

**The writers**

**William Kincaid**



William H. Kincaid is executive director of the Arms Control Association, a private arms control research organization in Washington that is associated with the Carnegie Foundation. He is also the director of the Arms Control Program for the Carnegie Endowment for International Peace.

He graduated from Princeton University and served for seven years in the Navy, reaching the rank of lieutenant commander. He also worked for The Associated Press in New York.

Kincaid received his master's degree and doctorate from American University.

Before joining the Arms Control Association, he was staff director of the Joint Congressional Committee on Defense Production. During 1977 and 1978, Kincaid was a senior consultant to the Federal Emergency Preparedness and Response Study of President Carter's reorganization project.

**Nan Randall**



Nan Randall is a Washington-based freelance writer.

Ms. Randall graduated from Sarah Lawrence College. She has worked as a researcher-reporter for *Newsweek* magazine and, from 1975 to 1977, as program director for the National Committee for a Sane Nuclear Policy (SANE).

**The artist**

**Frank Peters**



Frank Peters' art experience began in advertising, but for the past 20 years he has been principally involved in graphic design for news display.

He is an award-winning artist who has pioneered the use of color in producing news graphics on the short deadline schedule of a daily newspaper. His primary responsibility is illustrating the front pages of the A and B Sections of *The St. Petersburg Times*.

**The editor**

**John Costa**



John Costa is a copy editor on the wire desk of *The St. Petersburg Times*. He studied political science on the undergraduate and graduate level. He also served as an officer in Military Intelligence in Vietnam and headed the Warsaw Pact teaching team at the Army intelligence school. He has kept his interest in military affairs as both a reporter and editor at *The Times*.

**GE-operated plant makes Pinellas a prime target**

■ Paul Bennett is an arms control specialist for the Union of Concerned Scientists, a group located in Cambridge, Mass. and Washington, D.C. ■

By PAUL BENNETT  
Special to *The St. Petersburg Times*

A nuclear blast in Pinellas County would destroy RCI, Honeywell, Sperry Microwave and the other Pentagon contractors that make the county a major center of military electronics manufacturing. But one factory stands out as a target: the Department of Energy's Pinellas plant on Bryan Dairy Road, operated by General Electric.

For over 20 years, this plant has produced crucial components for America's nuclear weapons. It is one of just five facilities in the nation where such components are manufactured or assembled. All five would be hit in a Soviet nuclear attack.

The Pinellas plant's work is naturally classified, however, documents obtained from the Department of Energy reveal major activities. The plant manufactures "neutron generators," devices that "ignite" a nuclear explosion like a spark plug sets off gasoline. The plant also produces atomic-powered batteries, electrical connectors and product testers. A sophisticated laboratory researches manufacturing processes and builds prototypes of new product designs.

**THE FINISHED** components are shipped in special trucks to a factory near Amarillo, Texas where final assembly of nuclear weapons takes place. Solid radioactive wastes — including contaminated metal parts and used smokestack filters — are taken to a burial site in South Carolina.

The plant's post-attack plan shows that operations to be pulled out of the plant are the Department of Energy headquarters gave such an order. The danger that the United States would build and use new weapons after an attack is exactly why a Soviet salvo would include one missile aimed at Pinellas County.

**Doomsday** from 1-A

These manufacturing facilities were critical both to the production of highly sophisticated weapons and the maintenance of a complex, highly specialized economy.

**ANOTHER** major target was the U.S. Readiness Command at MacDill Air Force Base, the clearing house and nerve center for all overseas troop deployments in times of emergency.

A map prepared by the Pentagon's civil defense unit — the Defense Civil Preparedness Agency (DCPA) — had shown the Tampa-St. Petersburg region as at high risk from both blast damage and radioactive fallout in a hypothetical nuclear attack aimed at defense installations and industry. The DCPA map (reproduced on 1-A) showed that only two other places in the tri-state area of Georgia, Alabama and Florida could expect to be as hard hit. These were Huntsville in northern Alabama, site of major missile and aerospace facilities, and Savannah near the Georgia coast, a home-port area for missile-carrying subs.

**Ready for recovery**

Federal preparations for coping with the post-attack carnage were actually under way before the nuclear strikes.

A week before, as the possibility of war grew, selected officials from all government agencies were moved to the Federal Relocation Arc. The arc is a series of bunkers hewn out of the Appalachian Mountains in sites from North Carolina to Pennsylvania during the 1950s and '60s to house officials in an emergency such as the nation was facing.

From their bunkers in the arc and from Federal Regional Centers, officials would assess the attack damage, attempt to marshal federal, state and local resources to aid targeted areas, and begin planning for continuing hostilities or national recovery. The attack warning system was brought to a high state of alert and, beginning on the day of attack (so as not to promote panic and confusion prematurely or unnecessarily) taped advice on how to improvise shelter and minimize radiation exposure was beamed over and over from every broadcast outlet in the nation.

**MANY DID** not hear the broadcasts, and for others it was of no use.

At the same time, Congress adjourned, planning to reconvene after the attack in some safe haven, if possible. Congressional leaders and others in the line of succession to the presidency, as well as the Supreme Court, were hastily moved to the Federal Relocation Arc the night before the attack, though some refused to go because their wives could not accompany them.

Fearing a national panic if he left Washington during the crisis, the President had stayed in the White House until the firing order was given. Then, within minutes, he was helicoptered to his own mountain bunker. Even most preparedness officials did not know its location.

Once installed in this command post — different from the one sheltering the vice president — he signed an executive order creating the Office of Defense Mobilization, a sort of civilian general staff or superagency that would coordinate all relief and recovery efforts after the attack. In subsequent orders — prepared years before, updated periodically, and signed only that day — the President imposed martial law, suspended certain civil rights and many legislative acts, assumed authority to govern by decree, issued orders to confiscate property needed for defense or relief, and gave broad authority to other federal officials for the duration of the national emergency.

Despite these drastic emergency measures, the real test fell on state and local agencies that were to supply the front-line manpower and other resources for the post-attack period.

**'The Wechek family story'**

The Wechek family — father, mother 8-year-old son and 10-year-old daughter — escaped immediate death from the blasts. MacDill was far from their Clearwater home.

As soon as he felt the worst of the attack on MacDill was over, Wechek rushed to the elementary school to pick up his children. Back home, he and the family barricaded themselves with food and water in the large walk-in closet in their home's master bedroom and prepared to wait — not knowing for what. Through heavy static, the radio urged citizens to go to fallout shelters. But Wechek and his wife felt they would be safer going it alone in their home, with its freezer full of food.

The Wecheks survived the second, Pinellas County blast — but their house did not.

**IT WAS** demolished by the shock wave and subsequent wind storms. Wechek was able to pull his family from the heap of collapsed studs, wallboard and mattresses that had broken their closest shelter. Mrs. Wechek had several broken bones and a number of serious cuts. The boy was unconscious but alive. Father and daughter suffered shock and cuts in the blast in escaping from the house.

The Wecheks had been protected from the initial heat radiation by the walls of the house, but some of the debris fires were already taking hold.

The immediate problem was to avoid fire and smoke inhalation and then to find shelter from the fallout that would soon begin to contaminate Clearwater.

**'The Bragg family story'**

Mr. and Mrs. Bragg had lived in the same wood frame house south of downtown St. Petersburg — 12 miles from MacDill Air Force Base — for years.

When the radio broadcast the taped warning, they gathered Mrs. Bragg's heart medication and their prized possessions — pictures of children, a piece of heirloom garnet jewelry, and the cat "Mouser" — and walked to a nearby bank, where Mr. Bragg had earlier notified the yellow and black fallout shelter sign. As a bank it offered a fair degree of blast protection, although the Braggs, like many others, did not realize that most fallout shelters offered little safety against blast or heat effects from nearby nuclear detonations.

They survived the blast at MacDill, standing crowded in the bank's vaults with scores of others, mostly bank employees and other elderly citizens like themselves. Forty-five minutes after the blast, the vault's fluorescent lights and filtration system went off.

The Braggs waited in the bank for three hours. They could see smoke fill the streets outside and occasionally a jabbing flame crossed their line of vision or shouting was heard.

**MOST** IN the bank thought help was on the way. When no help came, people began to talk of leaving the bank to find help, a safer spot, or find out what was going on.

The Braggs left the bank in the direction of their home.

It was burned to the ground. Fires smoked all around and moving along the debris-cluttered streets was difficult. A few policemen and citizens had organized parties to help pull victims from damaged structures. They lay moaning or silent in the streets. Sirens could be heard in the distance.

Knowing nowhere else to go, the Braggs trudged back to the bank. There were fewer people there but it was still

crowded in the dark, hot, nearly airless vaults. Both felt sick from lack of food, water and adequate air. A young man with a civil defense armband came into the bank and took the names of those there. After a time, it became evident that he had been unable to find his assigned unit and had nothing to offer but general advice on first aid and the like. Still, the Braggs and their companions fared better than most when the second and third warheads fell that afternoon.

**In the President's bunker**

The President and his top advisers left Washington before the attack, although it turned out that the Soviet Union spared the capital so as to have a government with which to negotiate afterwards. The United States similar to a by-stander Moscow. The President and his staff had retreated to a hardened bunker deep under a granite mountain.

A national security adviser gave the President estimates of attack damage.

"Mr. President, we still do not have a complete or accurate count of the dead or injured or of the economic damage. We may never have. Prewar estimates put possible losses at 50-million to 100-million people. But we have a fairly good estimate of the size of the attack so that we can make projections as to fatalities, injuries and damage to industry," the adviser said.

**THE PRESIDENT** asked why accurate casualty figures were not available.

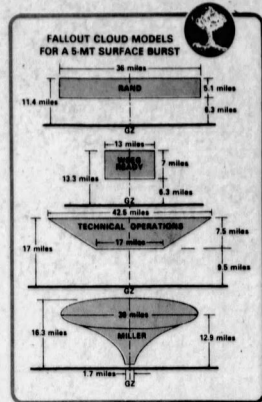
"The reason we will never have a totally accurate tabulation or body count is that the higher number of deaths in many urban areas has caused a severe health hazard potential, especially in southern New England and Southern California, where damage was extremely heavy. Fatalities must be buried in mass graves with layers of earth and lime to guard against the spread of disease. Unfortunately, the potential health hazard is so serious we have not been able to count or identify the dead before burial."

"**AS TO THE** injured, we are so overburdened and resources are so depleted, we have to concentrate on caring only for those who will clearly benefit from attention. Those who are slightly injured or are probably beyond help have had to be turned away. We are getting our morphine stockpile distributed, by airlift where possible, to help the latter cases."

"In the northern areas, the very cold temperatures and lack of shelter or fuel or power have contributed to many deaths from exposure."

"Deaths from lack of food will increase as the destruction of food stocks in the targeted cities and the lack of transportation have created severe shortages in urban areas. Uncontaminated water is also running scarce, we understand, although in time this problem can be more easily resolved than the lack of foodstuffs. Death from psychological shock and related causes, including suicides, appear to be running very high. This was not anticipated in our nuclear disaster planning," the officer concluded.

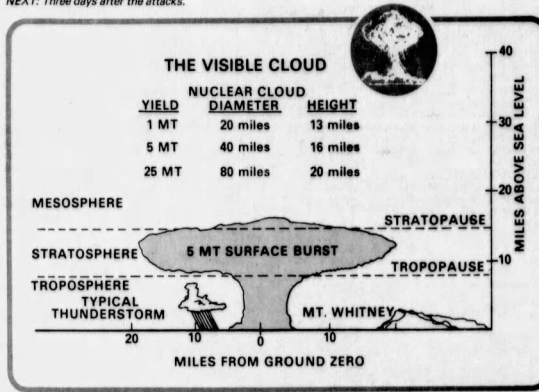
**NEXT:** Three days after the attacks.



St. Petersburg Times — FRANK PETERS  
Source: Defense Civil Preparedness Agency

**Fallout cloud models**

Several patterns for the mushroom cloud associated with a nuclear blast have been developed through tests at Eniwetok and Bikini Atolls in the Pacific. The patterns are important for prediction of fallout under differing factors such as wind conditions and size of weapons. A key problem in such predictions is the size and location of the radioactive cloud. The generally accepted pattern is the Miller model, bottom, but others that have occurred are: the Rand Model in which the fallout cloud is a disk with no stem; the Weapons System Evaluation Group (WSEG), which is also a cloud disk without a stem, but is smaller in diameter and thicker than the Rand Model; and the Technical Operations model, which appears as an inverted cone.



Source: Defense Civil Preparedness Agency St. Petersburg Times — FRANK PETERS

**A deadly mushroom**

The mushroom cloud associated with a nuclear blast is, simply, a cloud of radioactive dirt. The amount of radioactive fallout is directly related to the size and height of the cloud and how it is dispersed by atmospheric conditions. The size and height of the cloud are determined by atmospheric conditions and the size of the blast. The heat of the blast makes the particles of the cloud buoyant. Although they lose heat as they rise, the particles remain relatively buoyant because the air gets cooler at higher altitudes. Both the mushroom cap and its stem contain radiation and must be taken into account when calculating effects. The diameter of the mushroom stem is about one-fifth that of the cap.

**Doomsday story was over year in making**

By JOHN COSTA  
St. Petersburg Times Staff Writer

The idea for a story that looked at life after a nuclear exchange is the product of conversation that took place over a year ago.

*St. Petersburg Times* wire editor Mike Moscardini and I wondered if the United States had plans to cope with the devastation from a nuclear attack.

From the first, it sounded like a great story idea. But there was a nagging fear that there would be little substantive information to base the story on.

Was that ever a misplaced fear!

An arms analyst at the Brookings Institution recommended William Kincaid as the man who would know the man or woman who had the credentials to write the story.

**WE CONTACTED** Kincaid in the spring of '78. He liked the story idea so much he decided to write it himself with the aid of Nan Randall.

He also assured us that many responsible scientists and political leaders, both in and out of the government, had studied the subject and that mountains of information were available. We agreed that, while he would write the story, we would secure background material, both to familiarize ourselves with the topic and use as graphics with the eventual story.

We had no idea how large the mountains of information he described were until we contacted government agencies for the background material.

We were inundated. A bibliography would be long to the point of being burdensome. We could use only a small fraction of the charts available.

**BETWEEN THE** spring of '78 and now, the story was received, rewritten to a small extent, edited and sent back to Kincaid to see if he agreed with the changes. He did.

It cannot be emphasized too strongly that Kincaid is not predicting a war. No responsible weapons analyst

would make such a prediction. Besides, Kincaid's specialty is civil defense, not international relations.

It should also be noted that the most conservative statistics were used in calculating effects from such an attack.

The Soviet warheads that strike the United States are 1-megaton in size. The International Institute of Strategic Studies publishes each year *The Military Balance*, the bible of weapons estimates. For 1978-79, the institute reports that most of the Soviet warheads now operational are larger than 1-megaton. However, most analysts agree that as the Soviet Union improves its missile accuracy and its ability to place several warheads on one missile, the size of the warheads will decrease. So, for our 1985 scenario, we chose a 1-megaton warhead, knowing that deaths and injuries would certainly be greater if we stayed with the larger, currently operational one.

**MANY READERS** will note that some of the charts are based on 5-megaton warheads. These were used only where a comparable chart based on a 1-megaton warhead was not available.

A similar approach was taken in computing casualties in Hillsborough and Pinellas. The U.S. Census Tract gives population estimates for both counties for 1985. We were able to calculate how many people will be living within 2 1/2, 5, 8 and 13 miles of the defense-electronics plants north of St. Petersburg in 1985. The same projections could not be made with any certainty for areas around Hillsborough targets, so current population figures were used although the county will be larger by 1985.

National casualties were also calculated conservatively.

The Defense Civil Preparedness Agency estimates that with no civil defense system at all, 80-million Americans would survive a nuclear attack. With the system we have now, 110-million Americans would survive. If all high risk areas, such as Tampa-St. Petersburg, develop evacuation plans for civilians, as many as 180-million Americans could survive. We assumed some progress in civil defense efforts — an assumption many would disagree with — in projecting about 80-million dead Americans.

Finally, you may be wondering where the Braggs and Wecheks came from. They were families in Pat Frank's *Alas, Babylon*, the 1960 novel, set in Florida, about the day after the bomb dropped.