

Journal of Civil Defense



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Special Update on ...

Inside:

Russian Bunkers

Can Moscow Be Trusted?

Inside Russia's magic mountain

— Kenneth R. Timmerman..... 4

Spencer S. Dakota's Twister Legacy

Tornado Safe Room Info — FEMA 11

The Progression of Terrorism and the Use of Nuclear and

Non-Nuclear Electromagnetic Pulse (EMP) — *Bronius Cikotas* 13

Report on the Bandelier National Monument — Cerro Grande

Prescribed Fire Investigation + Other Wildfire News..... 17

Disaster Aid to NC Floyd Survivors Nears \$1.2 Billion — FEMA 19

TACDA Conference Tapes Available..... 21

Independent Assessment Says Missile Defense On Track..... 22

National Missile Defense Engagement Sequence..... Back Cover



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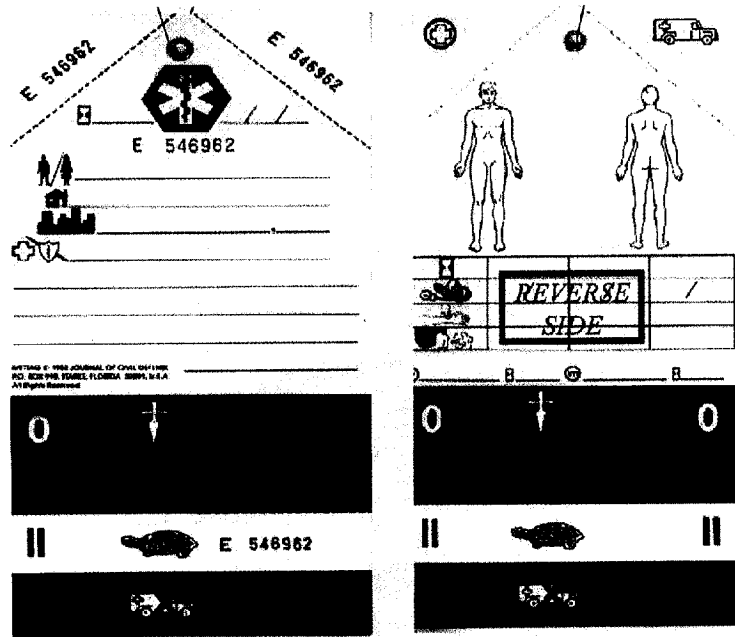
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To our readers ...

This issue of the *Journal of Civil Defense* leads off with a fascinating new look at Russia's deep underground bunkers – the largest of which, Yamantau, is shrouded in mystery. Here is a brief excerpt from this article that should get everyone's attention: "*Since the end of the Cold War in 1991, U.S. intelligence sources believe the Russian government has pumped more than \$6 billion into Yamantau alone, to construct a sprawling underground complex that spans an area as large as Washington, D.C., inside the Beltway -- some 400 square miles. ...In 1998, in a rare public comment, then-Commander of the U.S. Strategic Command (STRATCOM) Gen. Eugene Habinger, called Yamantau "a very large complex -- we estimate that it has millions of square feet available for underground facilities. We don't have a clue as to what they're doing there."*" This article is "must" reading for any citizen who wants to gain insight into why we should still be concerned about the threat Russia poses to our country.

A second article worthy of special note is the one on *Terrorism and Nuclear and Non-Nuclear EMP* by Bron Cikotas. Bron was recently asked to appear before Congress to explain his concerns on these subjects and is a widely known expert on EMP and infrastructure issues.

As a reminder, videos of the last TACDA Conference are now available for \$14 each. See page 21 of this Journal for more information.

Thanks for your support!

Kevin Briggs President, TACDA

The *Journal of Civil Defense* is the official bimonthly publication of the American Civil Defense Association (TACDA). Kevin Briggs, President; Kathy Eiland, Executive Director. The TACDA Board also includes Ed York, Sharon Packer, Frank L. Williams, Bron Cikotas, Nancy D. Greene, and Regina Bass. Walter Murphey is the Editor Emeritus of the Journal.

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CAN MOSCOW BE TRUSTED?

Inside Russia's magic mountain
Congressmen: Secret nuke-proof complex
bodes ill for U.S. arms-control negotiations

By Kenneth R. Timmerman
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TACDA Editor's note: This article is from a series of investigative reports on Russian arms-control violations and the very real nuclear threat they indicate, by former Time magazine reporter Kenneth R. Timmerman. Reprinted with permission of the Internet newspaper WorldNetDaily.com. No reprints are permitted on the Internet, only in offline printed publications and with special permission. [TACDA comments are included in brackets/italics as shown here]

WASHINGTON -- Deep in the Urals, in the region of Beloretsk, rises a mountain called Yamantau. It is believed to conceal one of Russia's darkest nuclear secrets -- a secret President Clinton, members of Congress and the U.S. military top brass have raised repeatedly with Russia's leaders, without ever receiving a response.

Some U.S. analysts believe the secret underground complex beneath Yamantau Mountain betrays a lingering belief among top Russian leaders that they must continue to prepare to fight and win a nuclear war. Russians say they still fear the U.S.

As WorldNetDaily revealed yesterday *[the article referred to here is planned for publication in a future issue of the Journal of Civil Defense]*, it is now known that the Soviet Union used secret underground bases in Eastern Europe to conceal nuclear missiles at the end of the Cold War, as an integral part of its nuclear war-fighting strategy. In all, some 73 SS-23 missiles, packing a nuclear punch 365 times the bomb that detonated over Hiroshima, were hidden by the Soviets in violation of the INF Treaty, which went into force in June 1988.



On May 10, the Slovak Defense Ministry rolled out the SS-23s it had inherited from a secret Soviet missile cache left over from the Cold War. The U.S. will assist Slovakia in dismantling them later this year.

If war had broken out those missiles would have given the Soviets an overwhelming strategic advantage against the United States, allowing them to decimate NATO forces in Europe in a surprise attack. The last of these missiles will be destroyed this summer by the government of Slovakia, under a grant from the United States.

Today, Russia may be conducting nuclear deception on a far vaster scale beneath Yamantau Mountain, where it has dug out a gigantic underground military complex designed to withstand a sustained nuclear assault. U.S. intelligence sources tell WorldNetDaily that the Yamantau complex is but one of some 200 secret deep underground nuclear war-fighting sites in Russia, many of which have been significantly upgraded over the past six years at a cost of billions of dollars.

Since the end of the Cold War in 1991, U.S. intelligence sources believe the Russian government has pumped more than \$6 billion into Yamantau alone, to construct a sprawling underground complex that spans an area as large as Washington, D.C., inside the Beltway -- some 400 square miles.

In 1998, in a rare public comment, then-Commander of the U.S. Strategic Command (STRATCOM) Gen. Eugene Habinger, called Yamantau "a very large complex -- we estimate that it has millions of square feet available for underground facilities. We don't have a clue as to what they're doing there."

It is believed to be large enough to house 60,000 persons, with a special air filtration system designed to withstand a nuclear, chemical or biological attack. Enough food and water is believed to be stored at the site to sustain the entire underground population for months on end.

"The only potential use for this site is post-nuclear war," Rep. Roscoe Bartlett, R-Md., told WorldNetDaily. Bartlett is one of the handful of members of Congress who have closely followed the Yamantau project.

53°32'56"N 58°34'57"E



[Editor's note: graphic provided to TACDA was blurred] This declassified Defense Intelligence Agency map shows the relative location of the underground Yamantau Mountain complex.

The Yamantau Mountain complex is located close to one of Russia's remaining nuclear weapons labs, Chelyabinsk-70, giving rise to speculation it could house either a nuclear warhead storage site, a missile base, a secret nuclear weapons production center, a directed energy laboratory or a buried command post. Whatever it is, Yamantau was designed to survive a nuclear war.

In response to repeated U.S. inquiries, the Russian government has provided no fewer than 12 separate and contradictory explanations for the site, none of them believed to be credible. The Clinton administration admits that the Russian government has refused to provide any information on the underground complex. Despite this, administration officials tell Congress not to worry.

A 1997 Congressional Research Service report said that the vast sums invested to build the Yamantau Mountain complex "provide evidence of excessive military modernization in Russia." Russia is pouring money into this and other underground nuclear sites at the same time U.S. taxpayers have provided billions of dollars in aid to Russia to help dismantle nuclear warheads taken off line as a result of START I and START II.

"Yamantau Mountain is the largest nuclear-secure project in the world," said Rep. Bartlett. "They have very large train tracks running in and out of it, with enormous rooms carved inside the mountain. It has been built to resist a half dozen direct nuclear hits, one after the other in a direct hole. It's very disquieting that the Russians are doing this when they don't have \$200 million to build the service module on the international space station and can't pay housing for their own military people," he said.

The Russians have constructed two entire cities over the site, known as Beloretsk 15 & 16, which are closed to the public, each with 30,000 workers. No foreigner has ever set foot near the site. A U.S. military attaché stationed in Moscow was turned back when he attempted to visit the region a few years ago.

Neither the Central Intelligence Agency nor the Defense Intelligence Agency would comment on what the Russians were doing at Yamantau Mountain.

"There's not a lot we could say without venturing into the classified realm," CIA spokesman Mike Mansfield said. "It's hard to discuss it with any specificity."

Both agencies have provided repeated briefings on Yamantau to Congress, and have declassified satellite photographs which reveal above-ground support facilities for the underground sites as well as tell-tale signs of excavation.

The very little that is known publicly about the site comes from Soviet-era intelligence officers, who defected to Great Britain and the United States. In public testimony before a House Armed Services Subcommittee last October, KGB defector Col. Oleg Gordievsky said the KGB had maintained a separate, top-secret organization, known as Directorate 15, to build and maintain a network of

underground command bunkers for the Soviet leadership -- including the vast site beneath Yamantau Mountain.

"And what is interesting," said Gordievsky, was that President Yeltsin and Russia's new democratic leaders "are using those facilities, and the same service is still running the same facility, like it was 10, 15 years ago."

Yamantau Mountain is so secret that only a handful of Russian government officials know about it, says Rep. Curt Weldon, R-Pa., who speaks Russian and travels frequently to Russia, chairing a congressional working group that discusses strategic issues with counterparts from the Russian Duma.

"I ask the Russians about it every time I meet with them," Weldon told WND. "We've never had a straight answer."

Weldon got interested in Yamantau Mountain in 1995 when he saw a public report suggesting it was a vast mining project.

"I went to Moscow and spoke with the deputy interior minister who was in charge of mining," Weldon says. "I asked him if there was any mining activity there. He just shook his head and said he had never heard of it. So I mentioned the other name the Russians use for it: Mezhgorye. He said he hadn't heard of that either. Then he sent an aide out to check. Twenty minutes later, the aide came back, visibly shaken. He said they couldn't say anything about it."

Weldon says he also met with Andrei Kokoshkin, a former deputy defense minister who was put in charge of President Yeltsin's National Security Council.

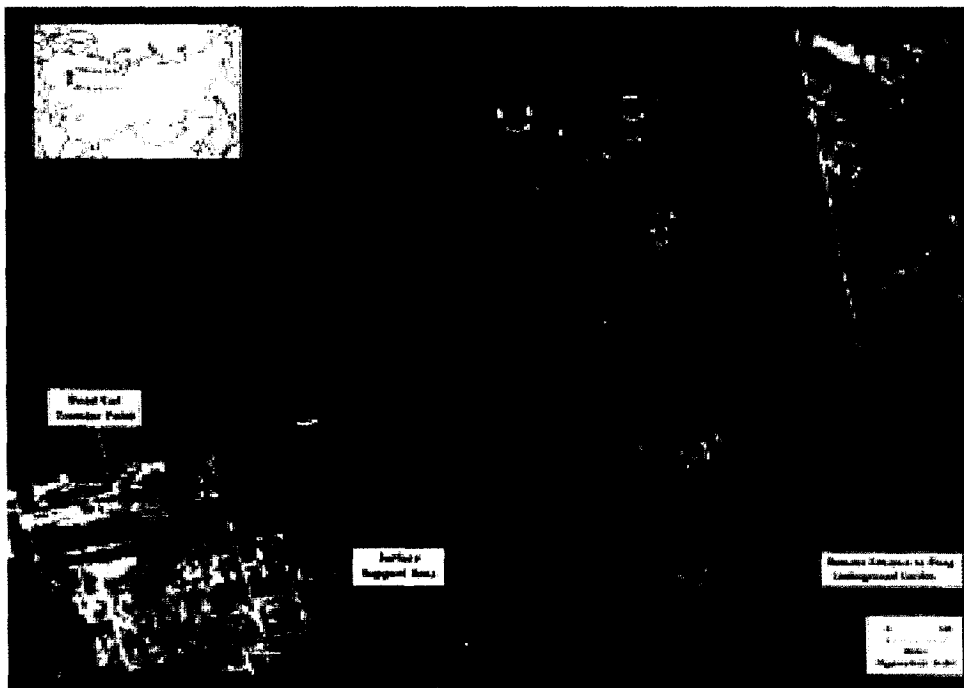


[Editor's note: graphic provided to TACDA was blurred]
This U.S. satellite photograph of the Yamantau Mountain region was taken on Oct. 16, 1997, and annotated by the Defense Intelligence Agency. Clearly recognizable signs of excavation can be seen at the areas marked Yamantau Mountain and Mezhgorye. Two above-ground support cities, each housing 30,000 workers, are located at Beloretsk and Tirlyanskiy.

"Kokoshkin called it a public works project, and said there was nothing to worry about, since the Defense Ministry had no involvement in it. So I brought out a copy of the Defense Ministry's budget -- it's only a few pages long -- and showed him the line item for Mezhgorye. He smiled and said it must be for bridges, roads and schools. When I then asked if I could see it, he said that could only be arranged through Yeltsin. The site was controlled directly by the president."

So Weldon says he drafted a 3-page letter to Yeltsin in Russian.

"I told him all the things I was trying to do to foster better U.S.-Russia understanding, but said that I couldn't help if they couldn't clear up something as important as this," Weldon told WND. "He never replied."



[TACDA Editors Note: original graphic is blurred.] The U.S. intelligence community has been observing Sherapovo for many years. Initially built in the 1950s, it was modernized a first time in 1978, at the height of détente, then again in the mid-1980s. This declassified U.S. intelligence photograph shows surface support areas and secret above-ground entrances to the underground bunkers. In time of war, Russia's civilian leadership can be evacuated from Moscow along a secret subway line. Once at Sherapovo, they can conduct the war effort using a highly redundant communications system "allowing the leadership to send orders and receive reports through the wartime management structure," according to a 1988 Pentagon report. Over the past six years, the Russian Federation has again upgraded Sherapovo, intelligence sources tell WorldNetDaily.

Weldon twice asked Gen. Sergeyev, commander of the Strategic Rocket Forces about Yamantau.

"He said it was a command center, and that we had the same kind of thing in our country at Cheyenne Mountain in Colorado. He suggested that eventually we could be allowed to come visit it. Despite his promise, that has never happened. Clearly, this is a project that is so secret that only the upper level of the government know about it."

The work at the Yamantau complex is only part of Russia's current efforts to modernize and reinforce some 200 deep underground command posts, nuclear warhead repositories and clandestine missile sites. Some CIA and Joint Chiefs of Staff analysts believe these assets will give Russia a strategic advantage over the U.S. in the event of nuclear war.

Among these Russian sites is the Sherapovo command and control center, south of Moscow.

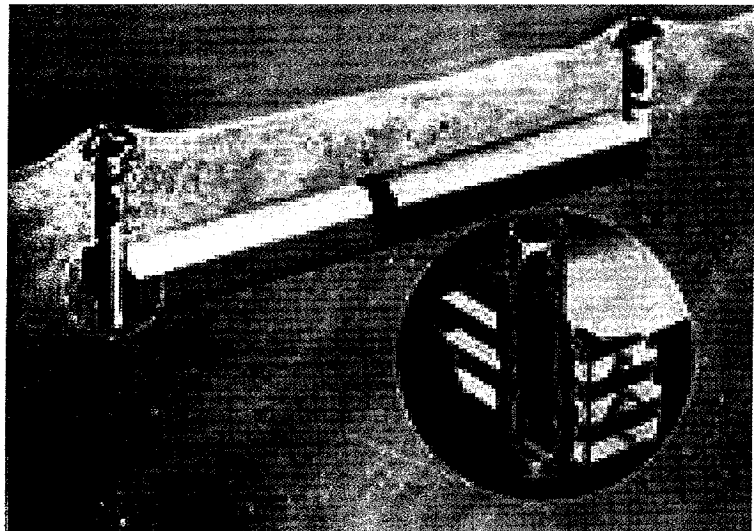
This site, which is large enough to house 30,000 people, is the civilian command center the Russian government can use in time of war. It is connected to a network of deep underground bunkers built beneath the Kremlin, and linked to Moscow by a secret subway line.

Russia's general staff has a similar facility some 20 kilometers away from Sherapovo, known as Checkov, which can also accommodate an estimated 30,000 people.

A separate facility, located 850 miles east of Moscow at Kosvinsky Mountain in the Urals, has been designed as the Russian equivalent of the Cheyenne Mountain Operations Center in Colorado, where the United States can track incoming ballistic missiles and command U.S. forces to counter-attack.

Altogether, the CIA now estimates that these sites can house some 150,000 Soviet civilian and military leaders and are impervious to direct nuclear strikes.

By contrast, the three U.S. nuclear war-fighting command centers (Cheyenne Mountain, Fort Ritchie, Maryland and Mount Weather, Virginia) were designed in the 1950s to withstand first generation atomic weapons. They have not



[TACDA Editors Note: original graphic is blurred.] This CIA artist's conception shows a simple underground bunker, before the recent upgrading. These bunkers are now believed to be linked via secret subway lines to command centers outside Moscow.

been upgraded, despite the fact that Russia's arsenal is composed of large "city-busting" thermonuclear weapons. Only Air Force One is considered to be invulnerable in the event of a nuclear strike, intelligence sources told WND. *[While generally accurate, not all of the particulars of information presented in this paragraph are correct – TACDA Staff]*

Under the START II agreement, the U.S. and Russia are supposed to reduce their nuclear arsenals to 3,500 warheads each. Since then, Presidents Clinton and Yeltsin agreed to a further reduction to 2,500 warheads. Administration officials are now talking about a START III agreement that would bring the levels down to around 1500 warheads.

In an unusual move, the Joint Chiefs of Staff, not a source of opposition to administration plans until now, recently told the administration that they could not recommend such deep reductions, the Washington Times reported last month.

Intelligence sources familiar with U.S. and Russian nuclear-war fighting scenarios explained why: The U.S. must keep back a "strategic reserve" of 400 megatons to deter Russia from attacking U.S. cities, where 80 percent of the U.S. population lives. By contrast, only 25 percent of Russia's population lives in cities.

Given the smaller size of current U.S. warheads -- around 300 kilotons -- this task alone would require more than 1,200 warheads, leaving only 300 warheads for strategic targeting, the sources said.

The 200 deep underground sites in Russia are considered "weapons sinks" by the CIA and JCS targeting analysts, and require multiple warheads each.

"In other words, at 1,500 warheads, the U.S. would have to choose between attacking missile silos or command and control centers, a dilemma the Russians wouldn't face," one analyst told WND.

Russia's track record of cheating on previous arms control agreements and its massive underground building program in recent years provide an ominous backdrop to President Clinton's negotiations with Russian President Putin in Moscow.

Kenneth R. Timmerman is a veteran investigative reporter who has published three books on the arms trade and intelligence issues. In congressional testimony last year, he revealed the existence of an ICBM program in Iran known as the "Kosar," helping to spark legislation that imposed sanctions on Russia for transferring missile technology to Iran. A contributing editor to Reader's Digest, the former Time magazine correspondent is currently writing a book on Bill Clinton's corrupt relationship with communist China.

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Spencer, South Dakota: A twister's legacy: building a safer future

Courtesy FEMA

Ronald Schoon will never forget May 30, 1998 when a terrifying storm battered Spencer, South Dakota (pop.317). He was huddled in the basement behind a washer and dryer along with his wife and her mother. As the wind and rain pelted the house, they prayed that the storm would spare them.

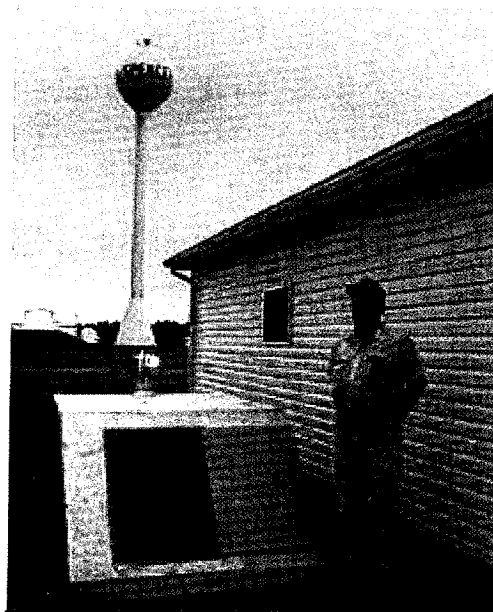
"It took the house right off the top of us," Schoon said. "It was gone. We were just standing there, looking up in the air. I looked up and saw the sky and it was raining on us."

Schoon says he will never let his family be at the mercy of a tornado again. When he rebuilt his home, he added a concrete safe room.

Not everyone in Spencer was so fortunate. The tornado damaged or destroyed nearly every home and business in town. More than half of the town's residents were injured. Six people were killed.

The tornado packed winds of up to 200 mph. After the storm passed, emergency personnel were shocked at the sight of the destruction. Among the non-residential structures destroyed by the tornado were the post office, a bank, a state transportation facility, a fire station and the library.

The tornado dealt the community a devastating blow, but today Spencer is bouncing back and building back smarter, and safer. While many of the lots that were in the tornado's path are still empty, the community has rallied to replace several of the buildings taken by the storm including the church, library, post office, bank, community center, and city hall.



Ronald Schoon shows off the safe room that he installed to protect his family from the next tornado.

Rick Weiland, a South Dakota native who oversaw federal relief efforts in Spencer as the Regional Director for the Federal Emergency Management Agency, applauded the town's resilience. "The people of Spencer went through a lot. Some of them ultimately decided to pull up stakes. But those who remain have taken great strides toward rebuilding their town and making it more disaster resistant. To me, that is the very heart of recovery: rebuilding smarter, stronger and safer."

Mayor Arnie Scheuren says at least five families in town have already built safe rooms and several others have reinforced closets and basements to help weather the storm.

"The idea of safe rooms has caught on here. A lot of people are doing it," Scheuren said.
 "With a safe room people are not powerless. They can protect themselves."

Patty Wagner and her son Johnny agree.

"Johnny was sleeping with us, because he does quite regularly when there is bad weather. We got up and grabbed him and went out into the hallway. We were very, very frightened. But now we know we can just go in our safe room. You feel more secure when you know you have someplace to go."

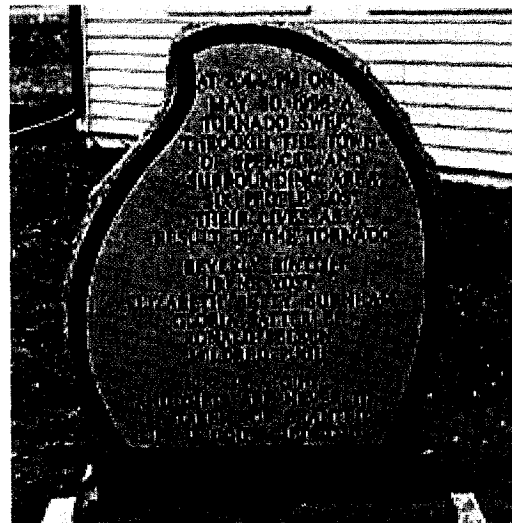
Clearly the tornado left an indelible mark on Spencer, but the pride and determination of the town's residents is bringing about another transformation, which is no less dramatic.

The first thing you see as you approach town in the new water tower. It is sky blue and stands several stories high. In large black letters it says, "Spencer."

There are new homes scattered throughout town. There are also large areas where clusters of homes once stood, but are still empty.

Local officials make sure these lots are mowed and weeded, ready for the next family that wants to call Spencer their hometown.

"I think we have a nice clean town," Mayor Scheuren said. "It's quiet, ideal for families and retirees looking for a place to settle down. We just need to get the word out this year that we are back in business and have lots for sale."



A memorial to victims of the Spencer tornado stands in front of the new Spencer City Building.

To order a copy of this booklet and the accompanying construction plans and specifications, call 1-888-565-3896 and request a copy of publication FEMA 320.

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The Progression of Terrorism and the Use of Nuclear and Non-Nuclear Electromagnetic Pulse (EMP)

*Excerpts from the statement of Bronius Cikotas
to the House Armed Services Special Oversight Panel on Terrorism May 23, 2000*

While terrorism, whether against individuals, groups, or nation-states, has been around since the beginning of history, the tools of terrorism were generally limited in their ability to inflict injury or death. In the past it required an army, a state of anarchy, or a group of citizens acting in unison to cause significant death or injury to a segment of the population and to cause a state of fear or panic to prevail.

The issue today is that with development of new technology, tools of warfare and terrorism are merging and their effectiveness is improving dramatically. In the past the primary targets of terrorism were direct attacks on people and while that is still true today, the new technologies of nuclear, biological and chemical weapons which in some cases are available to terrorists today, allow a few individuals to achieve levels of destruction that even armies could not inflict in the past.

Because the terrorist group is not an entity that can be negotiated with or be held accountable and often is anonymous, there are potentially no limits to acts of terrorism. Today the limiting factors to terrorism appear to be self preservation, (i.e. the risk factor associated with acts of terrorism), any self imposed moral or political constraints, which may be non existent and are generally not visible to outside observers and the ability of terrorist groups to obtain, understand and know how to use the most destructive tools of terrorism (nuclear, biological and chemical) which fall into the Weapons of Mass Destruction category.

“... new technologies ... allow a few individuals to achieve levels of destruction that even armies could not inflict in the past”

I would contend that today, the “Threshold of Use” has not been successfully crossed by terrorists into the area of weapons of mass destruction. ... The potential of massive damage and large psychological impact may tempt them to move across the threshold into the Weapons of Mass Destruction area. Because it may be difficult to obtain a nuclear weapon or to build their own and to deal with the complexity of use, these first attempts to cross the threshold are likely to be made by well financed and well organized, state sponsored terrorist groups that have the resources to acquire and use nuclear devices. Although biological and chemical agents are easier to obtain, the same issues apply in dealing with the complexity of effective use and avoidance of self-contamination. Then there is the issue of traceability and retaliation. Even Osama bin Laden might think twice about the risks of a nuclear, biological, or chemical attack where potentially the rewards for capture or efforts to destroy his organization may reach astronomical levels and that there might not be a place on the earth to hide. After all, his attacks against the U.S. embassies in Tanzania and Kenya were effective using conventional means. For a terrorist group, the prospect of massive destruction and death may be enticing, but the threshold to use Weapons of Mass Destruction is high. The problem with these assumptions is that they sound rational and while they may apply to many terrorists, there are exceptions, they are real and they are dangerous.

A plan to cross that threshold using chemical warfare agents was being prepared by the Aum Shinrikyo Cult in Japan. It had the resources, scientific talent and an organization that could carry out an extensive attack that would kill tens to hundreds of thousands of people throughout the world. Simply stated, their plan was to shake up the world, start insurrections, wars and conflicts so they could rise to the top. Their plan might have succeeded in killing large numbers of people, had it not been for their attempt to rush into the attack mode by staging the Tokyo subway attack, using sarin gas, a nerve agent, which killed 12 people and injured some 5000. It also blew the cover off their

“Aum Shinrikyo took the world and terrorism watchers by surprise with its great potential for causing massive deaths and injuries. It was a wake-up call to the world.”

organization and caused widespread arrests and seizure of some of their assets. In effect, Aum Shinrikyo hurriedly crossed the threshold into chemical warfare area against a civilian population without achieving its objectives for a dispersed well-coordinated attack. Aum Shinrikyo, in terms of its financial backing, resources, organization and scientific talent today could be equated to the resources available to a narco cartel, crime syndicate or other transnational or state sponsored organization. It is important to consider that if Aum Shinrikyo was planning to kill a hundred thousand people, why not a million or ten million given the opportunity. Aum Shinrikyo took the world and terrorism watchers by surprise with its great potential for causing massive deaths and injuries. It was a wake-up call to the world.

“Even Secretary of Defense William Cohen talked about how simply anthrax attacks could be carried out against U.S. cities.”

There are predictions that attempts to cross the threshold will be made against the United States and the issue appears to be not if but when. Even Secretary of Defense William Cohen talked about how simply anthrax attacks could be carried out against U.S. cities, causing massive casualties. Justifiably there are major

efforts under way to prevent, mitigate and prepare for these types of attack.

Because of the high threshold and associated risks to move into the WMD area, I believe many individual terrorists, terrorist groups and even state-sponsored terrorism are looking for easier and less direct ways to attack the U.S. and its interests. Recently Chinese military writers proposed the use of strategic indirect warfare against powers like the U.S. rather than direct confrontation. This can take the form of political and economic manipulation, disruption of infrastructures, intimidation, various forms of economic warfare, etc. This is an area where knowledge and tools are expanding rapidly through the internet and where the internet has become the main means for launching the attacks. It is also an area where it is possible to have unwitting surrogates do your work by proliferating powerful tools that on the surface may appear as innocent pranks or play things. In addition, Indian Brigadier Nair wrote a book (1992) on lessons learned from the Gulf War in which he details U.S. military vulnerabilities, with much emphasis on electronic warfare. His audience is third world nations that may confront the United States.

“Because of our growing dependency on computers, there is a new target set for terrorists that includes our infrastructures which are vulnerable to cyber, radio frequency and other forms of attack.”

“... cyber experts testified to Congress ..., that through a cyber attack they could bring the U.S. power grid down and keep it down.”

Because of our growing dependency on computers, there is a new target set for terrorists that includes our infrastructures which are vulnerable to cyber, radio frequency and other forms of attack. Some of our cyber experts testified to Congress almost a year ago, that through a cyber attack they could bring the

U.S. power grid down and keep it down. If that can be done these types of cyber attacks would have to be classified as weapons of mass destruction attacks. It could be argued that we have deep and extensive infrastructures that could not be attacked in any significant way. The problem is that if you take the power grid down, the rest of them crumble because of interdependencies. Our almost total dependence on our infrastructures for power, food, water, fuel, telecommunications, transportation, etc. and a general lack of reserves brought about by just in time manufacturing, makes us particularly vulnerable to infrastructure disruption. The cities typically have a three-day supply of food on supermarket shelves, the rest is on trains and trucks from the processing plants.

Cyber attacks are starting to play a significant role in what could be considered indirect economic warfare. It is a form of warfare that is economically attractive, where a simple internet virus like the Love Bug ... can cause 10 billion dollars worth of damage throughout the world. The emerging area of radio frequency weapons, or non-nuclear EMP, ...will also play a significant role in this type of warfare.

“... cities typically have a three-day supply of food ...”

POTENTIAL TERRORIST USE OF NUCLEAR AND NON NUCLEAR EMP

Nuclear EMP, which is generated by high altitude nuclear detonations (typically 30 to 300 km) produces a fast-rising, high-amplitude, short-duration electromagnetic pulse amplitude, (few to tens of thousands of volts per meter) followed by a much lower amplitude, gradually decreasing long duration pulse that lasts for minutes. EMP couples to all conductors including power lines, telephone lines, pipelines, conductors within buildings down to direct interaction with electronic circuits and chips. It can couple enough electrical energy to cause upset and burn out in electronic circuits on a wide scale.

It was considered a serious cold war threat that potentially could disable our weapons systems, communications, power grid and other electronically dependent infrastructures. The Department of Defense conducted major programs to harden military systems against EMP effects and in some cases built their own EMP hardened infrastructures to insure that their capability to respond to a nuclear attack would be affected minimally by the potential failure of the power grid or other critical infrastructures.

With the end of the Cold War many consider that the EMP threat has gone away and that the intent to use it is no longer there.

“ ... do not push Russia around, we (*Russia*) have a responsible government now, but there are factions that could surface and push for an EMP attack against the U.S. that would shut your country down without directly causing physical damage or death.”

Some even imply that the hardening of our military systems is no longer necessary. Given this assumption, at least in the case of Russia there are three areas of concern. The capability to use this type of attack against our infrastructure by nuclear-capable nations has not changed and other nations are likely to gain that capability in the future. As long as nuclear warheads and the means to deliver them exist, the EMP threat still exists! Intent to use can change in a week or a month, and it takes us years of effort to harden our systems to EMP. This possibility for change of intent was implied in a meeting in Vienna between our Congressional delegation, which included Congressmen Curt Weldon and Roscoe Bartlett and their counterparts from the Russian Duma over tensions between U.S. and Russia with regard to our conflict in Kosovo. In summary, the message was – do not push Russia around, we have a responsible government now, but there are factions that could surface and push for an EMP attack against the U.S. that would shut your country down without directly causing physical damage or death. The vulnerability of our infrastructure and our society has increased with the increased use and dependence on electronics. When people consider that at the end of the Cold War the intent to use EMP has gone away, what they tend to ignore is that the purpose and use of EMP outside the context of the Cold War may have changed. During the Cold War the EMP attack was considered a precursor to a nuclear attack. Today it could be considered as an intimidating threat, show of intent, coercion or a form of economic warfare.

The capability to launch this type of attack against the U.S. or a region of the U.S. rests primarily with Russia and to a lesser extent other major nuclear powers that design, produce, and test their nuclear weapons. It is not enough to have a nuclear weapon; you need a delivery system that will detonate it at high altitude over or in close vicinity of the U.S.

“ ... what about a terrorist group using a SCUD or a similar missile from a ship off the East coast of the U.S. to launch an EMP attack?”

The question is -- what about a terrorist group using a SCUD or a similar missile from a ship off the East coast of the U.S. to launch an EMP attack? EMP is a sophisticated form of attack. The adversary needs to determine the EMP output of a bomb to match it to a delivery vehicle, in order to figure out how best to use it. If a terrorist group built its own nuclear weapon, or got hold of a Former Soviet Union (FSU) tactical nuclear weapon, put it on a SCUD or a similar missile, launched it and detonated it at altitude, it is unlikely that they would be able to know whether the EMP output would be comparable in terms of damage as compared with explosive power of a small bomb, a grenade or a firecracker. That is a lot of effort for an outcome that is uncertain, particularly since understanding the effects of EMP on the infrastructure is a complex task. The possibilities of inflicting damage improve when you consider rogue states or a well-financed organized state sponsored terrorist organization, particularly if it acquires the support of FSU

scientists who have worked in this area. Today the real capability and threat of EMP is posed by the established nuclear powers and it diminishes quickly both in capability and EMP output as you move down the scale to terrorist groups, rogue states, narco cartel, crime syndicate and transnational organizations. It is a job for our intelligence community and the terrorist watchers to continuously assess not only the capability, but also the intent of use of nuclear EMP as a threat against the U.S. It is not an easy task considering that in 1992 Alexander Lebed, national security adviser to Boris Yeltsin, told a U.S. congressional delegation that 84 out of 132 Russian suitcase nuclear bombs are missing. In my opinion, these bombs are too small for effective EMP generation, but it illustrates the complexity of the situation.

What are our options to deal with this threat? There are no fast or easy solutions,

"EMP assessment of the power grid vulnerability has not been completed and assessment to damage caused by radio frequency weapons or devices has not been started."

but the following approaches should help. Continue with the National Missile Defense Program and include the EMP attacks from close in SCUD like launches as a threat to the U.S. This should also cover potential nuclear, chemical, biological and other similar attacks against our cities. The other area that needs to be addressed is the vulnerability and the interdependencies of our infrastructures. There are certain key infrastructures that we either need to harden or back up to some extent. The hardening would have to include EMP, cyber, radio frequency weapons, etc. If the Power Grid fails other key infrastructures likely would crumble. I do not know if anyone has addressed hardening the power grid to cyber attacks. EMP assessment of the power grid vulnerability has not been completed and assessment to damage caused by radio frequency weapons or devices has not been started. Considering its size and complexity, hardening the power grid is not a simple option. Building even a limited backup to the power grid is also a very costly proposition. However, commercialization of fuel cell generating plants, not as back up, but as primary power sources, is going to happen. There are predictions that in the near future new homes and businesses will be powered by fuel cells that produce electricity and heat and they will be competitive and will not be connected to the power grid. The government should consider using this trend as a means to build a limited backup to the power grid to meet critical national needs in case of power grid failure.

The main difference when considering the effects of nuclear and non-nuclear EMP is that effects from a nuclear EMP can be induced hundreds to a few thousand kilometers from the detonation. Radio frequency weapons have ranges from tens of meters to tens of kilometers. The advantage of radio frequency weapons is that they can be hidden in an attache case, suitcase, van or aircraft. The attack can result in computer upsets or burnouts, but generally the computer users would not know that they have been attacked would attribute the failures to internal problems. Basically, radio frequency weapons require a larger investment in hardware than cyber attacks and RF weapon attacks are limited to local area effects rather than world wide as in the case of cyber attacks.

While I indicated that nuclear generated EMP is not something I expected terrorist groups to start using, that is not the case with radio frequency weapons. The U.S., FSU, as well as other nations have been working in this area for tens of years, and with the fall of the FSU, the technology is proliferating and being commercialized. The commercialization is occurring because there are legitimate uses of this technology like stopping cars at ranges up to 3000 feet as the Swedes have demonstrated. These devices can also be useful in direct and indirect warfare, antiterrorism, terrorism, economic competition, etc. Today Russia, China, France, Great Britain, Germany, Sweden, Japan, U.S. and, I am sure, others have radio frequency weapons programs.

Bron Cikotas is a member of the Board of Directors of TACDA and was the former head of the Defense Nuclear Agency's EMP Division. He now serves as an Infrastructure Consultant with the Battelle Corporation. The views expressed are those of the author and not necessarily those of the U.S. Government or the Department of Defense.

Report on the Bandelier National Monument – Cerro Grande Prescribed Fire Investigation

Excerpts from the Executive Summary of the “The Cerro Grande Prescribed Fire Investigation Report” May 18, 2000.

On May 4, 2000, in the late evening, fire personnel at Bandelier National Monument, National Park Service, ignited a prescribed fire with an approved plan. Firing and line control occurred during the early morning of May 5. Sporadic wind changes caused some spotting within the unit and a slopover on the upper east fireline. Because of the slopover the prescribed fire was declared a wildfire at 1300 hours on May 5. The fire was contained on May 6 and early on May 7; however, at approximately 1100 hours on May 7 winds increased significantly from the west and resulted in major fire activity and ultimately caused the fire to move out of control to the east on the Santa Fe National Forest. The fire was taken over by a Type 1 team on May 8.

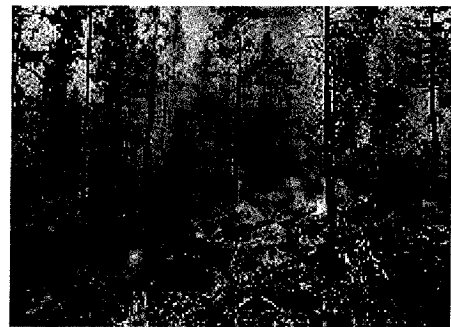
In its most extreme state on May 10, the Cerro Grande Prescribed Fire was carried by very high winds, with embers blowing a mile or more across the fire lines to the north, south, and east, entering Los Alamos Canyon towards Los Alamos, New Mexico. The towns of Los Alamos and White Rock were in the fire’s path and more than 18,000 residents were evacuated. By the end of the day on May 10, the fire had burned 18,000 acres, destroying 235 homes, and damaging many other structures. The fire also spread towards the Los Alamos National Laboratory, and although fires spotted onto the facility’s lands, all major structures were secured and no releases of radiation occurred. The fire also burned other private lands and portions of San Ildefonso Pueblo and Santa Clara Pueblo. As of May 17 the fire was uncontrolled and approaching over 45,000 acres.

Secretary of the Interior Bruce Babbitt formed an interagency Fire Investigation Team on May 11 to examine events and circumstances from the beginning of planning the prescribed fire until the fire was turned over to a Type 1 Incident Management Team on May 8. Furthermore, Secretary Babbitt and Secretary of Agriculture Dan Glickman suspended all federal prescribed burning for 30 days, or longer, west of the 100th meridian.

The team based its findings and recommendations on interviews with key personnel and other people who witnessed the fire; documents associated with approval and implementation of the prescribed fire; on-site observations; and technical analyses of factors including weather, climate, and fire behavior.

The Fire Investigation Team concludes that federal personnel failed to properly plan and implement the Upper Frijoles Prescribed Fire, which became known as the Cerro Grande Prescribed Fire. Throughout the planning and implementation, critical mistakes were made. Government officials failed:

- To utilize the correct National Park Service complexity analysis process.
- To provide substantive review of the prescribed fire plan before it was approved.
- To evaluate conditions adjacent to the prescribed fire boundary with regards to fire behavior, fuel conditions, and public safety in the event the fire crossed the planning boundaries.



Cerro Grande Fire Photo. Courtesy of the National Park Service

- To complete and document the onsite review of critical conditions identified in the prescribed fire plan prior to ignition.
- To provide adequate contingency resources to successfully suppress the fire.
- To provide any wind predictions in the 3-5 day forecast for the periods of May 7 to May 9.
- To follow safety policies for firefighters and the public.

The investigation team believes that the Federal Wildland Fire Policy is sound; however, the success of the policy depends upon strict adherence to the implementation actions throughout every agency and at every level for it to be effective.

The Cerro Grande Prescribed Fire Investigation Report will be provided to an Independent Review Board, which will review the team's findings and recommendations.

The Cerro Grande Fire – In Brief

Size:	Total fire area estimated at 47,650 acres
Started:	Declared wildfire at 1:00pm on May 5, 2000
Cause:	Escaped prescribed burn from Bandelier National Monument
Location:	Approximately 8 miles southwest of Espanola, NM
Containment:	100%, as of 1800 hours on 6/6/00
Fire Personnel:	35 crews, 5 helicopters, 4 engine, 5 water tenders, Total personnel on scene: 1,114



Vale Hotshot Crew
member battles the blaze.
E. Cavasso

Other Wildfire News in Brief:

- Federal funds have been made available by FEMA to help Florida fight another outbreak of wildfires located in the counties of Dixie, Lafayette, Madison and Taylor. The action brings to 10 the number of Florida fires that have been authorized for FEMA fire suppression aid this year.
- FEMA reported on June 13th that federal firefighting funds had been authorized for the second time to help Colorado battle another uncontrolled wildfire. The 2,000-acre Hi Meadow fire destroyed a number homes and forced the evacuation of more than 300 people from houses near Bailey, about 35 miles southwest of Denver.

Disaster Aid to NC Floyd Survivors Nears \$1.2 Billion

Information provided courtesy of FEMA

Disaster aid to North Carolinians affected by hurricanes Floyd and Dennis has reached nearly \$1.2 billion, Federal Emergency Management Agency (FEMA), U.S. Small Business Administration (SBA) and North Carolina recovery officials said today.

In all, 86,954 people registered with FEMA to see if they were eligible for federal and state Hurricane Floyd and Hurricane Dennis disaster assistance in the 167 days the registration period was open - September 15, 1999 to February 29, 2000.

FEMA provided 37,995 households more than \$87 million in Disaster Housing Program grants. Homeowners were provided either a grant to make the home livable, or to rent another place to live, while home repairs were made. Renters received a grant to rent another place to live.

Following the storm, North Carolina Emergency Management purchased 2,536 travel trailers and mobile homes for use as temporary housing for victims of the flood, placing more than a thousand of the units in group sites in Edgecombe, Pitt, Lenoir and Wayne counties. As occupants of the travel trailers and mobile homes found permanent housing they move out of the trailers, and, as of the end of May, the number of units occupied in the group sites dwindled to 651.

The U.S. Small Business Administration has approved more than 12,600 low interest disaster loans for more than \$484 million to help homeowners, renters and businesses repair or restore disaster-damaged real or personal property. The SBA low interest disaster loan is the primary form of disaster recovery funding.

The state-administered Individual and Family Grant Program has provided 23,567 households with grants totaling more than \$90 million to help with essential and necessary disaster related needs unmet by other programs.

FEMA's National Flood Insurance Program paid 12,830 claims from Hurricane Floyd totaling more than \$141 million. Flood insurance is the first line of defense in a flooding disaster. It must be acquired 30 days before the flooding event. Buy now for the next hurricane season.

The state-administered Public Assistance Program (for infrastructure repair) has obligated \$235 million to reimburse eligible costs for disaster response and recovery expenses of governmental units and non-profits providing a government like service. FEMA funds 75 percent of these costs and the state funds the non-federal share.

The state-administered Hazard Mitigation Grant Program has approved nearly \$147 million to acquire 1,679 structures in flood prone areas. FEMA funds 75 percent of these costs and the state funds the non-federal share.

The Disaster Unemployment Assistance Program (DUA), funded by FEMA and administered the state, has paid more than 6,200 claims for a total of more than \$6.4 million. DUA provides unemployment payments for up to 26 weeks for the self-employed, agriculture workers and other workers not covered by the regular unemployment program.

The FEMA provided more than \$5.7 million to the state-administered Crisis Counseling Program to help North Carolinians recover emotionally from hurricanes Floyd and Dennis. The program funds the Hope After Floyd outreach programs still active in 32 disaster declared counties.

"With the start of the new hurricane season June 1, now is the time to take steps to reduce damage from future events," said Eric Tolbert, director of the N.C. Emergency Management Division.

"Check you insurance policy to make sure you are covered for all events. Check your emergency supplies and replace those that are out dated or depleted. It is wise to maintain a three day supply," he added.

"Disaster preparation also is the goal of FEMA'S Project Impact: Building Disaster Resistant Communities," said Federal Coordinating Officer Carlos Mitchell of the Federal Emergency Management Agency.

Project Impact is an initiative to challenge the country to undertake actions that protect families, businesses and communities by reducing the effects of natural disasters through local public and private sector partnerships.

Project Impact communities in North Carolina are: City of Charlotte and Mecklenburg County, City of Wilmington and New Hanover County, Town of Boone, Buncombe County and all incorporated municipalities, Lenoir County and all incorporated municipalities and the Eastern Band of Cherokee Indians.

FEMA, North Carolina Approve More Than 1,000 Buyouts

Raleigh, NC, April 19, 2000 -- The acquisition of more than 1,000 Hurricane Floyd damaged structures at a cost of nearly \$67 million has been approved by federal and state officials in the seven months since the storm struck North Carolina, federal and state disaster recovery officials said today.

Federal Coordinating Officer Carlos Mitchell of the Federal Emergency Management Agency (FEMA) said, "Altogether, the buyout of 1,065 homes have been approved at a cost of \$66.7 million."

State Coordinating Officer Eric Tolbert of the N.C. Emergency Management Division said, "We are working faster than ever to process these requests for acquisition. It is a real tribute to all levels of government that so much has been accomplished in such a short time."

"Never again will these sites be the scenes of such devastation, loss and personal tragedy as we witnessed when Hurricane Floyd flooded them out. These sites will become permanent green space," he said.

Community	Structures Approved	Funding
Farmville	16	\$2,087,436
Kinston	100	\$4,420,500
Lenoir County	203	\$11,272,710
Johnston County	14	\$1,446,379
Tarboro	40	\$2,103,309
Wayne County	382	\$13,049,365
Greenville	199	\$11,910,859
City of Wilson	196	\$11,550,301
Edgecombe	121	\$8,878,685

The table at the right shows the communities with approved acquisitions projects.

TACDA Conference Tapes Still Available

(from November 1999 Conference)

[Disclaimer note. These videos contain only limited editing from the actual presentations given at the conference and are not broadcast quality (however, they are an excellent information resource for concerned citizens). TACDA provides them as a public service. All information in these tapes is for general understanding. Before taking any specific personal actions, professional advice should be sought.]

Title – Speaker – Description – Time		Available for purchase: \$14
Call 1-800-425-5397 to order!		↓
“Preparedness in the Year 2000” Kevin Briggs (TACDA President) Covers the threats of key natural and manmade disasters throughout the U.S., to include terrorism and war, and provides insights into issues and mitigation strategies [60 minutes]		Yes
“Surviving Weapons of Mass Destruction” – Sharon Packer (President of Civil Defense Volunteers of Utah, MS in Nuclear Engineering) Covers nuclear, chemical, and biological threats and hazard mitigation strategies as well as a brief explanation of EMP [32 minutes]		Yes
“From MAD (Mutual Assured Destruction) to MASS (Mutual Assured Security & Survival)” – Nancy Greene (V. President of TACDA, former Editor of HUMINT Magazine and a well-known international relations expert) Covers the history of the MAD policy, why the DoD has historically neglected active and passive U.S. population defenses, and recommends a mutual Russian & U.S. missile defense strategy. [36 min.]		Yes
“Historical Swiss and Russian Civil Defenses” – Ed York (international civil defense expert, worked on the Manhattan Project and many civil defense trade-off studies). Covers his first-hand experiences with the Swiss Civil Defenses and his extensive research into Russian Civil Defense based on debriefings of Russian immigrants. [30 minutes]		Yes
“The News Media, Crisis Management, and the War in Kosovo” – Charles Wiley (Accuracy in Media spokesperson, Veteran War Correspondent (jailed by communists on several occasions), International Civil Defense Reporter) Exposes how dangerous this war was and how the media was often manipulated to produce one-sided reporting.		Yes
“US Infrastructure Issues” – Bron Cikotas (former head of the Defense Nuclear Agency’s EMP Division; consultant on U.S. infrastructure) -- Available only in audio cassette for \$5.00		Yes, audio only
“A Physician’s Response to Modern Threats” – Dr. Jane Orient (President of Doctors for Disaster Preparedness)		Yes
“US Earthquake Hazards and Mitigation” – Waverly Person, US Geological Survey		Yes
“EMP – Issues and Answers” – Bron Cikotas (former head of the Defense Nuclear Agency’s EMP Division; consultant on U.S. infrastructure) – Audiotape only.		Yes
“Economic Aspects of Disasters” – David Horton (Constitutional lawyer and economics historian)		Yes
“Needed: A Radical Rebalancing of Our Defenses” – Kevin Briggs (President) Covers the historical development of Civil Defense in the U.S. and explains why we need both active and passive defense for both manmade and natural disasters. Explains why the current National Missile Defense (NMD) program will not be effective against many threats and discusses how a more effective NMD could be fielded.		Yes

Independent Assessment Says Missile Defense on Track

*By Jim Garamone
American Forces Press Service*

WASHINGTON, June 22, 2000 -- The proposed limited National Missile Defense system "is on track to achieve the earliest capability to meet the defined limited threat," an independent assessment team said.

The report, written by retired Air Force Gen. Larry D. Welch of the Institute for Defense Analyses, bolsters DoD's choice of technology to meet an ICBM threat from a rogue state. The report stated it is appropriate and technically feasible. The Ballistic Missile Defense Office will conduct another test of the system July 7.

Defense Secretary William S. Cohen will use the results of this test -- and the results of previous tests -- to make a recommendation to President Clinton about the feasibility of the system, which is estimated to cost \$14 billion. President Clinton will make a decision on whether to go ahead with the program in the fall.

The team recommended DoD expand the test envelope and do more research on discriminating warheads from decoys. The unclassified version of the team's report deemed deployment "high risk" but saw no reason to change the current schedule. The team agreed the proposed system would counter the threat of rogue state ICBMs.

Jacques Gansler, undersecretary of defense for acquisition, technology and logistics, described how the system would work. "It begins with the space-based warning system, the system that picks up the fact that a booster has been launched," Gansler said. The Defense Support Program satellites are already in place and being used to detect launches worldwide.

When the satellite detects a launch it will pass the information on, through the command and control system, to early warning radars. Again, these are already in place. "These then will track the targets as they come toward us, doing some preliminary track information so that we can determine where it's going, and it can give us information for the intercept," Gansler said.

The information will then be transferred to an X-band radar. This must be built as part of NMD. To protect the United States, the radar must be built on Shemya Island, at the end of the Aleutian Island chain in Alaska. These radars do an excellent job of discrimination, Gansler said. "This is primarily where you start to sort out the decoys and the warhead, or multiple warheads, if you have them," he said.

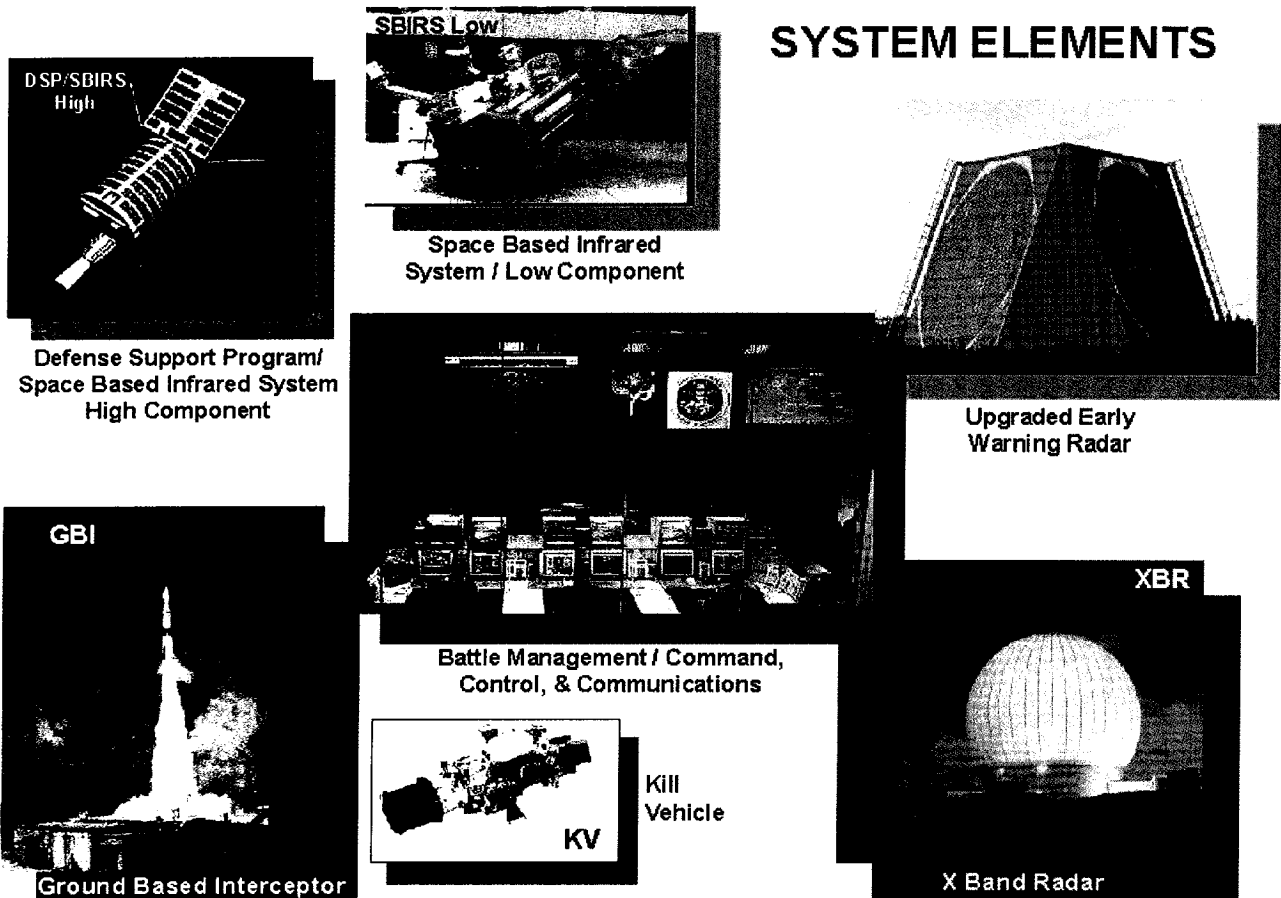
This is when U.S. officials would launch the interceptors. "This has two pieces; it has the booster, and it has the ... kill vehicle," he said. There are no explosives in the kill vehicle, which weighs about 130 pounds. To kill an approaching warhead, the vehicle uses visual and infrared sensors to collide with the reentry vehicle. With a closing speed of 17,000 miles per hour, the collision "ionizes" both the kill vehicle and the warhead. To be effective, the kill vehicle has to hit an area the size of a breadbox.

"The key to this whole system working is the battle management system that integrates all of this -- the multiple sensors and the discrimination capability," he said. The center is at Colorado Springs, Colo., and will have the capability to send course corrections to the interceptor in flight.

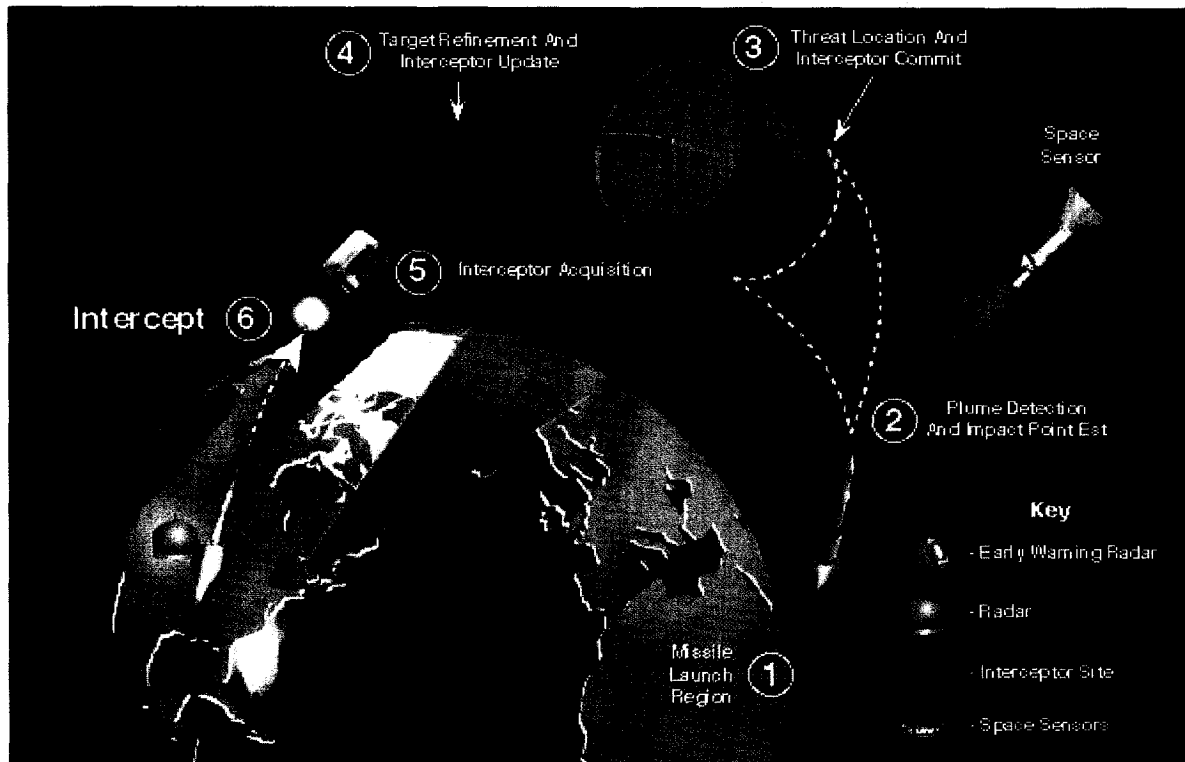
Gansler said if an incoming warhead is detected, more than likely officials would fire more than one interceptor at it. The mid-course phase interceptor gives officials the time and opportunity to do this. Other systems -- the boost phase and the terminal phase -- give officials one shot and that's it.

Intelligence officials estimate rogue states could possess ICBM technology coupled with weapons of mass destruction by 2005. Other anti-missile defenses would not be ready to deploy by then. If the president decides to go forward with the NMD program, the radars and 20 interceptor missiles could defend the United States by fiscal 2005.

Gansler and BMDO director Air Force Lt. Gen. Ronald Kadish see the program evolving after initial operating capability. The program could add other detection means and build up to 100 interceptor missiles.



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