Floods, tornadoes and other wrongs of spring.

Edward Teller: Why missile defense is still a pretty good idea.

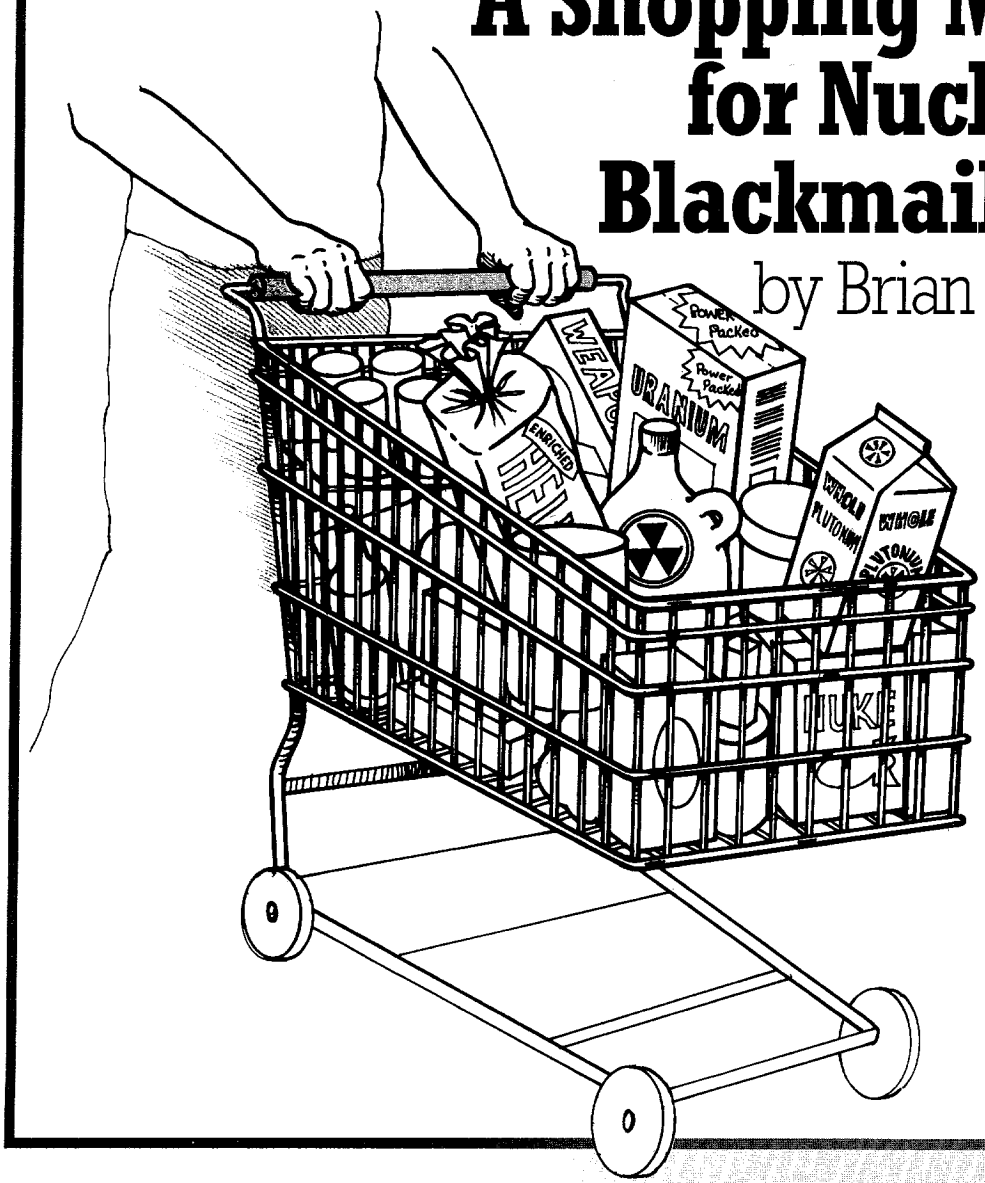
Journal of

Civil Defense

The American Civil Defense Association *Spring 1997 • $4.50*

A Shopping Mall for Nuclear Blackmailers

by Brian Eads



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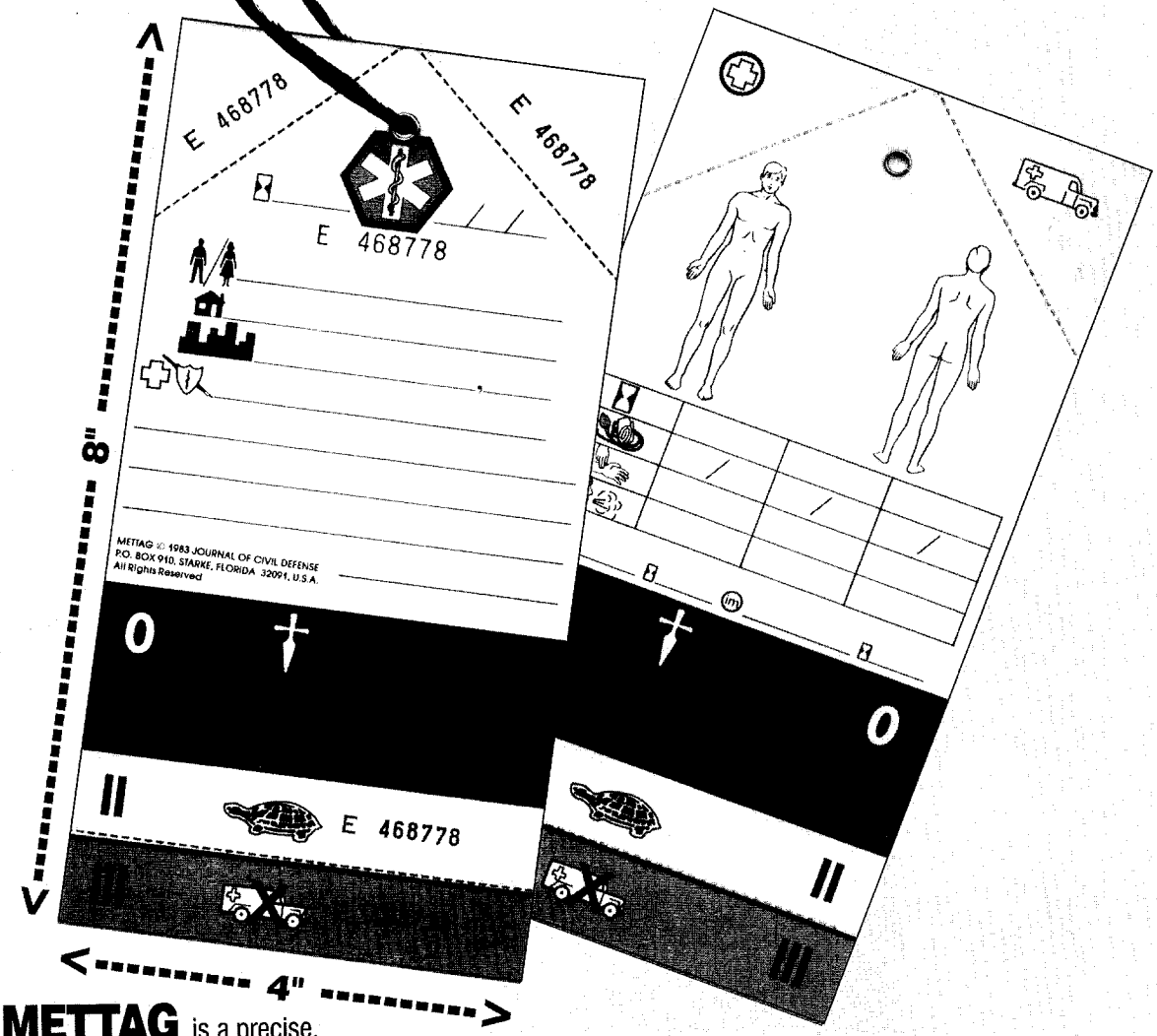

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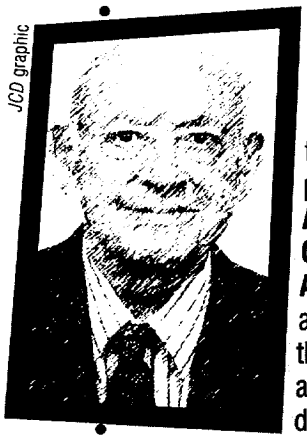
Journal of Civil Defense
The American Civil Defense Association
Promoting sensible precautions for disasters.
Spring 1997

inside

To our readers...

You'll notice old and new names and titles in this issue of the *Journal of Civil Defense.*

Walter Murphey takes up the rank of editor emeritus after serving as editor since the magazine's inception in 1968.



JCD graphic

Walter also becomes senior counselor to the journal's publisher, **The American Civil Defense Association,** after more than 30 years as executive director.

Longtime TACDA staffer **Kathy Eiland** takes over the latter post.

The journal's editorial and design responsibilities have shifted to a San Antonio, Texas, consulting firm, **Sensa Business Communications,** headed by **Tony Batezel.**

Since the mid-60s, Walter has well and faithfully served the cause of civil defense and national preparedness.

Anyone familiar with TACDA knows that it's been Walter's diligence and perseverance that have made the Association a powerful advocate for civil defense.

TACDA's members and staff will miss Walter at the Association's helm in Florida, but he will be as close as a phone and fax machine at his new home in Colorado.

Thank You, Walter, for your inspiring life and example.

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Cover illustration for the *Journal of Civil Defense* by Pamela Thornbloom

The *Journal of Civil Defense* is the official quarterly of The American Civil Defense Association (TACDA), P.O. Box 910, Fla. 32091; Kevin Briggs, president; Kathy Eiland, executive director. TACDA urges government and citizens alike to maintain sensible precautions for disasters — natural and man-made.

Washington Perspective

by Kevin Briggs

WILLIAM S. COHEN, secretary of defense since January, has been around the Washington political scene for years (see bio).

And he seems to share some of TACDA's civil defense concerns.

During his Senate confirmation hearings, as reported in the *Washington Post*, Cohen said the potential use of biological, chemical, and nuclear weapons by terrorists was the "gravest threat that any of us will face in the coming years."

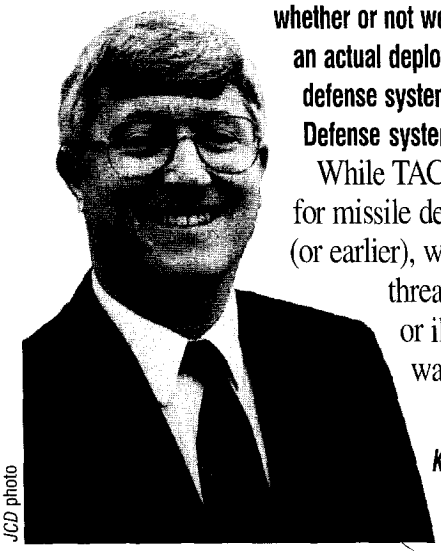
"...It's become all too easy" for rogue nations or groups to develop weapons of mass destruction, he testified, since bomb-making can be learned even on the Internet.

What does Cohen think about national missile defense? According to his office, the secretary vows that:

We're going to have a stronger ballistic missile defense program.... We have funding that will allow for former Secretary Perry's three-plus-three solution as far as the National Missile Defense system.

Essentially, we are going to include funding in this budget that will allow the research and development to go forward as far as a National Missile Defense system, to conduct that research and development and come to the year 2000.

At that time, we will call upon our Intelligence Community to give us the best analysis that we have of the nature of the threat that we will face at that time, and then make a determination as to whether or not we should go forward with an actual deployment of a ballistic missile defense system, a National Missile Defense system.



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While TACDA agrees with the need for missile defenses by the year 2003 (or earlier), we believe there's enough threat *today* from accidental or illicit missile launches to warrant *rapid deployment* of such defenses. We take seriously the warning of Russia's defense minister that: "*Russia might soon reach the threshold beyond which its rockets and nuclear systems cannot be controlled*" (*USA TODAY*, Feb. 7, 1997).

We hope Cohen will push for a system to stop both cruise and ballistic missiles aimed at any of the 50 states. ■

Kevin Briggs is president of The American Civil Defense Association.

Views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or U.S. government.

Bio

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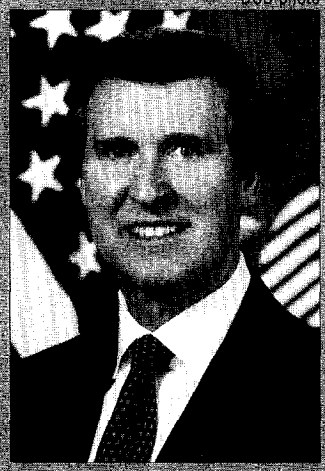


Before taking over the Pentagon, **Secretary of Defense William S. Cohen**, 56, served the state of Maine for three terms in the U.S. Senate and three in the House of Representatives.

He sat on the Senate Armed Services and Governmental Affairs Committees from 1979 to 1997.

He was a member of the Senate Select Committee on Intelligence from 1988 to 1991 and 1995 to 1997, serving as vice chairman from 1987 to 1991.

Cohen played a leading role in crafting the Goldwater-Nichols Defense Reorganization Act of 1986. He was the Senate sponsor of the GI Bill of 1984 and the subsequent enhancements to this legislation.

Cohen's efforts led to the creation of the Rapid Deployment Force, which later developed into the Central Command, and the maritime prepositioning program.

He also co-authored the Intelligence Oversight Reform Act of 1991, as well as legislation designed to overhaul U.S. counterintelligence efforts and defend against foreign political and industrial espionage.

Cohen served on the board of directors of the Council on Foreign Relations from 1989 to 1997, and in 1996 chaired the Council's Middle East Study Group.

He has also chaired and served on numerous other groups and committees.

Journal of Civil Defense

The Soviet Union's most lasting legacy:
tons of poorly protected, weapons-grade plutonium and uranium.

A Shopping Mall for Nuclear Blackmailers

by Brian Eads

IT WAS A GRIM AFTERNOON when the first giant C-5 Galaxy U.S. Air Force transport plane came to a halt on the snow-clad runway in northeastern Kazakhstan, Central Asia.

Watching from inside an airport building, scientist Alex Riedy breathed a sigh of relief. After six weeks of labor by his team of 30 Americans, Project Sapphire was nearing completion.

Fifteen miles away, at the Ulba Metallurgy Plant, a 14-truck convoy waited. Carefully packed on the trucks were 2.3 metric tons of fissionable materials, including more than a half-ton of weapons-grade uranium, enough to build some two dozen nuclear bombs. The Kazakh government had quietly asked Washington to help it dispose of these nuclear leftovers from the Soviet military.

The next day, November 20, 1994, the Galaxy lifted its cargo into the sky and began the more than 20-hour flight back to Dover Air Force Base in Delaware. Two more aircraft, laden with equipment and nuclear materials, soon followed. Within 48 hours, U.S. Department of Energy tractor-trailers delivered the precious cargo to the high security of the Y12 plant in Oak Ridge, Tenn., where it would be stored before being transported to another plant for conversion into commercial fuel.

The rescue had come just in time. Security at the Ulba plant had disturbed the Project Sapphire team: Weapons-grade materials were stored behind wooden doors, often with open padlocks. There were holes in the fence surrounding the poorly lit compound. "It looked like there had been no maintenance in ten years," Riedy says.

Worse, the team found evidence that at least one would-be nuclear state, Iran, had been shopping at the plant: wooden crates labeled with Teheran addresses had apparently contained material used to accelerate a nuclear reaction.

The airlift, said then-U.S. Secretary of Defense William Perry, had kept weapons-grade materials from falling into the hands of "potential black marketeers, terrorists or new nuclear regimes."

The Makings of Catastrophe. The Ulba plant, however, was only one minor outpost in the Soviets' vast nuclear archipelago. Across the former Soviet Union, hundreds of similar sites are poorly protected, sloppily managed and bankrupt. Security and inventory control are so loose that nuclear terrorists may have already acquired enough material to make a bomb.

As Russia dismantles its 25,000 to 40,000 nuclear warheads — at the rate of 2000 to 3000 a year, the task won't be completed for at least a decade — the amount of easily transported nuclear material will grow.

Law-enforcement and intelligence officials warn that the former Soviet Union's "loose nukes" pose a deadly

threat to Western security. "It has the makings of a nuclear-proliferation catastrophe," says Harvard University Professor Graham T. Allison, co-author of *Avoiding Nuclear Anarchy.*

How difficult is it to build a nuclear bomb? Perhaps not as difficult as you might think. You need the materials, a few physicists and engineers, some technical know-how and a couple hundred thousand dollars. The technical know-how is available from bookstores or the Internet. Most of the necessary electronics and hardware are sold at large electronics stores.

The real challenge is getting explosive material: even small amounts of weapons-grade plutonium and highly enriched uranium (HEU) are difficult and expensive to manufacture from scratch. But a crude nuclear device — one that would devastate a city, for example — doesn't need much. Less than three pounds of plutonium or seven pounds of HEU will do. By that measure, the stockpile of potential bomb-making material in the former Soviet Union — well over 1000 tons of weapons-grade HEU and plutonium — is colossal.

Uncertain Amounts. Since communism's collapse, the dangerous inadequacies of nuclear security have become all too clear. Technology that is standard in the West — radiation detectors, microwave sensors, video monitors — is often out of date, out of order or, usually, nonexistent.

At the Chelyabinsk-65 complex in southwestern Russia, for instance, some 33 tons of plutonium are housed in a 40-year-old converted warehouse with windows in the walls and one padlock on the door. (A spokesman denies that security is poor at the complex.) Outside the port of Murmansk, near Finland, a storage area for radioactive waste products was guarded by two men and a dog. "They didn't even have a telephone," recalls a visitor to the site.

> "The truth is, Minatom has no idea how much material it has."

Though Minatom, the Russian atomic-energy agency, denies it, experts say the agency doesn't keep accurate records of the materials it possesses. "The truth is, Minatom has no idea how much material it has," says Alexei Yablokov, former adviser on environmental matters. And inventories in the former Soviet states are equally unreliable. Ukraine's Kharkiv Institute of Physics and Technology claimed to have just 33 pounds of weapons-grade materials, but it is reported that inspectors from the International Atomic Energy Agency found five times that amount.

At the Ulba plant, the Project Sapphire team found some four percent more material than was listed in the plant's inventory. That discrepancy may sound small, but it could represent some 50 pounds — half the amount needed to make a uranium bomb of the size that devastated Hiroshima.

Tempting Targets. Nuclear workers have lost status, prestige and economic security since the downfall of the Soviet Union. Typical monthly wages in the industry may run from $100 to $200 — when workers are paid at all. Some moonlight as street traders or cabdrivers to feed their families.

They know that nuclear materials are valuable, and admit that stealing them can be easy. "All I'd need is a lead-lined briefcase," one scientist told *Reader's Digest.*

For some nuclear-industry insiders, that temptation can be irresistible. "After they are arrested, Russian nuclear thieves have said they read that smuggling would make them a billionaire," says Vladimir Orlov, director of the Center for Policy Studies in Russia.

In 1992 Leonid Smirnov, a chemical engineer at the Luch Scientific Production Association in Podolsk, near Moscow, sidestepped plant security more than 20 times, smuggling out 3.3 pounds of weapons-usable uranium powder, which he stored on his apartment balcony. Russian police arrested Smirnov at a train station on his way to Moscow to find a buyer.

According to U.S. Senate testimony, retired Russian naval captain Alexei Tikhomirov slipped through an unguarded gate at a nuclear-fuel storage facility near Murmansk in 1993. He sawed a padlock off a door, then pried it open with a metal bar. Inside he broke off ten pounds of uranium from three submarine fuel-assemblies, stuffed the material into a bag and calmly retraced his steps. Eight months later police caught him by chance as he tried to sell the stolen uranium. (Asking price: $50,000.) The military prosecutor remarked that "potatoes were guarded better than naval fuel."

In December 1994 police in Prague, capital of the Czech Republic, seized nearly three kilograms of HEU and arrested the men who had allegedly smuggled it out of Russia by train. The group's Russian suppliers had promised 40 kg. more HEU almost immediately, and up to one ton in the future. Law

enforcement authorities told Senate investigators that middlemen in the deal said interested buyers included North Koreans (who allegedly pulled out when they obtained what they wanted elsewhere), Spaniards offering counterfeit currency, and Nigerian criminals allegedly proposing to trade drugs for the uranium.

According to Harvard's Graham Allison, more nuclear material has been stolen from the former Soviet Union since the fall of the Berlin Wall than the United States produced in the first three years of the Manhattan Project — and that's counting only the known incidents.

Courting Terrorists. "The conventional wisdom is that the Russians are addressing the problems," says William Potter, director of the Monterey Institute of International Studies in California. "But they are not."

Before killing 12 and injuring 5500 in a poison-gas attack on the Tokyo subway in March 1995, Japan's Aum Shinrikyo doomsday cult, according to a Senate investigation, tried to buy Russian nuclear warheads and recruit bomb-making experts. The 30,000 Russian followers of the sect included at least one employee at the Kurchatov Institute, the birthplace of the Soviet atomic bomb.

Elsewhere, rebellious Chechens in the Russian Caucasus claimed access to the Soviet nuclear arsenal. They boasted about planting potentially dangerous cesium-137 in a Moscow public park. The cesium was recovered by a Russian radiation-safety unit.

North Korea, Iran and Iraq all deny military nuclear ambitions. But the evidence shows they have made repeated attempts to obtain nuclear material and know-how from the former Soviet Union.

In December 1992 Russian security officers detained at least two dozen rocket scientists at an airport near Moscow as they attempted to board a plane for Pyongyang. North Korea hired the men from a missile institute near Moscow, promising to pay them $1500 to $3000 a month.

Dangerous Liaisons. At least some of Russia's nuclear bosses have shown they are ready to cooperate with would-be nuclear states. Desperate for foreign sales, Minatom signed a secret protocol with Teheran in January 1995 to develop a uranium mine and supply a uranium-enriching gas centrifuge — a critical component for nuclear-weapons production capability. When the Kremlin learned of this deal from the United States in 1995, the protocol was canceled.

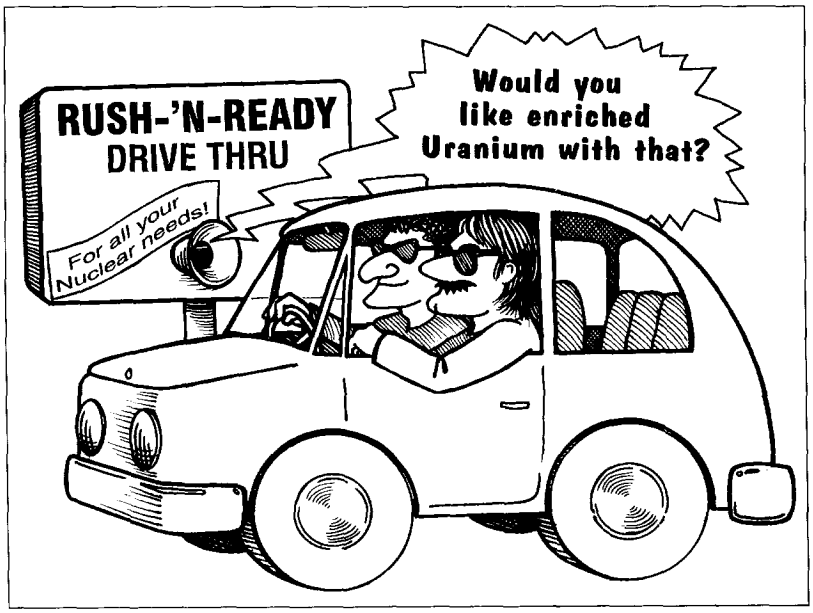
Since Allied attacks during the Gulf War destroyed much of Iraq's nuclear weapons-making capacity, Saddam Hussein has turned to Russia. In 1995 Soviet missile-guidance systems en route to Baghdad were seized in Jordan, and U.N. inspectors found similar components hidden in Iraq's Tigris River.

WHAT SHOULD WE DO? Most countries of the former Soviet Union recognize that nuclear leakage is a global problem threatening terrible consequences. But they lack the means to prevent it.

Project Sapphire showed how the West can make a difference. The United States has pledged more than $1.5 billion to install modern security systems at the most vulnerable sites and to build a secure storage facility for fissionable materials.

The West can do more:

- Encourage manufacturers of nuclear security devices — microwave barriers, video surveillance, high-tech fencing and detectors — to start joint production ventures with former Soviet states. "Let's help the Russians build up the production base for security devices," says Andrea Ellner of Britain's University of Reading.
- Tighten export controls in the U.S. and Europe. Before the Gulf War, much of the equipment used in Iraq's nuclear-weapons program came from the West. Selling such technology is even more dangerous when the buyer might have access to Russian nuclear material.
- Accelerate the deal to buy 500 tons of Russian HEU for conversion to civilian reactor fuel. "This is a cheap and simple way of making sure it doesn't fall into the wrong hands," says Harvard's Graham Allison. "And it's not charity for the Russians — it's extra security for the West." ■



JCD illustration by Pamela Thornbloom

Though it's been years since President Ronald Reagan first called for a missile defense system, the idea still has a loyal following. Here, TACDA member Dr. Edward Teller of the Hoover Institution and Lawrence Livermore National Laboratory tells a fellow Hooverite why the idea still sounds pretty good.

Missile Defense: Needed Now

An Interview with Edward Teller by Peter Robinson

JCD illustration by Pamela Thornbloom

Dr. Edward Teller

Peter Robinson: It was in March 1983 that President Reagan first called for research to devise a system capable of destroying incoming missiles. You were in favor of President Reagan's initiative — indeed, you were one of his closest advisers in the matter. Why?

Edward Teller: I was very happy that President Reagan emphasized the need to develop a defense against missiles. But I was uncomfortable about the question, about whether it could be done. However, under the impact of President Reagan's statement, a number of us, particularly my friend Lowell Wood, at the Lawrence Livermore Laboratories, looked in great detail into the question.

Our idea was as follows: "Here comes an incoming object. It is now in space, and we have tracked it since it was launched. We want it to collide as soon as possible with smaller objects, and we want the smaller objects to destroy the attacking object." Our conclusion at the time was that solving this problem was difficult but possible. And in the last ten years, it has seemed to me more and more hopeful.

Robinson: But one of the points of dispute was — and remains — the cost. The Reagan administration proposed spending $40 billion over ten years. Isn't that a staggering sum? Could it possibly be worth it?

Teller: That is considerably less than 2 percent of our defense budget. Now, to my mind, the main job of our armed forces is to defend the American people. Devoting 2 percent of our military expenditure to defending the American people against incoming missiles is not too much.

Robinson: [In the mid-1990s,] the Republicans in Congress proposed a national missile defense. It called for three years of research, followed by deployment. The Clinton administration opposed the measure, proposing instead three years of research, funded at a lower level, followed by a decision about whether to continue research or begin deployment. In other words, the Republicans wanted to make the decision to deploy right now, whereas the administration wanted to defer the decision itself for at least three years. [Then] Secretary of Defense Perry argued that only China and Russia have nuclear ballistic missiles that can reach the United States and that it will be at least a decade before other nations —

Teller: May I interrupt?

Robinson: Of course.

Teller: Fission was discovered in December 1938. Five and a half years later, there was an atomic explosion on Hiroshima. To say what can or cannot happen in the course of ten years is nonsense. And I am not only worried about ballistic missiles carrying nuclear warheads. I am worried about ballistic missiles carrying anything.

Robinson: Chemical weapons?

Teller: Chemical weapons. Biological weapons. In the Middle East these weapons have already been used in a

terrifying and effective way between Iran and Iraq. So whether nuclear explosives are developed or not, people are already exposed to terrible weapons.

There are other threats. It has been estimated, and I have no reason to doubt it, that *intermediate*-range missiles are available now to twenty or twenty-five governments. And it is not only the populations of our European allies who are within range of such missiles. It is also our own population. No Americans live within five hundred kilometers of any adversary country. But ships carrying these missiles can get that close to the American shoreline and closer.

So the question is not as simple as making experiments and then deciding whether to deploy, yes or no. We ought to begin deployment as soon as possible, maybe now, because the very *act* of deployment will uncover difficulties and complications. Whatever we can do now, if only in a limited way, it is best to do now.

Robinson: What about the argument that there are other, more pressing threats? Recently the *New York Times* quoted a Pentagon official as saying the following: "A terrorist with little technical know-how and twenty pounds of smuggled plutonium could make a bomb powerful enough to destroy a city. That's what we should be worried about." What do you say to that?

Teller: And we should also be worried about the common cold. Look, there is *this* problem, and there is *that* problem, and the two problems have absolutely nothing to do with each other. I am wrong. They have a little something to do with each other, and in a moment I will tell you what.

But missile defense is an important thing, independent of any terrorist threat. I agree with those who say we should only deploy the best system. I don't agree that we shall ever really know what is the best. In deploying, we *always* have to take chances. I think the time to take the chances is *now.*

What does a missile defense have to do with a terrorist threat? Only this, that if we go ahead with missile defense, not only for the United States but as far as possible for our allies, for the whole world, and if at the same time we minimize our excessive secrecy about our military, then we can bring about a better atmosphere in which measures against terrorists will *also* become easier.

So these problems are not completely independent of each other, but the kind of dependence of don't do this before you have done that — that is nonsense. If we know how we can do something against terrorists, we should *do* it. If we know how we can do something against missiles, we should *do* it. The two should not be balanced against each other.

Robinson: [Then] Secretary of Defense Perry said that the Republican proposal for a missile defense would have crippled the 1972 Antiballistic Missile Treaty, harming our relations with Russia and other nations. Are you concerned about such diplomatic ramifications?

Teller: I think the diplomatic arrangements that were made with the Soviet government, a government that no longer exists, have very little to do with the real issues. The real issue now is, how do we get everybody together to do, in a joint way, whatever can be done to reduce every danger and, specifically, to reduce the danger of missiles.

You have mentioned international agreements. I would like to have an international agreement to this effect. Anybody can fire missiles — the more the better, happy about it. But the condition is that if any nation, America or Russia or any other nation, say Switzerland, wants to fire a missile, it must make an announcement, let us say, one week ahead, giving the purpose and the missile's orbit. And when anyone fires a missile without announcing it or without announcing it correctly, that missile, without any further question, whether it is a ballistic missile or a cruise missile, is shot down. ■

Peter M. Robinson *is a research fellow at the Hoover Institution, where he writes about business and politics. He is also the editor of the* Hoover Digest; Research and Opinion on Public Policy *and host of Uncommon Knowledge, Hoover's weekly public policy television show.*

Missile defense: maybe sooner than later?

A strategic missile defense system may be closer to reality, thanks to a U.S. Air Force attack laser aircraft slated to become operational within five years.

By 2002, a 747 armed with a laser weapon will be capable of shooting down ballistic missiles launched in a regional conflict. A seven-plane fleet capable of destroying missiles in the early phase of their flights could exist as early as 2008, the Air Force says.

Though there's a world of difference between strategic and regional missile defense technologies, the capabilities of the YAL-1A, as the Air Force dubs its new plane, may help close the gap.

The plane will be able to detect and destroy the missiles shortly after they launch hundreds of miles away, with the resulting debris falling back on enemy territory.

Responsible for producing the new plane is the Air Force Space and Missile Systems Center's Airborne Laser Program Office at Kirtland AFB, N.M.

The Wrongs of Spring

This year, they're mainly floods and tornadoes.

Spring floods triggered by storms and heavy rains hit — and hit again — the Midwestern states, continuing a trend that had already left the Pacific Northwest waterlogged by mid-winter.

The floods showed how vast regions of the country are vulnerable to natural disasters and dependent on government and community assistance in the aftermath.

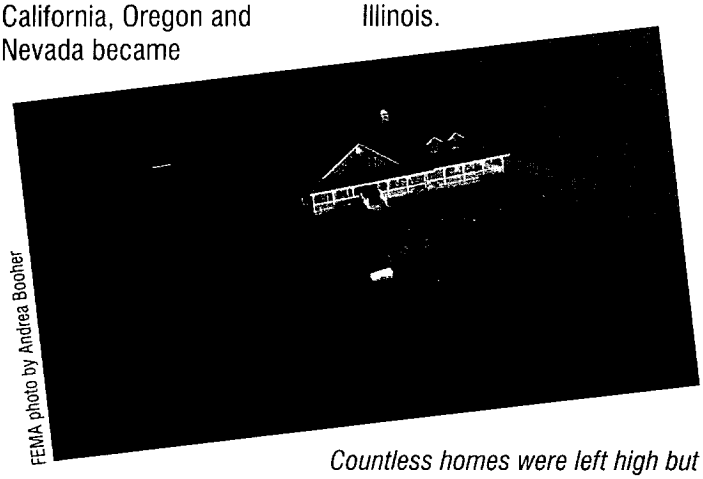
Scores of counties in California, Oregon and Nevada became eligible for federal assistance in the first week of the new year alone.

Then March came in like a lion, devastating counties in Tennessee, West Virginia, Ohio, Indiana, Kentucky and Illinois.

North and South Dakota and Minnesota were hit by floods as well.

In addition, tornadoes as well as floods ravaged nine counties in Arkansas.

Federal aid for the flooded states was coordinated by the Federal Emergency Management Agency.



FEMA photo by Andrea Booher

Countless homes were left high but not so dry during spring floods in the Midwest. The emergency demonstrated the need for better regional precautions to prevent repeats of the disaster (see sidebar, "Sensible precautions").

'I don't know why....'

SARDIS, Ark. (AP) — Charles Dunn wept for his parents, who died as the storm ripped apart their home on its march southwest of Little Rock [on Saturday, March 1].

"I don't understand it," he said. "It would be different if someone had done something to them, then I could go and settle the score. But there's [nothing] you can do. I don't know why it took them away."

The same winds that left Dunn's parents dead in their back yard lifted his 2-year-old nephew, Kyle Glasco, out of the home. He was found in trees more than 1,000 feet away, uninjured, missing only one shoe.

Dunn found the missing shoe Sunday.

By David A. Lieb. Reprinted with permission of The Associated Press.

How a Foot or Two of Water Can Cost You Your Life.

Nearly half of all flash flood fatalities are auto-related. Check out these facts:

1. **Water weighs 62.4 lbs. per cubic foot and typically flows downstream at 6 to 12 miles an hour.**
2. When a vehicle stalls in the water, the water's momentum is transferred to the car. For each foot the water rises, 500 lbs. of lateral force are applied to the car.
3. **But the biggest factor is buoyancy. Each foot the water rises up the side of the car, the car displaces 1,500 lbs. of water. In effect, the car weighs 1,500 lbs. less for each foot the water rises.**
4. Deceptively, two feet of water is enough to carry away most cars.

Sensible precautions

You can lessen — or mitigate — the effects of natural disasters like floods, tornadoes and hurricanes by taking these sensible precautions:

- **Build barriers such as levees to help reduce financial loss and structural damage to homes during flooding.**
- Implement a business or community plan to reduce susceptibility to hazards.
- **Secure shelves and water heaters to walls.**
- Install hurricane straps to attach a structure's roof to its walls and foundation more securely.
- **Use fire-retardant materials in new construction.**
- Build storm cellars or sheds that are fully or partially underground.
- **Learn the warning signal used in your community.**
- Turn on the radio in bad weather.
- **Set up a community or neighborhood watch group.**
- Hold briefings in the community and at home on safety procedures.
- **Conduct public and in-home emergency drills. Teach children where to go.**
- Identify elderly shut-ins and nonmobile people to notify and care for during and after the emergency.
- **Inventory your possessions, and maintain a copy in a safety deposit box.**
- Never try to outrun a tornado in a car. Leave the car, and take shelter in a ditch.

Part 2

National Civil Defense Policy

by Kevin Briggs

Does our nation still support civil defense — including protection from enemy attack?

AS THE LAST ISSUE of the *Journal of Civil Defense* explained, the answer is "Yes, our nation still supports civil defense." At least in theory.

National Security Directive (NSD) 66 states our government will "respond to emergencies of all kinds *including attack*." This NSD also states that under the Federal Emergency Management Agency's direction, the program will include: "Information to promote a clear understanding by the public of the civil defense program, *all threats which may affect their localities and actions they should take to minimize their effects.*"

But does our government back these words with actions? This time, the answer is "It's hard to tell."

Here's why I feel this way. I recently searched FEMA's Internet web page under the general topic of *Preparing for a Disaster* and readily found helpful information on every major form of disaster, with the singular exception of nuclear attack (there was no mention of it in this area).

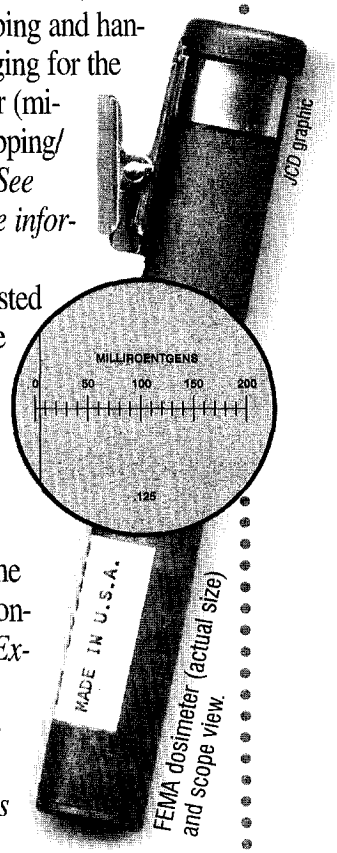
I spent perhaps another half hour looking for information on things such as "fallout shelters" and "blast shelters" but found nothing. I found references to "nuclear attack" and "civil defense" in other areas of FEMA's web site, yet could not find information on: (1) what attack threats I could expect in my locality and (2) how to minimize my risks to a possible attack (as required by NSD 66).

The FEMA web page recommends you call your local office of emergency services for more information. When I did this, our county planner said there was no specific plan to tell citizens what attack risks they face and how to minimize them. Did the county have a list of fallout shelters in the area or an evacuation plan? Nope. He said if an attack occurred, various county organizations would provide assistance as best they could.

On a positive note, FEMA has helped the United States prepare for a nuclear attack (or other radiological emergency) by funding and designing an excellent, ruggedized series of dosimeters. These dosimeters meet military and ANSI requirements for shock, vibration, and immersion and precisely measure accumulated quantities of gamma and x-ray radiation. These dosimeters are about the size of a pocket fountain pen and come in ranges from 0 - 200 mR to 0 - 600 R.

These dosimeters are available through TACDA and cost $120 including free initial shipping and handling and free charging for the life of the dosimeter (minus subsequent shipping/handling charges). *See back cover for more information.*

For readers interested in how civil defense responsibilities are delegated within our government, the sidebar, "It's in Writing" (opposite page), provides some help. The sidebar contains quotes from: *Executive Order (EO) 12656*, Subject: *Assignment of Emergency Preparedness Responsibilities.* ■



FEMA dosimeter (actual size) and scope view.

Views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or U.S. government.

It's in Writing

Assignment of Emergency Preparedness Responsibilities

Selected Excerpts from Executive Order 12656

WHEREAS our national security is dependent upon our ability to assure continuity of government, at every level, in any national security emergency situation that might confront the Nation; and WHEREAS effective national preparedness planning to meet such an emergency, including a massive nuclear attack, is essential to our national survival;... NOW, THEREFORE, by virtue of the authority vested in me as President of the United States of America, ...it is hereby ordered that the responsibilities of the Federal departments and agencies in national security emergencies shall be as follows:...

Sec. 104 (c) The Director of the Federal Emergency Management Agency shall serve as an advisor to the National Security Council on issues of national security emergency preparedness, including ... civil defense...

Sec. 201... The head of each Federal department and agency, as appropriate, shall:... (1) Be prepared to respond to all national security emergencies... (13) Develop and conduct training and education programs that incorporate emergency preparedness and civil defense information necessary to ensure an effective national response...

Sec. 301... the Secretary of Agriculture shall: (1) Develop plans to provide for the continuation of agriculture production, food processing, storage, and distribution through the wholesale level in national security emergencies, and to provide for the domestic distribution of seed, feed, fertilizer, and farm equipment to agricultural producers;... (3) Develop plans and procedures for administration and use of Commodity Credit Corporation inventories of food and fiber resources in national security emergencies;... (5) Develop, in coordination with the Secretary of Defense, plans and programs for water to be used in agricultural production and food processing in national security emergencies;... (6) In cooperation with Federal, State, and local agencies, develop plans for a national program relating to the prevention and control of fires in rural areas of the United States caused by the effects of enemy attack... (8) Develop plans for national security emergency agricultural health services...including... (a) Diagnosis and control or eradication of diseases, pests, or hazardous agents (biological, chemical, or radiological)...

Sec. 401... the Secretary of Commerce shall:... (3) In cooperation with the Secretary of Defense and other departments and agencies, analyze potential effects of national security emergencies on actual production capability, taking into account the entire production complex, including shortages of resources, and develop preparedness measures to strengthen capabilities for production increases in national security emergencies;... (5)... develop plans for providing emergency assistance to the private sector through direct or participation loans for the financing of production facilities and equipment;

Sec. 501.... the Secretary of Defense shall:... (6)... develop ... plans for the management, control, and allocation of all usable waters... (d)... Development of plans to assure the provision of potable water... (7)... develop plans and capabilities for identifying, analyzing, mitigating, and responding to hazards related to nuclear weapons... (13)... identify those industrial products and facilities that are essential to... post-attack survival and recovery... (15)... provide management direction for the stockpiling of strategic and critical materials, conduct storage, maintenance, and quality assurance operation for the stockpile....

Sec. 801... the Secretary of Health and Human Services shall:... (8) Develop plans and procedures to assist State and local governments in the provision of emergency human services, including lodging, feeding, clothing,... (9)... develop and distribute, in coordination with the Director of the Federal Emergency Management Agency, civil defense information....

Sec. 1501... the Secretary of the Treasury shall:... (3) Provide for the preserv.tion of, and facilitate emergency operations of, public and private financial institution systems, and provide for their restoration during or after national security emergencies;

Sec. 1701... the Director of the Federal Emergency Management Agency shall:... (7) Develop and coordinate with all appropriate agencies civil defense programs to enhance Federal, State, local, and private sector capabilities for national security emergency crisis management, population protection, and recovery in the event of an attack on the United States;...

Ronald Reagan

TACDA Letter

News for members of The American Civil Defense Association

Spring 1997

Here are five things on the drawing board or under way at TACDA:

First, we're revamping our Internet site (visit us at www.tacda.org). Soon, our web pages will offer:

- The best articles from our *Journal of Civil Defense* as well as other documents pertaining to civil defense.
- Information about upcoming preparedness events, such as seminars and expos.
- Sales info on our various preparedness products and services (such as Triage tags and food supplies).

Second, we're planning a Risk Assessment and Preparedness Annual for Americans who want to perform a personal and/or business risk assessment based on the location of their home(s) and place(s) of business.

Third, we're planning training materials for schools, civic groups, and television. These materials would be aimed at both training the general public with nongraded booklets and videos as well as graded course materials aimed at students who want to receive training certification.

Fourth, we want to develop recognition programs for individuals, businesses, and government entities for outstanding achievements related to disaster preparedness.

Fifth, we want to develop plans for energy efficient homes and businesses that mitigate disasters.

We welcome your feedback. Write us at TACDA, P.O. Box 910, Starke, Fla. 32091, e-mail us at tacda@daccess.net or call us at (800) 425-5397.

Looking forward to hearing from you...

Your TACDA leaders and staff

Join The American Civil Defense Association (TACDA)...

...and help promote sensible precautions to disasters. Sign up by contacting any of the listings at the end of the column on the left. Credit cards welcome.

An annual membership includes a year's subscription to the *Journal of Civil Defense* and the every-other-month newsletter, *TACDA Alert*, plus discounts on purchases at the TACDA store (see back cover). Annual individual rate as of May 1, 1997: $25; annual organization rate: $100.

An annual subscription to the *Journal of Civil Defense* (without TACDA membership) costs $18 (non-U.S. rate higher).

Civil Defense Emergency Services

Info

The following list is prepared as a service to *Journal of Civil Defense* readers. Listing of a company implies no judgment or rating of that company or an endorsement of its products or services by The American Civil Defense Association.

SHELTERS

Marcel M. Barbier, Inc.
Concrete Shelters & Shell Houses
3003 Rayjohn Lane
Herndon, VA 20171
Phone or fax: (703) 860-1275

Davis Caves Construction
Earth Sheltered Homes
PO Box 9
Armington, IL 61721
(309) 392-2574 fax: (309) 392-2578
earthhome@ice.net

FORMWORKS Building, Inc.
Engineered Const. Packages for
Shelters & Houses
PO Box 1509
Durango, CO 81302
(970) 247-2100

Nuclear Defense Shelters & Equipment
13126 Texas Hwy.
Many, LA 71449-9716
(318) 256 2021, fax: (318) 256-0879

Radius Defense, Inc.
222 Blakes Hill Road
Northwood, NH 03261
Phone or fax: (603) 942-5040

World Shelter Corporation
Portable Dome Shelters
1545 Wilshire Blvd., Suite 408
Los Angeles, CA 90017
(800) 678-4344, fax: (213) 483-7628

EMERGENCY FOODS AND EQUIPMENT

AlpineAire Foods
PO Box 926
Nevada City, CA 95959
(800) FAB-MEAL (322-6325),
fax: (916) 272-2624
Contact: Randy White

Emergency Essentials, Inc.
165 S. Mountain Way Dr.
Orem, UT 84058
(800) 999-1863 fax: (801) 222-9598
Food Reserves
Box 88
Concordia, MO 64020
(816) 463-2158, fax: (816) 463-2159

Marten's Health & Survival Products, Inc.
Box 188140
Carlsbad, CA 92009
(800) 824-7861, fax: (619) 438-7910

NITRO-PAK Preparedness Center
151 N. Main St.
Heber City, UT 84032
(800) 866-4876, fax: (801) 654-3860

Out-N-Back
Outdoor Food & Equipment
Box 1279
Provo, UT 84603
(800) 533-7415

Perma Pak Products
Food Storage Sales
3999 S. Main, #S-2
Salt Lake City, UT 84107
(800) 594-8974, fax: (801) 268-4376

Ready Reserve Foods
1442 S. Gage St.
San Bernardino, CA 92408
(800) 453-2202, fax: (909) 796-2196

Sierra Supply
Box 1390
Durango, CO 81302
Phone or fax: (970) 259-1822

Simpler Life Emergency Provisions
Box 5214
Hacienda Heights, CA 91745
(800) 266 PREP, fax: (818) 961-5648

Survival Supply Co.
Box 1745-CD
Shingle Springs, CA 95682
(916) 621-3836, fax: (916) 621-0928
bob541@directcon.net

Survivor Industries, Inc.
2551 Azurite Circle
Newbury Park, CA 91320
(805) 498-6062, fax: (805) 499-3708

The Survival Center
Box 234
McKenna, WA 98558
(800) 321-2900, fax: (360) 458-6868
sales@survivalcenter.com

EMERGENCY WARNING SYSTEMS

American Signal Corporation
Box 165
Mequon, WI 53092-0165
(414) 238-8000, fax: (414) 238-8008

Community Alert Network (CAN)
301 Nott St.
Schenectady, NY 12305
(800) 992-2331, fax: (518) 382-0675
kbaechel@ix.netcom.com

Federal Signal Corp.
2645 Federal Signal Dr.
University Park, IL 60466
(800) 548-7229, fax: (708) 534-4855
www.fscfws.com

TFT Inc.
3090 Oakmead Village Dr.
Santa Clara, CA 95051-0862
(800) 838-9119, fax: (408) 727-5942

Whelen Engineering Co.
Rt. 145, Winthrop Road
Chester, CT 06412-0684
(800) 637-4736, fax: (860) 526-4784

Upcoming Events

1997

May 2-7.
National Conference on Lifesaving Intervention, Hyatt Regency, Tampa, Fla. Info: (800) USA-NDMS, ext. 444. Conference to include chemical/biological incident demo.

May 16-18.
Preparedness Expo and Natural Health Fair, Arizona State Fairgrounds, Phoenix. Info: (800) 894-1970 or fax (541) 476-3849.

May 28-31.
National Association for Search and Rescue (NASAR) 26th Annual Conference & Exhibition, Richmond Marriott, Richmond, Va. Info: Beth or Terri, (408) 662-8518.

May 30-31.
Association for National Defense and Emergency Resources (ANDER) meeting, Best Western Cascadia Inn, Everett, Wash. Info: Kay Kimura, (301) 460-7996. TACDA members are eligible for ANDER member registration rates. Topics to include potential terrorist threats and resource allocation during simultaneous major conflicts.

June 14-15.
Doctors for Disaster Preparedness meeting, Bahia Hotel, San Diego. Info: DDP office, (520) 325-2680; hotel, (800) 288-0770 or (800) 233-8172 from Canada.

June 22-25.
7th World Conference on Disaster Management. Hamilton Convention Centre, Hamilton, Ontario. Info: (800) 965-4608.

1998

Feb. 18-19.
Children's Emergencies in Disasters National Workshop, Orlando, Fla. Info: (202) 884-4927 or fax (301) 650-8045. Topics to include special needs of children in disasters.

When a quick trip to the supermarket isn't an option, you need a backup plan.

Introducing

The Reserves

Canned Food That Tastes Like Plan A

From the TACDA Store

Proceeds help TACDA promote sensible precautions for disasters.

The Reserves. Canned food you are able to, well, stomach as well as shelve.

Buy a year's supply from the **TACDA Store** and eat tasty, balanced meals for some two bucks a day per person (TACDA member rates).

Great as backup food during emergencies, when the fridge is empty. Or as your menu of choice.

An annual supply includes pasta, vegetables, cheese, eggs, nonfat milk, sugar, and lots more. Various combinations are available.

Shelf life is up to 20 years, thanks to a low-moisture, nitrogen-rich canning process.

Also available from the TACDA Nonprofit Store: water barrels, grain grinders, and radiation dosimeters — great for hospital and lab workers and students (see story on page 10).

Proceeds help TACDA promote sensible precautions for disasters.

The TACDA Store

When the supermarket isn't an option. Or is.

(800) 425-5397

Have credit card handy.
Operators available weekdays.

Journal of Civil Defense
The American Civil Defense Association
P.O. Box 910
Starke, Florida 32091

Nonprofit
Organization
U.S. Postage
PAID
San Antonio
Texas
Permit 1257