Dutch counterintelligence agent) was: "If Moscow decides that 50,000 demonstrators must take to the streets in the Netherlands, then they take to the streets. Do you know how you can get 50,000 demonstrators at a certain place within a week? A message through my channels is sufficient."

Places, names, events and other facts associated with Soviet undercover operations abound throughout the pages of *The Apocalyptic Premise*. And Soviets themselves have their say.

FROM MAD TO "MADNESS"

MAD, of course, is the acronym for Mutual Assured Destruction, a policy featuring hostage populations which the U.S. and its allies have long cultivated. It has been generally condemned as immoral, suicidal and psychotic. Unfortunately, it is still with us.

"Madness" is a facetious short title for *Nuclear Madness*, a new book by Helen Caldicott, president of the Physicians for Social Responsibility.

A review of *Nuclear Madness* by Dr. (PhD) Doan L. Phung in *American Medical News* gives some credence to the short title. In part he says:

"Dr. Caldicott's fear of radiation is puzzling. Being a professional, she knows that nobody understands the health effects — beneficial or adverse — of extremely low levels of radiation. She even mentions in *Nuclear Madness* that everybody on earth receives an annual dose of about 100 millirems from background radiation. What she fails to tell her readers is that in normal operation a nuclear plant would contribute less than one millirem to a person living within a few miles.

In contrast, coal-fired plants throw into the air uranium and thorium in such quantities that these coal plants would be shut down if subjected to the radiation standards of nuclear plants. Even the Three Mile Island accident did not give any member of the public a radiation dose larger than a chest x-ray. Dr. Caldicott's husband, a radiologist, surely dispenses several such doses to his patients every day in order to help improve their health. Her indictment that any radiation is bad is therefore more psychosis than reason.

"... She urges people not to trust anybody who dares say, 'But let's look at the benefits of the peaceful atom.' Yet she makes it abundantly clear that people should trust her because she is a physician and she knows.

"Finally, and perhaps most importantly, she exhorts people to resort to 'emotion and passion and commitment to stir our souls and our hearts and our minds.' This, if at the expense of reason, can also breed foolishness and injustice."

Dr. Phung's 17 years in the energy research and development field enable him to expose Caldicott ignorance on the subject of nuclear power.

Phung does, however, buy Caldicott's arguments against preparedness for nuclear war. Perhaps had he had 17 years' experience in strategic defense he would see that her arguments here are equally wacky.

(The April issue of the *Journal of Civil Defense* will contain a review of *Nuclear Madness* by Max Klinghoffer, MD.)

RIDICULE AS A WEAPON

Hyperbole and ridicule abound in the debate on civil defense and strategic defense. The "anti" groups seem to be more adept at it than the "pro" spokesmen.

Robert Scheer's new book With Enough Shovels: Reagan, Bush and Nuclear War expresses ridicule by referring to what has already been widely ridiculed by the media: T.K. Jones' statement "Dig a hole, cover it with a couple of doors and then throw three feet of dirt on top . . ."

The real objection to Jones' statement is that it points to a solution to survival for people who have been neglected by their leaders. The government has failed to mount a meaningful civil defense program. It has failed to advise its citizens on the value of shelters and methods of providing them. (But it has provided remarkable shelters for leadership elements and vital hardware.) It has failed to give an honest account of the dangers of nuclear attack.

Ergo. Jones supplied a way out for John Doe. With a 19th Century pioneer spirit, grab a shovel, roll up your sleeves and do what your government has neglected to do.

Not really un-American. Just un-Soviet — on this side of the Iron Curtain. No Soviet leader or agent in his right mind wants Americans prepared, even with shovels.

Why is Scheer's book against an effort on the part of Americans to survive in spite of being deserted by leadership?

You be the judge.

HYPERBOLE AS A WEAPON

The PSR (PHYSICIANS FOR SOCIAL RESPONSIBILITY) NEWS-LETTER represents a good many distinguished doctors genuinely concerned about nuclear war. Those who beat the drums for them, however, sometimes let their enthusiasm prevail over logic.

An example is a list of twenty "Major American Nuclear Weapons Accidents, 1960-1980" which appears on page 4 of the newsletter's current winter issue.

Ten of the "accidents" are anything but child's play. However, in none of them does a nuclear detonation take place. Calling them "major nuclear weapons accidents" is perhaps a matter of judgment.

The remaining ten can be safely called varying degrees of hyperbole. For instance, one "major nuclear accident" is described as six accidental interruptions of the hotline between Washington and Moscow.

Another is a "hoax message that the President has been assassinated" and that the Vice President "has declared the start of World War III."

Another is submarine buoys emit-

ting a false signal that U.S. subs have been sunk by enemy action.

And still another is a U-2 plane which mistakenly starts to fly toward Moscow from the North Pole.

Major nuclear weapons accidents?

Washington DC: TACDA's Washington DC office, now looking for office space, in the meantime is operating under the guidance of Executive Director Stephen H. Mayerhofer. Mayerhofer, appointed by the TACDA Board of Directors at its December 12 Washington DC meeting, operates a consulting firm, Mayerhofer & Associates, at 10560 Main St. (Mosby Building), Fairfax, VA 22030 — phone: 703-691-0297. Mayerhofer is a member of the Washington DC TACDA Chapter.

Brighton, England: Patrick Mayhew, M.P. and Minister of State at the Home Office had this to say about civil defense at a CD luncheon: "We are in the midst of a most determined and sustained campaign to denigrate civil defense. its purpose and its capabilities. It is a campaign international in scope, apparently orchestrated in execution, and as little inhibited by concern for the truth as by any restraint upon the scale of its expenditure. It must give great satisfaction to the USSR — who curiously enough together with neutrals like Switzerland and Sweden, have invested hugely in civil defense for themselves. The campaign implies either a reckless disregard for the risk of any further war, or an indifference to humanity seldom equalled in modern times. For its success would ensure that in ... war there would be nothing to help civilians here survive."

Los Angeles, CA: Van E. Hallman, member of TACDA's Southern California Chapter, was interviewed at the year's end by the Los Angeles Herald Examiner. The feature story that resulted reflected Hallman's concern for inadequate civil defense measures in the United States. "My wife and I felt we should do something to protect our family," said Hallman to reporter Steven Dougherty from his underground shelter. "Since the government has no civil defense program to speak of, I did it on my own."

Earth homes, partially or totally underground, have come timidly into fashion here and there due mainly to their economy and the conservation of depleted and disappearing sources of energy. One company which markets several types of earth homes is Earth Systems, Inc. of Phoenix, Arizona. It calls the earth home "Tomorrow's Home Today" but admits that the concept is nothing new. Man and animal have always sought the protection of the earth. It's a good place to live, and safe from a growing number of hazards.

PHOTOS BY EARTH SYSTEMS, INC.

THE FRIENDLY EARTH

A World War II story tells of an Army private who obstinately refuses to obey his sergeant's order to dig a slit trench to protect himself against enemy fire. His reason: he is "sanctified" and by Heaven protected from harm. The sergeant, with the earthy wisdom that often escapes more sophisticated leadership, thereupon orders the private to dig a shallow latrine trench. The private, understanding the necessity for latrines - for sanctified and unsanctified alike - obeys. When later the bivouac comes under artillery fire the private, following his instinct for self preservation, does not hesitate to use his shallow latrine to protect himself from the bursting shells and flying shrapnel. He also retains his dignity and principles: he has not been conned into digging a slit trench.

There is a parellel in today's world. The idea of building a shelter against nucler attack goes against the grain with most people. There's a natural abhorrence of war, especially

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- Kevin Kilpatrick

nuclear war. And this abhorrence is fed by the deceptive and convincing anti-shelter, anti-civil defense, antipreparedness propaganda imported from those sources which conspire to achieve our downfall. Add to that the day-to-day problems that absorb the attention of every citizen: He or she must earn an income that will pay for lodging, food, transportation, medical care, recreation, education, insurance and so on for a family. This requires endless planning and budgeting, sometimes borrowing. With that there are constant crises big and little plus status aquisitions: a boat, a car, a computer, a trip and other indulgences of one kind or another. But shelter? No sir! That would appear to be an admission that nuclear war is acceptable (at least in the light of manipulated public opinion). Problems of survival must never replace problems of keeping in step with community codes, values and interests. As far as nuclear attack is concerned the average individual is encour-



Earth home under construction showing steel framework and excavation. Journal of Civil Defense: February 1983

aged, is obliged and is relieved to consider himself and his family as being "sanctified." Protective measures are for those who have lost faith.

THE "SANCTIFIED" PRIVATE

But, like the sanctified private, there's a way now to shelter one's family without really meaning to. It's called the "earth home" and a number of companies are in the business. The principal advantage, the main selling point, is one of energy conservation. One company, Earth Systems, Inc. of Phoenix, Arizona markets several models of "earthsheltered homes." Energy costs, it claims, are cut 65-75% over wellinsulated conventional homes. Normally these two-story houses feature the second story at ground level, with the first floor below ground. However, they can be completely above ground or completely below ground. The above-ground homes would still be "earth sheltered" with a minimum of two feet of earth mounded over a circular or oval steel frame supporting a concrete shell. This shape gives the structure strength not attainable in conventional construction. Because of this strength and the rounded shape of the building storm effects are minimal. Ventilation efficiency is enhanced. The absence of interior weight-bearing walls gives great design flexibility. Ambient noises are largely absent. Doorways, a central pagoda, skylights and atriums provide natural light. Security is vastly improved. To make the earth home fit into a conventional neighborhood special retaining walls and landscaping are provided. A "kit" (from

Earth Systems, Inc.) for a 40-foot diameter home comes to \$10,500. Add to that shipping, excavation for the lower floor, assembly, earth moving, utilities, retaining walls, landscaping, lot purchase and so on, and your investment will top the cost of a good conventional structure by about 30%. However, the buyer has the option of doing a good bit of the work himself, which will bring about substantial savings. Also, the notable long-term savings in energy costs, insurance and maintenance start immediately upon completion.

THE "EARTH HOME" ... BIDS TO BECOME A PROMINENT PART OF THE AMERICAN SCENE.

The "earth home" has made its appearance, is growing in popularity and bids to become a prominent part of the American scene. Not advertised, however, is the earth home's value as shelter. But the value is there. The earth cover, for instance, can give it a respectable fallout protection factor. The rounded profile on the steelconcrete "semisphere" not only will protect against the violence of storms — it will protect against some blast of a nuclear explosion. With simple slanting measures its shelter value can be vastly improved.

. . . A WAY NOW TO SHELTER ONE'S FAMILY WITHOUT REALLY MEANING TO.

Like the World War II private who wanted no part of a slit trench, the typical home buyer today wants no part of a wartime shelter. Those who buy (and those who sell) earth homes are charitably indifferent to the fact that they have achieved a fair degree of shelter without meaning to. When the next world crisis develops and breaks they will suddenly realize what they have and thank their lucky stars for their built-in fallout and blast protection factors.



Interior view of completed earth home.

Maybe the earth home is something to think about.

Address of Earth Systems, Inc: P.O. Box 35338 Phoenix, AZ 85069 (Phone: 602-893-1498)



Exterior view of earth home. Retaining walls and garage provide appearance that fits in with neighboring conventional houses.

A perpetuation of the "Horse-and-Buggy" age in disaster methodology can only tie civil defense to costly, cumbersome, inefficient emergency operations. Veteran civil defense director George Duck here presents a known radiological monitoring concept that belongs in today's emergency operations centers — but is not yet there.

An automated radiation detection 5 system? Why not?

Detection systems for water levels, water pressures, pollutants, barometric pressures, rain gauges, temperatures, seismic activity and other requirements are in common usage today. The technology, therefore, already exists for monitoring radiation levels from a remote location.

A growing number of civil defense

protessionals are becoming concerned about a radiological defense system that has not been updated in over 20 years. Civil defense operations are still dependent on training large numbers of radiological monitors who must physically take readings with hand-held instruments in a radiation field. The high turnover of emergency personnel and the high attrition factor of volunteers seriously diminish the operational readiness of most localities.



AUTOMATED RADE

MORE TIMELY AND MORE ACCURATE LIFESAVING DECISIONS . . .

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- George Duck

The development of an automated radiation detection system would revolutionize the current lumbering. and outdated system so that much more timely and more accurate lifesaving decisions could be made on the movement of people in a fallout situation

The system envisioned by this writer would place radiation detec tors with coded radio transmitting devices in the approximate locations of existing WERS (Weapons Effects Reporting System) stations. These coded signals would be received in the local emergency operations centers, translated into meaningful data, and passed on to state and federal emergency operations centers. The applications of such a system to various operational requirements are almost infinite. Such a system is compatible with computer systems . . . can be integrated into existing radio systems... can employ meteor burst techniques ... or even utilize earth satellites.

Such a system would have proven its worth in the Three Mile Island incident and could go far to help alleviate public concern in future nuclear incidents. It's about time we used our imagination and our expertise to develop a workable and modern radiological defense system. The technology exists. The resources exist. If NASA can monitor radiation levels on the moon we certainly can do it on Planet Earth.□

Nuclear scientist Carsten M. Haaland illustrates how the United States, given the will to do so, can provide effective space and terminal defense against nuclear attack — an option for the 80s.

III. ACTIVE DEFENSE TECHNOLOGY*

Carsten M. Haaland
 Oak Ridge National Laboratory

Active defense includes all devices and mechanisms that go into action to destroy or disable an attacking weapon. Active defenses against missiles include anti-missile missiles, projectiles fired from guns, and directed-energy or beam devices. Missiles differ from gunprojectiles in that missiles are totally self-propelled by rocket motors which accelerate them from the beginning of their flight, while gunprojectiles are launched from barrels of guns. Large gun-projectiles may have rocket motors to increase their range and/or velocity. Future active defense may conceivably reach around the world with manned or unmanned satellite battleships. These satellites would attack the enemy's missiles with beams, probably laser, as they rise into the upper atmosphere during the boost phase of their flight.¹ Or active defense may emphasize terminal defense, which concentrates on eliminating attacking missiles with interceptors of several kinds just before they get close enough to damage their targets.

Active defense involves glittering, spectacular machines and high technology. It has always been attractive to a certain group of brilliant scientists. If active defense could be perfected so that essentially no weapon could penetrate, the less glamorous, passive defense would not be necessary. Although a multilayered, active defense can be very effective, even the most enthus-

iastic proponents will admit that some weapons could "leak" through the system here and there throughout the nation. Such leakage does not mean that all is lost nor that active defense should not be attempted until it can be made perfect. The damage that could be wreaked if there were no active defense would be far greater. One must accept the possibility that some nuclear weapons may penetrate the best of active defense systems; thus, an active defense must be complemented by a strong passive defense until it is proven to be nearly perfect.

Active Defense Options Against Ballistic Missiles

The possibilities for active defense are more easily comprehended if one imagines the flight of a ballistic missile. There are four major stages in the flight of a ballistic missile: launching, boost phase, midcourse, and terminal.

Each of the post-launch stages of ballistic missile flight — boost, midcourse, and terminal — offers both attractive and unattractive aspects to the defender. The strongest defense possible would be to attack the missile at all three stages, providing a defense in depth so that if the missile were not destroyed in one stage of its flight it could be attacked during the succeeding stage. The feasibility for such a defense is discussed here.

During the boost stage, the rocket



engines make a large, highly visible and vulnerable target. The entire object, rocket engines, fuel, and, if MIRVed (Multiple Independent Reentry Vehicles), the MIRV bus, can be destroyed with kill mechanisms requiring much less energy than at later stages. The problem for the defender is that the rocket is either launched from deep inside the enemy country, if it is an ICBM, or from almost anywhere in the vast expanses of oceans, perhaps rather close to the targets, if it is an SLBM (Submarine Launched Ballistic Missile). The distances are so great or, with SLBMs, the boost phase is so short that the rocket will generally pass beyond the vulnerable boost phase before an intercepting rocket launched from satellite, ship, or land can reach it. A laser weapon looks promising for attack during the boost phase because the beam travels at the speed of light --300,000 km/sec - and vulnerability of the ICBM is high during this phase. In order to cover the Soviet Union and the oceans with defensive capability, some 18 to 30 laser battle stations at an altitude of roughly 800 miles² would need to be in orbits around the earth. Such space-based, laser battle stations appear to be technically feasible, and there is a possibility that the first of such unmanned stations may be deployed within this decade, especially if a large project for their development were initiated. The development of the space shuttle enhances the capability for deploying such a system.

During mid-course, several things make a ballistic missile vulnerable. One is the long duration (several minutes) of this part of the flight

^{*}Derived from research jointly sponsored by the Federal Emergency Management Agency and the U.S. Department of Energy under contract W-7405-eng-26 with the Union Carbide Corporation.

which allows time for several engagements. Another is the high predictability of the location of objects in mid-course if a very small portion of their trajectory is known. To counter an anticipated midcourse attack, the rocket can clutter up a large volume of space around the missiles in mid-course (with decoys and chaff) so radar can't see where they are or whether they make changes in their course. The current approach to solving this problem lies in the development of long-wave, infrared (LWIR) passive detectors to find and select the attacking missiles, compact dataprocessing computers, and a system of mid-course homing interceptors.3

During the beginning of the final flight stage of the missile during reentry, the lightweight objects and those with high drag (unstreamlined) will fall behind the RV (Reentry Vehicle) and may burn up; those decoys with matching dynamics will not. The vulnerability of the RV at this stage is that it is exposed, leaves a highly visible track (though possibly somewhat different from the decoys), and is in the territory of its enemy. On the other hand, due to its design for surviving the heat of reentry and expected countermeasures, the RV has a designed-in toughness and the warhead will reach its target in only a matter of seconds.

The current approach to terminal defense is basically the same as it was ten years ago - intercept with rapidly accelerating rockets and kill the reentry vehicle cluster with a small nuclear detonation. One of the objections raised to this system during the 1968-69 ABM (Antiballistic Missile) debates was the erroneous idea that these detonations would poison the country with radioactive fallout. Because the nuclear detonation takes place so high that the fireball does not touch the ground, and "clean" nuclear explosives would be used, there is comparatively little radioactive fallout. The fireball and the vaporized materials in it would be lifted by bouyant forces to the stratosphere where most of it would remain for months or years, while becoming less radioactive due to natural decay processes.

Nevertheless, the idea of having rockets with nuclear warheads near populated areas scares many people. It seems unlikely that we would

protect our cities with such devices today, although we did in the late 50s and early 60s. Furthermore, if an extensive ABM system were needed quickly, the time required to make the nuclear warheads for the interceptors could limit the rate of deployment, but only if there were a shortage of fissile materials. If non-nuclear warheads are used on the interceptors, the interceptors must get much closer to the target and the high-explosive warhead must explode in a very small time window. A homing guidance sensor using millimeter-wave radar has been selected for technology development and demonstration. This device would improve the usefulness of a non-nuclear interceptor in terminal defense.³

Limitations of a Purely Terminal Defense System with Perfect Interceptors

Suppose that U.S. cities were defended by a purely terminal system, that is, no boost or mid-course capability existed, and that each defending interceptor could successfully destroy a warhead attacking the city it defends. If the U.S. had many more defending interceptors than the total number of attacking warheads, one might think that the attacker could inflict no damage. However, the attacker needs only to

How would such a system fare against attacking arsenals of ten or twenty thousand warheads? The graphs given by Haaland and Wigner4 can be used to provide answers to such questions. For example, if the U.S. has 40,000 perfect shortrange interceptors and is attacked by 10,000 warheads each of 100 KT yield, the maximum number of fatalities which can be inflicted on the U.S. population protected by fallout shelters but no blast shelters (7 psi overpressure is assumed to kill 50% of the residential population) is 25 million. If 100-psi blast shelters were provided in cities, these fatalities would be reduced to about 9 million. These shelters would also protect the occupants from fallout from upwind ground bursts. If there were no active or passive defense, the number of fatalities from such an attack would probably exceed 80% of the population, if population destruction were the objective.

In the example above, the immediate fatalities could possibly (not positively) be eliminated if there were a second-level or overlay defense (mid-course intercept) in addition to the underlay (terminal) defense. The overlay interceptors could pick off enough warheads in mid-course so that the number of weapons heading toward a city would not exceed the number of underlay interceptors defending that city. The complexity of the

... COMPLEXITY OF THE ATTACK ... GUARANTEES UNCERTAINTY ...

concentrate his warheads on a certain city, and when that city runs out of interceptors, the next few warheads can destroy the city. Only if *each* city chosen for defense were defended by more interceptors than the *entire* number of warheads in the attacker's arsenal could the potential of no blast damage be guaranteed for those chosen cities.

In reality, the limited number of interceptors can be distributed among U.S. cities so that the number of fatalities which an attacker can cause is minimized, although not reduced to zero.⁴ Furthermore, this best distribution will remain the optimal distribution, independently of the size of the attack, i.e., it remains (for any size of the attack) at least as effective as any other distribution.

attack and the defense in sheer numbers of simultaneous engagements, combined with constantly shifting countermeasures and the unknown objective of the attack. virtually guarantees uncertainty in the outcome. For secure effectiveness there must be a passive defense, a final layer of underground defense, to protect people in the event nuclear warheads leak through the overlay and underlay defense. These developments in active defense technology do not make shelters obsolete or limit them to large cities - instead, they reaffirm their necessity and enhance their effectiveness.

Limitations of Directed Energy Weapons

Beams of high-energy particles,

including neutral beams, beams of positive and negative ions, and beams of protons and electrons, could be more destructive to attacking warheads than lasers. A highly reflective surface combined with ablative properties and rotating systems is an effective countermeasure to a laser beam, requiring significant increase in laser power for guaranteed destruction. The simple countermeasure of high reflectivity would not work against a particle beam, but the combination of ablation and rotation with electromagnetic measures could be effective. The power of particle beams has been known for decades; electron beams were used to weld refractory metals such as tungsten before the laser was discovered. Even under these ideal industrial conditions, the beam must be directed on one spot from a short distance away for a relatively long time in order to be effective on a modestly heavy section.

The problem with particle beams is in getting them to travel all the way from the accelerator to the target. The air is opaque to particle beams while it is transparent to laser beams, if the power density of the laser beam isn't too high or the wavelength too short. The particle beam has to punch its way through the air to get anywhere and then it travels at less than the speed of light. So far the beams have not been able to punch more than a few tens of feet.⁵ In order to deliver a lethal blow to a fast-moving missile. the beam would have to follow a spot on the missile long enough to deliver the energy required for destruction. This would require that not just a hole be punched through the air, but that a broad strip of air be cut out. A technology breakthrough is required here — it does not appear to be imminent but merits further work.

The difficulty of transmitting a particle beam through the air leads one to consider its possible application in space. However, the equipment for generating high-energy particle beams is inefficient and too massive to be considered as a space-borne weapon at the present time. Even if it were feasible to space-mount such a weapon, another problem in beam propagation would arise. Electricallycharged particles move in curved paths in a magnetic field. A beam of charged particles in space would be

disrupted by the earth's magnetic field. Positively charged particles would curve in one direction and negatively charged particles in another. In order for the beam to be able to travel from the accelerator to the target in space, the particles must be neutral or, if charged, they must somehow locally cancel out the earth's magnetic field and their mutual repulsion. The technology does not exist for accelerating heavy beams of neutral particles to high energies directly. Charged particles of opposite sign could possibly be accelerated and then recombined to become neutral just before expulsion, as is becoming common in neutral injectors for fusion machines. These processes would require more equipment and greater mass. Unless there is a dramatic breakthrough, it appears that particlebeam weapons will not be in the defense picture.

energy in the laser beam would be further degraded, depending on wave length, in rain, snow, heavy fog, or under heavy cloud cover. Visual and visible-light laser sighting devices would also be limited by these conditions. The ground-based laser weapon would then become essentially useless for defense against RVs.

Active Defense Against Cruise Missiles

There is a possibility that the Soviets may develop and deploy sophisticated, long-range cruise missiles within the decade. Cruise missiles and ballistic missiles require entirely different active defense systems. A layered-defense concept based on the three stages of delivery of the cruise missile can be similarly built up. The first stage is the delivery to the launching point by the cruise-missile launching plat-

... LASER BEAMS USED AS RAY-GUN WEAPONS ... A SCIENCE FICTION GIMMICK WHICH HAS COME TRUE ...

The idea of laser beams used as ray-gun weapons is seen by the public as a science-fiction gimmick which has come true. As mentioned before, a fleet of space-based laser battle stations could be highly effective against attacking rockets while they are in the boost phase, thus providing a third layer of active defense if used in conjunction with mid-course and terminal defense. These same lasers could be used against cruise missiles and bombers. but only when the skies are transparent to the wavelengths used. A heavy cloud cover would not only hide low-flying cruise missiles and aircraft from the space-based laser battle station but would also absorb. reflect, and refract most laser beams so they would have little or no effect on objects below the clouds.

It is doubtful that ground-based laser weapons would provide a defense against ballistic missiles. When the power density of a laser beam reaches a certain level, the air ionizes and becomes opaque to the beam. This limiting power density may be too low to have a significant effect on a warhead hardened to survive the heat of reentry, even with converging beams from widelyspaced sources. Furthermore, the form, which may be a bomber, ship, or submarine. The second stage is the near-surface flight of the cruise missile from its launching platform to the vicinity of its target, a flight which may take hours. The third stage is the final approach of the cruise missile to its target.

The primary weapon against the cruise missile would be a supersonic homing missile with a non-nuclear warhead. These missiles could be fired either from aircraft above the cruise missiles or from the ground. If the cruise missile reaches the third stage, the attack approach, it might also face barrages of metal projectiles fired by computer-controlled, Vulcan-type guns (advanced Gatling guns) with radar, infrared, and other sensors.

Interception of the cruise missile by these types of weapons will probably not destroy the nuclear warhead. If the warhead has a series of backup and impact fuses, it will detonate when in difficulty, even though it has not reached its intended target. This possibility means that people in areas where these air defenses are to be used should have blast shelters; these areas may include virtually the entire country.

... AN EFFECTIVE DEFENSE AGAINST ATTACKS BY ... CRUISE MISSILES EXISTS IN THE U.S.

At this point the technology for an effective defense against attacks by large numbers of sophisticated cruise missiles exists in the U.S. However, the cost to build a fairly leak-tight defense system against such attacks would be enormous, and this cost would be added to the cost of BMD (Ballistic Missile Defense). Again, the need for a final layer of defense, passive defense, to protect people in the event of leakage of nuclear warheads is evident.

Active Defense and the Ozone Problem

Elimination, or, at least a drastic reduction, in long-term worldwide problems resulting from large-scale nuclear war can be one of the bonuses of a strong active defense system. A strong ballistic missile defense (BMD) will not only reduce or deny the blast, fire, and fallout damage that the attacker seeks, but will also reduce or eliminate the problems of ozone depletion, climatic changes due to dust, and worldwide fallout.

The possible problem of depletion of the ozone layer in the amostphere by large-scale nuclear war was discussed in the first paper of this series ("Developments in Strategic Nuclear Weapons"). A depleted ozone layer would result in largescale damage to plants and would produce burns on exposed people and animals. This problem, and those caused by dust and worldwide fallout, would be reduced, if not eliminated, in two ways, one directly and the other indirectly, by a strong BMD.

The direct way in which BMD would eliminate or reduce long-term problems is simply by causing the attacking weapon to detonate where it can do no harm, or by destroying or neutralizing it. One of the problems of interception by a *nonnuclear* device is that it will probably not destroy the nuclear warhead, as discussed previously in connection with cruise missiles. If the warhead has the expected backup fuse system, sometimes called "salvage" fuses, it will detonate, even though it has not reached its intended target. If interception by a non-nuclear device takes place during midcourse, while the attacking warhead is several hundred miles above the earth, the salvage-fused detonation will have a negligible effect on the ozone layer, there will be no dust produced, and almost undetectable worldwide fallout throughout the ensuing decades. Such a detonation may cause extensive damage by EMP (Electromagnetic Pulse) to unprotected systems on the earth below, and for this reason it may become desirable to intercept in warheads do not exceed 200 KT in yield, a nuclear exchange involving 10,000 MT will have an insignificant effect on the ozone layer.

These considerations bring up a question that was used by the opponents of ABM during the debates of 1968-69; namely, won't a strong BMD simply encourage the attacker to increase his arsenal? (It may not increase, but it will certainly change.) There are two replies to this question: (1) the unilateral withdrawal of ABM by the United States has had no obvious effect in

... IT WOULD BE MORE HUMANE FOR THE UNITED STATES TO GET INTO A UNILATERAL RACE IN WHICH WE NEGATE SOVIET GROWTH IN MEGADEATH CAPABILITY WITH PURELY DEFENSIVE CAPABILITIES.

space with a small nuclear device.

If interception is made by a nonnuclear device during the terminal phase, a salvage fuse on the attacking weapon may result in a fireball, which, though not harming the intended target, will contribute to the problem of ozone depletion and worldwide fallout. This consideration brings us back to the need for small nuclear weapons on the interceptors in the terminal phase. Only the nuclear radiation from the detonation of a nuclear weapon has the speed and penetration capability to neutralize a nuclear warhead and "defuse" the salvage fuse. The intercepting warhead can have such a small yield that thousands of them could be detonated in the atmosphere without causing depletion of the ozone layer, dust, significant worldwide fallout, or harmful EMP.

The indirect way in which a strong BMD would reduce the long-term problems of a large-scale nuclear attack would come about through the changes that would be made in the arsenal of a sophisticated enemy in order to counter the BMD. An attacker with a few hundred ICBMs having only a single, large-yield warhead in each might not be able to inflict significant strategic damage to a nation heavily defended by BMD. But if each ICBM is loaded with many MIRVs (i.e., breaking up the large-yield warheads into many small warheads), the chances for inflicting greater strategic damage are significantly increased, and the ozone depletion possibility will be reduced. As mentioned in the first article of this series, if the individual

slowing the relentless expansion of the Soviet nuclear arsenal; and (2) rather than having a bilateral race in the construction of offensive weapons, it would be more humane for the United States to get into a unilateral race in which we negate Soviet growth in megadeath capability with purely defensive capabilities. A combination of three things: (1) a constantly developing and growing active defense system; (2) a strong passive defense, including an informed public; and (3) maintenance of appropriate offensive weapon capability, may well be more effective as a deterrent to the Soviets throughout the coming decades than the process of matching the growth of their offensive capabilities. П

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FAMILY FORUM - Carolyn Hayes and Marie Sanford

in the mail and over the phone we at the **Journal of Civil Defense** office, who function in those areas receive questions on the practical non-technical things a family can do to provide for itself in case of emergency. The main incentive for seeking such information seems to be to remain alive when circumstances conspire to push us in another direction.

We get such questions as:

How much water do I need? Food? How much shelter do we need for fallout protection? When may we come out of the shelter? What should I take with me when I have to evacuate? How do we stay cool? warm? provide air? What about my medicine? Should I take it with me?

Our editor has not been super-enthusiastic about getting involved in this column, in what he calls a... Well, what the heck. We can be just as persistent as he can. So here goes — with No. 1!

"WATER, WATER — WHERE?"

It should be no surprise that by far the most important item to have stored or on hand in a disaster situation is a good supply of water. The body needs an adequate supply of liquids in order for kidneys to function properly and to aid in waste disposal. Cresson H. Kearny, in his book Nuclear War Survival Skills, tells us that a person could survive for weeks on 3 pints of water a day, providing that he eats little food -food which is low in protein. Another requirement for a low water consumption is a cool environment. Since we cannot be sure of these conditions you should plan on storing at least 15 gallons per person for a two week period. This should prove sufficient for drinking as well as minimal sanitation.

Few families have enough large containers to store these amounts so Family Forum suggests one way to help with this. Polyethylene trash bags enclosed in smaller fabric bags such as pillowcases can serve as emergency water storage tanks. Line each fabric bag with two large trash bags and pour in about 5 gallons of water. Twist the top of the bag securely and very firmly tie as one would normally do when tying up a garbage bag. This forms an almost water tight seal.

To store these flexible water bags place on a flat surface. Tie a strong cord or rope to each corner of the outer bag and loop over a doorknob or overhead hook, thus keeping the opening of bags above the water level.

Another method for storing water or other liquids is to use clean plastic or glass jugs or jars. Some people feel that opaque plastic is better for this than clear but it is largely a matter of opinion. The onegallon size takes little shelf space and is easy to handle. A tip for freezer owners - if space is available: Consider filling plastic jugs with water (leaving room for it to freeze) and place in your freezer. This will not only provide you with water for later use it will help the efficiency, of your freezer. Metal containers sometimes rust and give water an unpleasant taste. Glass or earthen jugs are wonderful, but they must be protected from breakage. It is a good idea to replace your supply of fresh water from time to time.

Where fallout is not present, water from melted snow, rain, streams, lakes or even ditches (where movement is present) could be used as long as you purify it before using it.

If you suspect that your water supply has become contaminated it can be purified in several ways. The surest method of purifying is to boil it vigorously for 5 minutes, let it cool, then pour it out leaving any sediment which may remain in the container. If you do not have access to a heat source then the water may be purified by using common household bleach containing sodium hypochlorite (5.25%) as its active ingredient. The label will give you this information. For small amounts of water use 2 drops of bleach for each quart of clear water or 4 drops if the water is cloudy. Let stand for at least 30 minutes before using. Properly disinfected water should have a slight chlorine odor. Another choice is to use 2% tincture of iodine. Add 5 drops to each quart of clear water or 10 drops to cloudy water. Let stand for at least 30 minutes before using. Commercial purification tablets may be used. Follow package directions.

When you think of stored water you are inclined to forget some sources of already stored water such as: water or juices stored in refrigerator, ice cubes, the hot water tank, the commode tank (CAUTION: if disinfectant is used in the commode tank DO NOT USE, it is not safe for drinking), canned vegetables and/or fruits and milk.

We invite responses and questions to the *Journal of Civil Defense*, Family Forum, P.O. Box 910, Starke, FL 32091.



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TRIAGE — EMERGENCY CARE

XI — Radiation Detection, Decontamination, Protection

(11th of 18 installments)

- Max Klinghoffer, M.D.



Max Klinghoffer

The purpose of this installment is to help you understand ionizing radiation: what it is; how it's used; it's dangers; sources; and how to protect ourselves from radiation injury.

It is important to RESPECT radiation rather than to FEAR it. Today radiation is used in many areas of our lives. Radioactive materials are used in medical diagnosis and treatment of disease, Radioactive materials are used in biological studies and radiation helps us to "date" materials in millions of years old. Industry uses radioactive sources to discover internal flaws in building materials — flaws which would otherwise be hidden. Radioactive materials are also the basis for some of our new sources of power.

In spite of the prominent role radiation plays in our lives today, many people do not understand what it is. Simply, it is one form of energy. We deal with various forms of energy throughout our lives: light from rays of the sun; light from incandescent lamps powered by electricity; heat from various sources; waves of electromagnetic energy which bring us our radio and television programs; sound waves which make it possible to hear each other; visible rays which touch the retina and produce sight — all of these are forms of energy.

It might be good to briefly review the structure of the atom, even though detailed knowledge of this subject is not essential in rendering triage-emergency care. Again, the rescuer will be prepared to work more efficiently if he knows the WHY of the procedure.

Atoms are made up of a nucleus and an electron(s) orbiting the nucleus. In a schematic diagram they may look something like a planetary system. The nucleus of the atom contains protons and neutrons. In the case of the ordinary hydrogen atom, the nucleus contains only a proton. The proton has a mass ("weight") of one and an electrical charge of plus one. The neutron has a mass of one, but it is electrically neutral. The electron has a mass so small it (the mass) is, for practical purposes, negligible; but it has a charge of minus one.

The chemical nature of an atom is determined by its atomic number which

is the same as the number of protons in the nucleus. The atomic "weight" is determined by the sum of the number of protons and the number of neutrons in the nucleus. It is the difference in the number of neutrons which may cause atoms to be of varying weights, while having the same chemical properties. (Remember, the chemical properties depend upon the number of protons.)

If an atom has the same number of electrons in its orbits as it has protons in its nucleus, the atom is electrically neutral - since the negative charges exactly equal the positive charges. The number of neutrons does not affect the electrical state of the atom since the neutron does not carry an electrical charge. The force which may cause an atom to gain or lose one or more electrons is called ionizing radiation. It is this form of radiation with which we are concerned in handling victims of radiation. Because ionizing radiation is capable of causing atoms to gain or to lose electrons, it can have a profound effect on the chemical process in the cells which make up our bodies.

Isotopes are atoms which have the same number of protons in the nucleus but with different numbers of neutrons. To demonstrate the simplest example, hydrogen exists as an atom with one proton in the nucleus and one electron in the orbit. It also exists with one proton and one neutron in the nucleus and one electron in the orbit. This isotope of hydrogen then has twice the mass of the first example but has the same chemical features. Still another hydrogen isotope has one proton and two neutrons in the nucleus and one electron in the orbit. Again, this atom is electrically neutral but the mass of this atom is three times that of the first example. The atom of hydrogen which has one neutron is called deuterium and the atom which has two neutrons is called tritium.

Early experiments with radioactive materials revealed that such materials gave off three types of radiation: alpha, beta and gamma. Alpha radiation is the least penetrating and a piece of paper or the intact skin may provide protection against this radiation. The alpha radiation or particle is the nucleus of the

helium atom, that is, the helium atom without its electrons. The beta radiation is an emission of electrons from the atomic nucleus and is slightly more penetrating than alpha radiation. Clothing can stop this radiation, but when in contact with the skin for any length of time, beta radiation may produce skin "burns". Usually if the contaminated clothing is removed and the patient carefully washed off, the harm will be minimal. Material emitting either alpha or beta radiation may be dangerous once taken inside the body by ingestion (swallowing); inhalation (breathing); or absorption (through open wounds). As long as they are combined with tissue and organs, the body continually "radi-ates itself." Gamma radiation is composed of electromagnetic waves which are extremely penetrating, much like x-rays.

It is easy to understand that if radiation strikes the body, it can produce changes within the atoms which make up our cells and tissues. In large quantities it can do enough damage to produce "radiation sickness". Conversely, this energy may also destroy



unwanted cells (cancer) and this is especially true because many cancer cells are far more susceptible to radiation than are normal cells.

In order that you understand the hazards of radiation and know the protective measures, it is necessary to describe some ways in which radiation may affect us. Isotopes or gamma rays can penetrate the body even at a considerable distance. I hesitate to use the example of the x-ray machine, since I do not wish to instill a fear of this device. Therefore these remarks should be prefaced by saying that x-ray units, used by trained personnel in accordance with good medical practice, offer great benefits to us and outweigh any possible harmful effects. Nevertheless. this is a good example of the effects of radiation from a distance. You may be standing six feet from the source of radiation, yet at that distance the energy will penetrate your body and cause a change in a film on the opposite side of your body (the x-ray "picture").

How can we know if radiation is in our vicinity? Radiation cannot be detected by the five senses. We cannot feel it, taste it, smell it, hear it, or see it. The idea that the Japanese fishermen on the "Lucky Dragon" (in 1954, down wind of an area presumed safe from an H-bomb test on one of the Bikini Islands) were able to see radiation in the form of a "gray snow", following the detonation of a test bomb, is a fallacy. What they did see was particles which were products of the blast, and which CARRIED radioactivity.

Since radiation is a form of energy, it has the capability of affecting certain instruments or devices in a manner which produces visible or audible re sults. Such devices range from the relatively simple "film badge" worn by radiologists, to the more sophisticated scintillation counters. However, those who will be working with possible radioactivity following a major accident or post-war, will probably be concerned with only two or three detection devices. The film badge, mentioned previously, is simply a piece of undeveloped film sealed within a light-proof plastic badge and worn by the individual. The time and date are recorded on the badge. Radiation, like visible light, has the property of "exposing" the film; and since radiation is penetrating, it will expose the film through the plastic case. After a period of time, the film is removed in a dark room and developed. The degree of "darkening" of the film gives an estimate of the amount of radiation to which the individual has been exposed since the date recorded on the badge. By comparing this piece of film with several standard films, each of which has been exposed to varying amounts of radiation, a fair approximation may be determined

Far more commonly used is an instru-Journal of Civil Defense: February 198321



ment called the Geiger counter. Most of us have at least a casual acquaintance with Geiger counters, because they seem to be an essential ingredient of most of our horror movies and our science-fiction films. In the old days, monsters were multi-headed and they breathed fire. The monsters of today cause Geiger counters to click ominously.

The Geiger counter consists essentially of three parts: 1. the Geiger tube, 2. an amplification unit and 3. an indicator which responds with audible "clicks", flashing light, or deviation of a meter.

The Geiger tube is a rather highly evacuated tube with two electrodes. When this tube is in the vicinity of radiation, some of the atoms within the Geiger tube are ionized, and split into positive ions and electrons. Some of these ions strike other atoms, which in turn are ionized. This effect is sometimes called an "electron avalanche". It produces a change in the electric potential between the electrodes. This change of electric potential is amplified by the amplifier system of the Geiger counter, which then transmits this change to a meter reading, a light, an earphone or a loudspeaker. The flashing light, or the clicking sound, can give

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us some idea of whether we are approaching an area which is radioactive — or whether we are moving away from it.

When you examine a Geiger counter, you will usually find that the Geiger tube has an outer metal casing. When this is rotated, it exposes a portion of the Geiger tube which has a very thin shell. Thus, with the thin shell of the Geiger tube exposed, the instrument will now respond to radiation of lesser penetration. In contrast, when the metal casing is revolved so that the entire tube is covered, radiation of low penetration will not record and only high penetration radiation will cause the counter to react.

When you use the Geiger counter, always study the instruction manual for that particular instrument. There is a range switch on the instrument, which gives the counter a much wider range of recording. Thus, we read the deflation on the meter, and multiply that reading by the number indicated by the range switch.

Do not let this explanation of the Geiger counter cause you to have any reluctance to use the instrument. The meter is a time-dose indicator. For example, if the counter is showing fifty milliroentgens per hour, then you know if you stay at that point, in one hour you will have accumulated fifty milliroentgens. If you remain there two hours (provided the reading remains constant) you will receive one hundred milliroentgens.

Remember this: IF YOU CAN READ THE SPEEDOMETER ON YOUR CAR, YOU CAN READ AND INTERPRET THE GEIGER COUNTER. If you drive at exactly fifty-five miles per hour, then you will have traveled fifty-five miles in one hour. If the Geiger counter records fifty-five milliroentgens per hour, then in one hour you will have accumulated fifty-five milliroentgens.

It is not possible to describe every type of Geiger counter here, since there are so many different manufacturers, but the principle remains the same. You can compare the use of the Geiger counter in monitoring an area with the game you played as a child — "hide the thimble." As you approach an area in which the Geiger counter chatters rapidly and the meter deviates widely, you are getting "hot." As you move away from this area and the Geiger counter emits just an occasional click and the meter deviates very little, you are getting "colder."

A few precautions should be mentioned here. The batteries which power the Geiger counter must be kept fresh or you may get dangerously false readings. Some Geiger counters have a battery check position or a check source to verify that they are working properly. If you are dealing with materials which are covered with radioactive dust, you must avoid letting the Geiger tube become contaminated with that dust. If the tube itself becomes contaminated then it will give the reading attributable to the dust on the tube, in addition to any other radioactivity in the vicinity. One additional warning: if the clicks become almost a continuous sound and the meter swings full scale and then the sound disappears and the meter reads zero, it is possible that the radiation has "overwhelmed" the Geiger counter and you are getting false low readings. The Geiger counter is a very sensitive instrument and records in "milliroentgens" per hour.

Now it is perhaps time to define a few terms. Radiation is measured in "roentgens" named for Wilhelm Konrad Roentgen the discoverer of x-ray, but don't let such terms frighten you. A roentgen is simply a unit of ionizing radiation just as we speak of a gallon of water, a distance of a mile, or a pound of weight. A "milliroentgen" is 1/1000 of a roentgen. The Geiger counter is too sensitive to accurately measure roentgens.

For reading in roentgens (one roentgen being one thousand milliroentgens) we use an ionization chamber. This is not totally unlike a Geiger counter. It consists of two plates within a vacuum tube with a high voltage potential between them. There is also an amplifier and a meter. In the presence of radiation, the electric potential is changed and records on the meter in roentgens per hour.

None of the portable instruments which you may use has a high voltage source. In fact, they use flashlight or similar batteries, and the voltage is "stepped up" by electronic means. DO NOT touch any of the inner components of the Geiger counter because of the danger of shock or burning your finger.

1

Isotopes are chemicals which are chemically similar to another but which vary in the number of neutrons. For example, ordinary iodine has an "atomic weight" of 127. lodine 131 is chemically identical to ordinary iodine but lodine 131 is an isotope and it happens to be radioactive. Another term you should know is "half-life". Radioactive elements undergo a change called "decay"; this is not comparable to the ordinary decay we think of in the decomposition of organic materials. If a radioactive element has a half-life of eight days (approximately that of lodine 131) this means that, if the element emits a certain amount of radioactivity today, it will emit half that amount in eight days. In eight more days it will emit half of the half or one-fourth the original amount. Thus a radioactive material "decays" according to its half-life. Some materials have a half-life measured in fractions of a second, Radium has a half-life of about 1654 years and others have still longer half-lives.

To further allay any undue fears about radiation (make no mistake: radiation CAN be dangerous), you should be aware that we are exposed to radiation every day of our lives. In fact, we are exposed even when we are embryos. There is a certain amount of "background" radiation in the substances of the earth. This is of course much greater in the vicinity of natural deposits of Uranium, Thorium, Pitchblends, etc. The sun constantly gives off cosmic rays and if we go into the deepest mine on earth, these radiations can still be detected.

Not long ago the numerals on watches and clocks were painted with radioactive materials and there was some (though minimal) exposure from these. Not so fortunate were the ladies who painted luminous numbers on timepieces. They formed the habit of "pointing" the paintbrushes with their lips and many died of the effects of radiation poisoning. The ingested radium which lodged in their teeth and bones provided a constant source of exposure for as long as they lived. Earlier in this century, a very popular type of serving ware called "FIESTA" was available in various colors; the brilliant red color was due to a small amount of Uranium salt. These dishes will cause a Geiger counter to chatter and will often throw the meter off the scale. Fiesta ware is excellent for a demostration of radiation. Would I eat

from a Fiesta dish? Without hesitation. But if — hypothetically — someone offered me a portion of such a dish, ground into a fine powder, I would likely refuse it.

If you wish to demonstrate radiation detection and decontamination there are safe and simple ways of doing so. Be sure you discuss this with a radiologist and that you know how to handle these items safely (the isotope used here is lodine 131, of rather low level intensity, and a short half-life).

First, we take a capsule of lodine 131 and bring the Geiger tube in proximity to the lodine. (Have an amplifier attached to the counter, so the entire group may hear the response.) Now "contaminate" yourself. Using a small amount of syrup or honey to attach the capsule of lodine 131 to an old shirt which you will have put on OVER your regular shirt. Now bring the Geiger tube close to the lodine 131 capsule demonstrating that your clothing is now "contaminated". Now remove the shirt and demonstrate that the radiation remains on the old shirt; it is still "contaminated." Now pass the Geiger tube over your clothing; there is no response. You have very simply demonstrated that one of the major steps in decontamination is the removal of the outer clothing. Next, use a drop of syrup to glue an lodine 131 capsule to your hands; your skin is "contaminated". Use a pitcher of water to wash this capsule into a small bucket. Now 'the Geiger counter will react to the water in the bucket; but there should be no reaction when it is held near your skin. You have now demonstrated the second step of decontamination; after removing the clothing, you have washed away the contamination which remained on the body. Two important points: years ago it was recommended that the body be "scrubbed" with soap, water and a brush. We now know this will embed microscopic particles in the skin, where they may be picked up and become part of the circulatory system. Therefore, use lots of water and soap, and a SOFT cloth. Second point: there are certain areas where radioactive particles tend to adhere; the hairy parts of the body and the "apposing surfaces" (areas between fingers, toes, armpits, etc. where the skin touches other areas of skin).

Another little "gimmick" for demonstrating decontamination is to use a drop of honey to stick a capsule of lodine 131 to a banana. Now demonstrate with the Geiger counter that the banana is contaminated. Now carefully peel the banana; place the peeling aside and using the counter, demonstrate that the peeling is still contaminated. Then demonstrate that the inside of the banana is free of contamination. (You may eat a bite of the banana to emphasize the point.) You may further add to the knowledge of your group by pointing out the multiple lessons learned: 1. radiation can be detected by simple means; 2. decontamination can be a simple procedure; and 3. always peel a banana before you eat it.

One question seems to be a universal one when teaching groups about radiation. What do you do with the contaminated clothing and the contaminated water used in washing?

The clothing which is contaminated should be placed in tightly sealed, metal "GI" cans, LABELED and placed at a distance from personnel. They can later be disposed of by those experienced in such matters. The public should NEVER burn contaminated materials. It is impossible to destroy radiation by burning and any attempt to do so will merely create a miniature "fallout" which is extremely hazardous. This should be done under controlled conditions only and by trained personnel.

As to the contaminated wash water: if the situation is one following a nuclear attack the entire area is contaminated and the question may not be a very important one. One should avoid pouring the contaminated water into or near a supply of drinking water. If the nuclear accident is one of smaller scope, it would be advisable to save all the wash water, if possible, so that it may be disposed of later by safer means. (It was observed in one hospital that large trays were placed over the shower duckboards to serve this purpose. Caution must be observed in disposing of this contaminated water.)

The effects of radiation may be divided into two types: somatic and genetic. Somatic effects are those changes which will take place in your body if you are exposed to an appreciable amount of radiation. Such changes may occur soon after exposure or many years later. Much will depend on the amount of radiation to which one is exposed and the rapidity of the decontamination process.

The genetic effects (and these may not be completely separable from somatic effects) are the changes which may occur in the offspring of those exposed to radiation.

The amount of the body exposed and the period of time over which the exposure took place is also important. For example, if an individual receives 800 roentgens over his entire body within a short time, he will almost certainly die. On the other hand, higher doses than that, have been applied over smaller areas of the body for a longer period of time, for therapeutic purposes.

Having discussed decontamination as a major means of protection, three other protective factors should be emphasized. These are: time, distance and shielding.

1. Time. We have already mentioned this factor under the subject of the time-

rate meters, but let us review. We know that total body exposure to fifty Roentgens will not produce any grossly detectable changes in the body (although blood tests may show some temporary changes). One hundred roentgens may make the individual slightly ill; nauseated and weak. Two hundred to three hundred roentgens will make you ill to the point of postration and when we reach four hundred or more, there is the likelihood of death. A more concrete example: There are injured people in an area which is fairly high in radioactivity. Monitoring reveals that the level of radiation is fifty roentgens per hour. It would be relatively safe to send a rescue team into that area to remove the victims and bring them out. Once these rescuers have worked in that area for one hour (and accumulated fifty roentgens) then they should be replaced by a new team of rescuers who have not been exposed. The outcome for the injured will depend, in part, on how long they have been exposed to this radiation.

2. Distance. The old Army adage of "splint 'em where they lie" - is a good principle, but again there are exceptions. The further we are from a source of radiation, the less radiation we absorb (even a little distance can help). This is so because ionizing radiation acts, in this respect, like visible light. If you are one foot away from a source of visible light and you double that distance by moving two feet away, you will now receive one-fourth as much light. If you move five feet away, you will receive one-twenty-fifth as much light. This same law of "inverse proportions" applies to radiation. Remember: In the

process of triage a radiation exposure threat has to be balanced against the seriousness of the injuries.

3. Shielding. This refers to the interposition of material of great mass between you and the source of radiation. It is the same principle of fallout shelters. The greater the mass of the material, the greater the protection factor.

Not everyone will have protective garb available in the event of an emergency involving radioactivity, but much can be improvised. Clothing should cover most of the body and for obvious reasons the material should be moderately heavy and of a tight weave. (Some types of cover-alls are satisfactory.) A mask, such as a surgical mask, will substitute as a crude respirator provided it is changed as often as possible. A hair covering should be improvised and some sort of goggles are advisable to prevent radioactive dusts from entering the eyes. Gloves with wristlets are advisable and some sort of shoe covering should be worn ("galoshes" are a practical improvisation). Such garb will help prevent radioactive dusts from reaching your skin, digestive tract and respiratory system. It may even protect you against alpha and beta radiation of low level, but it will NOT shield you against high level materials which emit gamma rays. Again, the appropriate detection instruments will give you an indication of how long you may stay in an area with relative safety.

Above all remember this: there is a parallel between ionizing radiation and fire; both can serve us, if we control them; they can harm us, if we forget their potential and ignore caution.

Contamination Experiment An excellent method to dramatize radiation contamination and wearing protective garb when handling such casualties was demonstrated by radiology technicians at Memorial Hospital, Elmhurst, Illinois. "The "victim" is one of the "walking wounded" Along with other , , , mock injuries, his upper arms are painted with a solution which is light pink in color, but when dry becomes completely invisible. (NOTE: this solution is safe and non-toxic). The "rescuers" are - not told of this "radioactive" contamination. In the demonstration, the lights in the room are turned off and a portable ultraviolet light (as used to grow plants indoors or a Wood's light; as wused in the doctor's office) is placed near the arms of the "victim" This: results: In a shilliant, glow of the victim's arms from the solution and the ultra-violet light. The "rescuers" and a skipteraction of the solution and the ultra-violet light. The "rescuers" and a skiel to approach theivicinity of the light. As they approach the light, their hands and arms will also glow. They have become "contaminated" with "radioactive" material. (It is urgent that all participants be informed there is, in fact; no radioactivity involved are non-toxic. Another word of caution: to avoid eye injury, no one should look into the ultraviolet light for any length of time. Another very effective way of demonstrating this is to have the "casualty" carried in on a litter. Now remove him, from the litter. The ultraviolet light will now show that the litter is 'contaminated" where it has been in contact with the affected areas of the "victim's body.



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- Crisis Relocation Planning Pro and Con, by Robert Baffin and Kevin Kil-Kilpatrick
- Triage Emergency Care (Part V Burns), by Max Klinghoffer, MD
- Vol. XV, No. 2..... April 1982 FY 1983: A CD LIFTOFF?, Interview of FEMA Director General Louis O.
- Giuffrida by Walter Murphey **Triage — Emergency Care** (Part VI — Fractures), by Max Klinghoffer, MD
- Education -- Key to CD Success, by Eugene P. Wigner
- Preparedness Payoff, by Richard Wood Civil Defense — Hawaiian Style, by Carole Haas
- The Abraham Lincoln Connection, by Frank Williams
- Vol. XV, No. 3.....June 1982 Deep Freeze for Nuclear Arms, by Edward Teller
- Triage Emergency Care (Part VII Resuscitation/CPR), by Max Klinghoffer, MD

Sauve-Qui-Peut, by Marc V. Ridenour Ground Zero: What's In It For You?, by

Richard E. Sincere, Jr.

Disaster Amnesia, by John E. Bex

Volume XV, No. 4August 1982 Civil Defense and the Strategic Balance, by Nancy Deale Greene

Why We Need CRP, by Roger J. Sullivan

- Triage Emergency Care (Part VIII Resuscitation/CPR), by Max Klinghoffer, MD
- EOC Modernization, by Edward J. Zaborowski

Volume XV, No. 5 October 1982 Developments in Strategic Nuclear

- Weapons, by Carsten M. Haaland Repugnant Moralism: Churches and Nuclear Weapons, by Richard E. Sincere
- Do-It-Yourself Civilian Defense, by Richard E. Oster, Sr.
- Triage Emergency Care (Part IX Resuscitation/CPR), by Max Klinghoffer, MD
- Doctor to Doctor, by Gerald L. Looney, MD
- Don't Blame It On the Feds, by Roger E. Herman

Vol. XV, No. 6..... December 1982 Civil Defense: Our No. 1 Requirement,

Q&A CORNER

Q — Is "Doctors for Disaster Preparedness" what it sounds like: a physician's group gearing up to function in *all* disaster situations?

A — As the question implies, Doctors for Disaster Preparedness (DDP) focusses not only on *response* to disaster but also on maximum *preparedness* for all disaster, especially major disaster, and the planning that must go with it.

DDP is in the formative stage. It is holding its next meeting at the Florida Institute of Technology, Melbourne, Florida at 1 PM on February 12th (Saturday). It includes all doctors in the medical field (physicians, dentists, veterinarians) as well as PhDs. Others are eligible to join as associate members or student members. Scale:

Professional membership ... \$35 Associate membership \$25 Sponsoring membership ... \$100 Student membership \$10

Temporary headquarters for DDP is at the TACDA office in Starke, Florida:

Doctors for Disaster Preparedness P.O. Box 1057

Starke, FL 32091

(Phone: 904-964-5397)

The DDP administrative aide is Janie Harrington. She will be glad to provide further information.

Q — What ever happened to "Ground Zero" and "Ground Zero Week"? Are they still with us?

A — They are. And we (TACDA and the Journal) are very envious of an organization that charges \$1 for sending out information that carries \$1.90 in postage. Wow!

Seriously, Ground Zero is a persuasive group with a competent staff. It claims: "Ground Zero is a nonadvocacy, educational organization which seeks to inform Americans about the threat of nuclear war and involve them in the effort to prevent it."

Commendable. That's what

by Eugene P. Wigner

- How Effective Can Shelters Be? by Carsten M. Haaland
- Triage Emergency Care (Part X Choking), by Max Klinghoffer, MD Away With Lifeboats, by Wayne King, DDS
- The Firefighter: America's Big CD Asset, by Kevin Kilpatrick

TACDA also purports to do. Their 1983 concept of "Firebreaks" is also commendable; it consists of a number of measures to reduce the threat of nuclear war. Oddly, President Reagan's effort not to let the Soviets out-arm us is not one of the "Firebreaks." Neither is a homeland defense to protect our women and children (and men). Neither is the development of weapons of defense (*not* offense) that will serve to spoil attack.

Further, Ground Zero's awesome dramatization of the effects of a nuclear detonation from ground zero outward assumes that wellbehaved American hostages will take *no protective measures*. No statistics are given where civil defense measures are assumed. Inasmuch as Ground Zero chief Roger Molander is reported to hold civil defense in disdain the omission can be assumed to be deliberate.

So, Ground Zero is alive and well — and presumably wealthy.

Richard E. Sincere, Jr., who wrote "Ground Zero: What's In It For You?" in the June 1982 issue of the Journal will write a Ground Zero update in the Journal's April 1983 issue.

Q — Where can I find a reliable siren that can double as a PA system?

A — One American company that specializes in siren systems to fit standard and special requirements is Whelen Engineering Company, Inc., 3 Winter Avenue, Deep River, CT 06417-0904 (Phone: 203-526-9504). It advertises that it is "first with a speaker that integrates siren and voice communication for optimum acoustic directivity and projection."

Whelen also features an encoding system that guards against false activation, a system status map and a "silent test" mechanism that permits system verification without operation, and auxiliary power. When conventional power is not available (or disrupted) solar power may be the answer. Photovoltaic panels at the site will allow systems to stand alone. They are integrated into individual siren systems depending on local conditions and requirements.

"Preparedness to deal with disaster of any kind," says the siren brochure, "is founded not only on the ability to alert, but now, more than ever, on the ability to inform." Whelen also deals in emergency lighting.

REVIEWS

THE APOCALYPTIC PREMISE: NUCLEAR ARMS DEBATED, edited by Ernest W. Lefever and E. Stephen Hunt. Published by the Ethics and Public Policy Center, 1666 Connecticut Ave. NW, Washington DC 20009 (Phone: 202-328-7400). Printed December 1982. 417 pages. Clothbound: \$14. Paper-bound: \$9. (Order from publisher.)

- Reviewed by Walter Murphey

The Apocalyptic Premise is farranging, serious commentary on the many knotty problems posed by modern armaments and those political figures who control them. The commentary covers the entire scale of the ideological spectrum.

The book, says the publisher's summary, "includes thirty-one selections that reflect a wide range of views on nuclear arms policy held by political leaders, religious authorities, scholars, policy experts, journalists, and political activists. It leaves the reader to decide which arguments are most compelling."

In their foreword the editors note that "great debates" are really not usually so great, that public discussion is often "trivialized by ignorance, naiveté, deception, demagoguery, self-righteous posturing, and exaggerated hopes and fears."

They further state that "Reasoned fear based on real dangers is essential for survival. Unreasoning fear based on myths or highly unlikely dangers can lead to unwise and destructive behavior. The nuclear debate provides examples of both."

Among those who contribute viewpoints are Edward M. Kennedy, Georg Leber (vice-president of the West German Bundestag), journalist Sidney Lens, Politburo member Boris Ponomarev, Jonathan Schell (author of *The Fate of the Earth*), Herman Kahn, columnist George F. Will, pacifist Bishop Roger Mahony, Pope John Paul II, Ronald Reagan, Caspar W. Weinberger, Leonid Brezhnev, and Margaret Thatcher.

Edward Kennedy argues that we have to accept Soviet repression "in order to coax them into arms control." And he wants a nuclear freeze (with strict verification) because "both of us prefer existence to extinction."

KGB expert John Barron has a harsher view. "Almost everybody 26 Journal of Civil Defense: February 1983 wants peace and fears war," he says. "Therefore, by every conceivable means, the KGB plans and coordinates campaigns to persuade the public that whatever America does endangers peace and that whatever the Soviet Union proposes furthers peace. To be for America is to be for war; to be for the Soviets is to be for peace. That's the art of Active Measures, a sort of made-in-Moscow black magic. It is tragic to see how well it works."

Three addresses by three world leaders to the United Nations in June 1982 rank high among the viewpoints. On June 12th Soviet Foreign Minister Andrei Gromyko read a speech by Chairman Leonid Brezhnev.



"Concern for peace," said Brezhnev, "is the dominant feature of the Soviet Union's policy. We are convinced that no contradictions between states or groups of states, no differences in social systems, ways of life, or ideologies, and no transient interests can eclipse the fundamental need common to all people — the need to safeguard peace and avert a nuclear war. Today, as never before, purposeful considered action is required of all states in order to achieve this lofty goal."

A footnote remark by new Soviet Communist Party Chairman Yuri Andopov dovetails with the Brezhnev point only in the light of the John Barron analysis. Said Andropov: "We know full well that it is useless to beg peace from the imperialists. It can be upheld only by resting upon the invincible might of the Soviet armed forces."

Ronald Reagan, speaking to the United Nations on June 17th traced America's gullibility in recent years and its present awakening. "My country learned a bitter lesson in this century," he said: "The scourge of tyranny cannot be stopped with words alone. So we have embarked on an effort to renew our strength that had fallen dangerously low. We refuse to become weaker while potential adversaries remain committed to their imperialist adventures."

Quoting Franklin D. Roosevelt in her June 23rd U.N. address, British Prime Minister Margaret Thatcher commented: "We, born to freedom and believing in freedom, would rather die on our feet than live on our knees." Her message was summed up in eight points, three of which are:

- We believe that the human values of civilization must be defended . . .
- We believe that the best safeguard of peace lies not only in a just cause but in secure defense...
- We believe we have a right and a duty to defend our own people whenever and wherever their liberty is challenged.

The Apocalyptic Premise puts Conservative-Liberal squabbling in meaningful perspective. It places a new and revealing spotlight on "simplistic slogans, apocalyptic visions, misplaced fears, distorted statistics, and the beguiling doubletalk of those with hidden agendas."

Here is a timely and vibrant study on the all-important issue of nuclear strategy. A godsend. A book for the serious strategic defense professional, the citizen concerned with national survival, and above all for every one of our elected representatives in the United States Congress and every state legislator.

NUCLEAR POWER '83 — published by Southern Science, Office of Black & Veatch, P.O. Box 10, Dunedin, Florida 33528 (Phone: 813-733-3138). Individual copies complimentary. Libraries and working groups invited to request up to ten complimentary copies. Bulk orders invoiced at \$1 per copy. 4-inch by 6-inch format.

Nuclear Power '83 is a handbook giving the location, history and characteristics of 159 nuclear power plants in the United States. Plants include those in operation and those under construction.

A NEW NATIONAL STRATEGY

25-minute color film produced by High Frontier. Purchase price for 16mm: \$225; rental: \$50 for oneweek period. Purchase price for ½inch Video cassette, Beta max or VHS: \$60. Obtain from High Frontier, 1010 Vermont Ave., NW (Suite 1000), Washington DC 20005. (Phone: 202-737-4979.)

- Reviewed by Robert Baffin.

Retiring Arizona Congressman John J. Rhodes, 28-year veteran of the House and 1982 Minority Leader, introduces A New National Strategy and says "This could be the most important program you'll watch this year."

Mr. Rhodes is right.

A New National Strategy dramatically presents the highlights of space programs in the Soviet Union and in the United States. In particular it develops General Daniel O. Graham's "High Frontier" concept of space defense (see review of book by the same name by General Graham in the June 1982 issue of the Journal of Civil Defense).

Basic to the concept is that the technology required is now available, "on the shelf" so to speak. It offers the United States the opportunity to "make an end run" around the Soviet threat without itself posing an offensive threat. As author Robert Heinlein points out: "You can't kill a single Russian with High Frontier." You can only save lives, including those in Russia.

Graham presents High Frontier in clear pictorial fashion. It is a threelayered program, with the first two layers in space and the third on earth at target sites. The first layer consists of several hundred space "trucks" orbiting the earth at 300 miles altitude and designed to intercept attacking missiles at their slow, vulnerable boost stage. This layer is called "Global Ballistic Missile Defense." The second layer would consist of sophisticated antimissile defense that would include laser and particle beam technology above the atmosphere where a missile spends the greater part of its journey from launch to target. The third layer consists of missile intercept techniques at the target end of the missile trajectory.

As David Wilson of the Boston Globe points out in his statement the current space shuttle program can contribute admirably to speeding up the implementation of High Frontier.

Georgia Congressman Newt Gingrich likened control of space in the future to the importance of control of the air in World War II. "He who controls space may well control the future of mankind," he states in the film.



And Graham emphasizes also that it is impossible to use any element of High Frontier for attack purposes. What we would do in pursuing and implementing High Frontier, he states, is to put an end to the current "Balance of Terror" — for posterity turn "Mutual Assured Destruction" into "Mutual Assured Survival."

The real message of *A New* National Strategy — the bottom line — is therefore the achievement of world peace.

Could you ask for more in a film?

NEW INTERNATIONAL STATUS OF CIVIL DEFENCE (as an instrument for strengthening the protection of human rights) by Dr. Bosko Jakovljevic. Published by Martinus Nijhoff Publishers. 1982. Distributed in the U.S. and Canada by Kluwer Boston, Inc., 190 Old Derby Street, Hingham, MA 02043 USA; 142 p.p., \$32.50.

- Reviewed by Van E. Hallman

A book heavy in its exact interpretation of rules and protocols which have been developed to grant international protection against the effects of war on personnel involved in civil defense activities. It is concerned primarily with new provisions of international law concerning civil defense contained in Protocol I Additional to the Geneva Convention of 1949 relative to the protection of victims of war. Implementation of the new provisions depends upon the ratification by the various international states of the protocol, which was adopted on June 10, 1977.

Despite appeals to the governments by both the General Assembly of the United Nations and the International Red cross, ratification of the protocol has been slow, as stated within the book. This can probably be best understood by realizing that all legal rules adopted at the international level are a compromise between various interests, views, and concepts of many governments. The rules on civil defense are a compromise between the need to safeguard those providing protection for the war victims and the needs to provide freedom of action for armed forces involved in conducting warfare. Precedence for enactment of rules of international law granting special status and protection of civil defense personnel can be observed by the status presently enjoyed by the International Red Cross.

A thorough book, with great attention to detail on its rather limited subject, it contains a very complete and clearly delineated appendix of documents accumulated during the years of work expended by various international committees.

TOO GOOD TO FILE

Valentin M. Berezhkov, representative of the Institute of U.S. and Canadian Studies of the Academy of Sciences of the U.S.S.R. said, "It's senseless to think someone could survive or win a nuclear war."

He said the Soviet Union has special organizations in case of natural disaster but the building of underground shelters ended in the 1960s.

"We realized it would not be good protection from nuclear war, so we didn't spend any more money on digging passages," Berezhkov said.

He countered U.S. speculation that the Soviet Union is prepared to evacuate cities and chided U.S. officials for promoting evacuation and relocation plans.

"It is impossible to evacuate. It takes only minutes for a nuclear warhead to get to (one nation from the other)," he said.

 from a report in *The Oregonian* on Valentin M. Berezhkov's October address before the United States Civil Defense Council



The case for the existence of a large Soviet CD capability is straight enough, irrefutable and is not a matter of opinion. It is based on analysis conducted over years by the U.S. intelligence community (see Director of Central Intelligence, Soviet Civil Defense, July 1978), on masses of Soviet civil defense publications - i.e., books, journals, newspaper articles, photography and films ... on statements by Soviet leaders and military chiefs, on interviews with Soviet emigres, and on observations in the USSR by knowledgeable travelers. Incidentally, I have interviewed U.S. students who spent some time studying at the Moscow and Leningrad Universities, and they had no trouble finding evidence of Soviet CD or photographing Soviet shelters. Of course, foreign students are not allowed to attend the military CD courses at the universities which are compulsory for Soviet students.

- Leon Goure
 - •

Leaders of the Soviet Union are going all-out in preparing their people for the possibility of a nuclear conflict while the West debates the merits of a "nuclear weapons freeze." In addition to increasing the Soviet military forces from 4 million to more than 6 million in the past 18 months, the Kremlin has launched a new campaign of preparation and indoctrination in civil defense unmatched since WW II.

This unexpected and highly ominous move is revealed by the Deputy Chief of USSR Civil Defense, Col. Gen. V. Dement'ev, in the lead article in the September edition of *Red Star*, the Soviet Army's official organ.

His report undercuts Westernoriented Soviet propaganda about the "foolhardiness" of any thought that a nuclear war is winnable or that a civil defense program could save millions and make the difference. This Soviet propaganda is now being spread throughout the US and Western Europe by nuclear freeze advocates.

Gen. Dement'ev strongly reaffirmed the view of Kremlin policymakers that civil defense is an integral part of the growing Soviet military posture, which is now at its highest state of readiness in 30 years.

What is new and alarming about the Soviet civil defense campaign is its scope and timing. In recent years, Moscow muted public attention to civil defense, with major attention confined to specialized military journals. Now, Gen. Dement'ev openly summons all elements of Soviet society to "aggressive," "persistent," and "purposeful" efforts to "popularize" and "perfect" civil defense.

... Taken by itself, the civil defense campaign wouldn't cause too much concern. However, when added to all the other Soviet military preparations, the timing and scope of the civil defense campaign means the Russians are preparing their people for future military action.

- Paul Scott as quoted in the Daily News Digest.

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Contrary to U.S. strategic doctrine and planning, Soviet doctrine affirms the utility of defensive operations in the nuclear age. It is the Soviet view that offensive and defensive means operate synergistically, while it is the American tendency to disparage the role and effectiveness of defense against nucler attacks. The Soviets espouse and implement both active defenses and civil defense, while many Americans believe such defenses to be futile or "destabilizing." As the Secretary of Defense has pointed out:

"While the Soviets have emphasized both offensive and defensive forces, the United States has largely neglected defense preparations. The Soviets have also continued development of and paid increasing attention to civil defense and a wide variety of measures, designed to enhance the prospect of survivability of key elements of their society after the outbreak of a nuclear war."

The Soviets continue to maintain a rich nationwide air defense, while the United States has virtually abandoned such a defense.

The Soviets also sustain an impressive ballistic missile defense development and testing program. with rapidly deployable and current technology systems and systems with future potential. While the United States has deactivated the one ABM site allowed by the SALT I ABM agreement, the Soviets have modernized and enhanced their Moscow ABM site. Clearly, the Soviets agreed to the SALT I ABM Treaty not because they had become converted to the concept of Mutual Assured Destruction (MAD), as American supporters of SALT I argued, but because the United States then enjoyed a significant lead in ABM technology (since lost) and because Soviet strategic goals would have been more difficult to achieve had the United States carried through with its plans to defend its Minuteman ICBM force.

 from "Has America Become Number2?" (a report issued by the Committee on the Present Danger).



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UPCOMING

MARKETPLACE

Feb 12-13	Disaster Medicine Seminar, Contact: Florida Institute of Fechnol- ogy, Division of Disaster Medicine, Medical Research Institute, 3325 W. New Haven Avenue, Melbourne, FL 32901, 305/723-5640 (Fee: \$35 — \$40 after Feb. 5)
Feb 22-25	Securicom '83 Worldwide Congress and First Int'I Exhibition — Computer and Communications Security & Protection, Cannes, Contact: SEDEP Department: Expositions, 8, Rue de la Michodière 75002 Paris, FRANCE
Feb 28- Mar 3	U.S.C.D.C. Mid-year conference — Holiday Capitol, 500 "C" St., SW, Washington, DC, Reg. Fee \$65. Contact: Doug Crichlow, 1107 N. B'way St., Indianapolis, IN 46202 — 317/633-3900
Mar 7-11	Phase IV Revised — National Security Seminar, National Emer- gency Training Center*
Mar 7-11	Tunnels — Design, Construction & Instrumentation — Denver, CO, Contact: Dr. R. S. Sinha (D-271), US Bureau of Reclamation, P.O. Box 25007, Denver, CO 80225, 303/234-7171 or Ms. C. F. Sheehy, Assoc. Dir., Univ. of Colorado, Campus Box 178, Boulder, CO 80309, 303/492-8356
Mar 25-27	Stress Factors in Emergency Medical Services & Critical Care Medicine. Contact: Jeffrey T. Mitchell, M.S., PhD Candidate, Emergency Health Services Program, University of Maryland, Baltimore County, Catonsville, MD 21228, 301/455-3223
Mar 28- Apr 1	Public Education course, National Emergency Training Center*
Apr 10-15	5th Congress of the Int'I Society for Rock Mechanics — Copy of Bulletin # 2, write Organizing Comm. — 5th ISRM Congress, PO Box 310, Carlton South, Victoria 3053, Melbourne, Australia
Apr 18-29	Protective Construction Course, National Emergency Training Center*
May 9-14	Public Education Course, National Emergency Training Center*
May 16-20	Phase IV Revised — National Security Seminar, National Emer- gency Training Center*
May 23-27	Graduate Seminar, National Emergency Training Center*
Jun 12-17	American Nuclear Society annual meeting, Westin Hotel, Renais- sance Center, Detroit, MI. Contact: Walter J. McCarthy, Jr., Chair- man & Chief Exec. Officer, Detroit Edison Co., 2000 Second Ave., Detroit, MI 48226, 313/237-8800
Sep 29- Oct 1	The American Civil Defense Association, 6th Annual Seminar- Conference, Pentagon City Quality Inn, Arlington, VA, for informa- tion contact: TACDA, PO Box 1057, Starke, FL 32091 — 904/964-5397
Oct 10-13	U.S.C.D.C. 32nd Annual Conference, Birmingham, AL, Contact: Sadie Morgado, 709 N. 19th St., B'ham, AL 35203 — 205/254-2039
Oct 30- Nov 4	American Nuclear Society, Winter Meeting, San Francisco, CA — Contact: Herbert Worsham, Jr., Mgmt. Analysis, 11095 Torreyana Rd., San Diego, CA 92121 — 714/452-5000
*Contact: Of Center, 1682	fice of Admissions and Registration, National Emergency Training 25 S. Seton Avenue, Emmitsburg, MD 21727

Would you like to hold a Disaster control Seminar? For information contact: **SAFETY SYSTEMS, INCORPORATED** PO Box 8463, Jacksonville, FL 32239 (904/725-3044)

30 Journal of Civil Defense: February 1983

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TRAINING TAPE AVAILABLE...MET-TAG — "Your Key to Survival" (Video Cassette — ½ in. VHS or ¾ in.) 20 min. Color. 1-week rental: \$10. Purchase: \$52. From: METTAG, PO Box 910, Starke, FL 32091 — 904/964-5397.

DISASTER-EMERGENCY NEWS-LETTER and 1983 nuclear equipment catalog for RER, Survivalists, CD. Good info, fair prices. \$2.50 postpaid. Radex, 4109 Graf Drive, Louisville, KY 40220 (502/491-0849)

AIRPORTS, rescue units, etc. needing rugged, color-coded, serial-numbered triage tags with casualty position marking capability invited to write for free "airport-option" information to: METTAG, P.O. Box 910, Starke, FL 32091 (Phone: 904/964-5397).

LATELINE

A SUPPLEMENT TO THE SOVIET MILITARY REVIEW for December 1982 is titled "Battle of Stalingrad." Obviously focused on tanning the fire of Soviet patriotism it bitterly denounces the West for its "failure to live up to their Allied commitments" by establishing a second front in Europe earlier in World War II. The victory at Stalingrad - a truly stunning one - is described as not only the turning point in World War IT but the turning point in world history, a defeat of capitalism by socialism. From 1943 on to the end of the war in 1945, according to the account, "the USSR could smash nazi Germany and its satellites on its own, without outside aid." Throughout "Battle of Stalingrad" there runs a bitter and vicious contempt for the Western Allies, a curious parallel to current Soviet peace overtures. It observes:

"US attempts to blackmail the USSR with the atom bomb proved wholly futile. By the 1970s the USSR and the USA achieved nuclear parity. The period of imperialist diktat has passed, never to return."

WHILE MUCH MORE COULD BE SAID about this home-front ballooning of the Soviet WWII role (the article totally ignores the Pacific theater) it really boils down to being as much a part of overall Soviet strategy as its determined internal civil defense effort, its external pooh-poohing of civil defense, its nuclear initiative, its external peace offensive, and its all-out space program.

IT GIVES OMINOUS MEANING to FEMA's new turn to natural disaster preparedness. (See "Capital Commentary" on page 5.)

ONE BRIGHT SPOT ON THE CLOUDY AMERICAN SCENE is the potential that the US space program holds for defense against nuclear missiles. Edward Teller's talk on technology at the TACDA Wichita Seminar highlighted a superior American space technology. Eugene Wigner at the same meeting cited space defense as a method of "disarming" weapons of offense. General Daniel Graham's "High Frontier" concept has such a goal precisely in mind (see review of A New National Strategy on page 27). Oak Ridge National Laboratory scientist Carsten Haaland (see page 6) gives us a revealing nuts-and-bolts picture of space defense. Secretary of Defense Caspar Weinberger has called for an anti-satellite weapons program. The US Air Force has now formed a "Space Command" to direct military operations in space. Leadership voices in overwhelming support of space defense can be heard from President Reagan on down. The Space Shuttle provides an ideal research vehicle. . . . The American Security Council's Washington Report comments: "It is intolerable that the Soviet government should conscientiously provide for the survival of its people while the U. S. government makes no effort at all to defend its people. Using advanced technology, the United States can and must defend its citizens against the horror of nuclear war."

Could these knowledgeable people be assembled at one location as a team to get on with the job of providing space defense for our country - a sort of "Manhattan II" project?

Does America deserve it?

THE OFFICER (RESERVE OFFICERS ASSOCIATION PUBLICATION) is running a four-part series of articles on civil defense in its December, January, February and March issues.

TOO LATE FOR "UPCOMING": SAFETY SYSTEMS, INC. announces five disaster control seminars for March (Registration - \$35 per person):

March 5 - South Brunswick Township, N. J. (Phone: 201-297-2388) March 6 - Blackwood, N. J. (Phone: 609-757-8481, Extension 3688 or 3684) March 12- Indianapolis, IN (Phone: 317-633-6052 or 898-8877) March 13- Springfield, IL (Phone: 217-789-2155) March 19- Chaska, MN (Phone: 612-448-3435, Extension 214)

Seminars are in cooperation with Fire Departments. For further information contact: Safety Systems, Inc., P. O. Box 8463, Jacksonville, FL 32239 (Phone: 904-725-3044).

EDITORIAL . . .

THE NATURAL DISASTER COP-OUT

- Frank Williams, TACDA President

Some serious students of civil defense hold that, given the failure of the United States to mount an effective civil defense program through a direct approach, it can be successfully pursued through preparedness for natural and manmade disasters at the non-nuclear level.

Because such preparations are much easier to accomplish and because public support for them is forthcoming (they are recurrent and the need is visible) this method can be attractive.

Further, it is morally right and necessary to respond to these disasters with all the expertise we can muster. (When preparedness is geared to wartime attack its value in responding to the lesser disasters is greatly enhanced.)

Unfortunately, a preparedness limited to taking care of the common disasters with their relatively small numbers of fatalities — a few tens or in some cases a few hundreds — is grossly deceptive and ineffective when applied to a disaster that measures its fatalities in the tens of millions (nuclear attack).

It is something like prescribing aspirin for a cancer patient — failure of the remedy is guaranteed. It is another pious and easy way out, one that is cunningly encouraged by adverse propaganda.

In spite of the fact that preparedness for wartime disaster is challenging and difficult and frustrating it must be clearly recognized and energetically undertaken if we are to be — like the Swiss, the Soviets, the Swedes, the Chinese and others — serious about providing potential enemies with unattractive targets that discourage attack. Such preparedness thus affords the best possible odds for peace and at the same time results in drastic casualty reductions in the event of attack.



At times we have been oriented in the right direction, for instance with our emergency foods (which we failed to replace when their shelf life expired), our shelter plans (which needed updating but did not get it), our dispersal planning (which has aborted with poorly managed crisis relocation planning), our 2000 packaged disaster hospitals (which were superb but which the government backed off from, and which have been largely canabalized or given away to foreign countries), etc.

The basic constitutional responsibility for the safety of America's people has been abandoned by those elected to preserve and defend the Constitution, to protect our country and its citizens.

It must be addressed again, and without delay, by a virile government.

It must not be couched in the cop-out of preparedness for disasters of less than 0.001% of the magnitude (measured in estimated fatalities) of the one we fear.

Such an approach is un-American. It's playing directly into the hand of our enemies. It's a total rejection of our pioneer heritage. It's suicidal.

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All this is not obvious now to our leaders and the public. It becomes suddenly and dramatically obvious — as it has before — at the time of crisis when little or nothing can be done about it.

The role of leadership, which leadership — with few exceptions — has so far ignored, is to take the known steps to see that this does not happen and that our country and its people persevere. It takes a lot more than preparing for natural disaster.

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