

FIGHTING CHANCE

John 8: 31-32

Proverbs 22: 3

Newsletter Vol. III, No. 4

May 1991

ECONOMICS OF SURVIVAL

Civil defense preparations are a kind of insurance that is very dangerous to be without. Like most insurance, you hope never to need your civil defense preparations. Nevertheless, it is irresponsible to leave one's family unprotected against major disaster.

If you buy life insurance from a company that ultimately becomes bankrupt, you have lost your life insurance. It is therefore important to determine that the economic health of your insurer (especially during periods of economic stress) is sound, so that your insurance will be there when you need it.

In the case of family civil defense preparations, the family itself is the insurer. Here to, the economic survival of the family is necessary to the maintenance of their disaster insurance.

Your shelter will not do you much good if the bank has repossessed the property in which you installed it. The rural location you chose to increase the family's quality of life and physical security is of little value if you are economically forced to return to an urban location.

For some people economic security for the basic items required for survival is difficult to achieve, because they have little savings or disposable income to utilize for this provision. Others are so wealthy that the resources required for civil defense preparations are a minor expense.

Paradoxically, it is the wealthy group that is more likely to lose their physical survival to economic failure or procrastination. Wealth often breeds a kind of complacency. It is difficult for such people to imagine ever needing to worry about the cost of food or an eviction notice. Moreover, wealth makes possible the kinds of leveraged investment risks which can quickly lead to bankruptcy.

Wealthy people who take action to provide their families with civil defense insurance should try to prepare as though their basic elements of wealth could completely disappear. With this sort of thinking, their civil defense insurance is likely to be more secure.

Some basic elements are worth listing. These are difficult for many to meet and difficult for some to take seriously, but they should be a part of everyone's basic survival thinking.

1. Have no debt whatever on the property which is your basic civil defense location. Moreover, try to arrange your financial affairs, so that your civil defense property will not become encumbered and lost to problems which might result from your other activities.

2. Assume that during a prolonged crisis of at least a year (such as that which might follow a nuclear attack) your family would need to live without any commercial transactions whatever. Assume that there would be nothing to buy or trade and nothing to use for money or barter transactions.

There are many hopeful words written about commercial transactions in a crisis. All sorts of advice is given about the storage of "barter goods" and living lavishly through chaos with your gold and silver coins and cash.

Civil defense is about life-threatening, real-time disasters. It is not a hypothetical exercise in free market economics.

If you expect to need an item or a skill during a disaster, obtain it now.

It is always depressing to see wealthy people who actually expect economic and possibly physical disaster in the United States, but who are spending their time planning to make a profit from this expectation. They plan to buy a survival location when prices drop during the disaster and get their food cheap with gold coins and clever barter transactions during a crisis.

You cannot profit from the demise of Western Civilization. Do your part toward preventing that demise and forget about "crisis investing."

3. Good health is essential in a crisis. Taking action to optimize your family's health can be a life-saving civil defense measure. Cigarette smoking contracts the human life expectancy by 8 years per pack per day. Junk food addictions can be similarly debilitating.

Is there anyone out there crazy enough to be storing cases of cigarettes in their survival supplies? No? Well, let's be a little more realistic. How about cases of honey? Do you really need hypoglycemia and increased probability of degenerative diseases during your shelter stay?

I admit to a sweet tooth that occasionally gets out of hand. The children are not permitted to eat sugar. Even in my most sugar-influenced moments, however, I have never considered storing cookies and candy in our shelter.

Most people have less than optimum eating habits. Most of us just cannot reform entirely. In planning shelter provisions, remember that in life threatening conditions the luxury of one's little addictions can be fatal. Store optimum nutrition in a shelter and omit the junk.

4. Everyone, no matter how wealthy, sets a limit to their civil defense budget. Expended with the correct order of priorities that budget can be used to maximize the chance of survival.

A useful order of priorities is:

A. Air - shelter ventilation must be adequate for breathing and for cooling especially in a hot climate or you will not be in the shelter very long.

B. Water - You cannot live more than two or three days without it. Plan to satisfy this need, if possible, by multiple independent means. Stored water in the shelter, stored water nearby, access to a well or spring or pond, means for utilizing rain or ground water, and purification equipment where necessary. You cannot have too many redundant sources of water.

C. Food - for a prolonged crisis. You can live without food for as long as 30 days or more in a shelter, but you must have food for long term survival. Remember, large amounts of food for you and your neighbors is far more important than gourmet satisfaction of your pallet. Our suggested ration of 20 lbs. corn, 20 lbs. wheat, 10 lbs. soybeans, 1 lb. salt, and 15 grams of vitamin C per person per month costs about \$10 per person month in bulk. You couldn't spend more than \$20 per month for that ration if you tried. Add some rice and dried milk (especially for infants), but keep the cost low, the storage conditions good, and the amounts of food stored as much as you can possibly afford.

Your neighbors are your most important post-attack asset. Plan to feed them, too.

D. Shelter - the best protection you can afford. Do not, however, plan more than you can afford and then procrastinate in building it. You are better off with an expedient shelter (or a permanent version along the lines of the tiny shelter we described in the October 1990 newsletter) than with no shelter at all.

It is better to suffer cramped quarters during the crisis, experience conditions of bad sanitation that you never dreamed possible, and emerge to rebuild your life than to perish in a crisis because you never got around to building shelter accommodations suitably luxurious to your tastes.

Ask yourself, "What would I do if there were a surprise nuclear attack right now?" Be sure that you have at least a workable answer to that question. Even a strategically located sewer pipe with a few gallons of water within reach is better than a large planned but postponed facility. Shelter "plans" have a very low protection factor.

E. Knowledge - if you don't have it, at least know where to get it. For any life-threatening disaster - chemical, biological, nuclear, or natural - the most effective source of initial knowledge is the book, Nuclear War Survival Skills. Always keep a copy of that book near at hand.

To this list add the best health you can achieve, the best friends and neighbors you can protect, and the wisdom to be without debt where it counts.

If you have done these things you will have definitely qualified as having made an effort to obey the Biblical admonitions to provide for your family and to utilize God's many gifts in response to His many warnings.

One more test. Is there a Bible in your shelter? It doesn't have to be there. It is better recorded in your mind and heart.

Put a Bible in your shelter, anyway. In the event that you do need to utilize your disaster insurance by a life-saving shelter stay, reading that Bible while you are in the shelter will remind you of the reasons for which you are there.

SHELTERS AND CONVENTIONAL EXPLOSIVES

During the American bombing of Iraq there was a highly publicized incident involving the destruction of a civilian bomb shelter by a conventional bomb. Although it is not clear why this particular example of the civilian carnage in Iraq was chosen for special publicity, it illustrates an important point.

Civilian shelters usually are not able to resist direct hits by conventional explosives (or nuclear explosives). The reason is economic. The cost of surrounding the shelter with several-foot thick reinforced concrete walls (as was done in German World War II bunkers) or placing the shelter 30 to 50 feet underground is higher than most individuals or governments are willing to pay to protect civilian lives.

Had we written Fighting Chance - 50 Feet To Survival rather than Fighting Chance - 10 Feet To Survival, the estimated cost of the nationwide shelter system would have doubled or tripled and therefore become impractical for political reasons.

The primary protection from direct targeting of shelters in a large country can be achieved by large numbers of small shelters at widely dispersed locations. That is the reason we recommend 2 million, 150 person shelters for Americans rather than a smaller number of large ones.

With 2 million, 200-psi shelters located within a short walking distance of the normal living and working places of Americans, even direct targeting of the entire Soviet nuclear inventory on the shelters would leave most Americans alive.

Direct targeting by conventional explosives during a land war in the United States would present similar difficulties for an aggressor. The shelters would be more vulnerable than from a nuclear attack, because of the much larger number of directly targeted explosions. Never-the-less, the destruction of hundreds of thousands of shelters by direct hits would still be quite difficult.

Systematic slaughter of Americans in their shelters would be possible only in the event of a complete collapse of the American military and occupation of the country by an invading army.

Some "experts" would laugh at such an absurd possibility. Surely we know that invading armies never come to the United States. That sort of thing only happens in Iraq, Kuwait, and Lebanon.

In any case, it is important to realize that a low-cost civil defense shelter is not a fortress. It is not secure against direct hits.

Military shelters must be stronger than civilian shelters and usually much deeper underground. This reminds me of the "bioenvironmental engineer" whom I quoted in this newsletter two years ago. You may recall that he was responsible for installing the chemical protection shelters for the United States Airforce in Europe.

When asked why these shelters are light-walled, partially above-ground structures with virtually no protection from direct hits by conventional explosives, he responded that his studies had indicated that "in the heat of battle, enemy pilots would usually not have the composure of mind to aim that accurately".

I wonder if he was watching television during the bombing of Iraq.

SHELTER CONSTRUCTION

During the time that our local steel fabricator was making the steel assemblies for the Idaho mobile display, he was also manufacturing the assemblies for the civil defense shelter of an out-of-state church. The photos below were taken in that fabrication shop and illustrate some elements of shelter construction.

Photos are a poor substitute for the real thing, but they can be more educational than shelter engineering drawings and written descriptions.

Figure 1 shows the fabricating shop. The Idaho shelter is on the right and the church's shelter is in the rear. There is an overhead crane along the center of the shop ceiling and steel plate in the foreground from which all of the assemblies are manufactured. About ten welders work in this shop. They spend most of their time manufacturing cylindrical steel shapes from flat steel plate.

Shops like this are in operation throughout America. We already have a vast shelter building industry in operation. We are just not asking it to build many shelters.

About one third of fabrication costs are materials and two thirds are skilled labor. For that reason, it is usually more economical to build shelters inside shops like this and deliver them to the installation sites. Without cranes to handle the heavy pieces of steel, other shop conveniences, and welders who are used to fabricating this kind of equipment on a daily basis (usually for steel storage tanks), labor costs escalate rapidly.

Figure 2 shows a completed entryway assembly. Each part of this assembly was too heavy for convenient handling by hand.

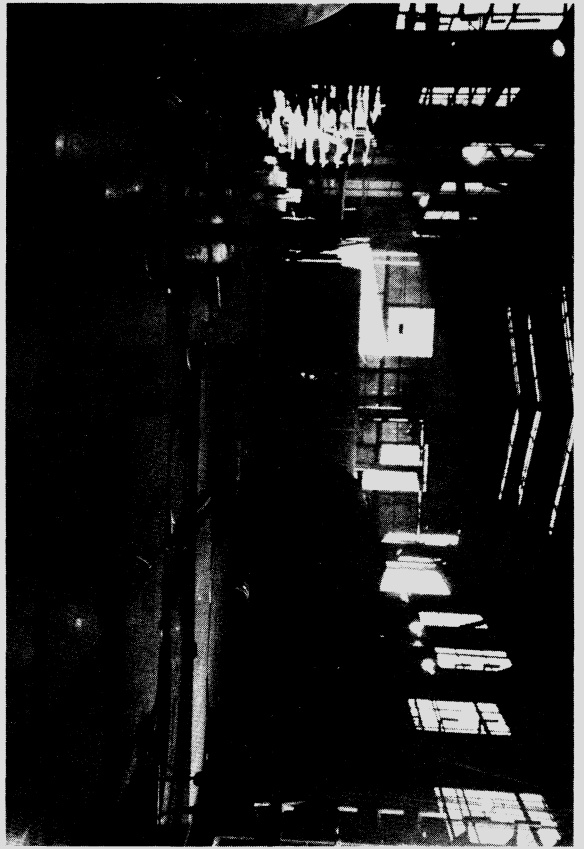


Figure 1

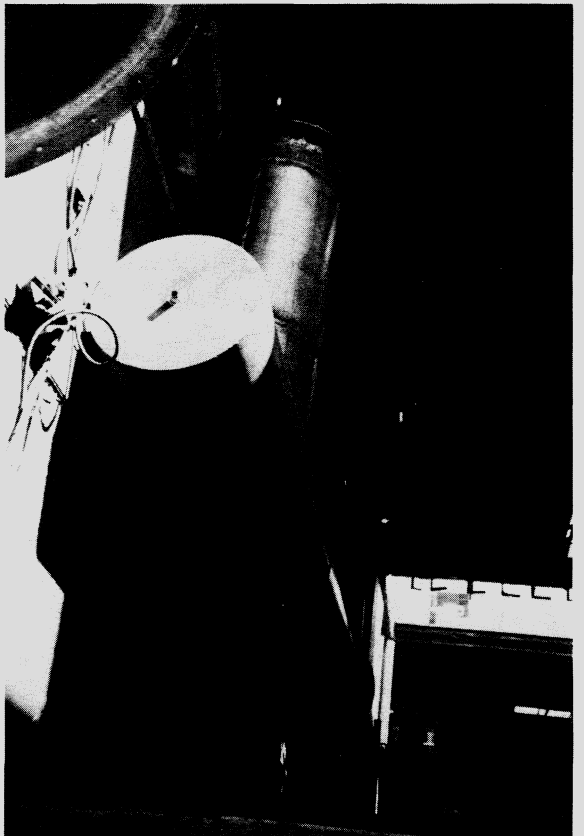


Figure 2

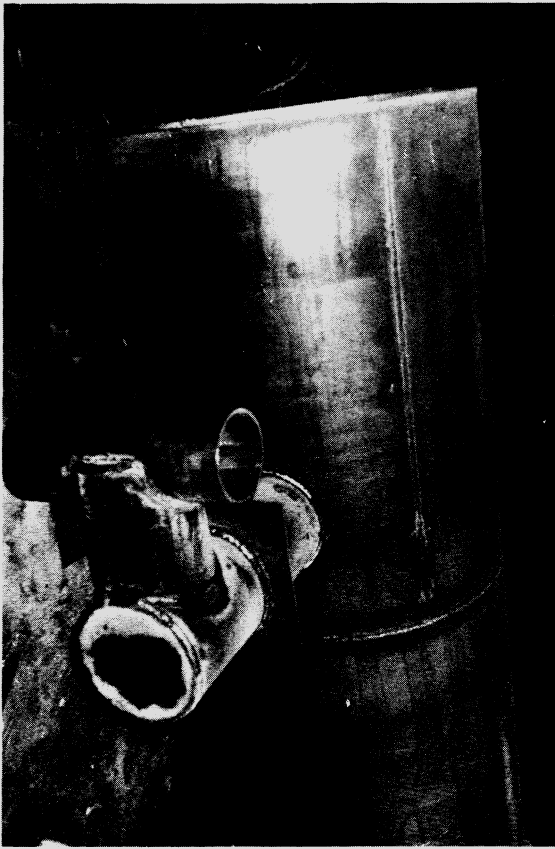


Figure 4

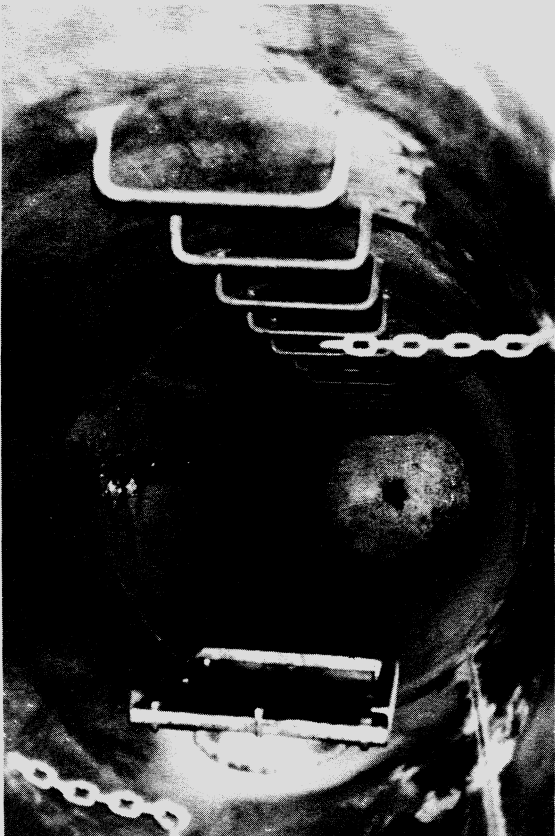


Figure 3

Figure 3 shows the inside of that assembly. Clearly visible is a 36-inch entryway with a ladder, chains for securing the blast door with load-binders, a shower drain, and the dust filter housing. The dust filter housing is over the perforated plate of the blast valve, and both of these cover the air vent through the side of the entryway below the door.

Figure 4 shows the outside of this assembly with the blast valve housing and T-fitting leading to redundant air vent pipes. Note the flange which extends into the soil and transfers blast pressure loads from the blast valve to the soil.

Figure 5 shows one entryway of this shelter with its air vent arranged for the installation of a Luwa ventilation system. The pipe from the Luwa system must exit the shelter and enter the entryway beyond the gas-tight door mounted on the flange plate inside the shelter.

In this assembly, the manufacturers have chosen to reenter the entryway with the air intake just beyond the doorway. The pipe could, alternatively, have entered the vertical part of the entryway beyond the six-foot horizontal section.

Figure 6 shows the rotary hinge assembly of the Idaho shelter and one of the three mounting plates for the Swiss self-rescue devices. Note the angle cut in the outer sleeve of the hinge which causes the door to rise as it is rotated. Provision has been made to lubricate the hinge.

The door itself is a one-inch steel plate with hooks recessed into its lower surface to accommodate the chains for the load binders.

The blast doors for the church shelter do not have this rotary hinge. Rather than compromise on ventilation and safety from biological and chemical agents by omitting a Swiss ventilation system, the church has chosen to compromise on convenience.

Those blast doors are just circular steel plates 3/4 inch and 1 inch thick with welded chains to secure the door by load binders. Without rotary hinges, they will need to arrange for an alternative weather closure for routine access to the shelter. In case of emergency, these heavy plates will be dragged over the door flange and secured from below.

This is not particularly convenient, but it is a safe, strong, and simple door. The inconvenience saves about \$1,500 which was better spent elsewhere.

Figure 7 shows initial fabrication work on the trailer for the Idaho shelter.

Figure 8 shows a welder completing work on the latch for the 1/2 inch steel weather closure doors on the Idaho mobile display. These are not installed in a shelter placed underground, but they may be unbolted and attached (with appropriate gaskets) to the inside flanges as gas-tight doors for installations with Luwa ventilation systems. In that case, a temporary slot must be cut in the shelter to put the doors inside.

These illustrations, of course, do not stand alone as an instruction manual on shelter construction. They illustrate, however, a few points which are supplementary to our earlier newsletter articles and to the shelter plans, video tapes, and other educational materials which are available from **Fighting Chance**.



Figure 5



Figure 6



Figure 7

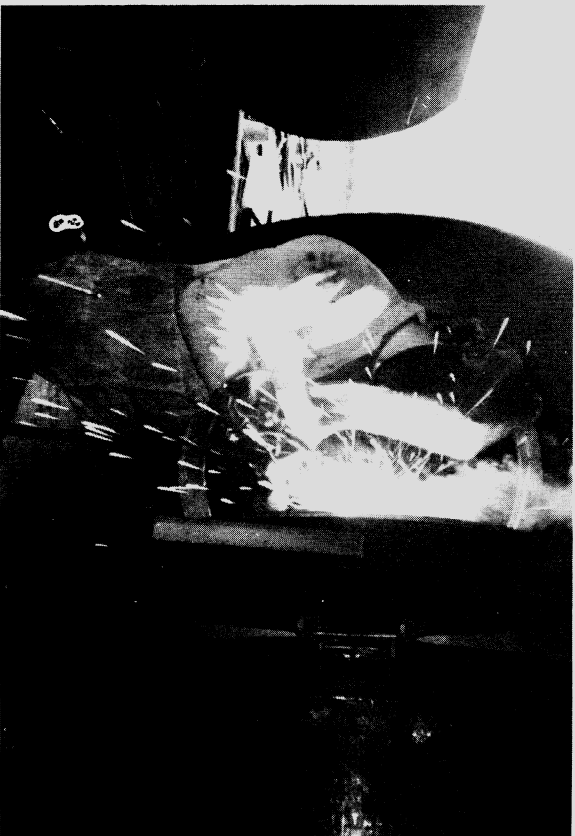


Figure 8

We have not carried out an extensive price and quality study of these batteries. Photocomm is a reliable company with high quality products. There are many other sources. Sealed batteries can be obtained in most communities. You may be able to find comparable quality batteries at a lower price especially if you buy them locally and save the freight.

I suggest you use a sealed battery in your shelter. Economize somewhere else.

RIFLE PROTECTORS

Some people have asked about the practicality of keeping their personal firearms in protectors similar to those supplied to American armed forces by the **Fighting Chance** rifle bag project.

We do not normally publish information specifically about firearms. There are many national experts and excellent organizations devoted to firearms. We do occasionally answer questions by individuals concerning the role of firearms in their personal civil defense preparations.

Each of you should have received a copy of Cresson Kearny's expedient instructions in our previous mailings. These can be modified as required to other shapes and sizes of firearms.

Generally it is a good practice to keep dust and dirt away from firearms. These polyethylene bags perform that function quite well. One special precaution is warranted.

Be sure the firearm is quite dry when you put it in the bag. Although 2 mil polyethylene is permeable to water, the rate of transfer is slow enough that significant rust formation could occur in the first day or two that a wet firearm is in the bag.

As far as long term rust is concerned, Cresson Kearny has performed some experiments which demonstrate that the water permeability of 2 mil polyethylene is high enough to preclude the accumulation of water from atmospheric fluctuations. In other words, if your rifle is dry when you put it in the bag (and the bag is dry), you need not worry about a long term rust hazard.

Military ammunition is often shipped in cases with inner polyethylene liners. Polyethylene bags for long term ammunition storage are fine, too.

This sort of protection might be especially wise if you decide to keep a firearm in your shelter for post-attack availability.

A few other remarks are warranted.

First, I have never seen a good civil defense shelter design which would be anything other than suicidal to defend with firearms from inside. Moreover, the mythical opponents of fantasies about such a defense are most likely to be your fellow Americans who are, in fact, your most important post-attack resource. Build the shelter big enough for them, too.

Second, Thomas Jefferson said:

"The constitutions of most of our states, and of the United States, assert that all power is inherent in the people; that they may exercise it by themselves; that it is their right and duty to be at all times armed; that they are entitled to freedom of person, freedom of religion, freedom of property and freedom of the press."

If you choose to exercise these rights and duties in part by possession of a firearm, be certain that you are skilled in its safe and effective use and that you are well aware of the obligations and responsibilities accompanying this particular "power" of the people.

Do not indulge in fantasies about protecting your shelter from an invading Soviet army with your firearms.

TELEPHONE TREE

Many readers of this newsletter have joined the **Fighting Chance** telephone tree, and we hope that many others will join. The tree consists of individuals who are willing to be asked occasionally to make a specific telephone call on behalf of a civil defense issue.

The first use (and success) of the tree was in saving the mobile civil defense display at the National Emergency Training Center, NETC. Although this display has been in effective use by classes there for over two years now, there were several times when anti-civil defense bureaucrats almost succeeded in getting rid of it.

Their last and hopefully final effort was an attempt to "install" it underground in an obscure location at NETC. This would have diminished its educational value and ended its use as a mobile display in the Washington, D.C area.

A coordinated barrage of calls from telephone tree participants encouraged the bureaucrats who favored the display and worried the ones who didn't. As a result the display survived and continues to do its work. Moreover, since it is used in training thousands of professionals from all over the United States, its existence has made possible our progress in getting similar displays adopted by state civil defense agencies.

Most state agencies will now accept and utilize these displays. As resources become available, we are supplying them.

We decided that it would be counterproductive to use the telephone tree for efforts which were unlikely to succeed. For this reason, most people have not been asked to make many calls.

There are many issue-oriented organizations which encourage telephone calls to Washington by their members. In most cases, the proponents of these issues know that the calls (or letters) are unlikely to make a difference. Calls are promoted, nevertheless, largely

as a mechanism for stirring up their supporters and increasing the chances of financial donations to their cause.

This telephone tree is maintained solely as a tool for effective action. Like many essential tools it will only be used occasionally. It will be used when we know the calls will make a crucial difference.

By being willing to make these calls, telephone tree participants provide **Fighting Chance** with this capability. Being known to possess this capability gives us additional influence to accomplish our goals even when it is not used.

SHELTER HAMMOCKS

An additional small company has begun making shelter hammocks. They are John and Linda Wells of the Johnwell Upholstery Company, 1427 Southeast Stevens, Roseburg, OR 97470 with telephone (503) 673-5448. We have seen their product which is made strictly according to the design in our drawings and displays and is of a high quality.

Always remember that you can use bed sheets and the instructions in Nuclear War Survival Skills to make excellent shelter hammocks. It is prudent to put the supplies necessary to make expedient hammocks in your shelter.

If you want the more attractive and convenient commercial hammocks, this company will make them for you currently at \$70 per hammock plus postage. Be sure you have really essential items first. That \$70, for example, will buy at least 6 person/months of very nutritious survival food supplies. You can also sew the hammocks yourself from the instructions which were given in the September 1990 issue of this newsletter.

There is one less-than-optimum feature in the hammocks we previously put into the displays which is now being corrected.

The heavy nylon material currently used for the primary hammock bottoms is waterproofed. This heavy nylon material is supplied from textile mills only in a waterproofed version. A waterproof coating is applied to the underside of the material in the final stages of manufacturing.

Ideally, however, a shelter hammock bottom should be permeable to water. Shelter occupants, particularly in a crowded shelter, are more comfortable if the evaporative cooling of their bodies is not impeded. Moisture given off by a hammock occupant should easily pass through the hammock material.

Under extreme conditions of heat or humidity or both, the occupants of hammocks which have waterproofed bottoms may find themselves in uncomfortable pools of water. In any case, evaporative cooling of their bodies will be less efficient.

Since these hammocks are for shelters rather than for foot-mobile transport, the material can be as heavy as is desired, but it should be permeable to water.

In order to obtain water-permeable nylon, one must get a textile mill to supply material that has not been waterproofed. At present and within our knowledge of the products available, this is a special order.

Bed sheets are water permeable and have many uses. You should probably leave them in your shelter even if you obtain sewn nylon hammocks.

DDP MEETING

On September 21 and 22, 1991 the annual meeting of the Doctors for Disaster Preparedness will be held at the Imperial Palace Hotel in Las Vegas, Nevada. This will be a small gathering which offers a unique opportunity to hear one-hour presentations by some individuals who are a part of American civil defense. These speakers will also be available for personal meetings and discussions with anyone who attends.

Speakers are still being arranged. Already they include:

Grant Peterson - FEMA Director of State and Local Programs or John McKay - FEMA Director of Civil Defense. These two men have agreed that one or the other of them will make a presentation on behalf of the Federal Emergency Management Agency.

Conrad Chester - Director of the Oak Ridge National Laboratory civil defense program. With decades of experience in civil defense engineering, Dr. Chester oversees the remaining civil defense work at Oak Ridge. This is the laboratory and program which carried out most of America's civil defense research and development work.

Edwin York - Now partially retired, Edwin York is probably the most experienced American scientist in the design, building, and testing of structures to resist nuclear weapons. He personally participated in many of the early nuclear weapons tests and spent a large part of his career designing and testing everything from personal shelters to missile silos. Among many shelter experts, the phrase "Ed York says its O.K." is sufficient to end a dispute about any aspect of shelter design.

Cresson Kearny - The acknowledged world's expert in expedient civil defense procedures, Cresson Kearny is also the foremost living American designer of combat infantry equipment. A reading of his credentials on page 3, "About the Author," in your copy of Nuclear War Survival Skills will make clear the value of traveling all the way to Las Vegas to hear his presentation alone.

Petr Beckman (who's presentation is subject to a possible schedule conflict) - America's foremost advocate of nuclear electric power. His newsletter, Access to Energy, is a spike of conscience and truth continually driven through the lies of those who wish to destroy many aspects of American life with pseudoscientific arguments. Petr Beckman is a remarkable scientist with a very distinguished and ongoing career in physics and electrical engineering.

Jane Orient - The most active and effective physician in America in the field of civil defense. Jane Orient's speaking, writing, and activist schedule on behalf of civil defense is remarkable in its extent and effectiveness and leaves one wondering at the fact that she still

finds time to make a living as a physician. Jane Orient is Vice-President and Past-President of DDP and is responsible for its administration and affairs.

Sharon Packer - A dynamic lady from Salt Lake City who is making one of the most effective grass-roots efforts in civil defense. She and the group which she and her co-workers have built are continually working on behalf of personal, local, and national civil defense. If you are interested in mobilization of community support for civil defense, you will be very interested in Sharon Packer's work.

Kenneth Lucas - A radiation-oncologist and civil defense activist. Dr. Lucas's research into the Hamburg firestorm bombing attack led to the recent publication of the article, "Efficacy of Bomb Shelters: With Lessons From the Hamburg Firestorm" in the Southern Medical Journal.

Howard Maccabee - Co-founder of DDP and widely-known lecturer and debater on behalf of civil defense. Dr. Maccabee is one of a few physicians whose work has effectively countered the anti-civil defense propaganda of the group which calls itself "Physicians for Social Responsibility".

Wayne Blanchard - One of the few Federal Emergency Management Agency officials who has consistently and effectively furthered the cause of American civil defense. Through his origination of civil defense training courses and training materials and his effective work within FEMA, Wayne Blanchard has helped to keep civil defense from perishing within the federal bureaucracy.

Arthur Robinson - The children and I will bring a mobile shelter display to the meeting. I will talk about various aspects of the **Fighting Chance** effort.

This program of speakers, including several who are not yet announced, will present information about all aspects of civil defense. In addition, there will be three presentations about the facts and fantasies surrounding the so-called "greenhouse effect".

Registration for this meeting can be made by writing to DDP, 2509 North Campbell, Box 272, Tucson, AZ 85719. Registration is \$85 with additional family members for half price. Group rate single or double rooms at the hotel for this meeting are \$55 per day.

DDP NEWSLETTER

Reprinted below is the March 1991 issue of the Doctors for Disaster Preparedness newsletter. The issue is authored by Stephen Alley, the American Legionnaire who toured the Northeastern United States with the Pennsylvania mobile shelter display (temporarily converted to American legion insignia) during the fall of 1990. Mr. Alley now hopes to arrange funding for a mobile display for year-around nationwide use by the American Legion.

DOCTORS FOR DISASTER PREPAREDNESS

NEWSLETTER

March 1991

Vol. VIII, No. 2

AMERICAN LEGION SPONSORS HOMELAND DEFENSE DISPLAYS

by Stephen Alley



The mobile steel shelter display attracted thousands of visitors at the Topsfield Fair in Massachusetts.

"Awesome!" "Radical!" "Neat!" the children said.

All along the 3400-mile tour route through the northeastern United States, children were seen taking their parents by the hand to visit the shelter.

Neither the children nor their parents—with few exceptions—had ever seen a bomb shelter before. But in Allentown, Pennsylvania, a number of passers-by recognized this particular structure immediately:

"Hey, what a great use for all those fuel tanks I've been digging up!"

In Iraq, the idea of using a buried steel tank as a shelter would not have seemed foreign. The Iraqis have field fortifications that look very much like the shelter display and are equipped with the same state-of-the-art ventilation-filtration system (imported from Switzerland). Deployed along with earth-moving equipment, their shelters were used to protect personnel during poison gas attacks on Iran.

In Switzerland, the ventilation-filtration system is standard equipment at home, as well as in army fortifications. All Swiss citizens have shelters for protection against

weapons of mass destruction—chemical, biological, and nuclear. Civil defense is as important as a basic life insurance plan to them. This fact was so amazing to Americans that many visitors stopped to read it aloud while they were waiting to enter the shelter.

The steel shelter is designed to be buried 9 feet below grade, utilizing earth arching to provide 200 psi blast protection. When installed, the entryway is closed by a 200-pound blast door mounted with a cantilevered hinge. (The blast door display—which the children could open easily—is not shown in the photograph.)

In addition to blast and fire protection, this type of structure has a radiation protection factor of 10,000.

At the Topsfield Fair in Massachusetts, people frequently asked why shelters had not been offered as an alternative to evacuation for the Seabrook nuclear power plant.

The Seabrook plant was delayed for years due to the lack of an acceptable evacuation plan. (It still doesn't have one.) The cost of a two-year delay caused by "intervenor"—estimated to be \$419 million¹—could have built more than one million blast shelter spaces at a cost of about \$400 per space. Unlike expensive, redundant safety measures, which can only reduce the (extremely low) probability of a significant radiation release, shelter protects people if an accident actually occurs.

Other display items include a year's supply of food for one person (vacuum-packed wheat, corn, and beans); water storage-sanitation kits; a solar panel for recharging the battery; a self-rescue device for raising the blast door if covered by rubble; and hammocks (convertible into chairs) that increase the shock isolation for shelter occupants. The hammocks were tested (and pronounced comfortable) by hundreds of children.

Some were skeptical about the stated maximum occupancy of 40. A submariner had an answer: "Forty, no problem. We could get 60 in here, easy."

This steel shelter was designed and built by the Oregon Institute of Science and Medicine for the state of Pennsylvania. DDP helped to finance the construction. The shelter's first public appearance was at the annual meeting of DDP in Washington, DC, in October, 1989.

The shelter tour was conducted under auspices of American Legion Post 50 of Unity, Maine, with the support of several civil defense organizations, including DDP. Stops were made at the Bangor State Fair, the Skowhegan State Fair, and the Lincoln Fair in Maine; the Allentown Fair in Pennsylvania; and schools and shopping centers. The Waldo County Emergency Management Agency, under the direction of Rick Farris, cosponsored two exhibitions, one in Wiscasset, ME, near the Maine Yankee nuclear power station. In Topsfield, the last stop, the shelter received a particularly enthusiastic reception (despite proximity to the birthplace of Physicians for Social Responsibility).

Unfortunately, those who wished to borrow the shelter for the Veterans Day Parade were disappointed. The shelter had to be returned to Pennsylvania. But my hope is that the Maine American Legion will become the first to provide a mobile display for all Legion posts within the state.

¹Bernard Cohen, *Before It's Too Late: A Scientist's Case for Nuclear Energy*, NY, Plenum Press, 1983.

Acknowledgements: The shelter display had the support of the national, state, and local American Legion, especially Post 50 of Unity, ME. Legionnaires Silas Reynolds, the truckdriver, and Charles Michaud, the Adjutant for the Department of Maine, were especially helpful. In Pennsylvania, Tim Allbaugh, RN; Del Mutimer; Robert Platt; Walter Kile; and William, James, and Jane Orient also helped.

Send all correspondence (manuscripts, address changes, letters to editor, and meeting notices) to: DDP, 2509 N. Campbell Ave., Box 272, Tucson, AZ 85719, telephone 602-325-2680. Instructions for authors available on request; SASE is appreciated.