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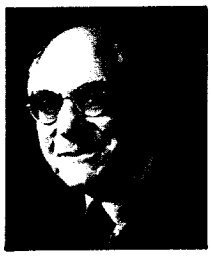
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The American Civil Defense Association

Journal of Civil Defense

The American Civil Defense Association

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

AUGUST 1982 **VOLUME XV — NUMBER 4**

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COVER PICTURES: TACDA's panel of blue-chip speakers promises a stunning Wichita seminar that will fully implement 1982's "Civil Defense Summit".

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The *Journal of Civil Defense* presents authentic information relating to civil defense—to the survival of free government, the United States and peace in the nuclear age. Its aim is public education in this field and service as a forum.

Authors are encouraged to submit manuscripts for consideration by the editorial committee for publication (the *Journal,* as a non-profit organization, pays no fees). Articles, preferably illustrated, should be 500 to 1,200 words in length, slanted to the non-technical reader, and oriented toward the civil defense field. Views expressed in contributions to the *Journal* are those of the authors and do not necessarily reflect *Journal* policy. Material may be reproduced if context is preserved, credit given, and copy sent to the *Journal of Civil Defense.*

THE AMERICAN CIVIL DEFENSE ASSOCIATION

P. O. BOX 1057
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SPECIAL SUPPLEMENT TO AUGUST 1982 ISSUE OF THE JOURNAL OF CIVIL DEFENSE

- BY JERRY STROPE

WASHINGTON, D. C.

U. S. HOUSE OF REPRESENTATIVES PASSES FULL FEMA BUDGET REQUEST . . . .

The Reagan Civil Defense Program got a new breath of life on Thursday, July 29 when the House of Representatives voted down an amendment to cut the authorization for civil defense funding, 240 to 163. The 3-to-2 margin was almost identical with the public's response to a recent Gallup Poll question: "President Reagan recently decided that the Government should increase spending for civil defense. How strongly do you approve or disapprove of that decision?" The public approved by a 3-to-2 margin.

Earlier this year, the Senate voted almost casually to slash the President's $252 million request to $144 million. Now that the House has authorized the full $252 million, the defense authorization bill will go to a House-Senate conference to iron out the differences. There is an excellent chance that the Senate conferees will recede from their original position. The Senate vote took the White House by surprise, and since then there has been some intense lobbying of key Senators preparing for a conference as well as the appropriation actions that will soon follow.

Senator John Warner (R-Va) held the hearings on civil defense by himself and was the only member of the Armed Services Committee to uphold the President's request when the committee chairman, John Tower (R-Tex), proposed the cut to $144 million. White House aides and key cabinet members have been working to reverse the situation in the Senate and, at the same time, get an affirmative House vote.

For example, in a letter to Representative Melvin Price (D-Ill), Chairman of the House Armed Services Committee, Secretary of Defense Casper Weinberger wrote: "We are concerned about the prospects of

(OVER)

floor amendments that would substantially reduce that figure and prohibit Crisis Relocation as a civil defense measure. If enacted, such amendments would undercut all possibility of our acieving a credible, cost-effective civil defense posture by the end of the decade."

The debate on the defense authorization bill on the floor began on July 19 and lasted 10 days. The big issues were the MX missile, the nuclear-powered aircraft carrier, and chemical munitions. On the evening of July 27, the last opposition to the MX folded and, in a flurry, the remainder of the bill was passed, apparently preventing the consideration of proposals to cut back civil defense. Civil defense opponents were furious and got House Speaker O'Neill (D-Mass) to agree to reopen the debate. The key amendment was put forward by Representative Edward J. Markey (D-Mass), a nuclear freeze proponent. His amendment would reduce the authorization for civil defense to the Senate's level and prohibit Crisis Relocation Planning. The debate was spirited for about an hour and 15 minutes. Among those who spoke for civil defense and against the amendment were Jack Brinkley (D-Ga), Ike Skelton (D-Mo), Donald Mitchell (R-NY), William Whitehurst (R-Va), Ken Kramer (R-Colo), and Roy Dyson (D-Md). Spearheading the anti-CD faction were Markey, Patricia Schroeder (D-Colo), and Ronald Dellums (D-Calif).

Attention now turns to the House Appropriations Committee where Edward Boland (D-Mass), Chairman of the cognizant subcommittee, is preparing to "mark up" the FEMA budget request. Boland has said that his subcommittee is prepared to support a "serious" civil defense effort, and perhaps the House authorization of the President's budget request will be reflected in the action on appropriations.

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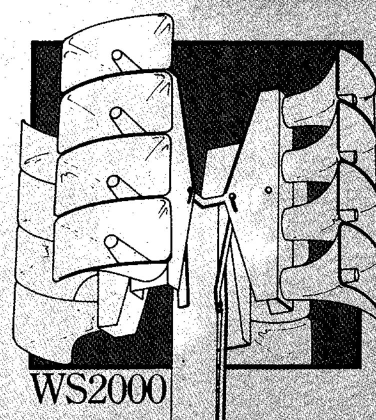

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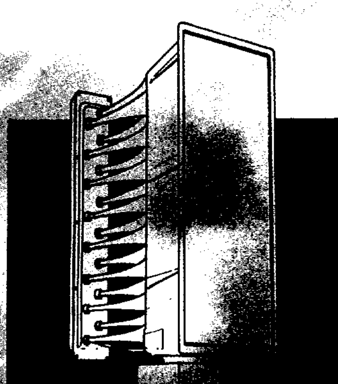

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CAPITAL COMMENTARY — Jerry Strope

John F. Devaney, veteran CD expert, writes a guest column for Jerry Strope:

SHUTE AND SCHELL: NUCLEAR POLLUTION

This is a review of two books about nuclear war. One, On The Beach, was written about 25 years ago by Nevil Shute, a novelist, to entertain his readers. The other, The Fate of The Earth, is a propaganda tract written this year by Jonathan Schell to support the political goals of the anti-war activists. Both are written against the background of The Effects of Nuclear War; both misrepresent those effects. Both seem to influence people who know nothing factual about nuclear war and are not curious enough to dig out the facts.

Both Shute and Schell depict the end of the human race on earth. Shute writes in understatement; his story is organized by its day-to-day events. In contrast, Schell's style is shrill and overblown; he has favorite words that he uses over and over: extinction (over 200), holocaust (over 140), peril (over 90), and annihilation (over 30). To paraphrase Hamlet's mother, "Jonathan doth protest too much methinks."

Both Shute and Schell use technical data. Shute introduces his through a character, a nuclear scientist, and thus can control his "technical data" to suit the needs of his story. Schell introduces some data from the standard reference, The Effects of Nuclear Weapons, and more from The Effects of Nuclear War, a report by the Office of Technology Assessment of the U. S. Congress (the OTA Report). He also cites a number of other sources, some recognizable more as political activists than as knowledgeable analysts of the effects of nuclear war. Typically, he selects data that fit his argument and ignores the rest.

In On The Beach, Shute starts the nuclear war between the Soviet Union and China and later involves the United States. He does not need to go into how many megatons are used. He needs only to imply that enough fallout is produced to be lethal all over the earth. Schell can't do that. He needs to have the Soviets detonate 10,000 megatons in the United States to support his thesis. To do this, he has to ignore Table B-1 of the OTA Report. In it he would find that, by 1985, the USSR could have some 8,800 weapons with a reliable total equivalent yield (delivered and detonated) of about 6,800 megatons. Then, if he holds back his Soviet reserve of 1,000 reliable megatons, he would be left with only 5,500 megatons for his attack, and 1,000 of these megatons would likely be air bursts according to the OTA Report.

Shute doesn't need to state assumptions; in fiction whatever the author says is taken to be so. Schell doesn't state assumptions although genuine technical analysis requires it. He uses data from the OTA Report in describing attack effects on New York, but he fails to mention they're "worst case" assumptions: no pre-attack warning, no evacuation or use of shelter, and clear weather. Schell's aim in all this is to terrorize his readers, and it best suits him to imply that what can conceivably happen, but is improbable, would be certain to happen.

All of Shute's people die of radiation sickness, so he needs fallout that is lethal after a year. He gives it Cobalt 60 (popular in novels) and makes it fine dust to fall slowly. In reality, fallout would more resemble course sand, and it would fall back to earth in about one day. He makes radiation sickness infectious. In reality, it is not.

In contrast, Schell needs all conceivable attack effects, and he uses them all: blast, heat, fire, nuclear and ultraviolet radiations, radiation sickness, disease, freezing, and starvation. He needs large amounts of fallout to kill people, other

(continued on page 31)

Nancy Deale Greene (wife of Lorne Greene) brings into play a ruggedly positive Hollywood civil defense initiative. Formerly defense and foreign policy advisor to the late Senator Hubert H. Humphrey, Greene currently serves as President of the Women's Institute of International Relations, State Commissioner of the Commission of the Californias, Chairman of the Board of Independent Research and Information Systems and member of The American Civil Defense Association (TACDA) Board of Directors. TACDA will feature Greene as a speaker at its October 1982 seminar in Wichita.

Nancy Deale Greene

CIVIL DEFENSE AND THE STRATEGIC BALANCE

— Nancy Deale Greene

"Civil Defense and the Strategic Balance" is condensed from *Military Science and Technology*, Vol. 2, No. 2, 1982 with the permission of its publisher, ICDM of North America, Inc., Santa Clara, California.

The Defense Philosophy

The essential role of civil defense in the strategic equation — politically, psychologically and militarily — has never been truly appreciated by the United States and the national defense planning establishment. With the exception of President John F. Kennedy's efforts in the early 1960s, following some early Pentagon planning and the Cuban Missile Crisis, population protection — as a vital and humane ingredient of national strategic defenses in the nuclear age — has gone unrecognized. The U.S. political/military leadership and the public-at-large have accorded civil defense the very lowest priority.

Why have they done this? There were several reasons. President Kennedy's life was cut short and the civil defense policy he strongly advocated later was killed in the cradle by Congress and allowed to die unattended by then-Defense Secretary Robert S. McNamara, on the basis that it might undermine nuclear deterrence by endangering Mutual Assured Destruction (MAD). Also, it was presumed that costs would be high for a national civil defense system — which could be easily "saturated" by the enemy with "offsetting offensive weapon systems." Studies which assumed these high costs dismissed prospects for commercial enterprise and private sector participation as well as the value of voluntary human resources, and attributed all costs to direct federal government funding.

A NEW NATIONAL STRATEGY SHOULD REPLACE MAD WITH MASS (MUTUAL ARMED SECURITY AND SURVIVAL).

The now obsolete concept of "assured destruction" might have retained some credibility had it been adopted as universal policy by the Soviet Union (and other nuclear powers), but it was never proposed in that context, and was simply ignored by the Soviets who continued to develop their own independent concepts about nuclear war and national defense in the nuclear age. What once was perceived (by the United States) as "*mutual* hostage populations," therefore, has evolved into a *unilateral* hostage population — that of the United States — and, as such does not enhance the deterrence of nuclear war, but invites attack, or at least, nuclear blackmail or coercion in time of crisis.

A new national strategy should replace MAD with MASS (Mutual Armed Security and Survival). This plan would incorporate active and passive defenses, including space

defenses, on a par value with traditional offensive weapon systems, with additional focus and funding in initial stages, because of past years of neglect. "Offensive" systems have advanced about as far as they can go. It is the "defensive" areas that have the greatest capacity for destabilizing the strategic balance, whether it is particle beam or high-energy laser research or civil defenses. A new countervailing strategy is desperately needed, and it must be primarily a *defensive* strategy.

Soviet vs. U.S. Civil Defenses

The Soviets began developing civil defenses even before World War II, and have continued, for well over thirty years at an accelerating pace, to institute civil and industrial defense programs as a major and essential part of a comprehensive national defense system suitable to the nuclear age.

The Soviets spend the U.S. equivalent of about $2 billion annually on civil defense. This compares to about $128 million annually by the United States, little of which goes for actual protection against nuclear attack by the Soviets or anyone else. Only about 5,000 people in the United States work in civil defense, including agency employees, compared with 100,000 permanent civil defense workers in the U.S.S.R., and an *additional 20 million part-time trained civil defense workers.* They all know what to do in time of emergency. In addition to fallout shelters, there are 15,000 blast shelters for the Soviet leadership and essential skilled industrial workers (110,000). U.S. fallout shelters, by contrast, are old, poorly marked, inadequately supplied and, for the most part, unwisely located, although there do exist hardened or deep underground facilities to protect the national political and military leadership and most state and local authorities.

Every school child in the U.S.S.R. learns about civil defense; a five-year course is required at higher education levels. The steadily paced Soviet civil defense program is *decoupled from crisis* and, as such, has not appeared to present an acute threat to the United States, certainly not to the critics of a U.S. civil defense program, who often cite the danger it would pose of alarming the Soviets while they remain sanguine about Soviet civil defenses.

In contrast, U.S. national policy leaves most civil defense activities—such as the marking and resupplying of shelters and the training of 2.4 million radiation monitors on equipment that is mostly rusted, out-of-date or unavailable — for a time of *intense crisis,* or period of "surge mobilization." Such a policy is far more likely to "alarm" the potential enemy, and create a national or international "war psychosis" than would a practical and steadily developed U.S. program. Obviously a time of international crisis would be the worst possible time to attempt to perform major civil defense chores if one still hoped to maintain deterrence and defuse the crisis.

While the value and logic of a multilevel defense structure has been recognized and acted upon by the Soviet Union and others, hardware and sophisticated high-technology in the United States has been emphasized to the virtual exclusion of low-technology options and people-oriented programs. Civil defense is neither a glamorous issue militarily, nor a high-technology one, but it is just as vital to both war deterrence and national survival as any hardware weapon system, for national defense and its weapon systems cannot logically be separated from the people they presumably serve to protect. (I say "presumably," because weapons can no longer act as buffers against aggression in the modern nuclear sense. "Mutual deterrence" is a myth of human perception that can be altered by other overriding human perceptions and by changing circumstances.)

A PEOPLE WITHOUT WEAPONS ARE DEFENSELESS, BUT WEAPONS WITHOUT A PEOPLE ARE PURPOSELESS.

Throughout history young men have been sent off to war to "defend their country's borders" and "protect the folks back home." This concept of war and national defense, however, is no longer valid in nuclear terms, when the "folks back home" are first offered up as "lambs to the slaughter." Credible deterrence depends upon the combined ability, and an enemy's perception of that ability, of a nation's weapons *and its people* to survive and to effectively retaliate should they be attacked. *A people without weapons are defenseless, but weapons without a people are purposeless.*

One important aspect, not taken into consideration by critics of a new U.S. civil defense program, is the fact that in the event of a major nuclear attack, tens of millions of Americans would *survive,* but these survivors would sustain far more numerous and severe injuries than if they first had been provided even minimal protection and information on emergency procedures. Their long-term survival prospects could be enhanced if some food, medicine and other essential supplies were safely stored in accessible areas less likely to be targeted. (Only about 2 percent of the United States is targeted, but about 60 percent of the population lives in the 2 percent.) New medical facilities and personnel should not be co-located with primary targets, and "emergency" facilities should be set up in non-target areas.

Unfortunately, most Americans believe the oft-repeated myth that nuclear weapons are a thousand

A prime initiative of Nancy Deale Greene is the newsletter *Humint,* "The Human Intelligence Network Report." *Humint,* published twice monthly by Independent Research & Information Systems Ltd., trains its unique expertise on timely world strategic factors affecting international political and power equations. Greene's co-editor is Vladimir Sakharov, former Soviet diplomat and intelligence officer. Dr. Sakharov (now an American citizen) wrote the authoritative book *High Treason,* published in 1980.

The *Humint* publishing office is located at 12077 Wilshire Boulevard, Suite 635, West Los Angeles, California 90025. (Phone: 213-417-8086.)

times more destructive than the Hiroshima bomb because they may be a thousand times more powerful. But a foxhole, one day's walk from ground zero, and 12 to 18 inches of dirt over one's head, can provide good protection. It cannot be assumed that one would not have sufficient time to get to a safe area. A surprise attack with little warning time is not the only way nuclear war might begin. It is more likely that people would have enough time to evacuate target areas, but not enough information about where to go. A public poll taken a few years ago showed that most urban residents would evacuate the cities voluntarily in a national emergency, but the majority of these would go from one target area to another, or from a *safe area to a target area.* Even with only one minute's warning time, most citizens do not know that closing the drapes could be a life-saving act fifteen miles from ground zero.

That the American people have allowed themselves to become totally dependent upon the human frailties of a few men — the political and military leaders of *either side* — to avoid nuclear war, and upon the increasingly vulnerable capabilities of our ballistic missile systems to deter war, without demanding even minimal personal protection, is an interesting, though not surprising, phenomenon. Many Americans have long succumbed to the *On The Beach* syndrome, which erroneously assumes that NO amount of protection can allow one to survive nuclear war. But given the record of history and human nature, which point toward the inevitability of war in whatever form, we should, as a matter of prudent precaution, adopt a policy of *national survival,* which can only be achieved by first thinking through the failure of deterrence, and the known and imagined aftermath of nuclear war destruction, in all its clinical horror. Only by measuring the known, and imagining the unknown, can a reasoned analysis and practical plan for human survival be made — should the "unthinkable" ever become the unforgivable . . .

The question often raised by those who believe civil defense unnecessary and nuclear war most unlikely, is whether a counterforce attack by the Soviets has any real credibility. "Surely," one argument goes, "a myriad of uncertainties about success of the attack would mitigate against its actual occurrence, at least under normal circumstances." Perhaps so, but what constitutes "normal" circumstances? How can we be certain they remain that way, or predict what would happen under "abnormal" circumstances? How mitigating are the uncertainties, and under what conditions?

The argument over "credibility" often is conducted in *Western* theory and terms, while it purports to represent Soviet thought and doctrine. Marxist-Leninist theory supports "the *initiation* of war as a deliberate act of policy . . . if the Soviet Union is virtually certain of winning and the gains clearly outweigh the cost." (Michael McGuire: *International Security,* Vol. 3, No. 4, Spring, 1979.) This theory is in addition to accepted Soviet doctrine, which advocates launching a preemptive strike if imminent enemy attack is perceived.

THE LIFE INSURANCE POLICY OF THE UNITED STATES IS IN ITS PEOPLE, NOT IN ITS WEAPONS.

Civil Defense Objectives

One expects to live a long life, but most carry life insurance. The life insurance policy of the United States is in its people, not in its weapons. Weapons defend at the perimeters, not at the core. U.S. strategic defenses appear to be designed to protect America's arms and legs with heavy armor, but expose the heart and vital organs. The future security of our country depends, therefore, on redressing this dangerous oversight.

At one time, and still to a great extent at policy-making levels in the United States, mutual vulnerability of populations (and even some defense systems) was perceived as a deterrent to nuclear war. This is based on the false assumption that no effective defense is possible against a ballistic missile attack, and that an attempt to build one would be dangerously destabilizing, as well as too costly — things the Soviets never seem to worry about. Presumably, mutual hostage populations would guarantee that neither side would strike first. Unfortunately, the knowledge that this still prevalent theory of mutual vulnerability has been totally ignored by the U.S.S.R., rendering it useless, has been lost on many U.S. leaders and decision-makers.

It has been publicly explained that during the 1962 Cuban Missile Crisis, the U.S. government did not alert the general population to take personal protective measures, in order not to raise Soviet alarm over U.S. intentions and risk a Soviet preemptive strike. One wonders if this baring of one's national throat would occur in some future crisis.

With the advent of MIRV'd missiles, mutual vulnerability could no longer remain mutual even as a theory. If an initial, probably unexpected, Soviet attack were successful, the attacker would have considerable disarming advantage militarily. If coordinated with fully activated active and passive defensive measures, particularly *civil defenses,* potential Soviet losses in the early 1980s could be limited to levels that might be deemed acceptable on a war footing by the Soviet leadership.

Activation of current Soviet civil defense plans might take place during an intense crisis, possibly reducing potential Soviet casualties to less than ten million (assuming a sufficient U.S. surviving force would retaliate), again presenting what might be an acceptable risk to the Soviet leadership, while the U.S. population would remain hostage and vulnerable at highest risk, with up to 140 million potential casualties under present civil defense readiness capabilities. Such a one-sided advantage in passive defenses could be used by the Soviets as an *offensive* threat combined with the threat or use of offensive weapon systems. The defense imbalance provides the Soviets with a greater temptation to attack the more vulnerable country, the United States, with little or no warning, particularly during a critically tense period or crisis.

What to Do

For many years now, the Soviet Union has gone about the business of developing a practical, potentially effective civil defense program as a matter of firm policy, not as the

result of crisis, thereby not unduly alarming its potential enemy, the United States.

On the other hand, so little attention has been paid to protecting the U.S. population, that if a severe crisis arose and immediate steps were required for crisis mobilization and population protection, there is even greater likelihood of precipitating a nuclear confrontation between the two superpowers than if the United States had pursued a steadily paced civil defense program similar to the Soviets'. Crisis management alone is difficult enough, without the added complications of U.S. failure to undertake proper civil defense precautions as a matter of prudent policy, *decoupled from crisis.* It would greatly increase the risk of war to require the most necessary civil defense and crisis mobilization activities to be performed hastily, probably ineffectively, under severe crisis conditions. Such a manic state of affairs is designed to create public panic and feed a national war psychosis, further heightening international tensions, and imposing psychological barriers to deescalation and peaceful resolution of the crisis.

Another aspect is a moral one. As long as the possibility of nuclear war exists, however remote, the greatest responsibility of the government is to protect and preserve the lives of its citizens. Weapons, buildings and objects can be replaced, but not human beings. A population decimated is a civilization lost. As we move into a period of greater military vulnerability, it would be the grossest abrogation of governmental responsibility not to prepare to save human lives and relieve human suffering, should nuclear deterrence fail.

A crisis relocation program, similar to the Soviets', compares favorably in funding requirements with other defense systems; can be instituted more rapidly than a hardware program, particularly on a crash basis, with little relative increase in costs, and could save 80 percent or more of potential casualties, something no weapon system could accomplish if war erupted. A major drawback of a civil defense program totally dependent on *crisis relocation,* however, is that it would be useful only if there were sufficient warning time available, and as long as the Soviets were also dependent on crisis relocation. The Soviets are building hardened blast shelters for their people at an intensified pace. When the project is completed, they will no longer be dependent upon the crisis relocation program they now have, and we could then be denied the critical warning time needed for our own crisis relocation.

A hardened-shelter-building program in targeted areas involving the public's active cooperation, the private sector, and direct and *indirect* government funding, is affordable, effective with less warning time, and could be achieved, *if* there is the national determination to do it. Neither the longer-term hardened-shelter program, nor the shorter-term crisis relocation program, should be adopted to the exclusion of the other. *Both* are required. Depending on where they are located, people should be told the type of in-place shelter they should have, and be given assistance in planning and construction.

The people are willing partners in survival and they will do what needs to be done to ensure not only their own survival, but the survival of the nation. □

SPOTLIGHT

MEDICAL TRIBUNE TURNS FOCUS ON SURVIVAL

In a front-page story titled "Should MDs Turn Their Backs On Nuke Survival, Care Plans?" the prestigious *Medical Journal* digs into the question of medical help for the victims of nuclear attack.

After looking at the position of hopelessness espoused by the Physicians for Social Responsibility and the International Physicians for the Prevention of Nuclear War, the *Medical Journal* presents the FEMA Crisis Relocation Planning position.

Then it gives Dr. Max Klinghoffer of The American Civil Defense Association a generous 11 column-inches of say. Observes Dr. K: "I maintain that there's no disaster so great, that would have so many casualties, that the medical profession is not obliged to take care of survivors."

Klinghoffer stressed the revival of abandoned programs such as shelter construction and the Packaged Disaster Hospital.

It was a "national disgrace" to abandon these programs he pointed out. "It was a mistake, however, that can be remedied."

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AEGIS INTERNATIONAL LAUNCHED IN ZURICH

Out of Switzerland, and reflecting the solid Swiss civil defense expertise, comes the new CD magazine *AEGIS INTERNATIONAL*.

Aegis for April/May 1982 boasts 48 pages plus cover and five feature articles, two of them on shelters.

An editorial on page 2 comments on pro and con reactions to the new publication. Publisher Carl M. Holliger observes that "sooner or later the critically-minded citizen of our times has to ask himself who it is that wants to keep the civilian population in a permanent state of insecurity: could it not be those who are forever wringing their hands over the dangers of the neutron bomb and tactical nuclear weapons, yet who take no concrete steps to protect the population — and then go on to castigate those who are concerned about these problems? We certainly hold no brief for belligerent behavior. Even so, it is more and more striking that in the opinion of pacifist and left-leaning environmental groups the measure of all things is a rosy-hued attitude which consists in the abandonment of all notions of freedom and in self-surrender in the social and political sense. The only people who have any pretensions to freedom are those to whom freedom is of such importance that they are prepared to fight for it and perhaps even to die for it. The world is not a playground for alternative cultures but a planet on which Good and Evil are locked in combat and where the wolf very often stalks in sheep's clothing."

Subscription to the bimonthly *Aegis* is $50 (overseas). Address:

Weinbergstrasse 102
8006 Zurich
Switzerland

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METTAG AT ILLINOIS AIR CRASH

On March 19, 1982 an Illinois Air National Guard KC-135 with National Guard and Air Force Reserve personnel on board crashed in McHenry County, Illinois. There was an immediate response by fire, rescue and police personnel with the McHenry County Emergency Services and Disaster Agency called to their role as coordinators. After an extensive search of the area, it was determined that none of the 27 people on board had survived the crash. Coroner of McHenry County, Alvin J. Querhammer, was on the scene and began his grim task of locating the bodies and parts of bodies that were strewn across a 2½ mile area. Due to the necessity of maintaining accurate records for the Coroner's Office and military personnel, it was quickly decided that stakes would be driven in the ground and a numbered METTAG tear-off attached to identify the location of the various bodies. METTAG was used for several reasons, one of which was the fact that there were several tear-off portions that could be stapled to other tags, keeping the numbers in chronological order. Another reason the tags were used was due to the slight rain and mist that was falling. The tags were felt to be impervious to inclement weather. Because the bodies had fallen from an approximate height of over 10,000 feet, many were not intact upon coming to the ground, and it became necessary to identify even the smallest parts of bodies and clothing. In order to maintain continuity from the scene of the disaster to the grave, the METTAG number was recorded on all death certificates issued for the 27 victims. A permanent record is now on file in the McHenry County Coroner's Office.

Coroner Querhammer is a member of the McHenry County Disaster Planning Committee, which is composed of representatives of the fire/rescue, police, health dept. and hospital personnel. John Shay, the County's Emergency Services and Disaster Agency Coordinator is chairman of this committee. Shay had participated in a number of disaster drills in the county in which METTAGs were used and had determined in advance that if an incident like this should ever occur in McHenry County he would use these tags.

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PEACE THROUGH STRENGTH BILL GOES "OVER THE TOP"

With Arkansas Senator David Pryor coming on board as the 51st senator to co-sponsor the Peace Through Strength Resolution the way appeared to be paved (with committee cooperation a current possible roadblock) for passage of the resolution by both houses of Congress.

A majority is already assured in the House of Representatives with 274 members (63%) now currently co-sponsoring the bill.

The resolution is the work of the Coalition for Peace Through Strength (a part of the American Security Council). It has already been passed by the full legislatures of 14 states and the Territory of Guam. It has been passed by the *Senate only* in 4 states and the *House only* in one.

Ten state governors serve as state co-chairmen of the Coalition.

The resolution — made a part of the 1980 Republican Party Platform — lists 8 general objectives designed to promote peace through strength. The third objective provides for the creation of "a strategic defense and a civil defense" at least equal to that of the Soviet Union.

The House and Senate bills calling for a "freeze and reduction in nuclear weapons" according to the summer 1982 issue of the *PSR Newsletter* now have 169 House sponsors (39% of the members) and 26 Senate sponsors.

•

CIVIL DEFENSE DEBATED AT WASHINGTON DC MEETING

The Emergency Assistance Committee, National Capital Section of the American Society of Civil Engineers, provided the setting for a civil defense debate on June 22nd.

The luncheon meeting discussion centered on the proposition "That Congress should enact into law the civil defense program proposed by the President." The affirmative side was taken by Dr. Roger J. Sullivan, Project Leader of Civil Defense Studies for System Planning Corporation. The negative position was represented by Dr. Joseph P. Evans, Washington Area Representative for the International Physicians for Prevention of Nuclear War.

Fifteen minutes were allowed to each speaker, with five minutes each for rebuttal. Questions followed, with informal exchanges lasting a half hour beyond the 2 o'clock adjournment.

It was felt by some participants that the basis was laid for further dialogue between pro- and con-CD groups.

•

JAPANESE TV FILMS THE "EGG"

On June 14th the Chugoku Broadcasting Company of Hiroshima, Japan visited Biosphere Company in New Hampshire (manufacturer of "The Egg" shelter) to film an interview with Biosphere president John G. Brodie.

The TV crew also took pictures of "The Egg" to show Japanese TV audiences in August during anniversary observations of the 1945 atomic bomb detonations.

Mass production engineering has brought the cost of the Biosphere shelter down from $30,000 to around $15,000. (Biosphere, Inc., 800-328-9493.)

Japanese TV reporter Hideki Matsushima interviews John G. Brodie, president of Biosphere Incorporated.

•

TV "VULNERABLE" TO DISINFORMATION

The *TV Guide* feature story for its June 12-18 edition is titled "Why American TV Is So Vulnerable to Foreign Disinformation."

It seems that one part of the American news media is beginning to awaken to the disinformation opiate that now affects — misleads — many sincere Americans.

Defecting Soviet diplomat Arkady Shevchenko, points out *TV Guide,* claims: "To get on American television — that is one of the highest priorities on the KGB agenda."

Through "masterful" plants, according to former CIA director William Colby "an absolute lie gets into general circulation."

Former UN Ambassador, now ABC senior correspondent, John Scali is quoted as saying "I think too little has been said in the past about the importance of disinformation and how it is a major intelligence weapon. The Soviets are masters at spreading rumors — I wish we were as good."

"The Soviets," says William Colby in the *TV Guide* article, "are well aware that truth is in the mind of the beholder. If you can affect what he thinks, that's the truth."

The truth, in other words, can be bent, can be manufactured, molded to suit the interests of adversaries. The realization by *TV Guide* that this is what is happening is a big step toward a general awakening. The idea, bought by many honest Americans, that civil defense is useless and provocative is a prime example of disinformation. So far it has worked well to the great advantage of the Soviets.

That's the propaganda game at its very best.

•

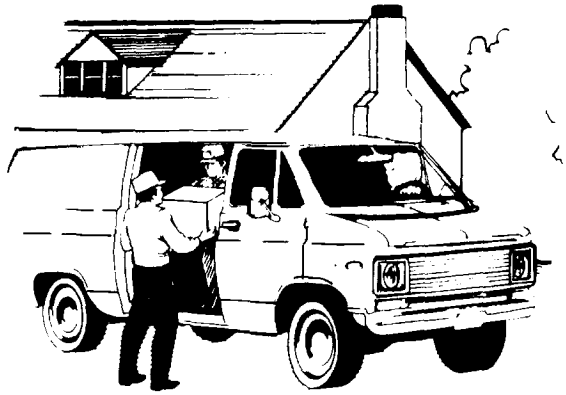
THE PONDEROSA PROJECT — A SURVIVALIST ADVENTURE

Not everyone can chuck it all and take to the hills. If you can and that be your bent, however, you might want to consider a place called "Ponderosa Village" — a community refuge organized by Larry and Meg Letterman in the rich, rolling south-central outback of Washington State.

The Lettermans emphasize self-sufficiency in earth-sheltered homes where society's upheavals can be weathered out in peace and security. The use of renewable energy, hydroponic (organic) gardening, a holistic health concept, a cooperative environment, and so on. Land parcels are 5 acres and up. Up to 160 households are anticipated. "We are in the initial stages," says Mrs. Letterman, "but we are not offering land to anyone before their initial visit here and interest in the village concept."

As an early-on crisis relocation plan the Lettermans and their Ponderosa may just have something. (For more information write Margaret Letterman, Route 1, Lot 17, Goldendale, WA 98620 — or phone 509-773-4633.)

Roger J. Sullivan



WHY WE NEED CRP

— Roger J. Sullivan

Roger Sullivan's position as System Planning Corporation Civil Defense Program Manager gives his article top credibility. System Planning Corporation's civil defense research has been extensive and widely used as a resource for reliable information and statistics. Dr. Sullivan writes from a position of unquestioned prestige and authority. His article reflects his personal views.

President Reagan has repeatedly called for a steeply upgraded civil defense program. Congress should support this.

The Soviet Union and the United States currently each possess several thousand strategic offensive nuclear weapons, deployed on intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and bombers. In principle three broad types of strategic defensive systems can counter these: antiballistic missiles (ABMs — to shoot down incoming ballistic missiles), air defense (to shoot down incoming bombers), and civil defense (to protect the country's assets, especially population, from the effects of nuclear weapons that penetrate and explode). Soviet air defense and civil defense are each many times as extensive as their U.S. counterparts. (ABMs are essentially prohibited on each side by means of the 1972 ABM Treaty.)

For many years U.S. policy has been based on "mutual assured destruction": the theory that neither side will attack the other because, if it did, the attacked nation would retaliate and destroy the attacker. Such a principle is highly dubious because (1) it is based entirely on our perceptions of Soviet intentions, not on their capabilities, and it may prove wrong in a crisis; and (2) the Soviets have never subscribed to it. Furthermore, as accuracy improves and the use of Multiple Independently-Targeted Re-entry Vehicles (MIRVs) increases, either side may, in the midst of some future crisis, conclude that, by attacking, it can destroy far more missiles than it need expend, thus possibly making an attack seem worth the cost. Thus the "crisis stability" of the current situation is not encouraging.

The situation would be much more stable if it were based on a principle of "mutual assured survival". Each side would possess relatively low levels of strategic offensive systems, limited by means of arms control negotiations such as the Strategic Arms Reductions Talks (START) proposed by President Reagan; and relatively high levels of strategic defensive systems to reduce the effectiveness of an attack. Stability would be greatly increased because (1) it would be based on verifiable Soviet capabilities, not their intentions or doctrine; and (2) it would ensure that any attacker would expend more weapons than he could destroy, thus removing the incentive for an attack. Such a policy requires both offensive arms control and strategic defense — two concepts that are complementary, not contradictory.

The most extensive plausible

nuclear attack against the U.S. is one that targets our military facilities and industry. However, population *per se* is not considered a target by the Soviets: thus an evacuated population would most probably not be targeted. A map of probable "risk areas" reveals that blast and fire would very likely cover only a few percent of the area of the 48 contiguous states. Because industry is generally located in cities, this area includes about 70 percent of the population. Such an attack would also produce extensive radioactive fallout over much of the nation. It would blow generally from west to east and decay substantially during the days following the attack. Although an attack could conceivably be launched "out of the blue", most analysts believe it far more likely that it would arise from an escalating crisis over a period of several days or weeks.

Protection against an "out of the blue" attack would require a nationwide system of blast shelters and would cost over $60 billion. In the current cost-cutting environment, such a commitment by the government seems highly unlikely. However, protection against the more likely attack-from-crisis, based on evacuation, would be far less costly: about $2 to $4 billion over 5 years or about $2.00 to $4.00 per American per year (we currently spend about 50 cents per American per year on civil defense.)

•

Four important questions must be addressed regarding such a program:

1. *Would a Crisis Relocation Program (CRP) work if people cooperated?*

Under a CRP, the officials of each state and county, in coordination with the Federal government, are establishing detailed plans and preparations for moving people out of primarily-urban high-risk counties and into rural, low-risk "host" counties. To protect themselves from radioactive fallout, people would have to establish "expedient" fallout shelter, following instructions provided by government. This could be done most easily by going into basements of existing buildings and piling earth around the outside, and in some cases on the first floor, to attenuate the radiation. A CRP should include detailed county-by-county preparations for traffic regulation, building allocation, and stockpiling of essential supplies, including water, sanitation kits, medical supplies, and some food. A great many issues have been analyzed concerning evacuation, including: key workers to maintain vital functions and prevent looting; traffic control; evacuation of people without cars; fuel supplies; housing and food in the "host" areas; and so forth. The overall conclusion is that, if the people cooperate, it can be accomplished successfully in one to three days. Analyses show that a large-scale attack would kill roughly 80 percent of the American people if there were no preparation, but about 20 percent if the CRP had been successfully implemented in advance.

2. *Would people cooperate?*

Since World War II there have been over 200 evacuations within the United States as a result of actual or impending natural disasters, such as earthquake, hurricane or flood. These evacuations have been routinely successful. State and local civil defense officials are capable individuals who know how to direct an evacuation without its resulting in injuries or inordinate chaos. Experience shows that the better the advance preparations, the more smoothly the evacuation proceeds.

In the absence of disaster, many people are apathetic or even hostile to the idea of evacuation; but when a real disaster seems imminent, people put aside their pre-disaster attitudes and cooperate with officials and with each other to a surprisingly high degree. To encourage such cooperation it is particularly important that officials provide as much information to the people as possible, before and after the disaster.

Wheras a natural disaster is an island of disaster in a sea of normalcy, an impending nuclear attack would imply potential disaster areas all across the country, corresponding to all military facilities and sizable cities. Extensive peacetime preparations, coordinated among Federal, state and local officials, would be a prerequisite to an orderly nationwide evacuation. Nevertheless, to any particular individual, one type of evacuation would appear about like the other. Thus it is reasonable to expect people generally to cooperate with authorities during a nuclear crisis evacuation. Furthermore, experience (e.g. Cuba 1962, Three Mile Island) has shown that, during a perceived crisis, a substantial fraction of the people will *spontaneously* evacuate. If for no other reason, nationwide CRP is necessary to channel such spontaneous evacuation and help people to relocate to relatively safe areas, instead of perhaps to other risk areas.

In a nuclear-crisis evacuation, people would have to follow instructions from authorities to establish expedient fallout shelters in the "host" areas. Over the years many tests have been conducted with untrained individuals, and have demonstrated that, given information and incentive, people can and will construct such shelters and live in them for several days.

Polls have shown that over 75 percent of the American people want good civil defense and are willing to pay the cost of a CRP. Most people do not become actively interested in civil defense until a crisis occurs; however, at that point they besiege the government for information and instructions and expect government to be ready to provide leadership.

3. *Would Postwar Survival and Recovery be Possible?*

A number of detailed studies have concluded that, if people are sheltered until the radioactive fallout decays, and if proper preparations are made for continuity of government and management of surviving resources, then long-term survival and recovery are indeed possible. An excellent book on how individuals can protect themselves is *Nuclear War Survival Skills,* by Cresson H. Kearny. It explains how to evacuate, construct shelter, obtain safe water, food, light, and sanitary facilities, and how to survive without doctors. I have personally conducted research on survival during the first year after a nuclear attack, considering the availabiity of such essentials as fuel, transportation and communication facilities, food, water, housing, clothing, sanitation, the threat of disease and long-term radiation, and potential ecological disruptions, following an evacuation and a nuclear attack. Life would be considerably more difficult than it is today, and many cities would be in ruins. I concluded, nevertheless, that if governments make sufficient preparations in peacetime, the people can survive in the post-attack

environment and begin to rebuild the nation.

4. *Would a U.S. CRP Increase the Chance of Nuclear War?*

In 1978 I interviewed about thirty authorities on crisis management and nuclear strategy — including liberals, conservatives, and "middle-of-the-roaders" — on the question of whether an effective U.S. CRP would be likely to precipitate a serious crisis or make nuclear war more likely. I concluded the following. If a nuclear crisis occurred, it would result from many complex and unpredictable causes. The presence or absence of U.S. or Soviet civil defense would have a relatively minor effect on the central events of the crisis itself and would probably not materially contribute to the chance of escalation to nuclear war. The U.S. should probably not evacuate in the absence of Soviet evacuation. However, if the Soviets begin to evacuate, then we should definitely do so as well, to protect our people if war follows. Such a U.S. responsive evacuation would not be likely to escalate the crisis further, and could well contribute to de-escalating it.

Civil defense may be likened to a seat belt in a car. From time to time I achieve a particular objective by driving my car from one place to another. I drive as carefully as I can, and try my best to avoid accidents; however, I also wear a seat belt to minimize the damage to myself should an accident occur. Similarly our country should conduct its national policy so as to achieve our objectives while trying our best to avoid nuclear war. Yet we need the "seat belt" of civil defense to minimize damage to our people should nuclear war nevertheless occur. I believe that civil defense would not increase the chance of war any more than seat belts increase the chance of automobile accidents.

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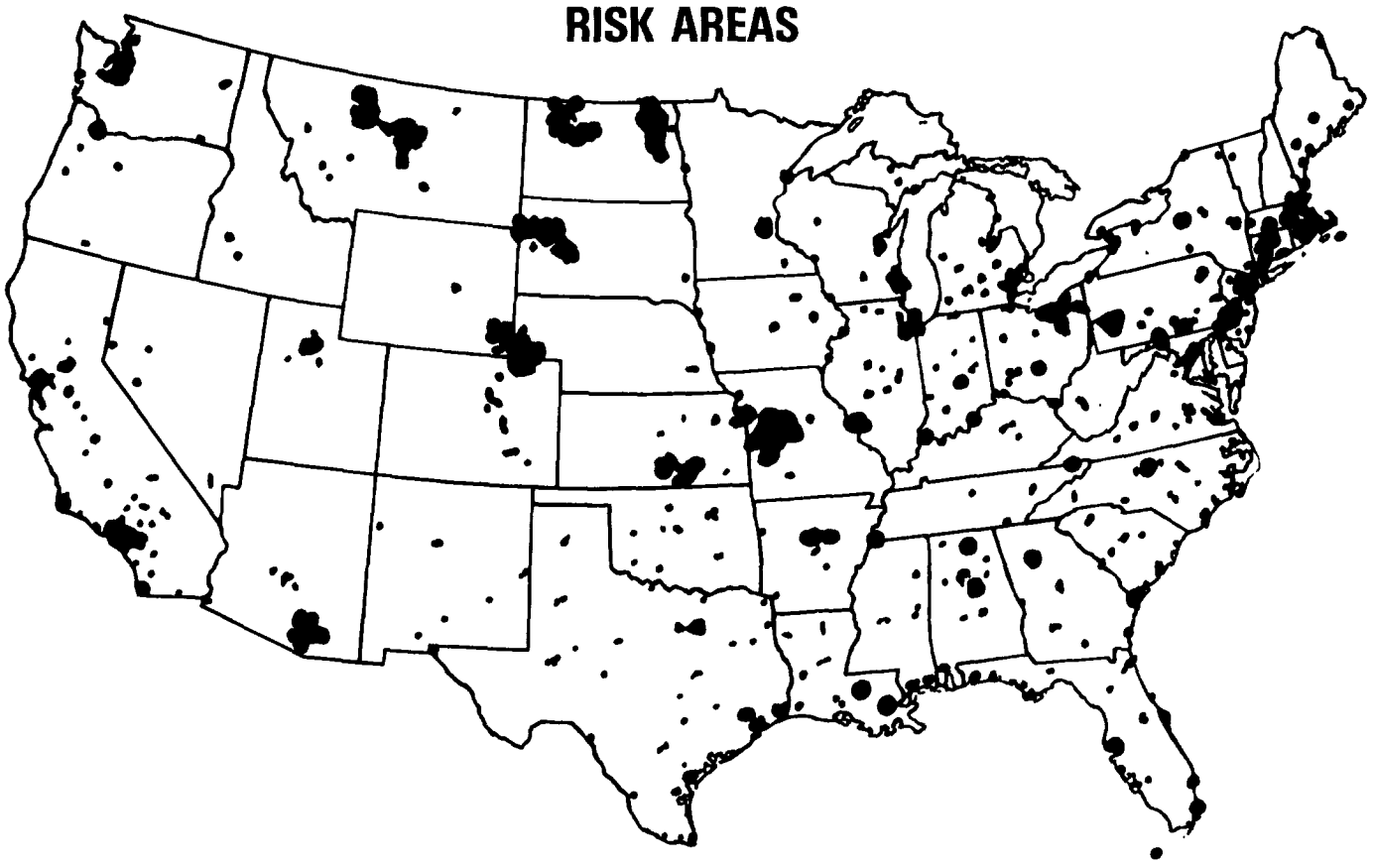
Since World War II the U.S. government has performed over 25 broad studies of civil defense and many hundreds of studies of its various components. The overwhelming conclusion is that it can work and we need it. In my view, the purpose of civil defense is not to make nuclear war more "thinkable" (thousands of people think about it every day) or "winnable" (this is admittedly a dubious concept). It is simply to provide as much protection as possible in case nuclear war occurs. The weapons are there. No physical barrier prevents them from being used. People and nations are unpredictable. A serious superpower crisis can occur anytime. Several days of advance indication of attack might well be available, especially if the Soviets began to evacuate. Heavy spontaneous evacuation would occur in the U.S. The public would cry out for leadership by government. Proper government preparation would provide the American people with a greatly increased chance of survival and recovery, should deterrence ultimately fail and nuclear war occur. We have an obligation to ourselves and our descendants to protect ourselves as much as possible against this terrible disaster. We need civil defense. We need CRP. □



U.S. blast risk areas. This map was prepared by the Federal Government and illustrates areas judged most likely to be targeted in a large scale nuclear attack.

"THE CIVIL DEFENSE SUMMIT"

October 7-9 at Wichita Hilton Inn East . . .

P³: PREPAREDNESS PROTECTION PEACE

TACDA SEMINAR EYES ACTION

Wichita Seen as CD "Springboard"

TACDA's 1982 Seminar agenda speaks for itself. TACDA has again outdone itself by bringing together under one roof fifteen leading civil defense authorities. (Please see listing on next page.)

The seminar will open at 1PM on October 7th with a TACDA Business Meeting. The meeting is open to members and non-members alike, and it will include the special presentation (and open discussion) of a stop-gap instant-shelter interim plan designed by NASA engineers for use until more deliberate plans cans be achieved.

The seminar registration fee of $80 ($70 if sent in before September 15th) includes the business meeting plus the morning and afternoon seminar sessions on October 8th and the final session on the morning of October 9th. It also includes the luncheon and the banquet on the 8th and two receptions, one on the 7th and one on the 8th.

The registration desk will provide hand-outs covering Wichita area attractions and special events.

An enlarged exhibit area this year, in the central ballroom adjacent to the site of the seminar sessions, luncheon, banquet and October 8

AGENDA

THE AMERICAN CIVIL DEFENSE ASSOCIATION ANNUAL SEMINAR

OCTOBER 7-9, 1982 — WICHITA, KANSAS

(WICHITA HILTON INN EAST)

— All activities take place in the South Ballroom unless otherwise noted —
Registration Desk open 1PM - 6PM October 7, 8AM - 6PM October 8, 8AM - 11AM October 9

Oct. 7	1:30PM - 5:00PM	TACDA Business Meeting ..... Hon. Frank Williams, Gen. John Neiler
	7:00PM - 10:00PM	Welcome Reception (Hospitality Suite)
Oct. 8	8:45AM - 9:00AM	Opening Ceremonies
	9:00AM - 9:20AM	"Looking Down the Nuclear Barrel" ..... TACDA Introduction (Panel)
	9:20AM - 10:00AM	"United We Stand" ..... Gen. Louis O. Giuffrida
	10:00AM - 10:30AM	— Coffee Break
	10:30AM - 11:00AM	"Civil Defense Instruction in High Schools" ..... Dr. Eugene P. Wigner
	11:00AM - 11:30AM	"Developments in Shelter Technology" ..... Dr. Conrad V. Chester
	11:30AM - 12:00N	"Shelter for the Asking" ..... L. R. Bearnes
	12:00N - 2:00PM	(Luncheon) "Accepting Our Nuclear Age" ..... Laurence W. Beilenson
	2:00PM - 2:30PM	"Britain at the CD Crossroads" ..... Eric Alley
	2:30PM - 3:00PM	"Moral Confusion in the Nuclear Debate" ..... Richard E. Sincere, Jr.
	3:00PM - 3:30PM	— Coffee Break
	3:30PM - 4:00PM	"Time Frame for Survival" ..... Gen. E. D. Woellner
	4:00PM - 4:40PM	"Survivors MUST Survive" ..... Dr. Max Klinghoffer
	4:40PM - 4:45PM	Closing Remarks and Announcements
	5:00PM - 6:00PM	Shelter Workshop (Hospitality Suite)
	7:00PM - 8:00PM	Reception
	8:00PM	(Banquet) "The Technology Card" ..... Dr. Edward Teller
Oct. 9	8:00AM - 8:50AM	Public Information Workshop ..... Hon. Fred J. Villella
	8:55AM - 9:00AM	Opening Remarks and Announcements
	9:00AM - 10:00AM	"Civil Defense Revisited" ..... Gen. George E. Keegan, Jr.
	10:00AM - 10:30AM	— Coffee Break
	10:30AM - 11:10AM	"Moving the Media" ..... Nancy Deale Greene
	11:10AM - 11:50AM	"Strategic Defense 1982-1990" ..... Dr. Leon Goure
	11:50AM - 12:00N	Adjournment
	1:00PM - 6:00PM	Inspection of Hutchinson, Kansas Federal Reserve Bank Emergency Operations Center (Interested participants are asked to sign up for the tour prior to noon October 8th — This well-known EOC has been written up in *The Wall Street Journal* and elsewhere. It is located in a salt mine 650 feet below the surface.)

reception, will feature shelter, emergency food, microcomputer, METTAG, CD equipment and other displays geared to the interests of seminar participants. Extended 30-minute coffee calls are designed to help give participants ample time to visit exhibits of their choice.

During seminar sessions speakers are encouraged to give participants the customary generous question and answer opportunities. Two workshops, one on shelter technology and the other on public information, will extend participant discussion opportunities.

A pointed TACDA resolution calling attention to past civil defense failures, current commitments and what action to honor those commitments will mean to the defense posture of the United States and world peace will be circulated with the registration desk being a signature collection point.

On the afternoon of October 9th (after adjournment) a visit to the Kansas City Federal Resrve Bank's Emergency Operating Center near Hutchinson, Kansas is available for those participants who wish to explore the 650-foot deep installation. The registration desk will accept reservations up to noon October 8th.

Further information may be obtained by contacting TACDA at P.O. Box 1057, Starke, Florida 32091 or phoning 904-964-5397.

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The optimum moment for cranking in a two-fisted civil defense program for the United States was about 1962. That was the year TACDA was founded. TACDA publications, TACDA spokesmen and TACDA seminars have since that time helped to spotlight the growing CD dilemma and beat the drums for protective measures. Although the effect on Congress and Administration officials has been noticeable, it has not yet been strong enough to tip the balance toward a meaningful CD program.

While the time is now very late, there has been in the last three years a growing national consensus that civil defense, despite its vocal critics, must assume quickly a role as a major responsibility of national defense.

It can be said, it should be said, that TACDA views this as its 1982 seminar objective.

REGISTRATION — TACDA 1982 Seminar, Wichita, Kansas, Oct. 7-9.

Registration fee — $80 **(Advance registration before Sept. 15 — $70)**

TO: **TACDA 5th Annual Seminar**
P.O. Box 1057
Starke, Fl 32091 (Phone: 904/964-5397) Enclosed: $ _____

Name(s) _____ (Phone: _____)

Address _____

City _____ State _____ Zip _____

(Registration includes all business and seminar sessions, and all scheduled meals, receptions and coffee breaks.)

Seminar speaker biosketches (in order of appearance on seminar agenda):

Hon. Frank Williams — TACDA President, Florida legislator since 1972. ASPEP member. CD lecturer, writer.

Gen. John H. Neiler — nuclear scientist, industrialist, founder of Oak Ridge Civil Defense Society.

Gen. Louis O. Giuffrida — Director, Federal Emergency Management Agency, committed to CD upgrading.

Dr. Eugene P. Wigner — Princeton U., Nobel laureate, leading U.S. CD authority. Nuclear scientist.

Dr. Conrad V. Chester — Nuclear scientist, Oak Ridge National Laboratory (Chief of Em. Prep. Section).

L. R. Bearnes — Project Director for adapting Kansas City underground to shelter. Veteran CD official.

Laurence W. Beilenson — author of *Survival and Peace in the Nuclear Age,* Reagan friend, CD activist.

Hon. Fred J. Villella, Director, National Emergency Training Ctr.

Eric Alley — Veteran British CD pro, Chairman Assn. of CD and Em. Planning Officers, career with ICDO (Geneva).

Richard E. Sincere, Jr. — Ethics and Public Policy Center staff, educator, strategic defense writer and analyst.

Gen. E. D. Woellner — Ex. Dir. U.S. Global Strategy Council, lecturer, writer, industrial executive, pilot.

Dr. Max Klinghoffer — veteran disaster medicine authority, writer, educator, lecturer, student of war survival.

Dr. Edward Teller — Hoover Institution on War, Revolution and Peace, Nuclear physicist, H-bomb architect.

Gen. George E. Keegan, Jr. — Co-chmn. Coalition for Peace Through Strength, strategic defense speaker, writer.

Nancy Deale Greene — Pres. Women's Institute of International Relations, Editor of *Humint,* actress, writer, poet.

Dr. Leon Goure — Dir. of Sov. Studies, Science Applications, Inc., author, speaker, defense analyst, Russian-born.

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—TACDA SEMINAR PARTICIPANT—

TRIAGE — EMERGENCY CARE

VIII RESUSCITATION/CPR — Part B

(8th of 13 installments)

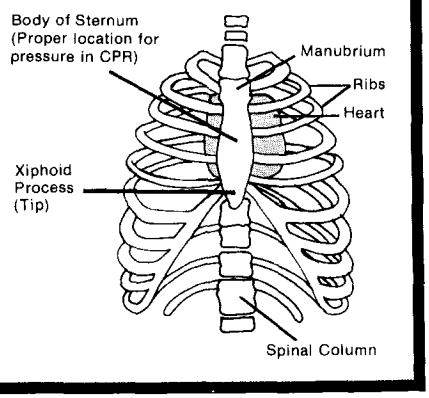
— Max Klinghoffer, M.D.

The functions of breathing and circulation are interdependent. That is, if breathing ceases, the heart will also stop within minutes since the heart action is dependent upon sufficient oxygen being supplied to the heart muscle. If heart action stops, respiration will soon cease, since respiration is controlled by a portion of the brain. When the brain is no longer supplied with blood (and, thus, with oxygen) the respiratory center will fail and respiratory arrest follows. Therefore, if opening the airway and getting oxygen into the lungs does not in itself resuscitate the victim, it is necessary to immediately start artificial heart action.

External heart massage (or, more correctly, external cardiac compression) is performed, as is mouth-to-mouth respiration, with the victim lying on his back on a firm surface. The necessity for a firm surface will become apparent as the technique is described. It is NOT possible to give efficient cardiac massage with the victim lying on a soft surface which yields to pressure.

External cardiac compression is based upon the fact that the heart is a hollow muscle which "pumps" the blood through a specific circuit (review circulation under section on hemorrhage). The heart lies between the sternum (breastbone) in the anterior (front) portion of the chest, and the spinal column (backbone) in the posterior (back) of the chest. Since the sternum is attached to the ribs, and since the ribs are moveable (and do move in respiration), it is possible to put pressure on the sternum and thus narrow the space between the sternum and the spinal column. This in turn compresses the heart between the two bony structures (see figures 2D & 2E). If this compression is done with sufficient force, and rhythmically, the result will simulate normal heartbeat (although this artificial circulation is not as efficient as normal heartbeat). Properly performed, external cardiac compression will produce adequate circulation to protect vital organs from damage due to oxygen depletion. Sometimes the patient who is in respiratory arrest may be revived simply by opening the airway. If this does not suffice, you can then provide oxygen by mouth-to-mouth respiration. But if the respiration and the heart action have stopped, or faltered, then it is necessary to provide both artificial respiration and artificial heart action. These two techniques, applied together, are known as cardiopulmonary resuscitation, or CPR. Having discussed mouth-to-mouth respiration, we can now describe external cardiac massage; and then the combination known as CPR.

Figure 1



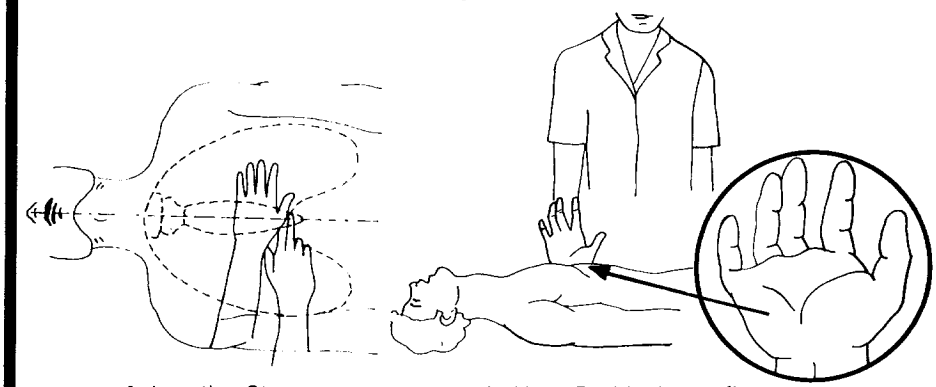
The sternum is a bony and cartilaginous structure, a portion of which overlies the heart. The upper border of the sternum can be palpated by placing the fingers just below the "Adam's apple", where there is a concave surface known as the sternal notch. From this point downward about two or three inches is the Manubrium of the sternum, which is not very moveable. From this structure downward is the body of the sternum, which can be compressed toward the spinal column. At the lowermost portion is the third part of the sternum, which is called the Xiphoid process (see figure 1— pronounced as though the "X" were a "Z"). It is important to know where these three portions are located, since compression over the manubrium will accomplish nothing, and since compression over the Xiphoid process is very dangerous. The Xiphoid process can be distinguished from the rest of the sternum by the fact that it is very flexible and can be moved readily. It varies slightly in its structure, from individual to individual, and may point slightly to the left or to the right. If it is compressed, is it often tender. Immediately below the Xiphoid process lie the spleen and the stomach, as well as the extreme left border of the liver. Any of these three structures may be damaged if much pressure is put on the Xiphoid process. The heart lies mostly under the body (mid-section) of the sternum, and it is here that compression must be applied in order to restore circulation. This is about two or three finger breadths above the Xiphoid.

At this point it is time to discuss what causes cardiac arrest and what a "heart attack" is. Cardiac arrest is cessation of heartbeat, and this may be due to any one of several causes. For practical purposes, certain other conditions are tantamount (equivalent) to cardiac arrest, even though the heart may exhibit some activity. In such instances, even though the heart may still have some slight activity, it is so ineffectual that no pulse can be felt and such activity can be detected only by electrocardiogram (or by direct visualization, if the chest happens to be open at surgery). Whether the heart has come to a standstill, or whether it is exhibiting ineffectual movement, the urgent need is to restore effective heartbeat.

Closed cardiac compression is accomplished by placing the "heel" of the hand over the body (mid-section) of the sternum (with the patient in the supine position) and rhythmically pressing directly over the sternum thus compressing the heart between the sternum and the spinal column. To reach sufficient pressure in the adult patient, it is necessary to place the second hand on top of the hand which is in contact with the chest wall. It is imperative that ONLY the heel of the hand contact the chest wall. If the fingers also touch the area over the sternum, the pressure is distributed over a larger area, thus decreasing the pressure where it is needed. Further, the contact with the fingers also increases the danger of fracturing ribs. It is not an infrequent occurence that ribs are fractured during CPR, but this risk is far overshadowed by the risk of death from cardiac arrest. Nevertheless, it should be remembered that avoiding contact of the fingers with the chest wall will not only decrease the chance of rib fracture, but will also provide greater pressure over the body of the sternum, (and hence over the heart). The actual pressure required to obtain satisfactory circulation is estimated to be about seventy-five to ninety pounds.

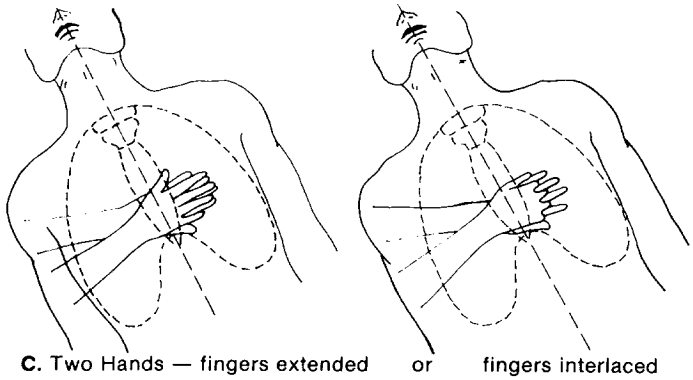
One good way to check the amount of pressure applied is to place a bathroom scale on the floor, kneel beside it, and

Figure 2

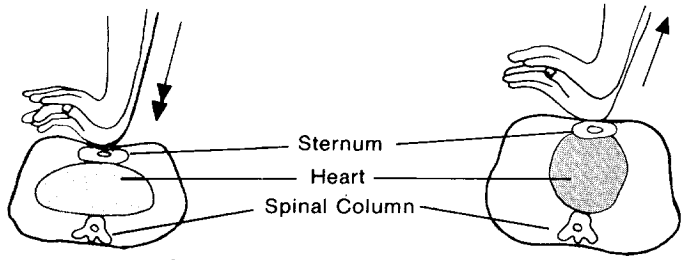


A. Locating Sternum

B. Hand Positioning — fingers upward



C. Two Hands — fingers extended or fingers interlaced



D. Compression of Sternum

E. Releasing Compression of Sternum (do not remove heel of hand)

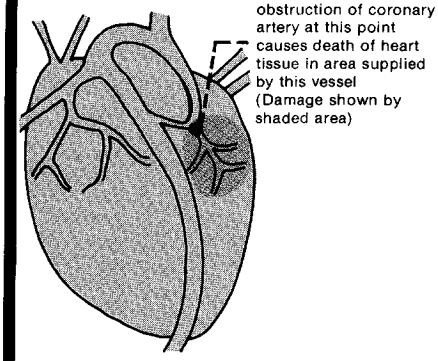
place the hands on the scale platform just as you would place the hands on the chest wall. Almost invariably the trainee will be surprised at the amount of pressure required. Of course, the use of the recording mannequin is better than the use of a scale; but a mannequin may not always be available.

External cardiac compression is used when the heart is not circulating sufficient blood to maintain life. This leads to the question: "what is a 'heart attack'?" This term is not a specific one since it may include more than one type of heart problem. In a general sense, the cessation of heart function may be divided into those caused by one of three factors: 1. failure of respiration (causing the heart to falter or stop because of lack of oxygen); 2. various dysrhythmias; 3. coronary occlusion. Dysrhythmias are the abnormalities in which the normal heart rate and rhythm become altered. Normally the heart beats at a rate of about seventy per minute (although there are wide variations of this which are considered normal), and the beat is regular. That is, the interval between contractions is about the same with each beat. There is one major exception to this. In many normal individuals the heart rate increases slightly with inspiration of air, and decreases slightly with exhalation. Some of these irregularities are relatively benign and are compatible with a normal life span. Extrasystoles, which are the occasional skipped beat or irregular beat occur in many normal people; and unless they become very frequent, or cause concern for the individual, they do not necessarily require treatment.

However, there are some dysrhythmias which are potentially dangerous, and one which is deadly. The latter is called VENTRICULAR FIBRILLATION, and may occur as a result of various diseases. In this condition the heart converts from its forceful, regular contraction to an ineffective "quivering" beat which will rapidly lead to death. You will not be able to detect this ventricular fibrillation (except on an electrocardiogram) since the beat is so ineffective that no pulse can be felt, and no heartbeat detected by ordinary means. For practical purposes, and for emergency treatment, this is cardiac arrest.

Ventricular fibrillation as well as cardiac standstill may occur as a result of CORONARY THROMBOSIS, also called CORONARY OCCLUSION and CARDIAC INFARCTION. The muscle of the heart is supplied with blood, just as are all muscles in the body. The heart is absolutely dependent upon this blood supply (and oxygen) for its activity. In coronary thrombosis there is a blockage of one of the coronary arteries (or a branch of such an artery) causing profound changes in the heart tissue normally supplied by that artery. That portion of the heart muscle which is now deprived of blood undergoes changes varying from alterations in the electrical activity of the heart to the all too frequent occurence of sudden death. This process is usually (but not always) accompanied by severe pain under the sternum or in the "pit of the stomach". Sometimes the pain radiates down the arms — particularly the left arm. This is frequently accompanied by nausea, weakness, pallor and profuse sweating. Of course, other conditions may produce similar symptoms, notably: a gall bladder attack; peptic ulcer; pneumonia; pleurisy; injury to the chest wall; pericarditis (an inflammation of the membrane surrounding the heart); and inflammation of the lower part of the esophagus. It is imperative to remember this: IF IN DOUBT, CONSIDER THE EPISODE A HEART ATTACK. Proceed with emergency measures where needed, and try to reach the local emergency services as soon as possible without interrupting care of the patient. It is not likely to be a serious error if you

Figure 3



Heart — Coronary Thrombosis

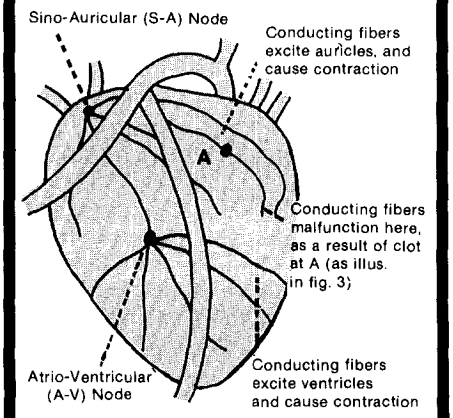
manage the patient as though he had a heart attack. To be lulled into inactivity and to fail to administer emergency treatment may cost the victim his life. Remember also that the heart attack patient will often deny that the episode could be a heart attack.

If the patient has a palpable pulse and is breathing well, it is advisable to have him lie down in a comfortable position (usually semi-reclining) and be prepared to elevate the lower extremities if there should develop signs of shock. DO NOT start rescue breathing or chest compression as long as the patient has a good heartbeat and good respiration. But be prepared to start CPR IMMEDIATELY if it becomes necessary.

Why is it so important to observe closely and to take appropriate action immediately? You will remember that in case of respiratory or cardiac arrest the average patient has only six minutes (at the maximum) to live. Any delay decreases his chance of survival.

When such a patient has a clot obstructing one of his coronary arteries it affects not only the heart muscle, but also the highly specialized conducting fibers within the heart. The heart functions on an electrical system. An electric impulse is initiated in the SINO-AURICULAR NODE at regular intervals (average: seventy-two per minute). This impulse spreads through the electrical fibers, activating the auricles of the heart and causing them to contract. The impulse then reaches another node (the ATRIO-VENTRICULAR NODE) where the auricles meet the ventricles. This now activates the atrio-ventricular node, which sends an impulse through the ventricles. Thus the auricles contract first, and a fraction of a second later the ventricles contract.

Figure 4



Heart's Electrical System

In the heart damaged by a heart attack, this electrical system is disrupted, and the heart suffers a dysrhythmia. Often this will progress to ventricular fibrillation and the heart will not pump efficiently enough to preserve circulation. This will result in death. But, as you now know, there is a way in which the heart can be made to contract sufficiently to preserve life: the process of CPR. In a substantial number of cases, if the patient is kept alive by CPR, the heart can recover from the "insult" of the attack — especially if the patient is transported quickly to a cardiac care unit in a hospital, where various measures can be taken to restore normal heart rhythm, as well as to prevent further clotting. It should be stated that a clot is not present in all instances of heart attack; sometimes, apparently, a spasm of the coronary vessels may be enough to cause the dangerous alteration in the electrical mechanism.

If the patient's condition worsens to the point that circulation and/or respiration falter to the extent that the brain is severely deprived of oxygen, the patient will develop a slightly purplish color called CYANOSIS. This is due to a lack of oxygen in the tissues. (You will recall that the "redness" of the blood is due to the combination of oxygen with the hemoglobin of the red blood cells, producing oxyhemoglobin. Blood which does not contain enough oxygen is of a dull color with a purple tinge).

Another point to be noted is this: as soon as the brain is depleted of oxygen, the victim becomes comatose (unconscious) or semi-comatose (semi conscious). He may also have convulsions. Since the size of the pupil of the eye is controlled by brain function, the pupils now dilate (become larger) and do not constrict (become smaller) when light strikes them. The normal pupil will contract when stimulated by light, and will become larger when the light is diminished. When the dilated pupil of the eye begins to contract with light during the rescue operation this is a good sign that CPR is having a beneficial effect. However, DO NOT SPEND TOO MUCH TIME CHECKING THE PUPIL, since any delay or any break in rhythm in CPR is hazardous.

In review, up to this point, remember the "A B Cs" of resuscitation: AIRWAY, BREATHING, CIRCULATION.

If you review the circulation as described in an earlier section, you will see that (starting with the left ventricle) the blood is pumped into the Aorta, the largest artery in the body. The Aorta branches and re-branches to supply oxygen and nutrients to the various tissues of the body (including the heart muscle). As the arteries become smaller, they are finally microscopic in size, and become part of the "capillary bed" — the point at which the blood actually furnishes oxygen and nutrition to the tissues. As the blood gives up its oxygen, the minute vessels become the veins of the capillary bed. The blood has now lost its bright red color (it is de-oxygenated) and is now of a dull color. The small veins now lead to larger and larger veins, finally becoming the Inferior Vena Cava and the Superior Vena Cava, which empty into the Right Auricle. From the Right Auricle, the blood is pumped into the Right Ventricle, and then into the lungs. Again, the vessels branch and re-branch until they become capillaries. At this point the vessels are very close to the Alveoli of the lung (the air sacs), and again an exchange takes place. the blood gives up its Carbon Dioxide (which is exhaled through the lungs), and takes up Oxygen, thus once again regaining its bright red color. The minute vessels now form larger vessels, and the oxygenated blood enters the Left Ventricle. The cycle is now complete.

In order to perform CPR correctly, the patient MUST be on a hard surface. It is not possible to give effective CPR on a bed, or on any other surface which will "give" during cardiac compression. It is usually better to quickly move the victim from the bed to the floor if this is possible. If weight or other factors prevent this, then it is urgent that a board be placed under the trunk of the patient in order to decrease the "give" of the mattress. One good method of demonstrating this is again by the use of a bathroom scale. Place the scale on the floor or other hard surface, and observe how much pressure is required to reach seventy-five to ninety pounds with the hands in proper position for CPR. Now, in contrast, place the scale on a bed or on a thick pillow. Note how much more effort is required to reach the same degree of pressure.

The patient must, of course, be in the supine position (lying flat on his back). There is a precise method of turning the patient if he is lying on his side or on his stomach. Since there may have been an injury, it is necessary to move the patient's body AS A UNIT, and to avoid twisting the body. Kneel at the side of the patient, and straighten his legs. Then gently straighten the arm NEAREST you, and raise it above his head. Using your own elbow as a pillow, grasp the shoulder of the patient. With the other hand grasp the patient by the belt or by the clothing at waist level. Now firmly but gently roll the patient onto his back. As you do so, the hand which was on the patient's shoulder should be placed behind his head, to cradle the head as the patient is placed on his back. Your knees can also be used to cushion the head as the body rolls into the supine position.

However, even before rolling the patient onto his back, it is required that you determine if the patient is indeed in respiratory and/or cardiac arrest or whether he has simply fainted. Therefore, before turning the patient, first shake him gently and shout at him. If he has fainted, it is likely he will show some signs of response. But do not spend more than a few seconds checking this point. If there is no response, start CPR

Figure 5

Turning & Positioning Victim for CPR

(first rolling the patient on his back if necessary). There is a reason for checking for response before initiating CPR. IT MAY BE DANGEROUS TO APPLY CPR TO A PATIENT WHO DOES NOT REQUIRE IT.

After positioning the patient and checking for response, the next step is to open the airway. This has been described. Sometimes the patient will show signs of response shortly after opening the airway, and without further measures. IN ANY PHASE OF THIS RESCUE OPERATION, ALWAYS BE READY TO PROCEED WITH THE NEXT STEP. THE PATIENT MAY RESPOND INITIALLY, AND THEN AGAIN GO INTO ARREST.

Allow about five seconds for spontaneous breathing, after opening the airway. Continue with your hands in this position (head tilt or jaw thrust) so that you may IMMEDIATELY proceed with the next step. If the patient does not respond within five seconds, rescue breathing must be initiated. Obviously, if there is a visible foreign body in the airway, this must be quickly removed. (CAUTION — in your haste to remove a foreign body, do not push it deeper into the throat).

Now take a deep breath, and immediately place your mouth OVER the mouth of the victim. At the same time, the hand which is on the forehead of the victim should be kept there for head tilt, but the thumb and index finger should grasp the victim's nose (see figure 7) and close off the nostrils. UNLESS YOUR MOUTH IS SEALED TO THE MOUTH OF THE VICTIM, AND UNLESS THE NOSTRILS OF THE VICTIM ARE COMPLETELY SEALED, RESCUE BREATHING WILL NOT SUCCEED. The lungs of the victim cannot be inflated if the air from your lungs leaks out at the junction of mouth-to-mouth, or if it leaks out through the victim's nostrils.

Now exhale forcefully into the airway of the victim. By watching out of the "corner of your eye" you should see the victim's chest rise as his lungs inflate. If this does not occur, or if you feel great resistance to your exhaled breath, there is almost always one of four causes: 1. the head is not tilted back adequately; 2. the mouth is not sealed to the victim's mouth; 3. the victim's nostrils are not sealed; 4. there is an obstructing foreign body in the victim's airway.

In a situation where the victim's mouth is badly injured and a mouth-to-mouth seal is not possible, then a variation may be used. The mouth is now sealed shut by lifting the lower jaw towards the upper jaw, and, if necessary, the hand placed over the mouth. Now the rescuer's mouth is placed over the victim's nose, and he proceeds with MOUTH-TO-NOSE breathing. Remember — in either technique, the head tilt or jaw thrust MUST BE MAINTAINED.

In initiating rescue breathing, timing and speed are important. The method of giving the first breath has been described. But in rescue breathing we actually begin with FOUR FULL BREATHS. This will be easier for you to perform correctly if you will remember this objective: the victim's lungs are to be filled as much as possible at the first breath. His lungs ARE NOT TO BE ALLOWED TO COMPLETELY DEFLATE, and a second breath is given. Again, his lungs do not completely deflate, and a third breath is given, and similarly, a fourth breath. The objective here is to FULLY expand the Alveoli, or air sacs, of the lungs. When you practice this method on a breathing mannequin, the graph of the breathing should look like figure 6a and not like figure 6b. This means, of course, that when you have exhaled into the victim's lungs you will remove your mouth from his mouth JUST LONG ENOUGH TO REFILL YOUR LUNGS, AND THEN BREATHE FOR HIM AGAIN. This means that the time interval between breaths is very brief. The entire four breaths should require not more than five seconds.

At the end of this cycle of four breaths, immediately check for pulse in order to see if cardiac massage is required. We do not use the usual site for checking pulse, since the wrist is some distance from the heart and a weak pulse may not be palpable at that point. The CAROTID ARTERY lies in the neck, just on each side of the Thyroid cartilage (or "Adam's apple"), and this artery is very close to the heart. The Carotid artery may be palpated by placing the fingers on the "Adam's apple" and gently let the fingers slide to the side of the "Adam's apple". On either side you will feel (palpate) a pulsation, which is synchronous with the heart beat. To check the pulse, palpate the artery on the side *nearest* you. DO NOT, IN CHECKING THIS PULSE ON YOURSELF OR ON OTHERS, PUT ANY GREAT PRESSURE ON THE ARTERY; AND DO NOT PUT PRESSURE ON BOTH SIDES AT THE SAME TIME. IN SOME INDIVIDUALS THIS MAY CAUSE FAINTING AND/OR CONVULSIONS.

Allow about five to eight seconds to check the Carotid pulse. If the pulse is absent, IMMEDIATELY begin closed cardiac compression. At this time you should be kneeling beside the patient with your knes at the level of his chest wall. In this position you may readily perform rescue breathing, and at the same time you are in position to do cardiac massage. The rhythm and timing of this can be learned only by practice on a mannequin. The compressions should be regular as to timing and as to force of compression. The rate should be as close as possible to eighty beats a minute for a one-man rescuer. This seemingly rapid rate has a purpose. Since the one-man rescuer will have to pause in cardiac compressions after

Figure 6

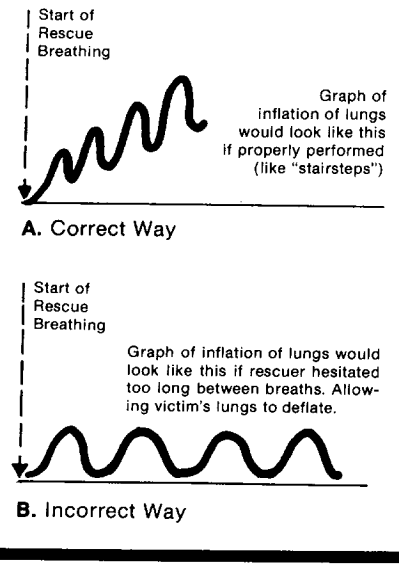
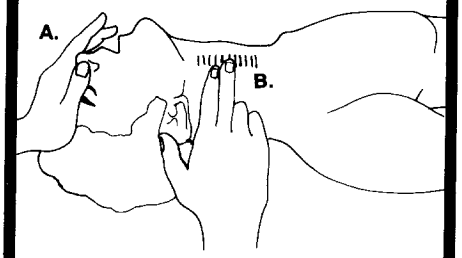


Figure 7



How to:
A. Close nostrils for air seal
B. Check Carotid Artery Pulse

fifteen beats in order to perform rescue breathing, this will make the EFFECTIVE rate of cardiac compression about sixty per minute. There is an audible timing device built into the mannequin to assist you in learning this rhythm. But a good way to practice this is with someone checking a stopwatch while you compress with this spoken rhythm: "One aand two aand three aand four aand five —" etc. up to fifteen. For further accuracy, it is a good idea to count up to ten, and then start again at one, thus: —aand ten, aand one, aand two, aand three, aand four, aand fifteen." Numbers eleven through fifteen (excluding twelve) have more than one syllable, and there may be a slight alteration in rhythm in going from numbers of one syllable to numbers of two syllables.

At the end of the fifteen compressions, again breathe for the victim; but this time just TWO BREATHS. These are given in quick succession, again to keep the lungs from totally deflating. Now again, give fifteen cardiac compressions, and two breaths. This is done for about a minute (which is four cycles of fifteen compressions and two breaths), and then again check for a Carotid pulse. Allow about five seconds for this check, and then again resume the cycle of fifteen-two. Since you will, as a single rescuer, have to relax the head tilt in order to do cardiac compressions, you *must again be certain of the head tilt, the mouth-to-mouth seal, and the sealing of the nostrils* when you resume rescue breathing. Similarly, when you complete the breathing part of the cycle, you must accurately locate the body of the sternum as the compression point. It is strongly advised that, upon completing the breathing cycle, you immediately place your finger tips on the tip of the sternum and then move upward three finger breadths. This requires only a second, and it helps assure you that your compressions will be effective.

How long do you continue CPR? This is a difficult question to answer, since victims have been revived after hours of CPR. But it is true that MOST victims who are going to recover will show signs of response within the first half-hour. DO NOT STOP FREQUENTLY TO CHECK PUPILS OR OTHER SIGNS, SINCE ANY INTERRUPTION OF THE RHYTHM OF THIS TECHNIQUE DECREASES THE CHANCES OF SURVIVAL. It is also true that an occasional victim may be revived even after a long period of submersion. This is especially true if he has been submerged in cold water. It may also apply to victims of cold exposure. Apparently the cold temperature helps protect the brain against damage from oxygen depletion. As you continue CPR, check the pulse every five minutes or so (this is not an exact requirement, and if you check at four minutes or at six minutes it will not greatly affect the outcome).

When the victim starts to breathe spontaneously, it will usually be a sort of gasping respiration, and usually quite irregular. At this point, it is important that you discontinue your previous rhythm of breathing, and that you now breath with a timing adjusted to the patient's breathing. In other words, as the patient is exhaling, you wait until the exhalation is complete. If you attempt to breathe into the patient's airway while he is exhaling, you are "fighting" his attempts at respiration.

When the heartbeat is again detectable (at the Carotid pulse), do *not* assume that your task is completed. The heart action may again stop, often for the same reasons cardiac arrest occurred in the first place. You must be ready to immediately resume CPR. □

NEXT INSTALLMENT:
RESUSCITATION/CPR — Part C

DISASTER MEDICINE SEMINARS MAKE FLORIDA DEBUT NOVEMBER 12

The Florida Institute of Technology (F.I.T.), in the shadow of Cape Kennedy at Melbourne, Florida, is the site of a new series of Disaster Medicine seminars to be held under the auspices of the institute's newly created Division of Disaster Medicine headed by Dr. Max Klinghoffer. It is to be an organic part of F.I.T.'s Medical Research Institute.

The first "pilot" seminar has been set for November 12-14, 1982 with a special reduced early registration fee of $45 through November 5th ($50 after that).

"Instruction at our disaster medicine seminars," said Dr. Klinghoffer, "will zero in on practical lifesaving and medical care techniques where professional medical care is not immediately at hand. Our approach will be an update of the popular and successful classes that were held at O'Hare International Airport over a period of fifteen years. Seminars of this nature, conducted at an enlightened lay level translate in the confusion of disaster situations into a rewarding organized approach and the consequent saving of many lives."

Co-sponsor of the seminars is The American Civil Defense Association.

The first seminar is to be held at F.I.T.'s Gleason Auditorium. Registrations opened July 1st and are now being accepted.

Attractions in the Melbourne area within an approximate radius of 50 miles include: Kennedy Space Center, Circus World, Sea World, Disney World and Florida's finest beaches. Melbourne is in the heart of Florida's citrus area.

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AGENDA

Nov 12: Philosophy of Triage
Treatment of Wounds & Bleeding
Prevention & Treatment of Shock
Immediate Treatment of Burns (Thermal, Solar, Chemical, Electrical)

Nov 13: Emergency Treatment of Fractures & Associated Injuries
Transportation of the Sick & Injured
Heat Injuries & Cold Injuries
Electrical Injuries
Detection & Decontamination of Radiation & Treatment of Radiation Injuries

Nov 14: General Emergency tips (diabetic coma, insulin shock, stroke, venomous bites & stings, poisoning, etc.)
Resuscitation/CPR
Improvisation of Hospitals in a Disaster
Emergency Childbirth

REGISTRATION, DISASTER MEDICINE SEMINAR

To: Disaster Medicine Seminar
Division of Disaster Medicine
Medical Research Institute
3325 W. New Haven Avenue
Melbourne, FL 32901

Enclosed please find $45 registration for the November 12-14, 1982 pilot Disaster Medicine Seminar.

Name: _____

Organization: _____

Address: _____

City: _____ St ____ Zip ____

(Phone: _____)

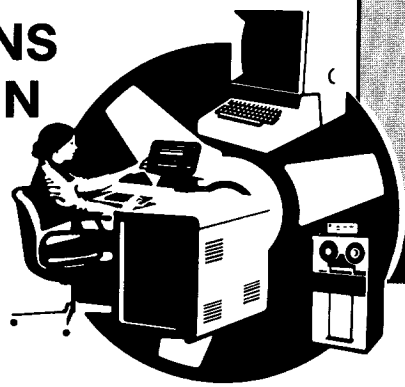
Please forward information on:

☐ Hotel accomodations
☐ Air schedules to Melbourne
☐ Other _____

_____

In crisis vital information to deal with its emergencies is needed immediately. Shuffling through files, desks and storage takes time that can cost money and lives. The modern Emergency Operations Center (EOC), if it is to operate at peak efficiency, must gear itself to modern technology, the heart of which is the microcomputer.

EMERGENCY OPERATIONS CENTER MODERNIZATION



— **Edward J. Zaborowski**
(The BDM Corporation)

During the past few years, Civil Defense Preparedness Planning has been given a new breath of life. The President campaigned on an accelerated civil defense program and the media is watching to see what progress is made in Civil Defense Preparedness. The Federal Emergency Management Agency (FEMA), under new and dynamic leadership, is busily engaged in attempting to catch up on years of neglect.

Although a new breath of life has been infused at the highest levels, it is not clear that it has permeated to the local level. The local level has for years been staffed by dedicated personnel who work with little or no

EQUIPMENT OF 1950 VINTAGE... MAY BE A DISASTER IN ITSELF.

tools, communications or supplies. Despite this, it is incumbent upon local governments to develop plans, standing operating procedures (SOPs), authorities, and the operational capability to improve readiness rapidly in a crisis. While one ordinarily thinks of a crisis as it relates to nuclear attack, the crisis can be a natural disaster (flood, earthquake, etc.) or a peacetime emergency (spillage of a toxic chemical, air crash, etc.). Preparing for the ultimate disaster, the nuclear holocaust, allows the local government to be prepared for any crisis. However, the use of equipment of 1950 vintage for the most part and the lack of exercises leads one to believe that the planning and execution in the event of a crisis may be a disaster in itself. Plans and SOPs are written in painstaking detail but are often not reviewed and exercised. Even if, by chance, they are reviewed and exercised, identifying needed data rapidly in a crisis situation is difficult.

MICROCOMPUTER . . . LIMITED ONLY BY THE IMAGINATION OF THE USERS.

Today's technology, in the form of a microcomputer, could change this perspective. A small, relatively inexpensive, easily operated device could revolutionize the Emergency Operations Center (EOC) at the local level. The uses of the microcomputer in the EOC are limited only by the imaginations of the users. Critical data now buried in the plans and SOPs can be displayed on the cathode ray tube (CRT) in a matter of seconds. Should this information be required in hard copy, it can be accomplished rapidly through the use of a printer. For example, the cities and local area road network can be displayed. Hospitals identified along with emergency numbers, bed capacity, special instruments available, doctors with special skills (knowledge of radiation burns, etc.) and a host of other items dealing with hospital capabilities can be instantly displayed without leafing through plans and SOPs. Shelter availability and status such as capacity, food, medicine, water supply, can also be quickly displayed. This data bank can be easily updated as changes occur.

These examples represent only a small portion of the information that can be stored and made available for instant recall so that the local officials and emergency managers have the best data available for life saving decisions. Mobile EOCs could also be equipped with microcomputers when it is necessary for the decision makers to be on the scene.

The National Emergency Training Center (NETC) at Emmitsburg, MD could easily incorporate this type instruction in its curriculum. The results of this training, along with the provision of the microcomputer for use at the State and Local level, would increase the survival readiness of the State and Local governments immeasurably. The morale of the dedicated workers (both regular and volunteer) would soar. The State and Local officials would have a feeling of confidence in knowing they would have better control of a crisis situation. Also, the Regional and Federal officials would be assured that the flow of information

TIME TO TAKE ADVANTAGE OF TODAY'S TECHNOLOGY

up would be more timely, precise and accurate. With this computer-aided information transfer, proper assistance can then be allocated.

In a crisis, time is of the essence. Good decisions are made on real-time data. Lives are saved by prompt, proper decisions. Isn't it time to take advantage of today's technology and modernize the EOC's at the State and Local level? By not doing so we will continue to live in the past — which could mean we will not live in the future! □

HANDLING HOT REACTOR FUEL ACCIDENTS — *SAFELY!**

— Kathy S. Gant
Oak Ridge National Laboratory

Dr. Kathy S. Gant

Because shipments of spent reactor fuel must move through many parts of the country, a transportation accident involving these materials is possible. Early response to an accident will be the responsibility of local emergency response personnel; most of these people will have no experience with spent fuel. The decisions that they make before the seriousness of the accident is known may be very important in minimizing the consequences of the accident. This article will briefly summarize some important considerations in the early post-accident response.

Background

An average of 300 spent fuel assemblies from commercial power reactors were shipped each year between 1964 and 1979.[1] All were shipped by truck with one or two assemblies in each shipment. Most current shipments are by truck, but rail and water shipments are also possible. The spent fuel casks which encase the fuel assemblies during transport are special, high-integrity packages designed to withstand puncture, dropping, thermal stresses, and water immersion[2, 3] — conditions that might occur in transportation accidents. Tests of the casks have not been limited to those required by federal regulations. Sandia National Laboratories have also performed tests like these: (1) crashing a tractor-trailor rig carrying a cask into a concrete barrier at 84 mph; (2) crashing a locomotive traveling 81 mph into a truck carrying a spent fuel cask; and (3) crashing a special railroad car carrying a cask into a concrete wall at 81 mph and then exposing the cask to fire. These tests were performed to verify the models used to predict the casks' behavior in accidents; however, none of the casks were damaged enough to release their radioactive contents into the environment.[4]

The rigid design criteria for shipping casks make it highly unlikely that a transportation accident involving a spent fuel shipment will pose any problems due to the release of radioactive materials. The probability of two types of accidents in which the cask closure seal might fail has been estimated at from one in a thousand to one in a million.[1] The spent fuel itself may be highly radioactive, and the liquid coolants surrounding the fuel in some casks are usually slightly contaminated, so if some leakage should occur, radiological problems could develop. Deliberate sabotage of a spent fuel shipment, particularly in areas of high population density, might produce serious radiological consequences. Although the cask designs would be resistant to sabotage, the Nuclear Regulatory Commission (NRC) has imposed additional security measures on any spent fuel shipments that it licenses.[5] These measures restrict shipments to approved routes which generally avoid densely populated areas, require escorts, minimize stops, and require frequent contact with state and local law enforcement agencies.[6] Advance notification of local authorities is also required for NRC-licensed shipments.[7] While escorts and notification were initially required for security reasons, they also increase the probability of having early technical assistance after an accident.

Emergency Response

A transportation accident involving spent reactor fuel can most probably be handled as any other transportation accident. Because the remote possibility of leakage of

*Research sponsored by Sandia National Laboratories' Transportation Technology Center, contract No. DE-AC04-76-DP-00789, under Union Carbide Corporation contract W-7405-eng-26 with the U.S. Department of Energy.

radioactive materials exists, one should assume radioactive contamination is present until the area has been surveyed. It is unlikely that radioactive contamination will provide any immediate threat to the response personnel. Priorities should be saving lives and assisting the injured, and then establishing control of the emergency.[4] Nonradioactive hazardous materials involved in the accident may be a bigger threat and require immediate attention.

Emergency Medical Care. Medical treatment for anyone who might be injured in the accident is the first priority of the emergency response team, even if the possibility of contamination with radioactive materials exists. Conventional first-aid techniques apply. If radioactive materials are known to be involved, victims should be moved from the immediate area of the accident unless moving would cause greater injuries.[4] If the injured are transported to hospitals before the radiological survey, the ambulance team and hospital should be warned of the possibility of contamination.

Isolation. General isolation of the accident is advisable until the situation is evaluated. Unnecessary people should be kept well out of the area, preferably upwind. Anyone entering the area around the accident should be detained until the area is checked. If this is not possible, names and information as to where these people could be reached should be obtained in case contamination is found.

Identifying a Spent Fuel Shipment. If the driver (assuming a truck) is conscious or an escort vehicle is present, identification of the shipment presents no problem. Placards on the vehicle or cargo may only indicate a radioactive cargo. For spent reactor fuel, the upper half of the placard on the shipping container should be bright yellow with "RADIOACTIVE III" in bright red. Shipping papers or bills of lading in the cab of the truck, the caboose of the train, or the bridge of the vessel provide information — the nature and quantity of the radioactive material — that is needed to determine the emergency response. For spent reactor fuel, the shipping papers will include the phrase "radioactive material, n.o.s." (n.o.s. stands for "not otherwise specified") and the term "fissile." Other identification such as "mixed fission products" or "irradiated reactor fuel assemblies" will further identify the cargo.

A copy of the Department of Transportation emergency-response guidebook,[6] which provides some basic principles for emergency action, should be located with the shipping papers in the vehicle. Guide 63 should apply to accidents involving spent reactor fuel.

If no papers, placards, or personnel associated with the shipment can be found, there are other ways to identify the shipment. Because of security considerations, responsible people along the route may have been notified. By checking with the state police or the governor's office, one may confirm that a shipment was being made. An emergency service such as CHEMTREC*, the Chemical Transportation Emergency Center, may be able to trace and identify the cargo from license numbers or carrier names.

Radiological and Nonradiological Hazards. Radiological assistance, unless already available, should be requested for a radiological survey. Fire or other hazards, if present, should be dealt with first. If chemical hazards from other sources exist, as might be the case in a train derailment, they should be dealt with promptly to minimize any chance of their causing problems with the shipping cask. If the casks are involved, the emergency team should get technical advice before acting. A spent fuel cask can be expected to tolerate exposure to fire, submersion in water, or burial in dirt long enough for the response unit to get expert advice by telephone from the shipper or from a knowledgeable state or federal agency.

The cask should be inspected for signs of damage. Most dents will be insignificant. Evidence of leaking liquid coolants (in casks using them) or broken closures may be indications of a more serious emergency. Only the radiological investigation can determine this. Some radiation is likely to be detected near the surface of an intact spent fuel cask. This is normal, but the reading (in millirem per hour) about 1 m (3 ft) from the external surface should not exceed the transportation index given on the shipping papers.

A word of caution is necessary here. Civil defense instruments designed for postattack conditions will not be adequate for locating all contamination. These instruments cannot detect alpha or most low-energy beta radiation. The lower range CV-700 (GM survey meter) may have some use in detecting hazardous quantities of some, but not all, radionuclides.** Most state and many local radiological offices will have the proper instruments, or federal radiological assistance may be requested through a Department of Energy field office.

Requesting Technical Assistance. To provide correct and necessary technical assistance, as much information as possible should be provided by those on the scene. Information provided might include items such as

1. name and position of person calling for help;
2. telephone number or numbers to call back if line cannot be left open;
3. location of accident;
4. information from shipping papers;
5. type and description of container;
6. description of accident;
7. details of weather and local conditions;
8. evidence of other hazards;
9. description of injuries and obvious cask damage;
10. radiological readings, if available, and the type of meter being used;
11. names of shipper, carrier, and consignee;
12. number of rail car or truck;
13. other information requested by the assisting party.

Protecting the Public

The emergency response team may also play a role in helping the state or local government protect its citizens from all hazards associated with the accident. If a potential health hazard exists, the local

*For transportation emergencies only: telephone (800) 424-9300 except in the District of Columbia, (202) 483-7616 in D.C. For more information, contact the Chemical Manufacturers Association, Washington, D.C.

**The response of the standard civil defense instruments to various radioactive isotopes have been tabulated by Oak Ridge Associated Universities and is included in ref. 4.

Truck hauling spent reactor fuel overturns killing driver.

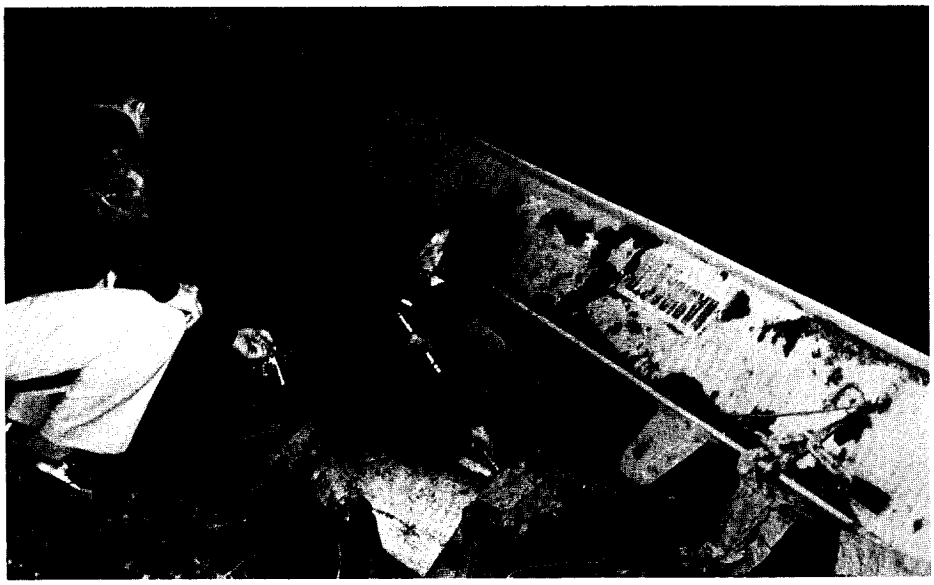
authorities will have to decide whether protective actions such as evacuation are warranted. These decisions will be based on local emergency plans, available technical information, expert advice, and established guidelines. [9]

Summary

A transportation accident involving spent reactor fuel is not likely to cause major radiological problems. The shipping casks are designed to protect the cargo against most transportation accidents. But, because the contents are highly radioactive and an accident that disperses this material could have serious consequences, the emergency response unit, (i.e., a trained radiological health team, civil defense unit, or county sheriff), must operate as if radioactive material had been released from the cask until a radiological investigation has been made.

Some of the guidelines proposed are little more than common sense, such as excluding unnecessary people and providing emergency medical treatment for the injured. Those in charge of the early response may request advice and technical assistance from a variety of private and governmental sources. The cask can withstand a variety of hazards long enough to obtain expert advice or assistance. The biggest threat may be another hazardous material involved in the accident; in that case, that problem should be dealt with first.

Although the same emergency response personnel may be involved in the cleanup phases of the accident, technical experts with special equipment and proper instrumentation will have a role in this process. The condition of the casks and degree of contamination, if any, will have been determined. State radiation specialists and technical representatives from the shipper, as well as other state and federal authorities, will be on site to supervise this phase. □



Radiological crew checks for radioactive leaks (and finds none).

Crane lifts intact fuel cask back to roadway for reloading on another truck.

(Above photos by Frank Hoffman, U.S. Department of Energy.)

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REVIEWS

HOW REALISTIC IS THE NUCLEAR FREEZE PROPOSAL? by Gilbert S. Stubbs. Published by the American Security Council Foundation, Box 8, Boston, Virginia 22713. 1982. 30 pages. $2 (from publisher).

Reviewed by Kevin Kilpatrick

If it is not clear *before* reading *How Realistic is the Nuclear Freeze Proposal?* it should certainly be very clear *after* reading it that for the past decade or so the United States has in effect been at or near a nuclear freeze condition while the Soviet Union has gone all out to build up its nuclear arsenal and nuclear expertise.

Says John M. Fisher in the foreword to Stubbs' pamphlet: "When the Soviets are building and the U.S. and its free world allies are not, there are no freeze proposals. When the U.S. and its allies decide that it is essential to take action to insure their survival, there is an immediate call to halt the arms race and freeze nuclear weapons."

In analyzing 15 freeze arguments Stubbs gives convincing statistics that support the Fisher statement.

For the strategic defense realist the Stubbs study provides a beautiful source of counter-arguments to the peace-at-any-price "professional activists" who form the nuclei of so-called "peace" groups.

Stubbs challenges the Soviets to *"demonstrate* its professed dedication to disarmament" through 12 cooperative actions, which he sets forth.

Appendix A includes the Peace Through Strength Resolution which has been embraced by a majority of U.S. Senators and Representatives. Its third point called for a meaningful strategic defense and civil defense.

Appendix A also states: "While we all share a common desire for peace, we believe that freezing the United States into a position of military inferiority to the Soviet Union would greatly increase the risk of war. We believe that only through strength can we assure both peace and freedom."

Gilbert Stubbs (with the help of John Fisher's thought-provoking preface) has provided us with a timely and remarkably pertinent booklet.

It needs to be read.

TRENCH RESCUE, by James B. Gargan, published by Robert J. Brady Company, Bowie, MD 20715. 1982. 192 pages. $17.95.

Reviewed by Richard W. Bignon, Captain, USAR, MOBDES.

Trench Rescue offers details on a subject that is frequently neglected when rescue systems are designed and implemented at municipal, state and federal levels. It is a well-conceived document that generally covers all aspects of commercial trench rescue operations. The numerous illustrations and glossaries of terms effectively increase the reader's understanding of trench rescue operations.

Gargan points out that a trench may be anything from a narrow slit dug for a small pipe to excavations made to accomodate irrigation pipes as large as 30 feet in diameter. He states that despite popular belief most fatal accidents occur in relatively small trenches. After defining the ubiquitous nature of trenches and the always present danger of collapse the book details the methods and equipment required to prepare for trench rescue operations.

Unfortunately, Gargan does not deal with the possibility of rescue from bomb debris. Warfare, particularly nuclear war, can create numerous conditions which would require rescue operations. The methods for accessing victims covered by bomb debris are similar to those described in *Trench Rescue.* Inclusion of the details relating to bomb debris and trench rescue operations in a nuclear environment would have greatly increased the value of this otherwise excellent book.

REAGAN SERIOUS ABOUT CD

In an address before the Massachusetts "Governor's Conference on Emergency Preparedness, General Giuffrida, FEMA Director, said:

"While Presidents Kennedy and Carter supported civil defense, President Reagan is the first to formulate a CD program to *accomplish specified objectives* and to propose *funding* to carry out that program. . .we, FEMA, seek to increase *opportunities for survival."*

LETTER

Present Civil Defense planning calls for evacuation of a large proportion of our population to areas believed unlikely to be hit by a missile. The assumption is made that U.S. Intelligence agents can detect an impending missile attack 2 to 8 days before the event. In view of the Soviet emphasis on surprise, the assumption is not completely justifiable.

However, suppose that preparations for launching can be discovered a few days before the attack. Intelligence says "Move the people". The people remain in their safe area for 10 days but nothing happens. On the 14th day, Intelligence says "Go home". A few days later, evidence of an attack again becomes very strong: people move to their areas and, again nothing happens. After two weeks, people return home. A week later, the warning comes again; people move to their safe areas but nothing happens. So it goes, ad infinitum. People aren't hurt but nothing gets done. Tempers are getting shorter.

The Russians would think they were having great fun.

What is needed is a highly developed space defense system — a "High Frontier" — and well-built shelters. These are what we should have been working on during the past 20 years. Nuclear wars are winnable.

Bruce A. Rogers, Tempe, AZ

NOW AVAILABLE: THE FOLDING TANKER!

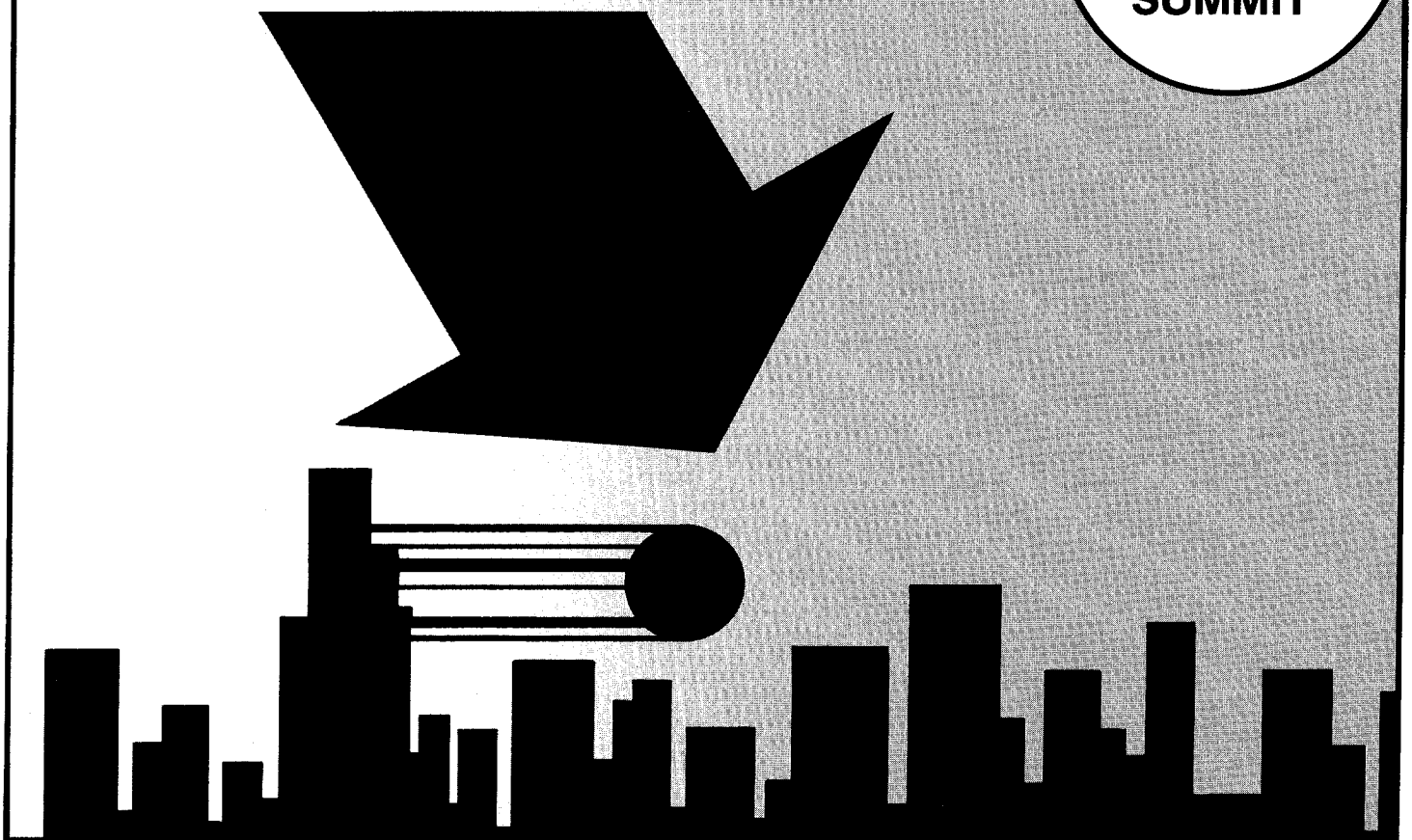
If you've been worried about allocating a municipal parking lot or a few big barns for emergency water tanker storage how would you like to settle for an 8 x 8 closet?

The Avon Rubber Company Ltd. (England) specializes in collapsible, portable rubberized tanks which store somewhat like winter blankets. A 10,000-liter (2,640-gallon) tank, for instance, fits into a space about 4-ft x 3-ft x 6-inches.

The Avon folding tanks come in sizes of 1,000 liters to 100,000 liters. They accomodate not only water but anything that will flow. No chemical tastes, long life, low cost. Special harnesses can be supplied. A wide range of CD and shelter uses. For full information contact Allied Defense Industries, Inc., 4623 Whittier Av. (Suite 305-D), McLean, VA 22101. Phone: 705-734-9636.

5th ANNUAL TACDA SEMINAR

1982 "CIVIL DEFENSE SUMMIT"



WICHITA

OCTOBER 7-9, 1982
WICHITA HILTON INN EAST

THEME: PREPAREDNESS, PROTECTION, PEACE } P³

SEE PAGES 16-17 FOR DETAILS

UPCOMING

Aug 29-Sep 2	International Meeting On Thermal Nuclear Reactor Safety-ANS/European NS/Canadian NS/Japan Atomic Energy Soc/IAEA, others, Americana-Congress Hotel, Chicago, IL (Contact: Donald Eggen, 312/492-7034)
Sep 13-17	"Aircraft Crash & Mass Casualty Mgt." Reg. Fee $595. (Contact: Center for Professional Deve., ASU College of Engineering & Applied Science, Tempe, AZ 85287 — 602/965-1740)
Sep 16-19	NASAR 14th Annual Search & Rescue Conference, Las Vegas (Contact: Natl. Assoc. for Search & Rescue, PO Box 2123, LaJolla, CA 92038)
Sep 17-19	Disaster Conf., Le Chateau de l'Aeroport Hotel, Montreal's Inter. Airport, Mirabel, Quebec, past disasters discussion, exercises, etc. (Contact: Helene Lamontagne, MD, 1110 Pine Ave. W., Montreal, Quebec, Canada H3A 1A3 — 514/844-7192)
Sep 23-25	Survival & Self Reliance Expo '82, (Contact: H. Roe Bartle, Expo. Ctr., Kansas City, MO 64106)
Sep 27-Oct 1	"Emergency Planning 1982" held by the General Physics Corp. 1 week course on peacetime radiological emergencies. (Contact: Randolph Harper, Gen. Physics Corp., 1000 Century Plaza, Columbia, MD 21044 — 1/800/638-3838)
Oct 7-9	Annual TACDA Seminar, Wichita, Kansas (Contact: The American Civil Defense Assoc., PO Box 1057, Starke, FL 32091 — 904/964-5397)
Oct 10-14	Annual USCDC Conf., Portland OR (contact Myra Lee, Em. Mgmt. Dir., 12240 N.E. Glisson, Portland, OR 97230. Tel 503/255-3600 ext. 207)
Oct 20-24	EMERGENCY 82 (International Exhibition for Emergency Preparedness) — Geneva, Switzerland (Contact: Mack-Brooks Ltd., 62 Victoria St., St. Albans, England AL1 3XT.)
Nov 12-14	TACDA-Florida Institute of Technology (F.I.T.) pilot EMERGENCY MEDICAL SEMINAR at F.I.T. campus, Melbourne, FL. (Contact F.I.T. 305/723-5640 or TACDA 904/964-5397.)
Nov 14-19	American Nuclear Society Winter Meeting, Washington, DC (Contact: James Tulenko, PO Box 1260, Lynchburg, VA 24505 — 804/384-5111 x 3347)

MARKETPLACE

DO YOU HAVE SOMETHING YOU WANT TO SELL OR BUY????
Place an ad in MARKETPLACE!!! 1982 rates are $4.00 per line of 37 characters. Enclose check or money order with ad and send to:
Journal of Civil Defense
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RADIATION SENTRY, DC, Autonnic, monitors and protective equipment. Fact Pack, $1. Free consultation for customers. Radex, 4109 Graf Drive, Louisville, KY 40220 (502/491-0849)

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

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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).

SAVE THE WHALES! Save the people too! Subscribe to America's foremost civil defense publication — goes around the world, *Journal of Civil Defense,* P.O. Box 910, Starke, FL 32091. One year — $12. Two years — $22 (Bi-monthly). (904/964-5397).

". . .the book points out. . . that there are forces in the West making material preparations for a new war and stepping up ideological sabotage against socialism. In this situation the CPSU is taking measures to further strengthen the combat might of the army and navy, to equip them with the latest weapons and combat hardware. . ."

— from a review of *The CPSU and Military Building,* edited by Gen. A. A. Ypishev (reviewed by Col. Gen. P. Gorchakov.)

LATELINE....

BOTANIST BRUCE CLAYTON, survivalist author and for the past year civil defense director for California's picturesque Mariposa County, has assumed duties as editor of West Coast newsletter INFO-RAY. INFO-RAY, now in its 27th year, specializes in radiological defense. Dr. Clayton brings to it a new dimension in survivalist-CD expertise. INFO-RAY is published by the California Office of Emergency Management, Box 9577, Sacramento, California 95823.

FIREFIGHTERS WHO DIED IN LINE OF DUTY in 1981 will be honored at the National Firefighters Memorial at 1PM on October 3rd. The Firefighters Memorial is located on the campus of the National Emergency Training Center in Emmitsburg, Maryland. Ceremonies will be open to the public, and names of the fallen firefighters will appear on inscribed bronze plaques surrounding the memorial.

DELEGATES TO THE AMERICAN NURSES' ASSOCIATION in June voted not to take part in civil defense planning which focuses on nuclear war survivability. A resolution on that subject was passed by a majority of the 700 nurses in attendance — who represented a membership of 165,000. Advocate Teana Krasover, president of the Nurses Alliance for the Prevention of Nuclear War (450 members in 40 states) pointed out that nurses would never deny medical care to anyone. (They would simply refuse to make plans for such care.) Those nurses voting represented 0.4% of their organization.

SHUTE AND SCHELL: Nuclear Pollution (continued from page 5)

animals, crops, and other vegetation. So he takes his 10,000-megaton attack and calculates an average one-week dose of 10,000 rem around the country. In reality, based on data from The Effects of Nuclear Weapons, the average one-week dose for a person continuously in the open would be about 3,300 rem for an attack of 10,000 megatons, all ground bursts. For an attack of 4,500 megatons ground-burst, the average one-week dose would be about 1,500 rem. This misrepresentation and exaggeration are typical of Schell's "analysis." Here and there in his diatribe, Schell does admit that there is uncertainty. But he ascribes it to the "defense experts and other dubiously qualified people" who have "resorted to fiction." Schell is not uncertain about anything.

When the human race comes to its end, Shute stops writing. Not Schell! He goes on to kill off all the other animals and vegetation except some insects and grass. He reaches his goal in his favorite word "extinction." But even then, he doesn't stop writing; he goes on and on and on. Schell ends his book "not with a bang but with a whimper." After giving us scenes of horrendous devastation and a shining vision of a democracy of all the world without war and the tools of war, he settles for a nuclear freeze. Of course, he would prefer a reduction in nuclear arsenals by half. Mr. Schell has barely driven a tack with a sledge hammer.

Nevil Shute wrote a novel that the anti-war people treated as "fact" and propagated the error. Jonathan Schell has written a disgraceful book that alleges fiction to be "fact." Once again the anti-war people are propagating the error. Others believe the propaganda and help to spread the error. All of this is getting in the way of genuine arms reduction efforts.

The truth is that the consequences of nuclear war are bad enough to impell rational people to work for abolition of nuclear weapons, but not bad enough to impell rational people to work against defenses against nuclear weapons. Such propaganda as Schell's book and the amateurish fulminations of the anti-war activists pollute the universe of ideas. This is the real nuclear pollution. And from this pollution, Oh Lord deliver us!

EDITORIAL . . .

THE MEANING OF "P³"

"Preparedness-Protection-Peace — P³." This strategic defense theme for TACDA's Wichita seminar in October sums up the convictions of 9 out of 10 Americans. It is historically accurate. Dramatic proof of its accuracy for peace-aligned nations has been demonstrated throughout the current century.

But being convinced of P³ does not lead to action to implement it. Needed to bring it on line is the presence of some other factor or combination of factors.

> We see a similar indifference in transportation safety and elsewhere. Seat belts in automobiles, for instance, make good sense to 9 out of 10 Americans, and all automobiles are now duly equipped with them. But 9 out of 10 Americans do *not* use them. By contrast, in aircraft everyone buckles his seat belt. Why? It's a requirement. No one objects — even though the lifesaving potential is much less in an airplane than in a car.

One of the factors that can lead to a sudden serious consideration of P³ is the imminence of war. This happened during the Cuban Crisis. The trouble with this factor is that time for necessary action is absent.

Another factor is the timely realization that war — nuclear war — is an actual possibility or probability and that family and small-group measures can be taken to implement the preparedness and protection segments of P³. The stumbling block here is that very few people can, without the impetus of sudden danger, grasp the importance of such measures and are willing to make the required investment. Those who do are apt to be ridiculed by the media and misunderstood by the public. We call them "survivalists."

CORRECTIVE ACTION WILL TAKE DOLLARS. BUT IT WILL TAKE MUCH MORE THAN DOLLARS.

Political leadership is also a factor. Participants at a FEMA training seminar at Emmitsburg, Maryland in April called it the *key* factor and at FEMA's invitation reminded FEMA that FEMA's No. 1 responsibility was not to focus its attention primarily on community preparedness but to stimulate the national leadership to recognize the fact that civil defense is an integral, a vital, part of national defense and that it requires unmistakable and sustained major emphasis and action at the national level. That is, if Americans are no longer to be hostages to foreign aggression. Whatever the investment, P³ is a thousand times more important than say, foreign aid — even food stamps. Both national survival and community survival are at stake. Only with the intelligent and determined exercise of national leadership can P³ be implemented to get America off its knees. Commitments to civil defense, no matter how sincere, are useless unless followed by strong and meaningful action.

> In those countries where civil defense now provides an effective nuclear umbrella, political leadership has been *the* determining factor. Political leadership — *not* the people — has been responsible for the programming and realization of P³ in Sweden and Switzerland. And P³ there, in spite of overwhelming difficulties, has been responsible for over 165 years without war in the very midst of bellicose, covetous neighbors. All-out leadership efforts in the Soviet Union and China have achieved a preparedness and a protection for their peoples that work as hard-boiled deterrents to aggression against them, nuclear or conventional.

Why has the United States, so sensitive to human rights and human dignity and human life, failed in its primary constitutional obligation to provide for the safety of its citizens? The idea that survival is too expensive is obscene. The idea that survival is impossible is obscene. The idea that Americans do not deserve it is obscene. Yet unfriendly foreign interests have cultivated these obscenities in our land with our undoing in mind.

Corrective action will take dollars. But it will take much more than dollars. It will take leadership, the kind of leadership we are capable of, have ready to use, but have not yet demonstrated.

P³ — preparedness-protection-peace — must now be put into orbit if America is to endure.

This is the meaning of TACDA's theme for its 1982 Wichita seminar. That theme will underlie the entire seminar program. It presumes that we are close to P³ action. We have to be.

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