SJR

22

Volume 20, Number 9

SPECIAL CTB ISSUE

Arms Control Today

November 1990
$3.00

Nuclear Testing: Time to Call a Halt

ACA
A Publication of the Arms Control Association

Forty-Five Years

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
United States	3	2	0	3	0	0	15	10	11	6	17	18	27	62	0	0		39	4				
Soviet Union					1	0	2	0	4	7	5	9	15	29	0	0	50	43	0				
Great Britain								1	2	0	0	6	7	5	0	0	0		0			0	0
France																3	1					5	3
China																				1	1	3	2

Since 1945, over 1,600 nuclear tests have been conducted worldwide. Until the Limited Test Ban Treaty of 1963, frequent atmospheric nuclear testing caused substantial radioactive contamination of the atmosphere; since 1963 all U.S., Soviet, and British tests have been conducted underground. No atmospheric tests have been conducted by any state since 1980.

The peak years for nuclear testing came immediately before and after the 1958-1961 testing moratorium. In 1989 and 1990, nuclear testing has declined as the Soviet and (to a lesser extent) the U.S. programs came under increasing budgetary and political pressure. On October 24, 1990, the Soviet Union conducted its first test in over a year.

Time to Call a Halt?

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Totals
	38	35	17	18	16				19		15	14	16	18	12	17		14	14	14	11	8	929
	16	17	19	22	14	18	15	12	18	22	29	21	22	31	27	19		0	23	17	7	1	714
0	0	0	0	0	0		0	1	0	2	1		1	1	2			1	1	0	1	0	42
5	0	8	5	3	5	7													8	8	8	4	181
1	1	1	1	2	1	1		3	1	2	1	1	0				0	0	1	1	0	2	36

Sources: Natural Resources Defense Council, Stockholm International Peace Research Institute

Figures for 1990 are through October 24, the date of the most recent Soviet nuclear test. The Soviet Union's total includes its tests for which a breakdown by year is not available. It is likely that the United States has conducted additional tests that have gone unreported in publicly available data, and it is possible the Soviet Union has carried out [illegible] conducted one underground test in 1974.

Atmospheric Tests

Underground Tests

No Tests

F.A.S.

307 Massachusetts Avenue, N.E.
Washington, D.C. 20002 (202) 546-3300

FAX COVER SHEET

TO: Sen. Duncan

FROM: C. Bolkcom

DATE: 4/8/91

NO. OF PAGES 3 (INCLUDING COVER)

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PROFESSIONAL EXPERIENCE

THE NORTH ATLANTIC ASSEMBLY Brussels. Researcher: Coordinated legislation between NATO's member-nation parliaments. Produced reports, editorials and speeches for legislators on alliance strategy, NATO's future, arms control, the CSCE process, aerospace technology, and environmental issues. Represented the Deputy Secretary General at meetings and seminars. Special Observer of the German Democratic Republic's first free election. January 1990-January 1991

CONGRESSIONAL ARMS CONTROL & FOREIGN POLICY CAUCUS Washington, DC Research Associate: Supported 140 Congressional offices by producing reports, analyses and legislative alerts on Defense Appropriations bills, the U.S. military intervention in Panama, the use of the U.S. military in the Andean drug war, and the prospects for deep cuts in the U.S. defense budget. October 1989-January 1990

INFORMATION RESOURCES TECHNOLOGY, INC. Washington, DC International Programs Analyst: Monitored legislation pertaining to emerging technology, trade, and international cooperation issues. Conducted analyses and produced reports assessing French governmental, industrial, and military coordination. Responsible for implementing a SUN workstation network used by the Department of Defense in managing international armaments cooperation programs. April-October 1989

FEDERATION OF AMERICAN SCIENTISTS Washington, DC Research Assistant: Co-authored a forthcoming data book on the Strategic Defense Initiative. Revised, edited, and updated an existing text. Focussed on arms control implications and contractor activity. February-April 1989

CONGRESSIONAL RESEARCH SERVICE, FOREIGN AFFAIRS & NATIONAL DEFENSE DIVISION Washington, DC Foreign Affairs Analyst: Produced extensive research for time-sensitive Congressional action including: legislative initiatives, briefing books, floor speeches, and consituent requests for information. Topics included: East-West relations, NATO burden sharing, West European defense cooperation, conventional and strategic arms control, high technology, and International Economics. September 1988-January 1989

UNION OF CONCERNED SCIENTISTS Washington, DC Research Assistant to Amb. Jonathan Dean: Provided quantitative analyses for conventional arms reduction models in "Meeting Gorbachev's Challenge," a book on restructuring the European security system. Assessed the USSR's unilateral conventional arms reductions in the context of the CFE negotiations. Edited speeches and manuscripts. Tracked legislation pertaining to arms control and defense spending. January-June 1988/January 1989

FOREIGN POLICY Washington, DC Staff Assistant: Evaluated and performed initial editing of manuscripts. Researched and verified the factual accuracy of articles on the history and function of the National Security Council, U.S.-Japanese trade relations, and U.S. foreign policy towards South Africa. September-December 1987

EDUCATION

M.A., **International Affairs**, The American University, Washington, DC (1988) Specialization: U.S. Foreign Policy, International Relations of Western Europe

B.A., **International Relations**, University of Minnesota, Minneapolis (1985)

CDI

Center for Defense Information

BIOGRAPHICAL DATA

Rear Adnmiral Eugene J. Carroll, Jr., USN (Ret.)

Rear Admiral Eugene J. CARROLL, Jr., was commissioned as an Ensign in April 1945. His early service as a Naval Aviator included ten months flying AD Skyraiders from aircraft carriers in the Pacific during U.N. operations in Korea. Following a series of assignments in the Atlantic Fleet, he commanded two light jet attack squadrons of A-4 Skyhawk aircraft. Transferred to the Pacific Fleet in 1965, he served a total of six years with units engaged in the Vietnam campaign. His assignments there included command of the amphibious assault ship, USS OGDEN (LPD-5) and the aircraft carrier, USS MIDWAY (CVA-41).

Promoted to the rank of Rear Admiral in 1972, he served as Commander of Task Force 60, the carrier striking force of the U.S. Sixth Fleet in the Mediterranean.

Admiral Carroll served on General Alexander Haig's staff in Europe from 1977 to 1979. He was the first naval officer to serve as Director of U.S. military operations for all U.S. forces in Europe and in the Middle East. His last assignment on active duty was in the Pentagon as Assistant Deputy Chief of Naval Operations for Plans, Policy and Operations. In this capacity he was engaged in U.S. naval planning for conventional and nuclear war.

During his 37 years of active service Admiral Carroll was awarded the Defense Superior Service Medal, the Legion of Merit with three gold stars, the Bronze Star Medal with combat "V" and gold star, the Air Medal with four gold stars and numerous campaign ribbons for service in World War II, Korea and Vietnam.

A graduate of both the U.S. Navy and U.S. Army War Colleges, Rear Admiral Carroll holds B.A. and M.A. degrees in International Relations from George Washington University. He is now serving as Deputy Director of the private, non-governmental Center for Defense Information in Washington, D.C. He is actively engaged in research and analysis concerning major defense issues and is writing and speaking on the need for rational military programs which will meet the long-term national security interests of the United States.

June 1986

ADMIRAL CARROLL

sane/alaska

Working For Peace, Justice and Global Security

An affiliate of SANE/FREEZE: Campaign for Global Security

FOR RELEASE:
Monday, April 8, 1991

FOR MORE INFORMATION, CONTACT:
Christopher Toal, SANE/AK, 272-0621;
Adm. Eugene J. Carroll, USN (Ret..), Center for Defense Information, 202-862-0700;
Roxanne Stewart (Sen. Jim Duncan's office), 465-4766

RETIRED ADMIRAL TO TESTIFY FOR NUCLEAR TEST BAN RESOLUTION

Rear Adm. Eugene J. Carroll, U.S.N. (Ret.) will testify via phone at a teleconference **Monday, April 8 at 1:30 P.M.** on behalf of SJR-22, a resolution sponsored by state senator Jim Duncan calling for an end to the testing of nuclear weapons. Adm. Carroll is Deputy Director of the private non-governmental Center for Defense Information, a Washington, DC think tank staffed by retired military officers.

Adm. Carroll served as the commander of Task Force 60, the carrier striking force of the U.S. Sixth Fleet in the Mediterranean. He served on Gen. Alexander Haig's staff from 1977 to 1979 and was the first naval officer to serve as Director of U.S. military operations for all U.S. forces in Europe and the Middle East.

Adm. Carroll's last assignment on active duty was in the Pentagon as Assistant Deputy Chief of Naval Operations for Plans, Policy and Operations. In this capacity he was engaged in naval planning for conventional and nuclear war. Adm. was decorated for service in World War II, Korea and Vietnam and holds B.A. and Masters degrees in International Relations from George Washington University. Since his retirement, Adm. Carroll has been actively engaged in research and analysis concerning major defense issues.

Also scheduled to testify for the resolution is Christopher Bolkom (202-546-1025), a staffer for the non-profit Federation of American Scientists (FAS), FAS, comprised of over 5,000 scientists in the U.S., is the oldest organization in the world devoted to ending the nuclear arms race. The organization has the sponsorship and support of dozens of prominent American scientists who are Nobel Laureates.

-30-

SANE-ALASKA
Mailing address: 3605 Arctic Blvd., #1717, Anchorage, AK 99503 Phone: (907) 272-0621

FORUM

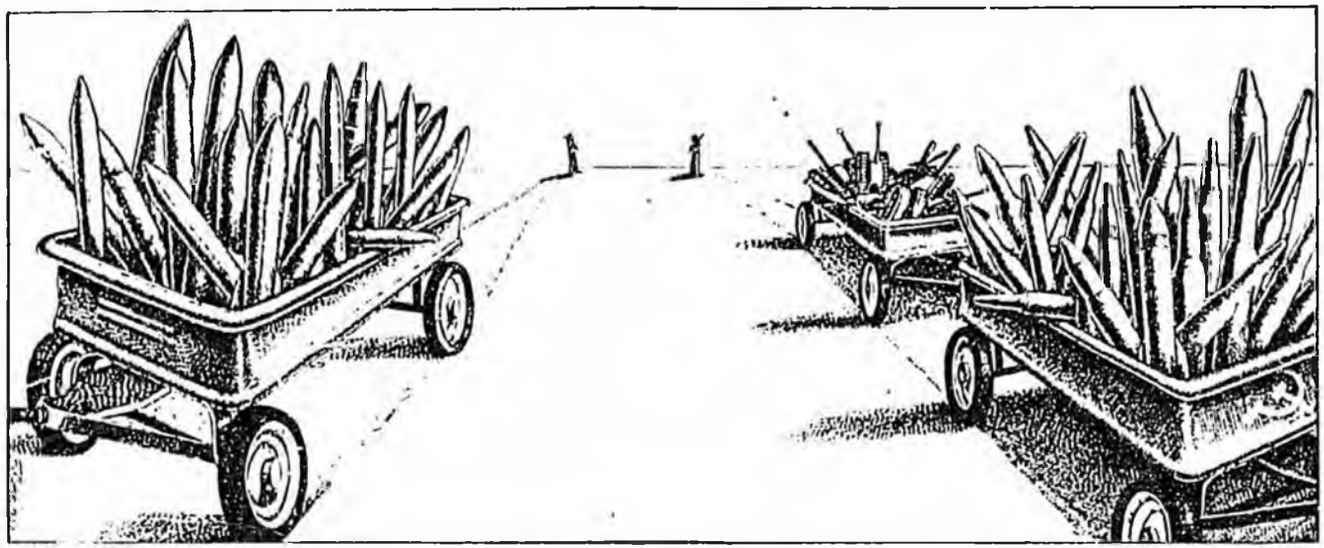
First step to elimination of war is nuclear test ban

By CHRISTOPHER TOAL

The continued testing of nuclear weapons by the United States and the Soviet Union is a global scandal hidden from the eyes of most Americans. Since 1945, when the U.S. exploded the first fission bomb in the New Mexico desert, the superpowers have conducted more than 1,500 nuclear tests. The knowledge gained from those tests has gone directly into the development of faster, more accurate, more threatening nuclear weapons.

President Kennedy began negotiations for a comprehensive test ban with Premier Khrushchev 25 years ago. Had they succeeded, the nuclear arsenals of the world would be free of Cruise missiles, MXs, SS-4s and a whole array of other weapons, and the world would be safer for it.

Now that we have agreed, in the INF Treaty, to remove our Pershing IIs, SS 20s and other intermediate-range missiles from Europe, the U.S. and Soviet governments are looking for ways to negotiate much deeper cuts in strategic nuclear arsenals. Yet as long as nuclear testing continues, those weapons can be replaced by others that would wipe out any benefit gained from simple numerical reductions.



Los Angeles Times

What can we expect to gain from more nuclear tests? Not confidence that our existing weapons are reliable — we can determine that through non-explosive tests. Since 1970, out of the 300 nuclear tests conducted by the United States, only eight were conducted to ensure that a warhead would explode as predicted.

Nor do we need nuclear tests to improve our means of verification. Seismic monitoring capabilities are now so precise that the Natural Resources Defense Council was recently able to document 117 previously secret U.S. nuclear tests. The Soviet Union has even agreed to on-site seismic monitoring as a means of verifying a comprehensive test ban.

What will nuclear tests give us in the future? Physicist Theodore B. Taylor, a former Deputy Director of the U.S. Defense Atomic Support Agency, listed some of the "third generation" nuclear weapons the Pentagon is developing in the April 1987 issue of Scientific American. The list includes nuclear weapons that could concentrate and aim different types of radiation, such as x-rays, gamma rays or microwaves, and underground nuclear weapons that could fuel x-ray lasers (key elements in Reagan's Star Wars plans). The whole trend of nuclear testing, in fact, is toward the development of new nuclear weapons with specific military uses — as though we could ever use these weapons without risking an all-out nuclear war.

President Kennedy spoke the central truth about nuclear testing 25 years ago at a commencement speech at American University. Both the U.S. and the Soviet Union, he said, "are devoting massive sums of money to weapons, that could be better devoted to combating ignorance, poverty and disease." A comprehensive test ban treaty, Kennedy assured us then, "would increase our security — it would decrease the prospects of war."

That was true 25 years ago, and remains true today. The U.S. spends between $12 and $70 million on each nuclear test, while programs to deal with homelessness, AIDS, child care, health care, education, and employment remain tragically underfunded.

Aug. 5, 1988 was the 25th anniversary of the signing of the Limited Test Ban Treaty. As President Bush considers his new Cabinet and policy, he should be encouraged to consider the benefits of a comprehensive test ban treaty. In ending all nuclear tests, we would pave the way for President Kennedy's ultimate hope: "the elimination of war and arms."

Christopher Toal was campaign coordinator for Alaska's Nuclear Freeze Initiative and is executive director of SANE/Alaska.

To President George Bush,
Senator Ted Stevens,
Senator Frank Murkowski,
and Representative Don Young:

we want a secure america

Together, you shoulder the awesome responsibility that Alaskans place on you to keep our country secure. As concerned Alaskans, we are pleased that President Bush has already met with Mikhail Gorbachev. We also welcome Mr. Bush's commitment to continuing progress towards a Strategic Arms Reduction Treaty (START) with the Soviet Union at the earliest possible date.

We commend Sen. Frank Murkowski's 1988 vote for the bipartisan Kennedy-Hatfield nuclear testing moratorium amendment and urge Sen. Ted Stevens and Rep. Don Young to follow suit in 1989.

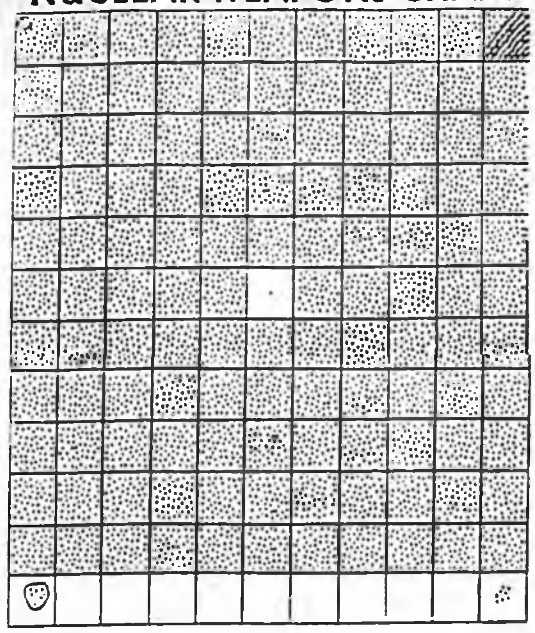
We believe that in order to fully protect national security, these positive efforts and any START Treaty must be coupled with a Comprehensive Test Ban.

A Comprehensive Test Ban would:

- Prevent the development of more advanced nuclear weapons that could threaten US survival.
- Help stop the spread of nuclear weapons to less developed regional powers where the risk of nuclear war is great.
- Rule out costly new nuclear weapons at a time when our government is faced with tough budget choices in order to remain strong.

WE WANT A PEACEFUL, SECURE NATION — NOT A NATION THAT IS THREATENED BY NEW AND MORE DEADLY NUCLEAR WEAPONS.

[illegible]



The dot in the center represents all the firepower of World War II — three megatons. The other dots represent the world's present nuclear weapons [illegible] World War II's [illegible] megatons. The U.S. and the Soviets share this firepower with approximately equal destructive capability.

The top left hand circle [illegible] represents the weapons on one Poseidon submarine — equal to three World War II's [illegible]. The circle in the lower left hand square [illegible] represents one new Trident sub [illegible] northern hemisphere.

[illegible]

The amount in the shaded area [illegible] represents the amount necessary to bring on the "nuclear winter." [illegible]

This chart, which has been reviewed for accuracy by U.S. Senate staff members, appears in *The Trimtab Factor: How Business Executives Can Help Solve the Nuclear Weapons Crisis* by Harold Willens.

NOTE: The recently ratified INF Treaty will remove missiles from Soviet & U.S. arsenals but [illegible]

What Is SANE/Alaska?

[illegible]

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THE ALASKA AFFILIATE OF

Sane Freeze

Former SANE/AK board member

Times photo by Al Grillo

Dr. Rodman Wilson, left, and Lawrence Weiss, both of Anchorage, discuss their part in a recent protest at the nuclear testing site in Nevada.

Alaskans protest at nuclear test site

By Catherine Stadem
Times Writer

Four Alaskans have broken the law and they're proud of it.

Dr. Rodman Wilson, Dr. Philip Nice, Dr. David Spence and Lawrence Weiss walked across a line with 135 companions on a sandy desert road in Nevada on Sept. 30, were handcuffed by sheriffs and arrested on charges of criminal trespass.

"I wanted to make a public statement that I think the U.S. government should stop testing nuclear devices," said Wilson, the municipality's deputy director of the Department of Health and Human Services.

Wilson, 65, and the other three Alaskans were attending the American Public Health Association convention in Las Vegas in September when they heard there would be an organized demonstration at the Nevada Nuclear Test Site, about an hour's drive away.

Spence, 40, is a physician with the state's public health service in Juneau. He said he was glad to pay the $25 bus fare to get to the protest site, about two miles inside the nuclear test reservation.

"I feel we're violating (the 1970 nuclear non-proliferation treaty) by failing to negotiate in good faith to stop testing. That's one reason I resorted to civil disobedience," Spence said.

Joining with Wilson and Spence were Nice, a 68-year-old doctor who teaches medical students at the University of Alaska-Fairbanks; and Weiss, 40, an occupational and environmental health specialist in private business in Anchorage.

The four were part of an estimated 525 protesters on Sept. 30, a day that has been called the "largest single day of protest" in a long series of demonstrations at the test site.

"Our main point down there was to make a statement about our opposition to the nuclear arms race and specifically a desire to end nuclear testing. Our goals in this defense are to try to accomplish a ban on testing nuclear weapons," Nice said from Fairbanks.

The protestors were given lessons on the bus and at the site, before their arrest, in Gandhian principles of non-violent confrontation. But instead of being a pro forma event, they found out when they arrived at the demonstration area that an underground nuclear explosion would take place within minutes.

"It was a very scary moment," Weiss said. "It was a very shocking thing" to find out that we were standing 40 miles from ground zero, he added. When organizers found out there would be an explosion, they gave the protestors a choice: leave the area immediately on the buses, or stay.

Everyone stayed.

Carl Sagan, noted scientist, held a radio tuned into the countdown close to a microphone while the protesters listened: "... 30 ... 29 ... 28 ..."

"People were crying and holding on to each other," Weiss said. "No one knew what to expect.

"It was the most terrible irony. You have 500 people demonstrating for peace and that's the moment the Reagan administration chose to detonate the 21st U.S. nuclear weapon since the U.S.S.R. unilaterally stopped detonating all nuclear weapons," Weiss said.

The men said they were in good company. Sagan crossed the line with them and got arrested that warm afternoon. Others crossing the line included Dr. Bernard Lown, Nobel Peace Laureate and co-president of the International Physicians for the Prevention of Nuclear War, and Dr. Victor W. Sidel, president-

See Alaskans, page B-2

Alaskans protest

Continued from page B-1

elect of Physicians for Social Responsibility.

The group has joined in a common defense — called The Desert Defense — and will be represented by Ramsey Clark, former U.S. Attorney General, at what is expected to be a high-profile trial.

Clark recently served as an expert witness in the Sept. 29 trial of another group of test demonstrators, which included Daniel Ellsberg. The defense of that trial was based on the Nuremberg principles of International Law, the defense of necessity.

Basically, these principles state that when the government is doing something so grave that it represents an extreme danger to your person, your family or the human community at large, the government's actions and policies must be resisted, the doctors said.

It is expected that the December trial — set for the 17th and 18th — will use the same defense as the Sept. 29 trial, at least in part. None of the Alaskans plans on attending the trial. They were arrested on misdemeanor charges and court appearances are not mandatory.

Although the protest was an official part of the 60,000-member American Public Health Association convention, the acts of civil disobedience were up to the individuals. Weiss explained. Weiss said he was not representing his employer, the Alaska Health Project, when he broke the law.

Spence said although he is employed by the state, he was on annual leave and paid his own expenses to the meeting. Nice also said he was representing himself and not his employer during the protest.

Wilson said that although he attended the APHA convention on taxpayers expense, "I do not expect the municipality to endorse my civil disobedience or to go to jail for me or pay my fine if I am found guilty, but I do expect the municipality to be sympathetic to my effort to keep the world from being incinerated."

FULL PAGE AD

A CALL TO HALT NUCLEAR TESTING

Next week President Reagan and General Secretary Gorbachev will meet in Geneva to discuss superpowers arms control issues. This meeting represents a historic opportunity for the two major nuclear nations to reach agreement on halting and reversing the arms race. We must not let this opportunity pass.

In 1963, under similar circumstances, the United States and the Soviet Union negotiated a limited test ban treaty. This treaty has been one of the pillars of the nuclear age, an example of the superpowers overcoming their differences and working together for their mutual self-interest and survival. The current summit in Geneva offers a similar chance for a significant breakthrough.

On August 6, 1985 the Soviet Union initiated a unilateral moratorium on all nuclear warhead testing, to be extended indefinitely if the United States follows suit by January 1, 1986. Physicians For Social Responsibility/ Alaska and Citizens Against Nuclear War urge President Reagan to reciprocate on the Soviet testing moratorium at Geneva by ordering a complete halt to all nuclear explosions by the U.S. A bilateral and verifiable nuclear warhead testing freeze is now technically and politically feasible. It could represent the first step towards a comprehensive nuclear test ban treaty which would benefit both nations, as well as the world community.

The opportunity to halt and reverse a costly arms race is before us in Geneva. All concerned citizens should make their opinions heard. We know from experience that political will can be translated into tangible achievement. After forty years of relentless build-up by the nuclear powers there is no better time than now to take bold steps towards peace.

Suggestions for Further Reading

"Nuclear Test Bans," Chapter 7 in Nuclear Arms Control: Background and Issues, National Academy of Sciences (National Academy Press, 1984).
Lynn R. Sykes and Jack F. Evernden, "The Verification of a Comprehensive Nuclear Test Ban," Scientific American, October 1982.
W.J. Hannon, "Seismic Verification of a Comprehensive Test Ban," Science, 18 January 1985.
Hafmeister, David, "Advances in Verification Technology," Bulletin of the Atomic Scientists, January 1985.
Greb, Alan G. and Warren Hachrotta, "The Long History: The Test Ban Debate," Bulletin of the Atomic Scientists, September 1982.
Evernden, Jack F., "Politics, Technology and the Test Ban," Bulletin of the Atomic Scientists, March 1985.

The following signators (most of whom helped pay for this ad) support a bilateral and verifiable nuclear warhead testing freeze as a first step towards a comprehensive nuclear test ban treaty:

Public Forum On The Arms Race and Geneva Summit

Monday, November 18, 1985
7:00-9:00 P.M.
Fairview Community Center
Multi-purpose Room
1121 E. 10th Avenue
(10th and Karluk)
($2.00 suggested donation)

The Speakers

- Rev. Richard D. Madden, Pastor, Immanuel Presbyterian Church. — "Moral Issues of the Arms Race"
- Keith Graham-Davis, M.D., Physicians for Social Responsibility/Alaska — "The Medical Effects of Nuclear War"
- William A. Jenkins, Ph.D., Professor of History at the University of Anchorage, Alaska — "Star Wars — An Escape From Deterrence?"
- John Havelock, former Alaska Attorney General. — "A Conservative Looks at Nuclear Test Ban"
- Dale Sambo, Inuit Circumpolar Conference. — "Proposals for a Nuclear Free Arctic and Subarctic"
- Lyle Oberg, Beyond War, — "Local and National Activities of Beyond War"
- Mark Mellgren, Alaska, Project '86. — "The '86 Soviet Initiative"

PSR PHYSICIANS FOR SOCIAL RESPONSIBILITY

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$25 - Regular Member
$15 Low Income Member
$ _____ Additional Contribution

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Citizens Against Nuclear War and Physicians For Social Responsibility of Alaska

Measure's backers, detractors agree on one thing:

Alaska nuclear freeze resolution would send a powerful message

Anchorage Times
8-13-86

by Earl Swift
Times Writer

Its backers say it is designed to send a message to Washington; its opponents argue that it will instead send a message to the Kremlin.

Those supporting it say it will bring the United States a tiny step closer to peace. The other side, however, says that through naivete and oversimplification, it will achieve the opposite.

The issue is Alaska's nuclear freeze initiative, a three-paragraph resolution on the Aug. 26 primary ballot that calls for the adoption of a nuclear freeze "policy."

And both the measure's supporters and detractors agree that what seems a cut-and-dried provision of few words addresses an issue of great complexity.

Alaska will be the only state in the union voting on such a measure in 1986, thanks to a three-year drive by members of Freeze 86, an Anchorage-based coalition that collected more than 30,000 voters' signatures to land the question on the primary ballot.

The measure's first section calls for state policy recognizing the prevention of nuclear war as earth's greatest challenge and the arms race as a prime promoter of such a conflict. It concludes with a proviso that the state's policy be to "promote a mutual and verifiable freeze followed by reductions in nuclear warheads, missiles and other delivery systems. . . ."

Paragraph two covers the initiative's implementation: "The governor shall conduct the affairs of state and carry out state programs in conformity with this policy," it reads.

Alaskans have had the opportunity to vote on the issue before. Voters in Anchorage and Juneau passed freeze resolutions in 1982, although the same measure failed in Fairbanks. In addition, state senators passed in April 1982 a resolution calling for a worldwide freeze proposal.

But this time, they have the opportunity to speak as a state on the issue. That's good, Chris Toal said Saturday: Such solidarity will send a solid message to Washington about the views of the state once owned by, and closest to, the Soviets.

Juneau resident Lou Coatney disagreed: The message will go to Moscow, he said, and it will say that Alaska is willing to accept any treaty, rather than a good one; it will, he said, compromise the United State's bargaining position with the Soviets.

"All the folks in the Bush never had a chance to vote for it before, so it'll be the first time for most native Alaskans to vote on it," Toal, a University of Alaska-Anchorage student,

"I think Alaskans should be as concerned as anyone else," about the issue, he said. "Maybe a little more, because everyone here is aware we are a target."

The measure's reference to "mutual" agreement, Toal said, can be interpreted as either calling for a bilateral U.S.-Soviet or worldwide freeze. But, he said, the two are largely synonymous: "The immediate danger is the superpowers."

Its second paragraph does not mean that Alaska's governor will be obliged to, say, oppose military deployment or commercial uranium mining here. The initiative is intended, Toal said, strictly as "an expression of concern by the people of Alaska," and the only time the policy might interfere with the executive's latitude would be if he "hosted a conference to promote the arms race."

Coatney, who describes himself as a student of Soviet history — and who prepared the opposition statement on the Division of Elections' summary of the question — said the U.S.S.R. views Alaska with special interest and that the initiative would be particularly damaging because of the state's size and geopolitical importance.

He disagrees, he said, "with the practical effect, as opposed to the idealistic intent," of the initiative, on three grounds. First of all, a freeze will do nothing to halt the development of nonnuclear weapons, he said; second, he thinks nuclear weapons deter any aggression, not just nuclear; and third, he says a freeze would most benefit the Soviets, who undertook a massive military buildup in the 1970s.

Toal disagreed, labeling counts of each country's nuclear stockpiles "number games" and "pre-nuclear thinking."

"They're pretty irrelevant if it only takes 400 nuclear weapons to wipe out either society," he said. "Four hundred nuclear weapons could reduce the United States to a Third World country overnight."

Both sides say freeze is 'message'

Anchorage TIMES
8-24-86

By Earl Swift
Times Writer

Both those for and against Alaska's nuclear freeze initiative say the three-paragraph resolution will "send a message" if the state's voters give it the nod in the Aug. 26 primary election.

But the measure's supporters and opponents differ on who will receive that message and what the initiative's long-term effects might be.

If passed, the provision would convey to Washington the concern of a state once owned by, and closest to, the Soviets, said Chris Toal, coordinator of Freeze 86, a coalition sponsoring the initiative.

Juneau resident Lou Coatney disagreed: The message would go to Moscow, he said, and would compromise the U.S.'s bargaining position with the Soviets.

Alaska will be the only state in the union voting on such a measure in 1986. Its first section calls for a state policy recognizing the prevention of nuclear war as Earth's greatest challenge and the arms race as a prime promoter of such a risky conflict. It concludes with a proviso that the state's policy be to "promote a mutual and verifiable freeze followed by reductions in nuclear warheads, missiles, and other delivery systems. . . ."

Paragraph two covers the initiative's implementation: "The governor shall conduct the affairs of state and carry out state programs in conformity with this policy," it reads.

Toal said the implementation provisions do not mean that Alaska's governor will be obliged to oppose military deployment or commercial uranium mining here. The initiative is intended, he said, strictly as "an expression of concern by the people of Alaska."

Coatney, who wrote the opposition statement in the Division of Elections' informational handout on the question, said he felt the initiative would be particularly damaging because of the state's size and geopolitical importance.

He disagreed, he said, "with the practical effect, as opposed to the idealistic intent," of the provision, saying it would do nothing to halt the development of non-nuclear weapons and would most benefit the Soviets, who undertook a massive military buildup in the 1970s.

Regardless of how one feels about the Soviet Union, Toal said, the chance of nuclear accidents is ever-present without a freeze. "If Murphy's Law can affect the space shuttle, Murphy's Law can affect nuclear weapons," he said. "There are a number of scenarios that could take place. It's the accidental ones that scare me the most."

■ NAVARRE, MIKE*	4,149	
☐ Sykes, Lloyd	552	
Republicans		
☐ Wagoner, Tom	2,213	
House District 8, Seat B (20 of 20 precincts)		
Democrats		
■ WALKINSHAW, C.E.	2,069	
Republicans		
■ DEMARCA, MARILYN	1,224	
☐ [illegible], Mike	1,025	
☐ Bennett, Ed	1,022	
Libertarians		
■ MARROU, ANDRE*	2,142	
PRINCE WILLIAM SOUND		
House District 6 (11 of 12 precincts)		
Democrats		
☐ [illegible], Elsie	577	26.3
■ CATO, BETTE*	830	38.3
☐ Powers, Wayne	270	12.3
Republicans		
■ LEARY, ROBERT	303	13.8
☐ Smith, Larry	200	9.1
NUCLEAR FREEZE INITIATIVE		
■ [illegible]	68,592	58.0
☐ No	48,073	41.9

Voters approve nuclear freeze initiative

By JOHN TETPON
Daily News reporter

The nuclear freeze initiative on Tuesday's ballot appeared headed for victory by a 3-to-2 margin with more than half of the vote counted. With passage, Alaska would join nearly half of the states in the nation in rejecting the continued build-up of nuclear weapons.

The proposition, Ballot Measure No. 1, said, "...The prevention of nuclear war is the greatest challenge facing the Earth and ... the nuclear arms race dangerously increases the risk of war that would destroy humanity." It called for a "mutual and verifiable nuclear weapons freeze, to be followed by nuclear weapons reduction." It directs the governor to "conduct the state's affairs in conformity with the initiative's goals."

Alaska Freeze '86, the organizers of the initiative, collected more than 30,000 signatures to qualify it for a place on the ballot. Similar propositions passed in municipal elections in Anchorage and Juneau in 1982, but failed in Fairbanks.

With victory apparent, freeze supporter Dr. Ted Mala, an associate professor of health sciences at the University of Alaska-Anchorage, said, "Peace is too important to leave in the hands of politicians." Mala is scheduled to visit the Soviet Union next month to discuss medical science projects.

The freeze campaign had virtually no organized opposition.

Few individuals spoke out against the initiative publicly. One, Lou Coatney of Juneau, argued that "a freeze of the research, development and production of nuclear weapons cannot be verified." U.S. spy satellites, he said, can read license plates, but the Soviets have "nonetheless succeeded in seriously violating existing nuclear and biological treaties."

The ban-the-bomb movement isn't new. Scores of national and international groups in 1982 endorsed similar proposals, among them Friends of the Earth, International Physicians for the Prevention of Nuclear War, National Council of Churches, National Education Association and the U.S. Conference of Mayors.

Twenty-three states have had nuclear freeze resolutions pass in both their upper and lower legislative bodies. The freeze passed by popular vote in nine states and the District of Columbia.

In a national Gallup Poll in 1984, 78 percent of the respondents favored a nuclear freeze, 18 percent opposed it and 4 percent had no opinion. More than 80 percent of those favoring a nuclear freeze were Democrats under 30 years of age.

In another poll, 62 percent of the delegates to the 1984 Republican Party national convention said they supported a nuclear freeze.

8-27-86 Anchorage Daily News P. A-12

Wednesday, August 27, 1986, The Anchorage Times A-5

Alaskans pass nuclear arms moratorium

By Earl Swift
Times Writer

Alaskans turned the idea of a nuclear weapons freeze into an official state policy Tuesday, approving an initiative calling for a moratorium on the production and deployment of such devices by a 16-percent margin.

The only vote of its kind in the nation this year, the tally was heralded by freeze organizers as a grass-roots victory for peace and a strident message to Washington about the state's nuclear angst.

With 84 percent of the state's precincts reporting, those favoring the three-paragraph measure accounted for 58 percent of the 114,665 votes cast, while those opposing it had captured just shy of 42 percent.

The simply worded provision, which will become law when the final election results are certified next month, calls for a state policy recognizing the prevention of nuclear war as the planet's greatest challenge and that the arms race increases the risk of such a conflict.

It continues with a proviso that the state's policy be to "promote a mutual and verifiable freeze followed by reductions in nuclear warheads, missiles and other delivery systems." Paragraph two covers the initiative's implementation: "The governor shall conduct the affairs of state and carry out state programs in conformity with this policy," it reads.

"We're really happy," smiled Chris Toal, coordinator of the Freeze 86 coalition that sought and obtained more than 30,000 voters' signatures to place the question on the ballot. "For a conservative state like Alaska to come out for the freeze this way is just terrific."

In a campaign that seemed to excite much private debate but little public discussion, both the freeze's supporters and detractors agreed the initiative would send a message.

They disagreed, however, on what message's target and long-term impact. Toal and other supporters argued the resolution would be particularly relevant to national leaders, given the state's one-time ownership by Russia and proximity to the Soviet Union. The measure's detractors, meanwhile, asserted that any message stemming from a successful initiative would go to Moscow, not Washington, and would compromise the United States' bargaining position with the Soviets.

The outcome of Tuesday's balloting seemed to settle the matter, as far as Toal was concerned. "We would have been ecstatic with anything over 50 percent," he said outside the Hotel Captain Cook's ballroom early this morning, as a handful of Freeze '86 volunteers — a few carrying placards and balloons reading "No More Hiroshimas" — congratulated one another nearby. "We think it passed because it makes sense — it's a common-sense vote to end the arms race."

The initiative's passage does not mean Alaska's governor will be obliged to oppose military deployment or commercial uranium mining here, Toal said; rather, he said, it is intended strictly as an expression of concern by the people of Alaska, aimed at national lawmakers.

"We hope our representatives will think twice before voting for anything that will bring about more nuclear weapons, with their votes in Congress," he said.

8-27-86 Fairbanks Daily News-Miner

Alaska voters join freeze bandwagon

The State of Alaska joined eight other states and Washington, D.C., Tuesday when voters passed Proposition 1, an initiative supporting a mutual and verifiable arms freeze followed by reductions in nuclear weapons arsenals.

At the end of the night, with 89.5 percent of statewide precincts reporting, the supporters of the measure led the the opposition 58 percent to 41.9 percent.

In the Fairbanks area, voters have changed their minds on this issue. A similar ballot proposition was voted down in the 1982 municipal elections, 8,832 to 7,977. Tuesday, 59 percent of Fairbanks and North Pole voters cast ballots in favor of the intitiative while 40.9 percent cast theirs in opposition.

"We expected it to be tight and the race is living up to its expectations," said Ian Heitman, coordinator of Fairbanks Freeze '86, at about 12:30 this morning.

Despite the opposition of more than 40 percent of the voters, neither Heitman nor co-worker Mike Geil was aware of any organized opposition to the freeze proposition.

Lou Coatney, a resident of Juneau, wrote a statement opposing the proposition, enclosed in a media packet from the Division of Elections. In his statement, Coatney called the resolution "a naive, simplistic and cruelly false solution to a complex and deadly problem."

"Our government has heard our concern about the cost and dangers of the arms race," Coatney continued. "It has tried to negotiate fair, verifiable disarmament treaties which will also continue deterring war. The Soviets refuse these and break others."

Coatney is only one man, however, and 49,653 people in Alaska, including 7,237 from Fairbanks, voted against Proposition 1. Heitman believes that if more voters knew the ins and outs of the freeze measure, more would have voted for it.

"I think it's a philosophical question that a lot of people don't have a lot of answers to," he said. I really don't understand why people would oppose it considering it's a mutual and verifiable freeze we're asking for. We're not asking the U.S to go it alone."

The question is: will the United States listen to Alaska? The answer, in Heitman's opinion, is yes.

"I think the Administration would have to look and take into consideration movements such as this from one state or 50 states," Heitman said.

Sic - Freeze

From other editors

Freeze debate still hot

The nuclear freeze initiative has stirred more debate on the Kenai Peninsula after the election than before. Peninsula voters rejected the ballot issue by a fair margin, but it was endorsed by voters statewide.

What happened? How could the people of Alaska be such weak-livered fools, some want to know. Don't they know that Soviet Communists are waiting for our weakness to show, so that they can strike? Some of the freeze opponents, unable to understand the vote outcome, have dismissed it as a case of the voters not understanding the issue.

That answer is too easy. It misses the points. For every voter who might truly have misunderstood the initiative, there were 10 who grasped its essence and knew what they were voting for. And that was a vote for the end of global insanity and chaos.

Those who want to argue get bogged down in questions such as whether a "mutually verifiable" freeze or ban is possible. But the initiative wasn't about whether it might become possible, but if it were, would you go for it? The voters answer Yes.

Awareness has spread throughout the world in these recent years that nuclear war and weaponry are games of insanity and annihilation. And, though the leaders and the politicians must be cautious about every move they make toward disarmament, there is a distinct possibility today that it is the politicians and the leaders alone who are preventing disarmament, or arms reductions leading toward it.

There is no call here for unilateral disarmament or American weakness. Alaskans who voted "yes" were not calling for their country to throw down its arms and beg the Soviets for mercy.

But there is a growing mass of world opinion – built on the most fundamental of possible foundations, survival – that cries increasingly for our leaders to join in saying "Enough."

All the firepower of World Wars I and II has been calculated at the equivalent of two megatons. This includes the bombs dropped on Hiroshima and Nagasaki, and it all amounts to little: All the death and bloody lament of killing in Europe and in the Pacific amounts to a popgun by the standards of today's nuclear weaponry. There are deployed around the world today thousands of missiles capable of raining destruction the equivalent of our two world wars to the 10th power upon a fragile earth.

The Americans who hope for disarmament and peace do not call for national foolishness, but for an end to international foolishness. If something must be read into Alaska's vote, it's a plea is this: Find a way to assure mutual disarmament and then get the job done before it's too late.

-Peninsula Clarion

86 Oct 1

Monday, August 25, 1986 Anchorage Daily News

FULL PAGE AD

Question:

What Do These Alaskans Have In Common?

Candidates running for political office:

Gov. Bill Sheffield
Walter J. Hickel
Dick Randolph
Sen. Arliss Sturgulewski
Ed Hoch
Allegra Barnes
Jane Angvik
Dave Carlson
Glenn Olds
Pegge Begich
Sen. Vic Fischer
Mary Ratcliff
Johnny Ellis
Dave Donley
Kay Brown
Rep. Max F. Gruenberg Jr.
Rep. Kate Hurley
Mark Boyer
Rep. Mike Davis
Virginia Sampson
Rep. Niilo Koponen
Rep. Marco Pignalberi
Rep. Andre Marrou
Thomas Brooks Jones
Bill Davis
V. Fate Putman
Donna Esseil
Rep. Mike Miller

Other Alaskans:

[illegible]

Answer:

They support a mutual and verifiable freeze or nuclear weapons and they hope you will vote for Ballot Measure 1 in the August 26th Alaska Primary Election.

Paid for by:

THE ALASKA FREEZE

and Physicians for Social Responsibility/Alaska
1013 W. 16th Avenue
Anchorage, Alaska 99501

ALASKA FREEZE '86
419 Barrow St., Anchorage, AK 99501

Sierra Borealis
Summer '86
Sierra Club

Critical Environmental Issue in the August 26 Primary Election

By Ed Davis, Vice-Chairman, Alaska Freeze '86

Alaskans will have the opportunity to make a powerful statement regarding nuclear weapons in the August 26th primary election. An initiative calling for mutual and verifiable agreements to freeze the arms race and eventually reduce nuclear arsenals will appear on the ballot.

Two years ago, Anchorage based nuclear activits groups, "Alaska Freeze '84" and "Citizens Against Nuclear War" spearheaded a petition drive to place the nuclear freeze on Alaska's ballot. Over 200 volunteers donated thousands of hours to collect signatures from 20,000 plus registered Alaskan voters. The August primary election will finally bear the fruit of that effort.

The threat of nuclear holocaust is widely recognized as one of the world's most critical environmental issues. It is essential that members of environmental groups make extra effort to vote in the primary election. Light voter turnouts have historically plagued primary elections.

Several organizations working towards passage of this initiative are recruiting volunteers and donations. Interested people may contact Alaska Freeze '86 (Fairbanks), call Mike Giel 451-6998; Citizens Against Nuclear War (Anchorage), call Chris Toal 274-4314; and Alaska Freeze '86 (Anchorage), call Ed Davis 333-1330.

The policy statement in this initiative is reprinted below:

"It is the policy of the State of Alaska: 1) to recognize that the greatest challenge facing the earth is to prevent nuclear war by accident or design, 2) to recognize that the nuclear arms race is dangerously increasing the risk of a holocaust that would be humanity's final war; 3) to promote a mutual and verifiable freeze followed by reductions in nuclear warheads, missiles, and other delivery systems in order to halt the nuclear arms race and reduce the risk of nuclear war."

campaign news

Sullivan chairs Murkowski campaign

Former Anchorage mayor George M. Sullivan was selected state chairman for Republican U.S. Sen. Frank Murkowski's re-election campaign. According to a news release from Murkowski's campaign office, Sullivan will represent Murkowski during the campaign, particularly when the Senate is in session. He will also provide counsel to the campaign staff. Other officers include Fred Eastaugh, Southeast chairman; Roy Huhndorf and Pat Rumley, Anchorage finance co-chairmen; Bill Bushey, Fairbanks finance chairman; and Bill Corbus, Juneau finance chairman.

Candidates back freeze measure

Gov. Bill Sheffield, who is running for re-election, Republican gubernatorial candidates Walter Hickel and Dick Randolph and Democratic candidate Steve Cowper have endorsed Proposition 1. The initiative calls for a mutual and verifiable nuclear freeze. It will be on the primary ballot. According to a news release, Alaska Freeze '86, which backed the drive to put the initiative on the ballot, is still seeking support from the rest of the gubernatorial candidates.

Anchorage Times
Sat August 16th

Alaska

Anti-nuclear war group to walk for ballot issue

Times Staff

Alaskans supporting a nuclear weapons freeze will hit the streets at 10 a.m. today, when Citizens Against Nuclear War sponsors a 10-kilometer pledge walk through downtown Anchorage.

The event, open to the public and intended to raise money for Freeze '86, a drive to ban nuclear weapons in Alaska through a ballot proposition in the Aug. 26 primary election.

People interested in participating in the walk and a subsequent rally on the Delaney Parkstrip should meet at the Log Cabin Church, 602 W. 10th Ave., Freeze '86 coordinator Chris Toal said Friday.

"We'll have the pledge forms available for them there, and if they have their pledges lined up they can fill them out right there," he said.

ELECTION COVERAGE INSIDE

U.S. SENATE: Murkowski, Olds running ahead C-1
U.S. HOUSE: Young, Begich battle shapes up C-1
NUCLEAR FREEZE: Initiative appears headed for victory A-12
AROUND ALASKA: Mat-Su, state C-1

SUZAN NIGHTINGALE: Passing out the plaudits for political 'eloquence' C-1

Well Being Magazine Summer 86

Statewide nuclear freeze movement gains momentum

Encouraged by the passage of nuclear freeze resolutions in Anchorage and Juneau as well as in thirteen o[illegible]r states and thousands of municipalities thr[illegible]ghout the [illegible]ation, a group of Anchorage citizens got toge[illegible]r in the spring of 1983 to organize a state-wide freeze campaign. The group decided to focus on placing a freeze initiative on the 1984 ballot. This goal required securing the signatures of 10 percent of Alaskan voters, roughly 20,000 persons. To qualify for the 1984 ballot, we needed to submit the signatures by January of that year. To that end, the group organized chapters in communities across the state.

The freeze initiative calls for "a mutual and verifiable freeze followed by reductions in nuclear warheads, missiles, and other delivery systems in order to halt the nuclear arms race and ... reduce the risk of nuclear war." In essence, the initiative constitutes a declaration by the Alaskan state government to the U.S. President and Congress.

The organization's paid coordinator moved from the [illegible] several months before the January 1984 deadline for submitting the signatures to the state. Nonetheless, the group came within several hundred [illegible] of meeting the quota. [illegible] several months later, it did secure the necessary number [illegible] qualified for the 1986 statewide ballot.

The importance of this campaign was heightened by [illegible]ness that Alaska has the chance to make a singular contribution to a nuclear freeze in that it appears to be the only [illegible] in the nation with a freeze initiative on the '86 ballot. The original group was joined by additional participants to promote the second and final stage of the campaign.

People in other parts of the [illegible] making a significant contribution to the [illegible] freeze initiative. Chapters in Fairbanks, Juneau, Ketchikan, Palmer, Homer, and Kodiak have organized for this purpose and some of the chapters are promoting related activities. The Kodiak chapter has established a pairing project with Anadyr, a coastal community in the Soviet Union. The Ketchikan chapter is actively involved in a campaign to establish a nuclear free zone in southeastern Alaska because of the possibility a nuclear submarine will be stationed in that area.

The freeze group, called Alaska Freeze '86, is planning a number of fund raising projects preliminary to a concentrated media campaign shortly before the November elections. It plans a solstice dance, freeze walk, and auction. It urgently needs contributions and participants in these activities. Anyone interested in participating should contact the chair, Dorothy Jones, at 694-2065 (evenings) or 277-0201 (days). Contributions should be sent to Alaska Freeze '86, 8605 Arctic Bl., Anchorage 99503.

ELECTION COVERAGE

Question: Appeared in Anchorage Times 8-26-86

What Do These Candidates Have in Common?

Gov. Bill Sheffield
Walter J. Hickel
Dick Randolph
Sen. Arliss Sturgulewski
Ed Hoch
Allegra Barnes

Jane Angvik
Dave Carlson
Glenn Olds
Pegge Begich
Sen. Vic Fischer
Mary Ratcliff

Johnny Ellis
Dave Donley
Kay Brown
Rep. Max. F. Gruenberg Jr.
Rep. Katie Hurley
Mark Boyer

Rep. Mike Davis
Virginia Sampson
Rep. Niilo Koponen
Rep. Marco Pignalberi
Rep. Andre Marrou

Thomas Brooks Jones
Bill Davis
V. Fate Putman
Donna Estell
Rep. Mike Miller

Answer:

They support a mutual and verifiable freeze on nuclear weapons and they hope you will vote for Ballot Measure 1 in the August 26th Alaska Primary Election.

Paid for by:

THE ALASKA FREEZE
Because Nobody Wants A Nuclear War

and Physicians for Social Responsiblity/Alaska
1013 W. 16th Avenue
Anchorage, Alaska 99501

ALASKA FREEZE '86
419 Barrow St., Anchorage, AK 99501

Proponents hope freeze vote gets message across

By SAM BISHOP
Staff Writer

Alaska would be on the record as supporting a "mutual and verifiable" freeze on the deployment of nuclear weapons if a measure on Tuesday's ballot is approved by voters.

Mike Geil, a member of Fairbanks Freeze '86, said passage of the measure would express the beliefs of Alaskans. He said many people are also hoping it will stimulate discussion of the freeze again outside the state.

(See FREEZE, Back Page)

out, he said.
"I think that that we take basis, not a we have a reacti there." Shaw s.
In addition to Flat and Fair tions were set up now after the at all but the statior ly will be closed t Syun Akasi designate of the t tute, said he plans reconsider the bu

FREEZE . . .

(Continued from page 1)

Several other states approved such freeze initiatives in 1984, but it did not appear on the ballot in Alaska. The people organizing the initiative drive were able to collect enough signatures, but by then it was too late to be on the ballot. Geil said the Division of Elections lost some of the signatures prior to the 1984 election and refused to put the measure on the ballot.

More signatures collected and the question was placed on the 1986 primary ballot, the next statewide election.

Geil, the science coordinator for the school district, said Fairbanks Freeze '86 began meeting in July, sponsored a booth at the Alaska State Fair and is running 30-second spots on local radio stations.

Geil said that there are an estimated 50,000 nuclear warheads in the world, the equivalent in explosive power of four tons of TNT for every person on earth.

"Why do we keep spending billions a year on making more and making bigger ones?" Geil said. "These things are about unusable they are so powerful. It's madness, especially when you think about what some of this money could be going toward."

If a freeze were implemented, the United States could save about $100 billion during the next five years, Geil said.

Geil said he wanted to emphasize that the measure refers only to a "mutual and verifiable" freeze. In national debates on the subject, doubts have been expressed about whether the United States or the Soviet Union could verify whether each had frozen production of nuclear weapons.

Geil said he thinks a freeze is verifiable and quotes several people to support him, including Herbert Scoville, former deputy director of the CIA, and Harold Brown, former secretary of defense.

"To me I think it (passage of the measure) will send a message that the people are still aware of this and they want an end to the insanity of nuclear weapons proliferation. And it will send a message to our representatives in Congress," Geil said.

Following is the exact wording of ballot measure No. 1:

"The initiative would officially recognize that the prevention of nuclear war is the greatest chal-

lenge facing the Earth and that the nuclear arms race dangerously increases the risk of a war that would destroy humanity. The Initiative would promote a mutual and verifiable nuclear weapons freeze, to be followed by a nuclear weapons reduction. The initiative would direct the governor to conduct the state's affairs in conformity with the initiative's goals."

A vote for adopts the initiative and a vote against rejects the initiative.

PRIMARY Preview

Anti-nuclear War group to walk for ballot issue

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The event, open to the public and intended to raise money for Freeze '86, a drive to ban nuclear weapons in Alaska through a ballot proposition in the Aug. 26 primary election, is supporting a nuclear weapons freeze will hit the streets at 10 a.m. today, when Citizens Against Nuclear War sponsors a 20-kilometer pledge walk through downtown Anchorage.

People interested in participating in the walk and a subsequent rally on the Delaney Parkstrip should meet at the Log Cabin Church, 600 W. 10th Ave., Freeze '86 coordinator Chris Tool said Friday.

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FISCAL NOTE

STATE OF ALASKA
1991 LEGISLATIVE SESSION

BILL NO. SJR 22

Revision Date: _____ Department Affected: LAA

Title: Urging Halt to Nuclear Tests BRU: _____

_____ Component: _____

Sponsor: Sen. Duncan

Requestor: Senate State Affairs COMPONENT SERIAL NO. | | | | |

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
REVENUE	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: none

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Senate State Affairs Phone: 465-3793

Division: Legislative Affairs Date: April 8, 1991

Approved by Commissioner: Senator Patrick Rodey Pat Rodey

Agency: Senate State Affairs Committee Date: April 8, 1991

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

Rev 10/90

INTERNATIONAL

COMPREHENSIVE TEST BAN

CAMPAIGN

BACKGROUND INFORMATION

HISTORY OF TESTING NEGOTIATIONS

THE COLD WAR

The concept of a Comprehensive Test Ban (CTB) predates even the first nuclear test. When World War II ended in Europe in May 1945, many scientists working on the Manhattan Project vigorously objected to testing a nuclear weapon. They argued that Nazi Germany had been defeated before it could develop the atomic bomb, removing the need to complete the development of a U.S. weapon. Their pleas went unheeded, and the world's first nuclear test was conducted in July 1945. The Soviet Union conducted its first nuclear test in August 1949.

By 1958, as public demand for an end to nuclear testing increased, the U.S. and the Soviet Union committed themselves to negotiating a test ban. In an effort to foster a climate conducive to negotiations, President Eisenhower announced a moratorium on U.S. testing. The Soviet Union joined on the condition that France and Great Britain also refrain from testing.

The moratorium continued until President Eisenhower announced withdrawal from the agreement on December 31, 1959, and France exploded its first atomic weapon on February 13, 1960. Citing this violation, the Soviet Union surprised the Western powers with a rapid series of 30 nuclear tests in sixty days. The U.S. responded by conducting nearly 100 tests in 1962. Nuclear testing had become more of a political exercise than a technical one, and remains so today.

LIMITED TEST BAN TREATY

The Cuban Misile Crisis between the U.S. and the Soviet Union in 1962 galvanized strong popular opposition to nuclear testing. This opposition increased when PSR publicized a study finding radioactive strontium-90, an element associated with the fallout from nuclear tests, in the deciduous teeth of American children. Together, PSR and the St. Louis Committee for Nuclear Information waged an effective campaign to educate the public about the deleterious health effects of testing in the atmosphere and to push for a test ban.

On June 10, 1963, President Kennedy announced a moratorium on U.S. nuclear testing in the atmosphere. The Soviet Union responded favorably and within 55 days the Limited Test Ban Treaty (LTBT) was negotiated and signed. The LTBT prohibits the testing of nuclear weapons above ground, underwater, and in space, but allows underground nuclear testing.

NUCLEAR NON-PROLIFERATION TREATY

After the LTBT was signed, the three original nuclear weapons states (the U.S., Soviet Union and Great Britain) committed themselves in specific provisions of other treaties to achieving a CTB. Article VI of the 1968 Nuclear Non-Proliferation Treaty (NPT), which bans acquisition of nuclear explosives by non-nuclear weapons states, directs the nuclear weapons states to pursue a test ban.

Many non-nuclear weapons states that are party to the NPT agreement have warned that they will not be held to the terms of the agreement unless the superpowers actively pursue the completion of a CTB. The threat of nuclear proliferation will continue until the nuclear powers sign a CTB and halt the flow of nuclear technology to non-nuclear states.

THRESHOLD TEST BAN AND PEACEFUL NUCLEAR EXPLOSIONS TREATIES

The 1974 Threshold Test Ban Treaty (TTBT), which prohibits all nuclear weapons tests over 150 kilotons, also urges a ban on all underground nuclear tests. Its companion treaty, the Peaceful Nuclear Explosions Treaty (PNET), prohibits the testing of non-weapon nuclear devices with a yield of over 150 kilotons. The TTBT and PNET were negotiated and signed by Presidents Nixon and Ford in 1974 and 1976, respectively. The U.S. Senate has not completed ratification of either treaty, despite some appeals for ratification in recent years. The U.S. and USSR have complied with both treaties since they were signed.

CTB PROGRESS UNDER PRESIDENT CARTER

Following the lead of his predecessors, President Carter identified the CTB as a top priority on his arms control agenda. In 1977, the U.S., the Soviet Union and Great Britain began CTB negotiations. President Carter's push for a test ban was opposed by the Joint Chiefs of Staff as well as heads of the Los Alamos and Lawrence Livermore national laboratories. Arguing that a complete halt to testing would impair the reliability of the U.S. stockpile, these critics persuaded the Carter Administration to press for a CTB that would be limited to three years.

In response to pressure from these testing advocates, President Carter de-emphasized CTB negotiations, and they ground to a complete halt after the Soviet invasion of Afghanistan. However, in the three years during which CTB negotiations were conducted, agreement was reached on most of the significant provisions. The Soviet Union made concessions on several pivotal verification issues, agreeing to emplacement of ten seismic monitoring stations in each nation and to on-site inspection in the event of any suspicious activity.

THE REAGAN ADMINISTRATION HALTS CTB TALKS

In a dramatic policy reversal from all previous administrations since Eisenhower's, President Reagan announced in July 1982 that he would not resume CTB talks. He asserted that negotiations could not be conducted until the verification provisions of the TTBT and the PNET had been strengthened. Reagan officials alleged that if the 150-kiloton limit on nuclear explosions could not be adequately verified, there was no possibility for verifying a total test ban. Although the Reagan administration said at the time that a CTB remained a "long term goal," a 1983 Arms Control and Disarmament Agency (ACDA) report to the House Appropriations Committee argued that nuclear testing should be continued indefinitely to evaluate nuclear weapons effects, to develop and modernize warheads, and to maintain stockpile reliability.

THE SOVIET TESTING MORATORIUM

In July 1985, Soviet General Secretary Gorbachev announced a moratorium on Soviet nuclear testing, to begin on the fortieth anniversary of the atomic bombing of Hiroshima. He appealed to the U.S. to join, but Reagan refused, and continued to refuse each time Gorbachev extended the moratorium. The administration argued variously that compliance with the moratorium could not be verified, that a halt to U.S. testing would be injurious to national security, and that the Soviet initiative was a propaganda ploy preceded by a period of intensive Soviet testing.

In December 1985, Gorbachev wrote a personal letter to President Reagan stating that the Soviet Union would allow on-site inspection if the U.S. would agree to stop its testing program. Reagan rejected this offer on the grounds that the Soviets could not be trusted. Throughout 1986, repeated Soviet extensions of the moratorium were met with repeated U.S. testing.

When the U.S. conducted its first nuclear test of 1987 on February 3, the Soviet Union announced that it would end its 19-month-old moratorium. The Soviet Union resumed testing on February 26, emphasizing that it was prepared to stop testing again "any day and any month when the United States announces termination of its nuclear tests." During the moratorium, the U.S. conducted at least 25 tests.

INDEPENDENT VERIFICATION AGREEMENT IMPLEMENTED

In May 1986, the Natural Resources Defense Council (NRDC), a private U.S. research organization, signed an agreement with the Soviet Academy of Sciences to monitor jointly U.S. and Soviet underground nuclear tests. The Soviets agreed to place three seismic monitoring stations within 200 kilometers of their chief test site at Semipalatinsk, provided that the U.S. allowed similar stations on its territory. Facilities in each country would be jointly staffed and operated by scientists from the two organizations, and information gathered by the stations would be delivered to both governments.

In July 1986, three seismic stations began operations about 100 miles southwest of Semipalatinsk. In January 1986, the NRDC began operating a seismic station near the Nevada Test Site where all U.S. tests are conducted. So far, the U.S. has refused to grant visas to Soviet seismologists, preventing them from working with NRDC scientists at the new seismic station. The success of this cooperative venture effectively refutes arguments that compliance with a test ban cannot be adequately verified with seismic monitoring equipment. It provides concrete evidence that verification issues can be resolved when political will is added to technical capability.

TESTING TALKS RESUME

In the autumn of 1987, the Soviet Union insisted that testing talks resume as a precondition to an agreement banning all Intermediate-Range Nuclear Force (INF) missiles. Both sides agreed in a joint statement that a CTB would be the ultimate goal of these talks. But Reagan Administration officials simultaneously insisted that the U.S. had to continue its testing program indefinitely, and that a test ban was not feasible for the foreseeable future.

The renewed talks are addressing more stringent verification of the 150 kiloton ceiling on all nuclear explosions required under the PNET and TTBT agreements. Although the Reagan Administration alleges Soviet violations of the TTBT, the CIA has confirmed that the Soviet Union has complied with the 150 kiloton ceiling.

Under the terms of the renewed testing talks, an on-site monitoring device called CORRTEX (Continuous Reflectometry for Radius versus Time Experiment) will be used to verify compliance with the 150 kiloton testing limit. The Administration has insisted on this on-site verification method in the past, in part because the Soviet Union was opposed to on-site monitoring. But the Soviet Union has agreed to use CORRTEX now, with the understanding that seismic monitoring would be the most effective means of verifying a CTB.

Improvements in superpower relations since mid-1987 have improved prospects for a CTB in future administrations. Although current testing talks will not produce new testing restrictions, they set important precedents for on-site inspections and government-level exchanges of scientific personnel.

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TALKING POINTS ON TECHNICAL ISSUES

A Comprehensive Test Ban (CTB) is the single most important key to halting the nuclear arms race. By stopping modernization on all sides, a CTB would stabilize U.S.-Soviet relations, and ease negotiation of deep cuts in the superpower nuclear arsenals. In addition, a CTB would help prevent the further spread of nuclear weapons technologies throughout the world. Supporters of continued nuclear testing site verification and warhead reliability as roadblocks to a CTB, but these issues have been resolved for decades. A halt to nuclear testing awaits only the political will of the superpowers.

The negotiation and signing of a Comprehensive Test Ban Treaty would reduce the global threat of nuclear war and enhance the security of the United States and the Soviet Union by:

- Preventing the design and development of new, dangerous nuclear weapons by the superpowers. A CTB would increase the benefit of arms reduction treaties by preventing development of replacement weapons.
- Strengthening international laws preventing the spread of nuclear weapons technology to current non-nuclear nations.
- Saving hundreds of billions of dollars in the U.S. and the Soviet Union by preventing production and deployment of new nuclear weapons.
- Protecting the global environment from the release of radioactivity from underground nuclear tests and weapons production facilities.
- Promoting contact and cooperation among U.S. and Soviet government agencies and scientists.

Over the past 30 years, U.S. officials have cited technical problems that would prevent nuclear powers from signing a CTB Treaty. These officials have claimed that inadequate verification technology would allow Soviet tests to go undetected during a CTB. Testing proponents also claim that a CTB would allow the reliability of nuclear warheads to deteriorate over time, reducing the credibility of the U.S. nuclear deterrent. But continued research in the fields of verification and reliability confirm that a bilateral test ban is feasible and cannot be dismissed on these grounds. In addition, a test ban would prevent the development of dangerous new nuclear weapons including Star Wars components, and would slow or stop the proliferation of nuclear weaponry throughout the world.

1. VERIFICATION OF A CTB

The technical ability to verify CTB compliance has been debated since leading Western scientists agreed in 1958 that a U.S.-Soviet bilateral ban on tests in the air, water, and space was verifiable. Five years later, President Kennedy and Soviet Premier Nikita Khrushchev signed the Limited Test Ban Treaty, banning tests in these environments. Even then, the two leaders believed that a CTB was verifiable with on-site inspection provisions. But political constraints on both sides prevented such an agreement, and have continued to plague test ban advocates to this day.

Seismic verification technologies are now so advanced that a CTB is verifiable even without test-site inspections. Experiments conducted by the U.S.-based Natural Resources Defense Council (NRDC) and the Soviet Academy of Sciences have shown that seismographic data is sufficient to detect all but the smallest nuclear explosions, even if the measurements are recorded from thousands of miles away from test sites.

A 1988 NRDC report provides further evidence that seismic monitoring can be used to effectively monitor a test ban. Reviewing past seismic data, researchers discovered that the U.S. had conducted 117 unannounced nuclear tests in the past three decades, bringing the total number of U.S. tests to 899 through 1987.

The following measures would allow both sides confidence that neither was conducting secret underground nuclear tests during a CTB:

- Cooperative calibration of seismic equipment, as demonstrated in the NRDC-Soviet Academy of Sciences experiment.

- Installation of in-country radiation detectors. Because many underground nuclear tests have released detectable radioactivity into the atmosphere, these detectors would create an additional hurdle for one party trying to conduct undetected nuclear tests in violation of a CTB.

- Observation of test ranges by reconnaissance satellites. Both sides have the national technical means to detect the movement of large numbers of people and scientific equipment necessary for even one nuclear test.

- Establishment of an international inspectorate for large industrial chemical explosions. Such an inspectorate would enable all sides to distinguish high-yield chemical explosions from nuclear explosions.

Independent verification technology experts and Congressional Committees agree that inadequate resources are being devoted to U.S. verification technologies. With a stronger verification regime, even the most strenuous attempts at clandestine explosions could be detected. A verifiable CTB awaits only the political will to complete negotiations. In late 1987, testing talks between the superpowers resumed, but with a more limited agenda and little urgency. U.S. negotiators first want to improve verification of the two testing treaties limiting both sides to nuclear explosions of less than 150 kilotons (the Peaceful Nuclear Explosions and Threshold Test Ban Treaties). The U.S. has also insisted that an on-site verification device called CORRTEX (Continuous Reflectometry for Radius versus Time Experiment) be used to check compliance with these treaties. However, neither country has charged the other with violating the 150 kiloton limit.

2. WEAPONS RELIABILITY AND A CTB

CTB opponents argue that nuclear weapons reliability cannot be assured without continued testing of stockpiled weapons. In fact, nuclear weapons reliability can be assured by periodic examination, non-explosive testing, and remanufacture of nuclear warheads. Weapons testing data show that very few U.S. tests are conducted to determine if existing stockpiled warheads work as designed.

- The Natural Resources Defense Council's January 1988 report "Known Nuclear Tests," concluded that, "since 1970, only eight tests out of almost 300 (three percent) have been conducted to correct defects in stockpiled weapons."

- Glenn Seaborg, Nobel Laureate in Chemistry and former Atomic Energy Commission Chairman reports that "no reliability tests were conducted between 1961 and 1971" by the U.S.

A 1987 Congressionally-mandated review authored by Lawrence Livermore National Laboratory physicist Dr. Ray Kidder concludes that a "high degree of confidence in the reliability of the existing stockpile is justified, and that it is sufficiently robust to permit confidence in reliability in the absence of nuclear proof tests." A CTB would permit activities necessary to sustain each side's confidence in the continued operability of its nuclear weapons stockpiles. These activities include:

- Rigorous inspection and inspection testing of individual weapons components -- fuses, power supplies, circuits, neutron generators and chemical explosives.

- Detonating the "implosion" fission-trigger mechanism with inert material substituted for the nuclear material.

3. NEW WEAPONS DEVELOPMENT

A CTB would dramatically hamper the development of dangerous new nuclear weapons, including Star Wars weapons, that are designed to attack the USSR first and destroy its ability to retaliate. These "third generation" nuclear weapons (first generation are Hiroshima-type fission weapons, second generation are fusion or thermonuclear weapons) would tailor nuclear explosive power for specific military missions. According to national weapons laboratory officials, the most sophisticated weapons could concentrate the effect of a nuclear explosion on a narrow area, maximize an electromagnetic pulse to block enemy communications and electronics, or power the Strategic Defense Initiative's X-ray laser weapon.

Department of Energy administrators are using third generation weapons development as leverage against a CTB. The weapons establishment's current warning of a "warhead gap" resembles specious arguments used in the 1960's against the Limited Test Ban Treaty (LTBT). But no gap would develop in warhead technology if both sides agreed to a mutually verifiable ban on all testing. In fact, the U.S. would benefit from an immediate test ban because its current lead

in warhead development, as measured by the key criteria of yield to weight and yield to volume ratios, could be maintained as long as the ban continued.

4. NUCLEAR PROLIFERATION

The prompt conclusion of a CTB between the major nuclear weapons states is required by the provisions of the Nuclear Non-Proliferation Treaty (NPT). The NPT signatory nations agreed in 1968 to forego developing their own nuclear weapons if the superpowers negotiated an end to testing and deep cuts in their nuclear arsenals. Without a CTB, the NPT may break down and more nations may join the "nuclear club." The 125-nation United Nations review of the NPT, held in September 1985, strongly urged superpower negotiation of a CTB.

A number of strategically important nuclear and non-nuclear nations, including France, China, South Africa, India, Pakistan, Brazil, and Argentina, have cited doubts about superpower commitment to non-proliferation as a rationale for not signing the NPT. Although a CTB alone would not prevent potential nuclear nations from acquiring weapons, widespread multilateral adherence to a CTB would have a stabilizing impact on international nuclear politics.

5. SAVING SCARCE WORLD RESOURCES

The cost of verifying a CTB Treaty for participating countries would be minimal compared to the resources saved not testing nuclear weapons. According the the Council On Economic Priorities, total savings from a CTB could amount to $4 billion dollars annually. But the true cost of continued testing is reflected in the development, procurement, and maintenance of new nuclear weapons. For the U.S. alone, currently planned new nuclear weapons will cost at least $150 billion.

6. STOPPING RADIOACTIVE CONTAMINATION

Nevada Test Site officials have estimated that one third of all U.S. underground tests have leaked radioactive isotopes into the atmosphere. Although most of these leaks are small, some have been measured beyond the borders of the U.S. Only the cancer rates of future generations will demonstrate the environmental damage caused by nuclear testing.

In the U.S., the most dangerous instance of radioactive contamination occurs at weapons manufacturing facilities. Most of these facilities would be out of business once a CTB took effect, because new warheads would not need to be manufactured.

7. STRENGTHENING SCIENTIFIC COOPERATION

The exchange of U.S. and Soviet scientific personnel and information to monitor a CTB would create a more stable superpower relationship. Such exchanges have proven useful in determining Soviet intentions and capabilities. Regular exchanges of high-ranking scientific personnel can only contribute to a better understanding on both sides of the real issues that divide them.

KNOWN NUCLEAR TESTS WORLDWIDE, 1945 TO DECEMBER 31, 1990

Year	U.S.	S.U.	U.K.	FR	CH	Total
1945	3	0	0	0	0	3
1946	2	0	0	0	0	2
1947	0	0	0	0	0	0
1948	3	0	0	0	0	3
1949	0	1	0	0	0	1
1950	0	0	0	0	0	0
1951	16	2	0	0	0	18
1952	10	0	1	0	0	11
1953	11	4	2	0	0	17
1954	6	7	0	0	0	13
1955	18	5	0	0	0	23
1956	18	9	6	0	0	33
1957	32	15	7	0	0	54
1958	77	29	5	0	0	111
1959	0	0	0	0	0	0
1960	0	0	0	3	0	3
1961	10	50	0	2	0	62
1962	96	44	2	1	0	143
1963	44	0	0	3	0	47
1964	38	6	1	3	1	49
1965	36	10	1	4	1	52
1966	43	15	0	7	3	68
1967	34	17	0	3	2	56
1968	45	15	0	5	1	66
1969	38	16	0	0	2	56
1970	35	17	0	8	1	61
1971	17	19	0	6	1	43
1972	18	22	0	3	2	45
1973	16	14	0	5	1	36
1974	14	18	1	8	1	42
1975	20	15	0	2	1	38
1976	18	18	1	4	4	45
1977	19	18	0	6	1	44
1978	17	27	2	8	3	57
1979	15	29	1	9	1	55
1980	14	21	3	13	1	52
1981	16	22	1	12	0	51
1982	18	32	1	6	1	58
1983	17	27	1	9	2	56
1984	17	29	2	8	2	58
1985	17	9	1	8	0	35
1986	14	0	1	8	0	23
1987	14	23	1	8	1	47
1988	14	17	0	8	1	40
1989	11	7	1	8	0	27
1990	8	1	1	6	2	18
	929	**715***	**43**	**186***	**36**	**1,910***

*Totals include 85 Soviet and 2 French tests not identified by date, and one 1974 underground explosion by India.

Fewer nuclear tests were conducted in 1990 than in any year since 1954, excluding the U.S./U.K./Soviet moratorium of November 1958 to September 1961.

Since 1945 at least 1,910 known nuclear test explosions have been conducted, about 86 percent of them by the United States and Soviet Union. For the entire period the average has been one test every nine days. Dating from each country's first explosion, the rate for the United States is one test every 18 days; Soviet Union, one test every 22 days; France, one test every 61 days; China, one test every 266 days; and the United Kingdom, one test every 330 days.

The United States does not announce all of its tests. The U.S. total includes 116 unannounced tests, the most recent of which was conducted on April 6, 1990. It is likely that several dozen more remain to be discovered. Twenty-seven of the total were peaceful nuclear explosions (PNEs) conducted between 1961 and 1973. Recent annual U.S. testing budgets have been approximately $600 million. Vertical shaft tests cost around $30 million each, and the more complicated horizontal-tunnel weapons-effects tests cost $50–60 million each.

Included in the Soviet total are 18 tests which, according to the Swedish National Defense Research Institute, took place between 1949 and 1958 but for which a breakdown by year is not available. Information has now come to light on other, previously unreported Soviet tests. In an article on the seismic characteristics of 96 tests conducted at Semipalatinsk between October 1961 and the end of 1972 (*Atomic Energy*, September 1989), Soviet scientists revealed that one additional test was conducted on October 14, 1965, and two additional tests were conducted in 1968, on October 21 and November 11. A U.S. scientist who reexamined the Soviet seismic record discovered two tests, one conducted on March 20, 1976, and one on July 19, 1982. These five documented tests have been added to the list, bringing the number of Soviet tests with known dates to 630. However, V.N. Mikhailov, the key official of the Ministry of Atomic Power and Industry, confirms that there have been additional tests. Mikhailov put the total number of Soviet tests (excluding the October 24, 1990, test) at 714 (see "Nuclear Notebook," November 1990). Mikhailov said that a total of 467 weapons tests have been conducted in Kazakhstan, and 131 on the Arctic island of Novaya Zemlya. Mikhailov specified that since 1963, there have been 499 underground weapons tests—343 in Kazakhstan, and 131 at Novaya Zemlya. Another 115 underground explosions were carried out for "peaceful purposes." While these new figures are important, contradictions remain which may eventually be resolved by future disclosures.

Beginning in 1962, the United Kingdom has conducted 22 of its 43 tests jointly with the United States at the Nevada Test Site.

A French Ministry of Defense document is the only source of information on five of the French tests. Two of these tests, included only in the total, occurred sometime between 1975 and 1977, but their exact dates are unknown.

The precise dates of all 36 Chinese tests are now known. The overall total includes one Indian underground test on May 18, 1974.

A New Road to a Comprehensive Test Ban

Fulfilling the promise of the Partial Test Ban Treaty: to end all nuclear weapons testing for all time

President Kennedy ratifying the Partial Test Ban Treaty after receiving the advice and consent of the U.S. Senate, October 7, 1963. Left to right: Senator Pastore, chief negotiator Averell Harriman, Senator Smathers, Senator Fulbright, Secretary-of-State Dean Rusk, Senator Aiken, Senator Humphrey. (Courtesy John F. Kennedy Library)

1963

"I think President Kennedy would be deeply disappointed to know that today, 24 years later, we still have no comprehensive nuclear test ban. And I think he would salute the effort to utilize one of the provisions of the Treaty for a conference of member nations to convert that Partial Test Ban Treaty into a comprehensive test ban. . . ."

Ted Sorensen
Special Counsel to President Kennedy on the 24th anniversary of the signing of the Treaty

1987

Press conference at the United Nations, August 5, 1987. Left to right, Carl Sagan, Ólafur Ragnar Grímsson, Paul Warnke, Ted Sorensen

PARLIAMENTARIANS GLOBAL ACTION

August 5, 1987 — Twenty-four years after the Partial Test Ban Treaty was signed, Global Action publicly launched its campaign to work for a comprehensive test ban through a new method: an amendment conference to the Partial Test Ban Treaty. A press conference, held at the United Nations on the anniversary of the signing of the Treaty, highlighted the broad international support the amendment conference proposal has already gathered.

While the press conference represented the first time this new method to work for a comprehensive test ban was presented publicly, Global Action has researched and built support for the proposal for two years.

The proposal advocates use of the legal right that the non-nuclear states have under the Treaty's amendment provision to convene an international conference of the 115 signatory states to consider transforming the Treaty into a comprehensive test ban.

Global Action press conference at the United Nations, August 5, 1987. Left to right, Carl Sagan, Director of the Laboratory for Planetary Studies, Cornell University; Olafur Ragnar Grimsson, President and Chairman, Global Action; Paul Warnke, chief US arms control negotiator during the Carter Administration; Ted Sorensen, Special Counsel to President Kennedy; Carl Kaysen, Executive Advisor, US delegation to the Partial Test Ban Treaty negotiations.

Mexican Ambassador Moya-Palencia speaks at the press conference. Left to right: Peruvian Ambassador Alzamora; Ambassador Moya-Palencia; William Epstein, Secretary-General U Thant's representative to the 1962-63 test ban negotiations; Yugoslav Minister Djokić.

"Mexico recently has joined in the promotion of the idea to amend the Partial Test Ban Treaty in order to achieve the complete prohibition of all nuclear weapons tests. We are, of course, fully conscious that any amendment to the Partial Test Ban Treaty will require its acceptance by the three Depository Governments, the United Kingdom, the United States and the Soviet Union. But an amendment conference will serve to demonstrate to world public opinion the almost unanimous position of the international community regarding these questions. This can be seen in the broad support that in the last two years has been given to the General Assembly resolution on this question."

Ambassador Moya-Palencia,
Permanent Representative to the UN from Mexico

The Amendment Conference and the United States

Q: *"Do you think that we should have to wait for a change of administration (in the U.S.) before the results of your parliamentary discussion can be put into operation? Or can we go into action right away once you've made a decision, whenever you've met?"* — Reporter at press conference.

Paul Warnke: "I think that this new negotiating forum could be activated while the Reagan Administration is in office. Now I don't think a treaty could be concluded without the cooperation of the United States, and as a consequence I would not anticipate that could be done before 1989. But the negotiations certainly could begin to take place, and the actual amendment could be framed. And that would probably take a period of about a year anyway."

Ted Sorensen: "I look upon such an amendatory conference as a means of mobilizing opinion both in this country and around the world to induce Washington and the other governments to do their part in concluding a comprehensive test ban treaty."

The Partial Test Ban Treaty is also referred to as the Limited Test Ban Treaty

"Together the United States and the Soviet Union have amassed an arsenal of nearly 60,000 tactical and strategic nuclear weapons. A tiny fraction of which would be sufficient to destroy the global civilization surely and conceivably put at risk the human species. And yet the two nations feel they do not have nuclear weapons of sufficient diverse and useful sorts. They desperately need more. . . . My point of view is that the single most effective, most easily implemented, most easily verified way to pull the rug out from under the nuclear arms race is a comprehensive test ban treaty and I applaud the initiative of Parliamentarians Global Action."

Carl Sagan,
Director of the Laboratory for Planetary Studies, Cornell University

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"Previous methods which have been used to negotiate a comprehensive test ban — bilateral superpower talks, trilateral negotiations that broke down in 1980, and the Conference on Disarmament in Geneva — have failed to achieve the desired result. Therefore, there is a great urgency to use a new method, which is provided by the Partial Test Ban Treaty, to mobilize the political forces that have for a long time favoured a comprehensive test ban. Through this method, governments, parliaments, public movements, scientists, and individual citizens can all cooperate to exert the pressure needed to end nuclear testing."

Ólafur Ragnar Grímsson,
President and Chairman, Parliamentarians Global Action

"The question in everybody's mind is why is it that 24 years after the signing of a Limited Test Ban Treaty we still do not have a comprehensive test ban. As you know, the signatories undertook to pursue a halt to all testing of all nuclear weapons for all time. And why that hasn't occurred, it seems to me, is attributable largely to a lack of political will. . . . So I welcomed this effort because it seems to me that this is one way to galvanize world support, to awaken the American public, to publicize the benefits of a comprehensive test ban. It is the most important single step that could be taken to prevent proliferation. If the United States, the Soviet Union, other signatories, including Great Britain, were to forego all testing of all nuclear explosive devices, it would be much easier to marshal world opinion, to prevent other countries from getting into the nuclear weapons business."

Paul Warnke,
Chief US arms control negotiator during the Carter Administration

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"I remember very clearly 24 years ago today those of us who had been involved on the Washington end joined with President Kennedy in his office as he received the telephone report from Averell Harriman in Moscow that after a relatively brief period of negotiations the Limited Test Ban Treaty had been signed. It was, as President Kennedy later said to the country, an historic step: the first step in slowing the nuclear arms race. But he also said it was a very small step. You may recall the old adage that he invoked — a journey of a thousand miles begins with a single step. . . . I was very proud of my small role 24 years ago; but I would hope that if we're going to go on a journey of a thousand miles we can take more than one step every 24 years."

Ted Sorensen,
Special Counsel to President Kennedy

"In our relation with the great majority of other states, we and the Soviet Union, less so the United Kingdom, stand in the posture of great bad faith. . . . The kind of proposals that we and the Soviet Union are in the process of negotiating, would leave us with arsenals still many times bigger than each of us had in 1963. So that as a step in moving us back to a posture of good faith, to a posture that says arms negotiations are not merely a blind, a camouflage, the extension from a partial to a comprehensive test ban treaty would be a most important and valuable step."

Carl Kaysen,
Executive Officer, US delegation to the
Partial Test Ban Treaty negotiations

"Let our descendants look back and see a beginning— not a light that briefly burned and slowly flickered out." —Averell Harriman

"When, in 1963, we rose from the round table in Moscow having agreed to the partial ban, there was a sense of elation. But the years since then have shown that what we agreed did all but nothing either to stem the nuclear arms race between the two superpowers or to prevent other states from joining the nuclear club. . . .

"I have never stopped believing that the decisive move that must be made, if the current situation is not to worsen, is to conclude an effective C.T.B. without further delay. The hesitant steps to this goal that have been taken since 1963 have so far always been frustrated. It is therefore my earnest wish that what Parliamentarians Global Action now proposes will achieve the success it deserves."

Lord Zuckerman, Scientific Adviser to British Prime Minister Harold Macmillan

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"Twenty-four years after the conclusion of the Test Ban Treaty it is now time for all nations supporting a ban on nuclear testing to take the necessary action. . . . The prospects of amending the Partial Test Ban Treaty into a comprehensive test ban must be explored. Greenpeace supports Parliamentarians Global Action in its amendment conference efforts. It's a grand opportunity for international cooperation in the interest of global security."

David McTaggart
Chairman, Greenpeace International

"I believe that this 25th year is a fitting time to initiate an international discussion with the hope that we might be well on our way to achieving the goal of a CTB by the 25th anniversary of the LTBT on August 5, 1988."

Glenn Seaborg, Chairman
U.S. Atomic Energy Commission, 1961-1971

"Your plan for international action to stop all testing will provide a valuable focus for activity around the world."

Admiral Gene LaRocque
Director, The Center for Defense Information

Averell Harriman and Soviet Premier Kruschev celebrating the day after the signing of the Partial Test Ban Treaty

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"It is now nearly 25 years since the Limited Test Ban Treaty was signed. As Averell said on the 20th anniversary of its signing in 1983, 'The Limited Test Ban Treaty demonstrates that nuclear control can be done even in difficult times. Let our descendants look back upon it and see a beginning — not a light that briefly burned and slowly flickered out. . . . The opportunity for constructive action exists today.' "

Pamela C. Harriman

"On the eve of Hiroshima Day I convey to you our support for your efforts to initiate the extension of the existing Partial Test Ban Treaty to a comprehensive one. This would facilitate all projects for a final nuclear disarmament the world over."

Dr. Hans-Jochen Vogel
Chairman, Social Democratic Party of Germany

For more information, write to
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(A Background Piece for the ICTBC from Parliamentarians Global Action)

A Partial Test Ban Treaty Amendment Conference

How can it be initiated?

Will the US comply and help convene it?

Will the US attend and negotiate in good faith?

Is this the best way to a comprehensive test ban treaty?

What role can the peace movement play?

For eight years, the Reagan Administration has studiously avoided negotiations on a comprehensive test ban treaty. Yet in his final year in office, President Reagan may find himself under strict treaty obligation to begin the convening of multilateral comprehensive test ban treaty negotiations. And his successor in the White House will have to prepare for the opening of these negotiations in the early days of the new administration.

How is it that the prospect of multilateral comprehensive test ban treaty negotiations could improve so dramatically even while President Reagan is in office?

The answer can be found in the 1963 Partial Test Ban Treaty, the very Treaty whose 25th anniversary we are commemorating this year. The first article of the Treaty banned testing in the atmosphere, under water, and in outer space. This did much to protect the environment from the worst effects of radiation from nuclear explosions, but it did little to stop nuclear weapons development. There was a gaping "loophole": underground explosions were not banned.

Since 1963, 110 non-nuclear nations have joined the three "Original Parties" to the Treaty — the US, UK and USSR. These nations have hoped, over all these years, that the promise in the Partial Test Ban Treaty, "to achieve the discontinuance of all test explosions of nuclear weapons for all time," would be fulfilled. After 25 years, with no results forthcoming from the nuclear powers, the non-nuclear states are taking matters into their own hands. They have turned to the second article of the Partial Test Ban Treaty: its provisions for considering and adopting amendments to the Treaty.

Using the United Nations as a spring board, six non-nuclear nations — Indonesia, Mexico, Peru, Sri Lanka, Venezuela, and Yugoslavia — have drawn the attention of the non-nuclear world to the possibility of amending the 1963 Treaty to close the underground testing loophole. At its most recent session, the General Assembly mandated activation of the Partial Test Ban Treaty's amendment procedure through "formal submission of an amendment proposal to the Depositary Governments" — the three Original Parties.

When this is done (and it can be done at any time by even a single country) the nuclear powers will be required by the Treaty to circulate the proposal to all 110 non-nuclear parties. If one-third of the parties like the proposal (over two-thirds supported the call for action at the UN), the amendment conference is on. And it is up to President Reagan, Prime Minister Thatcher, and General Secretary Gorbachev, whatever their opinion of the proposed amendment, to see that the amendment conference is convened.

The Soviet Union is ready to proceed in this way; Gorbachev personally declared so in his major address on international security in January 1986 and the Soviet Union has voted accordingly at the UN. Only the United States, the United Kingdom, and France opposed the General Assembly decision. The French vote is irrelevant since France is not even a party to the Partial Test Ban Treaty. But the US and UK are Original Parties; will they carry out their ministerial duties as Depositary Governments?

Will President Reagan comply with a treaty obligation to convene an amendment conference to consider converting the Partial Test Ban Treaty into a comprehensive test ban treaty?

The administration has put great emphasis on the issue of treaty compliance. To then turn around and blatantly disregard a clear-cut treaty obligation would smack of the worst hypocrisy. The US Senate would undoubtedly take note. It has a stake in this matter since it is the body which ratified the Partial Test Ban Treaty in October 1963. The constitutional issues that have arisen in the last year around Senate ratification of treaties would become even more acute if the administration contrived a new "interpretation" of the Partial Test Ban Treaty in order to avoid its clear-cut ministerial duties under the Treaty.

Both Houses of Congress have passed resolutions by wide margins calling for comprehensive test ban negotiations. Since the Soviets agreed last fall to a nuclear-test-talks agenda, however, it has become difficult for Congress to press this issue. According to US officials, this agenda puts off comprehensive test ban negotiations well into the next century. A legally based demand from the non-nuclear world for comprehensive test ban treaty negotiations would be welcomed by the Congress. Any administration effort to thwart this initiative would be sure to elicit a strong congressional reaction.

Even if the administration did obstruct the convening of the conference, the most it could do is delay matters. Either the next US administration would renounce such a policy and move to convene the amendment conference, or the Soviets, having waited to proceed in cooperation with the US and the UK, would carry out the task alone -- as would be its right and, indeed, its obligation.

For these immediate reasons, and for other important long-range considerations to be discussed in the next section, it is most likely that the Reagan Administration will grudgingly carry out its ministerial duties, passing the "problem" on to the next administration. In any case, a new set of issues will arise for the next US administration as the opening of the amendment conference approaches in the first half of 1989.

Once the amendment conference is convened, will the United States attend and negotiate for a comprehensive test ban treaty in good faith?

To approve an amendment to the Treaty, the US, the UK, and the USSR must be brought on board, since, by terms of the Treaty, majority approval must include the three votes of the Original Parties. As a legal maneuver, a boycott of the conference by any of the big three would derail an amendment effort. In political terms, however, such a policy would be a disastrous. It would have particularly dire consequences for the international non-proliferation regime.

The promise in the Partial Test Ban Treaty to seek an end to testing is reiterated in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). In Article VI the parties to the treaty have pledged themselves "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms at an early date."

The NPT went into force in 1970 and has a 25 year life span. Every five years it is subject to review by the member states. At the 1975, 1980, and 1985 reviews by far the most contentious issue has been the continued nuclear weapon testing by the US, the UK, and the USSR. At the next review in 1990, the question of nuclear weapon testing will be at the top of the agenda of the non-nuclear states. The 1990 review is the last before 1995 when the future of the NPT beyond its original 25 years in force is to be addressed by a treaty renewal conference. A simple majority of all the parties — with no special role for the nuclear weapon states -- will determine the fate of the NPT.

US behavior at a Partial Test Ban Treaty amendment conference would provide a "litmus test" of its intentions under Article VI of the NPT. One hundred nations are parties to both the Partial Test Ban Treaty and the NPT. A boycott of the Partial Test Ban Treaty amendment conference, or a manifest unwillingness to negotiate in good faith, would leave the United States open to the harshest criticism at the 1990 NPT review. It would totally undermine its ability to advocate strict adherence to the NPT, and would nullify any positive role the US might hope to play in the five years leading up to the NPT renewal conference.

It is widely believed that the most likely way that nuclear war may begin is with the use of nuclear weapons by some lesser power. The non-proliferation regime, that has thus far held this nightmare at bay, depends upon international confidence in

the NPT. It would be foolhardy for any US adminstration to undercut its influence in the NPT simply to avoid consideration of a comprehensive test ban treaty. Indeed any presidential or congressional candidate who failed to show awareness of this point might well lose the support of the electorate.

Even when negotiations are conducted in good faith, they do not always produce results. Is the amendment approach the best way to achieve a multilateral comprehensive test ban treaty?

Right now it is the best because it is the only way — all other ways forward are stalled or blocked. As already mentioned the bilateral test talks will not begin negotiation of a comprehensive test ban treaty for many, many years. For eight years, the multilateral fora in Geneva, the Conference on Disarmament, has been prevented from going ahead on the test-ban because of a US veto over the mandate for such talks.

The next US president may consider accelerating the pace of the bilateral negotiations or permitting multilateral work to begin in Geneva. But will he act? There will be entrenched opinion in important government circles opposing action. If an amendment conference is already in the process of being convened (or if it is a matter of correcting a policy of non-compliance), the president may find that it is easier to "react" on the test-ban issue .

The public might also find it easier to influence the test-ban talks at an amendment conference. They will not have to choose between the bargaining positions of East and West as they so often are forced to do in bilateral negotiations. There will be balanced proposals advanced by non-aligned nations whose only motive is to end the nuclear arms race. These proposals will be on the table for all to openly discuss, and contain verification measures as good as any bilateral agreement might produce.

The amendment route could, also, have a unique, direct impact on the problem of nuclear proliferation. Many nations would immediately sign on to a comprehensive test ban treaty no matter how it had been negotiated. But would the most crucial nations sign up: specifically those non-nuclear nations with nuclear weapons capability who have not signed the NPT — Pakistan, India, Argnetina, Brazil, Israel, and South Africa?

All these "threshold" nations are parties to the Partial Test Ban Treaty. In fact, with the exception of non-voting South Africa, they have all supported the UN resolution of an amendment conference. But even without their support, an amendment conference could aprrove an amendment to the Partial Test Ban Treaty. If the amendment were then ratified by a majority of the parties (that includes the Original Parties) it would become automatically binding on <u>every</u> party to the Treaty whether or not they have ratified the amendment. No other arms control treaty has an amendment procedure with this feature. Stopping the testing of nuclear weapons is one of the best ways of keeping these nations out of "regional" nuclear arms races.

Much of this test-ban strategy involves international diplomacy. What role is there for the peace movement?

The whole idea of using the Partial Test Ban Treaty's amendment procedure came from a peace group. Parliamentarians Global Action, one of the founding organizations of the International Comprehensive Test Ban Campaign, first began advocating this new approach to a test-ban in 1985. It played a part in the efforts at the United Nations to move the concept forward. Today it is working closely with the nations that co-sponsored the 1987 UN resolution to ensure that it is implemented, i.e. that the amendment procedure is activiated. Global Action will stay at the center of action if an amendment conference is called, both as a source of expert advice to the leading non-aligned countries and through the participation of parliamentarians from several countries in the official delegations to the amendment conference. Global Action will, of course, continue to work closely with other peace groups through the International Comprehensive Test Ban Campaign.

The peace movement can help make the most of this new initiative:

— There is an immediate need for education on the amendment conference approach. It is completely new to most people, even seasoned veterans of the arms-control community.
-- Global Action is urging individuals and groups to encourage Treaty action by the lead nations (Indonesia, Mexico, Peru, Venezuela, Sri Lanka, and Yugoslavia) by writing letters and visiting their embassies, consulates and missions.
— Once action is taken, Secretary Shultz and President Reagan should be pressed to commitment the US to strict compliance with its obligation to convene an amendment conference.
— If there is any foot dragging by the administration, Congress should be aroused to apply pressure for proper compliance.
— If candidate for the House or Senate are not advocating a test-ban and compliance with the Partial Test Ban Treaty amendment effort, they should be challenged on this and on their non-proliferation credentials.
— The president-elect should be pressed to adopt a constructive approach to the amendment conference, both to strengthen the US position within the NPT and to take advantage of approving an amendment that could "rope in" some of the nuclear threshold nations.
— The convening of the amendment conference, probably in New York City at the UN, would supply a superb opportunity for a show of numbers by test-ban supporters nationally and world-wide.
— Once a concrete proposal for a fully verified comprehensive test ban treaty is on the table, it can used as the centerpiece for a political campaign to press the nuclear powers to end testing.

It would be an outstanding breakthrough for the International Comprehensive Test Ban Campai ,n, if during its first year of activity, dedicated to commemorating the Partial Test Ban Treaty, an amendment conference was place on the agenda of the international community. It would help to remind Americans who already support a comprehensive test ban treaty that the rest of the world cares deeply about this issue and is prepared to act in concert with us. And it would set the stage for effective action in 1989 for a new test-ban policy from a new US administration.

Commencement Address
American University in Washington
(Excerpts)
President John F. Kennedy

June 10, 1963

I have. . .chosen this time and place to discuss a topic on which ignorance too often abounds and the truth is too rarely perceived — yet it is the most important topic on earth: world peace.

What kind of peace do I mean? Not a *Pax Americana* enforced on the world by American weapons of war. Not the peace of the grave or the security of the slave. I am talking about genuine peace, the kind of peace that makes life on earth worth living, the kind that enables men and nations to grow and to hope and to build a better life for their children — not merely peace for Americans but peace for all men and women — not merely peace in our time but peace for all time.

I speak of peace because of the new face of war. Total war makes no sense in an age when great powers can maintain large and relatively invulnerable nuclear forces and refuse to surrender without resort to those forces. It makes no sense in an age when a single nuclear weapon contains almost ten times the explosive force delivered by all of the allied forces in the Second World War. It makes no sense in an age when the deadly poisons produced by a nuclear exchange would be carried by wind and water and soil and seed to the far corners of the globe and to generations yet unborn.

Today the expenditure of billions of dollars every year on weapons acquired for the purpose of making sure we never need to use them is essential to keeping the peace. But surely the acquisition of such idle stockpiles — which can only destroy and never create — is not the only, much less the most efficient, means of assuring peace. . . .

Some say that it is useless to speak of world peace or world law or world disarmament — and that it will be useless until the leaders of the Soviet Union adopt a more enlightened attitude. I hope they do. I believe we can help them do it. But I also believe that we must re-examine our own attitude — as individuals and as a Nation — for our attitude is as essential as theirs. And every graduate of this school, every thoughtful citizen who despairs of war and wishes to bring peace, should begin by looking inward — by examining his own attitude toward the possibilities of peace, toward the Soviet Union, toward the course of the cold war and toward freedom and peace here at home.

First: Let us examine our attitude toward peace itself. Too many of us think it is impossible. Too many think it unreal. But that is a dangerous, defeatist belief. It leads to the conclusion that war is inevitable — that mankind is doomed — that we are gripped by forces we cannot control.

We need not accept that view. Our problems are manmade — therefore, they can be solved by man. And man can be as big as he wants. No problem of human destiny is beyond human beings. Man's reason and spirit have often solved the seemingly unsolvable — and we believe they can do it again.

I am not referring to the absolute, infinite concept of universal peace and good will of which some fantasies and fanatics dream. I do not deny the value of hopes and dreams but we merely invite discouragement and incredulity by making that our only and immediate goal.

Let us focus instead on a more practical, more attainable peace — based not on a sudden revolution in human nature but on a gradual evolution in human institutions — on a series of concrete actions and effective agreements which are in the interest of all concerned. There is no single, simple key to this peace — no grand or magic formula to be adopted by one

"Among the many traits the peoples of our two countries have in common, none is stronger than our mutual abhorrence of war. Almost unique, among the major world powers, we have never been at war with each other."

or two powers. Genuine peace must be the product of many nations, the sum of many acts. It must be dynamic, not static, changing to meet the challenge of each new generation. For peace is a process — a way of solving problems.

With such a peace, there will still be quarrels and conflicting interests, as there are within families and nations. World peace, like community peace, does not require that each man love his neighbor — it requires only that they live together in mutual tolerance, submitting their disputes to a just and peaceful settlement. And history teaches us that enmities between nations, as between individuals, do not last forever. However fixed our likes and dislikes may seem, the tide of time and events will often bring surprising changes in the relations between nations and neighbors.

"For we are both devoting massive sums of money to weapons that could be better devoted to combating ignorance, poverty and disease."

So let us persevere. Peace need not be impracticable, and war need not be inevitable. By defining our goal more clearly, by making it seem more manageable and less remote, we can help all peoples to see it, to draw hope from it, and to move irresistibly toward it.

Second: Let us re-examine our attitude toward the Soviet Union. It is discouraging to think that their leaders may actually believe what their propagandists write. It is discouraging to read a recent authoritative Soviet text on *Military Strategy* and find, on page after page, wholly baseless and incredible claims — such as the allegation that "American imperialist circles are preparing to unleash different types of wars. . .that there is a very real threat of a preventive war being unleashed by American imperialists against the Soviet Union. . .[and that] the political aims of the American imperialists are to enslave economically and politically the European and other capitalist countries. . .[and] to achieve world domination. . .by means of aggressive wars."

Truly, as it was written long ago: "The wicked flee when no man pursueth." Yet it is sad to read these Soviet statements — to realize the extent of the gulf between us. But it is also a warning — a warning to the American people not to fall into the same trap as the Soviets, not to see only a distorted and desperate view of the other side, not to see conflict as inevitable, accommodation as impossible, and communication as nothing more than an exchange of threats.

No government or social system is so evil that its people must be considered as lacking in virtue. As Americans, we find communism profoundly repugnant as a negation of personal freedom and dignity. But we can still hail the Russian people for their many achievements — in science and space, in economic and industrial growth, in culture and acts of courage.

Among the many traits the peoples of our two countries have in common, none is stronger than our mutual abhorrence of war. Almost unique, among the major world powers, we have never been at war with each other. And no nation in the history of battle ever suffered more than the Soviet Union suffered in the course of the Second World War. At least 20 million lost their lives. Countless millions of homes and farms were burned or sacked. A third of the nation's territory, including nearly two-thirds of its industrial base, was turned into a wasteland — a loss equivalent to the devastation of this country east of Chicago.

Today, should total war ever break out again — no matter how — our two countries would become the primary targets. It is an ironic but accurate fact that the two strongest powers are the two in the most danger of devastation. All we have built, all we have worked for, would be destroyed in the first 24 hours. And even in the cold war, which brings burdens and dangers to so many countries, including this Nation's closest allies — our two countries bear the heaviest burdens. For we are both devoting massive sums of money to weapons that could be better devoted to combating ignorance, poverty and disease. We are both caught up in a vicious and dangerous cycle in which suspicion on one side breeds suspicion on the other, and new weapons beget counterweapons.

In short, both the United States and its allies, and the Soviet Union and its allies, have a mutually deep interest in a just and genuine peace and in halting the arms race. Agreements to this end are in the interests of the Soviet Union as well as ours — and even the most hostile nations can be

relied upon to accept and keep those treaty obligations, and only those treaty obligations, which are in their own interest.

So, let us not be blind to our differences — but let us also direct attention to our common interests and to the means by which those differences can be resolved. And if we cannot end now our differences, at least we can help make the world safe for diversity. For, in the final analysis, our most basic common link is that we all inhabit this small planet. We all breathe the same air. We all cherish our children's future. And we are all mortal.

Third: Let us re-examine our attitude toward the cold war, remembering that we are not engaged in a debate, seeking to pile up debating points. We are not here distributing blame or pointing the finger of judgement. We must deal with the world as it is, and not as it might have been had the history of the last 18 years been different.

We must, therefore, persevere in the search for peace in the hope that constructive changes within the Communist bloc might bring within reach solutions which now seem beyond us. We must conduct our affairs in such a way that it becomes in the Communists' interest to agree on a genuine peace. Above all, while defending our own vital interests, nuclear powers must avoid those confrontations which bring an adversary to a choice of either a humiliating retreat or nuclear war. To adopt that kind of course in the nuclear age would be evidence only of the bankruptcy of our policy — or of collective death-wish for the world.

To secure these ends, America's weapons are non-provocative, carefully controlled, designed to deter, and capable of selective use. Our military forces are committed to peace and disciplined in self-restraint. Our diplomats are instructed to avoid unnecessary irritants and purely rhetorical hostility.

For we can seek a relaxation of tensions without relaxing our guard. And, for our part, we do not use threats to prove that we are resolute. We do not need to jam foreign broadcasts out of fear our faith will be eroded. We are unwilling to impose our system on any unwilling people — but we are willing and able to engage in peaceful competition with any people on earth.

. . . At the same tie we seek to keep peace inside the non-Communist world, where many nations, all of them our friends, are divided over issues which weaken Western unity, which invite Communist intervention or which threaten to erupt into war. . . .

Speaking of other nations, I wish to make one point clear. We are bound to many nations by alliances. Those alliances exist because our concern and theirs substantially overlap. Our commitment to defend Western Europe and West Berlin, for example, stands undiminished because of the identity of our vital interests. The United States will make no deal with the Soviet Union at the expense of other nations and other peoples, not merely because they are our partners, but also because our interests and theirs converge.

Our interests converge, however, not only in defending the frontiers of freedom, but in pursuing the paths of peace. It is our hope — and the purpose of allied policies — to convince the Soviet Union that she, too, should let each nation choose its own future, so long as that choice does not interfere with the choices of others. The Communist drive to impose their political and economic system on others is the primary cause of world tension today. For there can be no doubt that, if all nations could refrain from interfering in the self-determination of others, the peace would be much more assured.

This will require a new effort to achieve world law — a new context for world discussions. It will require increased understanding between the Soviets and ourselves. And increased understanding will require increased contact and communication. One step in this direction is the proposed arrangement for a direct line between Moscow and Washington, to avoid on each side the dangerous delays, misunderstandings, and misreadings of the other's actions which might occur at a time of crisis.

We have also been talking in Geneva about other first-step measures of arms control, designed to limit the intensity of the arms race and to reduce the risks of accidental war. Our primary long-range interest in

"Our most basic common link is that we all inhabit this small planet. We all breathe the same air. We all cherish our children's future. And we are all mortal."

"The one major area of these negotiations where the end is in sight, yet where a fresh start is badly needed, is in a treaty to outlaw nuclear tests."

Geneva, however, is general and complete disarmament — designed to take place by stages, permitting parallel political developments to build the new institutions of peace which would take the place of arms. The pursuit of disarmament has been an effort of this Government since the 1920s. It has been urgently sought by the past three administrations. And however dim the prospects may be today, we intend to continue this effort — to continue it in order that all countries, including our own, can better grasp what the problems and possibilities of disarmament are.

The one major area of these negotiations where the end is in sight, yet where a fresh start is badly needed, is in a treaty to outlaw nuclear tests. The conclusion of such a treaty, so near and yet so far, would check the spiraling arms race in one of its most dangerous areas. It would place the nuclear powers in a position to deal more effectively with one of the greatest hazards which man faces in 1963, the further spread of nuclear arms. It would increase our security — it would decrease the prospects of war. Surely this goal is sufficiently important to require our steady pursuit, yielding neither to the temptation to give up the whole effort nor the temptation to give up our insistence on vital and responsible safeguards.

"While we proceed to safeguard our national interests, let us also safeguard human interests. And the elimination of war and arms is clearly in the interest of both."

I am taking this opportunity, therefore, to announce two important decisions in this regard.

First: Chairman Khrushchev, Prime Minister MacMillan, and I have agreed that high-level discussions will shortly begin in Moscow looking toward early agreement on a comprehensive test ban treaty. Our hopes must be tempered with the caution of history — but with our hopes go the hopes of all mankind.

Second: To make clear our good faith and solemn convictions on the matter, I now declare that the United States does not propose to conduct nuclear tests in the atmosphere so long as other states do not do so. We will not be the first to resume. Such a declaration is no substitute for a formal binding treaty, but I hope it will help us achieve one. Nor would such a treaty be a substitute for disarmament, but I hope it will help us achieve it.

Finally, my fellow Americans, let us examine our attitude toward peace and freedom here at home. The quality and spirit of our own society must justify and support our efforts abroad. We must show it in the dedication of our own lives. . .

It is the responsibility of the executive branch at all levels of government — local, State and National — to provide and protect that freedom for all of our citizens by all means within their authority. It is the responsibility of the legislative branch at all levels, wherever that authority is not now adequate, to make it adequate. And it is the responsibility of all citizens in all sections of this country to respect the rights of all others and to respect the law of the land.

All this is not unrelated to world peace. . .[I]s not peace, in the last analysis, basically a matter of human rights — the right to live out our lives without fear of devastation — the right to breathe air as nature provided it — the right of future generations to a healthy existence?

While we proceed to safeguard our national interests, let us also safeguard human interests. And the elimination of war and arms is clearly in the interest of both. No treaty, however much it may be to the advantage of all, however tightly it may be worded, can provide absolute security against the risks of deception and evasion. But it can — if it is sufficiently effective in its enforcement and if it is sufficiently in the interests of its signers — offer far more security and far fewer risks than an unabated, uncontrolled, unpredictable arms race.

The United States, as the world knows, will never start a war. We do not want a war. We do not expect a war. This generation of Americans has already had enough — more than enough — of war and hate and oppression. We shall be prepared if others wish it. We shall be alert to try to stop it. But we shall also do our part to build a world of peace where the weak are safe and the strong are just. We are not helpless before that task or hopeless of its success. Confident and unafraid, we labor on — not toward a strategy of annihilation but toward a strategy of peace.

STATEMENT OF THE INTERNATIONAL COMPREHENSIVE TEST BAN CAMPAIGN

On the occasion of the 25th anniversary year of the signing of the Partial Test Ban Treaty, the undersigned organizations and individuals join together in an intensified international campaign to halt nuclear testing.

We are agreed:

- that the achievement of a Comprehensive Test Ban would prevent the creation of new more costly and dangerous nuclear weapons and that this ban is an urgent and indispensible step to halt and reverse the nuclear arms race;
- that a Comprehensive Test Ban would help to prevent further radiological contamination of the human and global environment;
- that effective verification of a Comprehensive Test Ban is now possible and that the $20-$70 million cost of each test and the billions of dollars that would be saved by forgoing new nuclear weapon systems should be directed to the improvement of the living conditions of people worldwide; and
- that a Comprehensive Test Ban is necessary to fulfill the legal obligation of signers of the Partial Test Ban Treaty and the Non-Proliferation Treaty "to seek the discontinuance of all test explosions of nuclear weapons for all time."

We thereby call on:

1) the United States, the Soviet Union and all other nuclear weapons states to declare an immediate moratorium on nuclear testing;
2) the United Kingdom, the United States and the Soviet Union to immediately resume negotiations on a Comprehensive Test Ban within the Conference on Disarmament in Geneva and we urge France and China to join in the negotiations;
3) non-nuclear weapons states party to the Partial Test Ban Treaty to implement without delay the United Nations mandate to convene an amendment conference to consider converting the Partial Test Ban Treaty into a Comprehensive Test Ban Treaty; and
4) all nations to conclude a binding, verifiable Comprehensive Test Ban Agreement prior to the 1990 Non-Proliferation Treaty Review Conference.

Linking with international organizations, we commit ourselves to working together on a series of activities and events in 1988, to include:

- a call for a Comprehensive Test Ban at the United Nations Third Special Session on Disarmament;
- the designation of August 5th, 1988, as International Test Ban Day; and
- local, national and international events and religious observances in conjunction with Hiroshima commemorations August 5th-7th.

Furthermore, we will call attention, through a worldwide alert network, to every nuclear test explosion.

NUCLEAR TESTING ISSUES IN BRIEF

WHY SUPPORT A COMPREHENSIVE TEST BAN TREATY (CTB)? A CTB WOULD:

- BUILD CONFIDENCE in weapons reductions agreements. In an era of negotiated cuts in nuclear arms, each side would be assured that the other is not developing new weapons.
- HAMPER DEVELOPMENT of new Soviet and American nuclear weapons, including planned "third generation" nuclear weapons. This new generation of weapons includes more powerful and accurate "first strike" weapons and components of the destabilizing Strategic Defense Initiative.
- INHIBIT THE SPREAD of nuclear weapons to additional countries. A CTB would eliminate incentives for proliferation, assuring currently non-nuclear countries that the superpowers are trying to stop the arms race.
- REDUCE HEALTH RISKS from the contamination of the environment with radioactive materials. Roughly one-third of all underground tests have vented radioactivity. A CTB would put out of business dangerous nuclear warhead production facilities with extremely poor health and safety records.
- SAVE BILLIONS of dollars that would otherwise be spent on the development, procurement and maintenance of new, dangerous nuclear weapons systems.

A CTB CAN BE VERIFIED:

In May 1986, the Natural Resources Defense Council (NRDC), a private U.S. research organization, agreed with the Soviet Academy of Sciences to jointly monitor U.S. and Soviet underground nuclear tests using seismic verification techniques. Seismic monitoring is a non-intrusive. cost-effective means of monitoring all nuclear test explosions.

NRDC and Soviet equipment has accurately measured U.S. and Soviet nuclear tests and detected secret US nuclear tests. Seismic verification has been proven able to detect even very small nuclear tests from hundreds of miles away. Although the Soviets favor seismic verification techniques, they have agreed to U.S. demands to use CORRTEX verification methods to verify the 150 kiloton threshold provision of two past treaties. CORRTEX requires on-site monitoring.

A CTB WOULD NOT ENDANGER WEAPONS STOCKPILE RELIABILITY:

Former directors of Los Alamos and Livermore national laboratories concede that explosive "proof testing" is not required to identify or remedy defective warheads. Nuclear weapons can be remanufactured periodically to assure reliability.

THERE IS STRONG PUBLIC SUPPORT FOR A CTB:

Seventy-eight percent of the public wants a bilateral nuclear testing moratorium. (Cambridge Reports, Inc., February 1987). Eight States, 24 counties, and 160 communities have passed resolutions calling for a mutual moratorium and a CTB.

CURRENT SUPERPOWER POLICIES ON NUCLEAR TESTING:

In a dramatic policy reversal from all previous administrations since Eisenhower's, the Reagan Administration announced in July 1982 that it would not resume CTB talks.

In July 1985, Soviet General Secretary Gorbachev launched a 19-month moratorium on Soviet nuclear testing and appealed to the U.S. to join. Reagan refused, and continued to refuse each time Gorbachev extended the moratorium.

In the fall of 1987, the Soviet Union insisted that testing talks resume as a precondition to an agreement banning all Intermediate-Range Nuclear Forces (INF). Both sides agreed in a joint statement that a CTB would be the ultimate goal of these talks. But Reagan Administration officials immediately said a CTB was not possible for the foreseeable future.

Improvements in superpower relations since mid-1987 have made a test ban agreement more likely under a future President. Although current testing talks are unlikely to produce new testing restrictions, they set important precedents, including on-site inspections and government-level exchanges of U.S. and Soviet scientific personnel trained in nuclear testing verification issues.

NUCLEAR TESTING TREATIES NOW IN EFFECT:

Limited Test Ban Treaty (LTBT) — 1963. Prohibits nuclear tests in the atmosphere, in space, and under water, while allowing underground testing. Signed by the U.S., USSR and Great Britain.

Nuclear Non-Proliferation Treaty (NPT) — 1968. Prohibits non-nuclear states from manufacturing nuclear weapons; in exchange, the nuclear powers agreed to negotiate an end to testing and reductions in nuclear weapons. Over 130 nations are party to the NPT.

Threshold Test Ban Treaty (TTBT) — 1974. Prohibits nuclear weapons tests over 150 kilotons and urges a ban on all underground nuclear tests. Never ratified by the U.S. Senate, but observed by the U.S. and USSR.

Peaceful Nuclear Explosions Treaty (PNET) — 1976. Prohibits testing of non-weapon nuclear devices with a yield over 150 kilotons. Never ratified by the U.S. Senate, but observed by the U.S. and USSR.

RECENT CONGRESSIONAL VOTES ON NUCLEAR TESTING:

May 1987 — House of Representatives approves Aspin-Gephardt amendment, 234-187. The amendment would have suspended funds for nuclear tests above one kiloton for one year beginning January 1, 1988.

September 1987 -- U.S. Senate tables Hatfield-Kennedy amendment, 36-61. It is the first Senate vote on legislation forcing a halt in nuclear testing. The legislation would have halted tests above one kiloton, and allowed limited reliability testing over the next two years.

Repeat votes on this legislation are expected in the House and Senate in 1988.

Support the International Test Ban Treaty in 1990-91

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Contact:

Phone:

PRESS PACKET

Nuclear Test Ban Events

In Conjunction With

The Test Ban Treaty Conference

January 7-18, 1991

UN Headquarters, New York, NY

COMPREHENSIVE TEST BAN TIMELINE
September, 1990 - January, 1991

SEPTEMBER

1-3	*International Physicians for the Prevention of Nuclear War (IPPNW) South Asia Regional Conference on CTB in New Delhi*
12-15	*IPPNW European Regional Meeting on CTB in England*
24	*CTB forum in Monterey, CA*
25	*Senate ratification of Threshold Test Ban and Peaceful Nuclear Explosions Treaties*
27	*CTB forum in Oakland*
29	*CTB forum at American Public Health Association annual meeting*
Late Sept	*Greenpeace ship travels from Norway to Soviet test site at Novaya Zemlya to protest Soviet testing*

OCTOBER

2	*Vigil and demonstration at U.N.*
10	*27th anniversary of Partial Test Ban Treaty taking effect--CTB signature ads appear across U.S.*
21-22	*National actions at over 20 Dept. of Energy (DOE) facilities and other federal buildings, to protest testing*
Late Oct	*Greenpeace ship "Rainbow Warrior" travels from San Francisco to Moruroa to protest French testing*

NOVEMBER/DECEMBER

8	*Non-governmental organizations' forum on a CTB at the United Nations*
10	*CTB forum in Baltimore*
11-12	*CTB public events in St. Louis*
26-28	*Tripartite delegation (Members of Congress, House of Commons, and Supreme Soviet) meets with Gorbachev, Thatcher and Bush to present open letters from parliamentarians, elected officials, and citizens calling for test ban*
29	*CTB forum in Salt Lake City*
29-Dec 14	*Olzhas Suleimenov, leader of Soviet anti-testing movement, speaking tour of New York, Boston, Seattle, San Francisco, Los Angeles, Las Vegas, Nevada Test Site, southern Utah, and St. Louis*
Dec 15-18	*IPPNW Circumpolar Regional meeting on CTB in Leningrad*

JANUARY

4	*International CTB Conference in Las Vegas*
5	*Mass demonstration at Nevada Test Site*
5-18	*Citizens' actions at embassies worldwide; lobbying of delegates, vigils, and observing at U.N.*
6	*U.S. Conference of Mayors and Soviet mayors meeting on CTB issue in New York; reception for citizens; gala dinner for mayors, UN delegates, parliamentarians, former Kennedy administration*
7	*Religious convocation/teach-in in New York*
11	*International Lobbying Day at the U.N.*
12	*Mass demonstration at the U.N.*
13	*International meeting in New York to launch "Global Anti-Nuclear Alliance"*
7-12	*International Pacific Policy Conference, Port Vila, Vanuatu*
7-18	*TEST BAN TREATY CONFERENCE convenes at UN*

NATIONAL ORGANIZATIONS ENDORSING

A COMPREHENSIVE TEST BAN

American Association of University Women
American Baptist Churches, USA,
Office of Governmental Relations
American Ethical Union
American Medical Association
American Peace Test
American Public Health Association
Americans for Democratic Action
Center for Common Security
Center for Defense Information
Center for Innovative Diplomacy
Church of the Brethren
Church Women United
Citizen Alert
Citizens Call
Committee for National Security
Continuing the Peace Dialogue
Council for a Livable World
Council on Economic Priorities
Democratic Socialists of America
DOWNWINDERS
Fellowship of Reconciliation
Friends Committee on Nat'l Legislation
Grandmothers for Peace
Gray Panthers
Greenpeace
The Hundredth Monkey
In Vivo Radiation Response
Institute for Security & Cooperation
in Outer Space
Institute for Soviet-American
Relations
Institute for Space & Security Studies
International Association of Lawyers
Against Nuclear Arms
International Peace Walk
International Physicians for the
Prevention of Nuclear War
Jewish Action for Nuclear
Responsibility
Jobs With Peace Campaign
Lawyers Alliance for World Security
Control
Lawyers Committee for Nuclear Policy
Mennonite Central Committee
Nat'l Association of Radiation Survivors
Nat'l Committee of Radiation Victims
Nat'l Conference of Black Lawyers
Nat'l Institute for Women of Color
Nat'l Lawyers Guild
Nat'l Women's Political Caucus
Natural Resources Defense Council
Network: A Catholic Social Justice Lobby
Nevada Desert Experience
Nuclear Free America
Pax Christi USA
Peace Links
Physicians for Social Responsibility
Presbyterian Church, USA, Peace and
Justice Committee
Promoting Enduring Peace
Psychologists for Social Responsibility
Rural Americans Working for Arms
Reduction
SANE FREEZE Campaign for Global Security
SANE FREEZE Interstate Lobby Network
Southern Christian Leadership Conference
The Shalom Center
U.S. Peace Center
Union of American Hebrew Congregations
Unitarian Universalist Association of
Congregations in North America
Unitarian Universalist Peace Network
United Campuses to Prevent Nuclear War
United Church of Christ
United States Conference of Mayors
Western States Legal Foundation
Women Strike for Peace
Women's Action for Nuclear Disarmament
Women's International League for Peace
and Freedom
Women's Peace Initiative
World Federalist Association
YWCA of the USA, National Board

10/16/90

A COMPREHENSIVE TEST BAN TREATY--NOW MORE THAN EVER

The international political arena has changed dramatically in just one year. The Cold War is over, Germany is reunited, Saddam Hussein has annexed Kuwait, the U.S. has poured troops into Saudi Arabia, and the nuclear powers are now seeking mutually-agreed-upon approaches to solving the crisis in the Middle East.

Each new development points more and more clearly to the need for and the timeliness of an international comprehensive test ban (CTB).

The new climate in East/West relations makes cooperative ventures like the CTB more possible than ever before. The Soviet Union's willingness--indeed, eagerness--for a CTB is well-documented: their 18-month moratorium during 1986-87 and their repeated statements that they would join the U.S. in a bilateral test ban at any time. Hundreds of thousands of Kazakhs living downwind of the major Soviet test site at Semipalatinsk have protested the continued testing, forcing the government to close the site. The Soviet government announced it would shift its testing program to Novaya Zemlya, an island in the Artic Circle, and within days, the government of Norway, the people of Novaya Zemlya, and the President of the republic which contains the island--Boris Yeltsin--all lodged protests.

While the growing crisis in the Middle East has diverted attention from the urgent need to halt the nuclear arms race and allocate resources to domestic and environmental problems, it also serves to heighten awareness of the crucial link between the proliferation of nuclear weapons and a CTB. One has only to imagine the effect on stability in the Middle East if Iraq possessed a nuclear bomb.

Americans are deeply afraid, and rightly so, that Iraq will use chemical weapons against U.S. troops. But it is important to remember that poison gas is essentially "the poor nation's atom bomb." Since Israel has acquired a nuclear bomb and prevented Iraq from developing one by conducting an air strike against Iraq's suspected weapons grade materials plant, Iraq has felt it had the right to match the Israelis by obtaining chemical weapons.

Less than two weeks after Iraq pillaged and annexed Kuwait, the 1990 Non-Proliferation Treaty (NPT) review conference convened in Geneva, for the last time before the treaty's renewal in 1995. Angered by the U.S. steadfast refusal to halt nuclear testing--a condition for continuance written into the treaty--the non-aligned nations, led by Mexico, insisted that the final document of the review conference include a commitment by all parties to negotiate a CTB. The U.S. delegation refused. The result: there was no final document from the conference. The future of the NPT is thus clouded by U.S. insistence that it continue to test and develop new nuclear weapons systems. Without an NPT regime, global arms control could be permanently derailed.

The crucial NPT conference coincided with the equally important Partial Test Ban Treaty (PTBT) amendment conference, scheduled for January 1991--the "Test Ban Treaty Conference." This conference has been brought about by extraordinary and unprecedented steps by the non-nuclear nations. The convergence of these two conferences opens a new opportunity for challenging the recalcitrance of the U.S. and other nations opposing a CTB.

As every nuclear-age president before Reagan recognized, the most effective way to lessen nuclear tensions is through a comprehensive test ban. Not only would such an accord halt the proliferation of nuclear weapons, it would also stop the superpowers from testing ever more destablizing systems. Over the past few years, significant progress toward verifying compliance with a CTB has been made. Through seismic monitoring and on-site inspections, the means of implementing a verifiable CTB are now available.

Polls show that 75-85% of the U.S. public consistently supports a CTB. By using this politically popular and understandable approach to curbing the nuclear arms race, we can also open a broader public discourse on the convergence of environmental, development, and disarmament issues. Worldwide, native populations and others living downwind from the test sites continue to reap devastating environmental and health effects of nuclear testing in Nevada, the South Pacific and the Soviet republic of Kazakhstan. Internationally, there is no issue which commands such broad public and diplomatic support.

** NONBINDING RESOLUTIONS **

224 JURISDICTIONS NOW SUPPORT A COMPREHENSIVE TEST BAN

190 Cities
26 Counties
8 States

Have passed nonbinding resolutions favoring a comprehensive test ban:

ALABAMA:
* Cities -- Anniston

ARIZONA:
* Cities -- Tucson
* Counties -- Pima

CALIFORNIA:
* Cities -- Azusa, Costa Mesa, Fremont, Los Angeles, Monterey, Morgan Hill, Oakland, Redondo Beach, Richmond, Sacramento, San Francisco, San Jose, Santa Barbara, Santa Cruz, Santa Monica, South El Monte, Stockton, Union City, West Covina, West Hollywood
* Counties -- Alameda, Contra Costa, Sonoma, Sacramento

COLORADO:
* Cities -- Denver, Boulder, Fort Collins

CONNECTICUT:
* Cities -- Hamden, New Haven, Simsbury, West Hartford
* State Legislature

DISTRICT OF COLUMBIA:
* City -- Washington

GEORGIA:
* Cities -- Atlanta

HAWAII:
* Cities -- Honolulu, Maunaloa, Monalulu
* Counties -- Honolulu, Kalui, Kalai
* State Legislature

IDAHO:
* Cities -- Hailey, Ketchum

ILLINOIS:
* Cities -- Chicago, Urbana
* State Legislature

IOWA:
* Cities -- Burlington, Cedar Rapids, Cherokee, Davenport, Decorah, Des Moines, Dubuque, Elkhader, Indianola, Maquoketa, Marshalltown, Orange City, Oskaloosa, Pringhar, Ringstad, Sheldon, Sioux City, Waverly, West Branch
* Counties -- Dubuque, Marshall, O'Brien

KANSAS:
* Cities -- Johnson
* Counties -- Sedgewick

MAINE:
* Cities -- Augusta, Auburn, Lewiston

MASSACHUSETTS:
* Cities -- Ashfield, Boston, Brookline, Cambridge, Colrain, Conway, Cummington, Deerfield, Egremont, Great Barrington, Greenfield, Heath, Lanesboro, Lenox, Leverett, Middlefield, Monterey, Northfield, Pelham, Pittsfield, Richmond, Sheffield, Shelbourne, Shelbourne Falls, Shutesbury, Somerville, South Hadley, Stockbridge, Wendell, West Stockbridge, Williamsburg, Williamstown
* Counties -- Berkshire

MARYLAND:
* Counties -- Montgomery

MICHIGAN:
* Cities -- Ann Arbor, Detroit, East Lansing, Lansing, Marquette
* Counties -- Ingham
* State Legislature

MINNESOTA:
* Cities -- Duluth, Minneapolis

MISSOURI:
* Cities -- Kansas City, St. Joseph, St. Louis
* Counties -- Jackson

NEW HAMPSHIRE:
* Cities -- Portsmouth

NEW JERSEY:
* Cities -- Audubon, Belleville, Camden, Cape May, Carney, Demarest, East Brunswick, East Orange, Englewood, Ewing Township, Fair Haven, Fair Lawn, Fort Lee, Hamilton Township, Highland Park, Hoboken, Jersey City, Kearny, Lawrenceville, Leonia, Long Branch, Maplewood, Metuchen, Mountclair, Newark, New Brunswick, North Arlington, Nutley, Orange, Paramus, Parsippany-Troy Hills, Princeton Borough, Princeton Township, Ringwood, Roosevelt, Rutherford, South Brunswick, South Orange, Teaneck, Trenton, Wayne, West Orange, Willingboro, Woodbridge
* Counties -- Essex, Mercer, Monmouth, Ocean

NEW MEXICO:
* Cities -- Santa Fe

NEW YORK:
* Cities -- Chappaqua, Chenango Town Board, Johnson City, Mount Vernon, New York City, Scarsdale, Vestal
* Counties -- Chenango, Rockland
* State Legislature

NORTH CAROLINA:
* Cities -- Chapel Hill, Davidson, Edenton
* Counties -- Orange

OHIO:
* Cities -- Cleveland, Columbus, Shaker Heights, Yellow Springs, Youngstown
* Counties -- Cuyahoga
* State Legislature

OREGON:	* Cities -- Portland * Counties -- Multnomah
PENNSYLVANIA:	* Counties -- Mifflin
RHODE LAND:	* Cities -- Bristol, Cranston, Cumberland Hill, Jamestown, Kingston, Narragansett, North Providence, Providence, South Kingston, Warwick, West Kingston, Woonsocket * State Legislature
SOUTH DAKOTA:	* Cities -- Brookings
TEXAS:	* Cities -- Austin
UTAH:	* Cities -- Provo, Riverton, Salt Lake City, Shione Tribal Council, Yumba Indian Reservation
VERMONT:	* Cities -- Burlington
VIRGINIA:	* Cities -- Alexandria
WISCONSIN:	* Cities -- Madison
WASHINGTON:	* State Legislature

Revised 10/22/90

COMMITTEE ON GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

TESTIMONY OF

WILLIAM E. COLBY
Director of Central Intelligence (1973-1976)

9 October 1990

Thank you, Mr. Chairman, for inviting me to testify before you on this important topic of the proliferation of weapons of mass destruction throughout the world and the necessity that this process be halted. The end of the Cold War and the successful activation of the United Nations to meet aggression by Iraq opens a whole new vision of possible cooperation instead of rivalry in the world community against common dangers to the peace and safety of all nations.

Many years ago, Prime Minister Indira Gandhi of India once rejected our advocacy of the non-proliferation of nuclear weapons by saying that she would not accept lectures on the subject by the great powers until they got their own nuclear arms race under control. The Non-Proliferation Treaty of 1968 tried to recognize the justice if not the wisdom of her comment by including the pledge that the nuclear powers would indeed pursue negotiations in good faith to end the nuclear arms race, and achieve nuclear disarmament. And for almost twenty years the two great powers produced no progress on this pledge, while they piled quantitative and qualitative increases into their nuclear

arsenals. They accompanied the process with pious assertions by their leaders that they looked forward to a world without nuclear weapons and ignored their agreement in the Limited Test Ban Treaty of 1963 that they would be "seeking .. the discontinuance of all test explosions of nuclear weapons for all time".

In the Iraq crisis, President Bush provided spectacular leadership for the world community to meet a world problem. He worked closely with many, even most, world leaders to assemble the consensus reflected in the United Nations resolutions to impose sanctions on Iraq until it reverses its aggression into Kuwait. And he accepted a leading role for the United States, sending our forces to ensure that Iraq does not move against Saudi Arabia.

Mr. Chairman, I suggest the Iraq crisis as a model of how to confront the dangers of the proliferation of weapons of mass destruction. We need to assemble a consensus of world opinion and implement this through multilateral diplomacy against those who endanger us all by insisting on continuing to develop these weapons. And the example of imposing sanctions on them should be among the tools available. But we need to show American leadership in the process.

The recent review conference on the Non-Proliferation Treaty is a model to the contrary. Instead of the United States taking the lead, it dragged its feet and caused the conference to be unable to issue a formal report. And the issue is one on which the United States should be in the forefront, a call for a

comprehensive nuclear test ban treaty. The result is to pose an ominous warning over the review conference scheduled for 1995, at which the question of the continued extension of the Non-Proliferation Treaty will be open, despite the ambiguous legal language between the choices of continuing it "indefinitely, or .. for an additional fixed period or periods".

It is difficult to ascribe the United States position to anything except Cold War or bureaucratic inertia. President Kennedy first tried to negotiate a comprensive test ban, and the two sides failed by the narrowest of margins. Every "improvement" in nuclear weapons since that time, including the nefarious MIRV and the theoretical first strike danger, stems from that failure, while the United States and the Soviet Union have bankrupted themselves and endangered the globe by building more and more dangerous versions of nuclear weapons.

In the current arms reduction (not mere "control") negotiations on both conventional and strategic weapons, it is clear that the world is moving faster than its diplomats. The negotiations are still being conducted on an adverserial basis, with concessions carefully balanced and the fullest concern being given the retention of huge forces for defense. Meanwhile, the political situation in Europe and the Soviet Union is moving far beyond these careful negotiations, as the Cold War disappears and with it the framework of hostility which has existed for so many years. The START discussions try to refine a reduction in strategic weapons from 12,000 warheads on each side to a "mere"

8,000 or so, while the two sides turn from confrontation to cooperation.

In this situation, American espousal of a comprehensive test ban could provide the kind of leadership President Bush has shown in the Iraq crisis. It would be aimed at a different crisis, one less immediate than the Perian Gulf but no less ominous in the years ahead. A comprehensive test ban could revive the consensus behind the Non-Proliferation Treaty and firmly halt any further "improvements" in nuclear weapons by any nations, giving the basis for firm influence and even sanctions on nations insisting on endangering the world by moving further into the dread territory of nuclear war. And it would be of advantage to the United States in locking in the budgetary and safety savings of stopping these tests, with assurance that they would be stopped elsewhere.

The example of such a forward step on nuclear tests and proliferation could also give impetus to similar advances on other weapons of mass destruction. And it could open the possibility of serious discussions on how to reduce the arsenals of nuclear and other mass weapons already in the arsenals of some states, providing assurances of security to those states to replace their reliance on these weapons for their ultimate security. We may not be able to put the nuclear genie entirely back in the bottle, but with American leadership on a comprehensive test ban we can stop its further proliferation.

THE CHRISTIAN SCIENCE MONITOR

Complete the Ban on Nuclear Testing

By William Epstein

TWENTY-TWO years ago this month, the Nuclear Non-Proliferation Treaty (NPT) was signed. With 142 parties, it is the main pillar of the regime to prevent the proliferation of nuclear weapons, but its future is now in jeopardy.

Next month the fourth review of the treaty will be held. It will be the last review before the first term of the treaty expires in 1995, when a conference of the parties will be convened to decide on its extension.

Because of the opposition of the United States to ending nuclear testing, the outcome of the fourth review and the future of the treaty itself are in serious doubt.

Five years before the NPT, the US, Britain, and the Soviet Union had signed the Partial Test Ban Treaty banning nuclear tests in the atmosphere, outer space, and underwater. The treaty left a gaping loophole by failing to ban underground tests; the nuclear powers proceeded to conduct such tests at a faster pace than ever before to develop more fearsome nuclear weapons. However, the three nuclear powers had pledged in the treaty that they would continue negotiations to end all test explosions of nuclear weapons. They repeated that pledge in the preamble of the NPT, and undertook in the now famous Article VI "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament."

A total test ban, as a means of stopping the proliferation of nuclear weapons, has been the main demand of the nonnuclear parties at the three previous reviews of the NPT. There will be even stronger pressure for it at the forthcoming review.

Neutral and nonaligned countries, which constitute the great majority of the parties to both the Partial Test Ban Treaty and the NPT, became fed up by the procrastination of the three nuclear parties. They have called for a conference to convert the Partial Treaty into a comprehensive test ban treaty. The amendment conference will be held at the United Nations in New York in January 1991.

The neutral and nonaligned countries are convinced that, unless all nuclear tests are ended, there is no way to halt the nuclear arms race and the continued proliferation of nuclear weapons by both the nuclear and nonnuclear countries. Even if the START negotiations succeed in reducing American and Soviet strategic nuclear weapons by 50 percent, the two superpowers will still have more than three times the number of these weapons than they had in 1968 when the NPT was signed.

Moreover, the supporters of a total test ban fear that even deep cuts will be nullified by testing and developing even more dangerous and destabilizing third-generation nuclear weapons.

Many parties are convinced that the fourth NPT review will be a failure because of the refusal of the US and Britain to negotiate a total ban on nuclear testing. This could have a disastrous effect on the chances of extending the NPT in 1995.

But if the US and Britain join the Soviet Union in supporting a total test ban, it could be achieved quickly. If a majority of the parties to the Partial Test Ban Treaty, including the three nuclear parties, approve and ratify the amendment banning all nuclear tests, that would automatically bind all the 118 parties. If that happens, then such near-nuclear countries as Argentina, Brazil, India, Israel, Pakistan, and South Africa (none is a party to the NPT, but all are parties to the Partial Test Ban Treaty) would not be able to test and develop nuclear weapons.

The US says it will oppose the amendment. But supporters of the amendment say the January conference will be only the first of a series that will continue until agreement is reached on a total test ban.

With the astonishing improvement in East-West relations, the ending of the cold war, and the vanishing threat of a nuclear war, there is no real reason for continued testing to develop costly, modernized nuclear weapons that will never be used. Some American officials have said that they would rather abandon the NPT than give up nuclear testing, which they consider to be in the national interest. Many international observers tend to regard this as a bluff and as contrary to American interests. They consider nuclear deterrence solid and credible for many years ahead and believe that testing would be continued only in a effort to acquire nuclear superiority or a first-strike capability. By stopping all testing, each superpower could be freed from the fear that the other could gain a strategic advantage or that new nuclear powers could become a threat.

It seems almost incredible that the US would risk jeopardizing the NPT for the dubious benefits it might obtain from continued testing. There is still time for reason to prevail.

■ *William Epstein is a senior fellow at the UN Institute for Training and Research. He represented the Secretary-General at the negotiations for the 1963 Partial Test Ban Treaty and the 1968 Nuclear Non-Proliferation Treaty.*

International rally backs nuclear test ban

ASSOCIATED PRESS

ALMA ATA, USSR – Activists from around the world came together yesterday to rally for a halt to all nuclear testing and to share sad stories of radiation damage in Soviet Kazakhstan.

"We're poisoning our air, we're poisoning our soil, we're poisoning our water," former bomb designer Ted Taylor told participants in the four-day conference. The US nuclear physicist said Americans and Soviets are more likely to be killed by the pollution from their own nuclear testing than by an enemy bomb.

Although superpower tensions are easing, the activists decided they have virtually no hope of persuading US, British and French leaders to stop testing nuclear bombs soon. The United States detonated an underground bomb on Friday.

The activists are concentrating instead on President Mikhail S. Gorbachev, said Dr. Bernard Lown of Boston, an organizer of the conference and president of International Physicians for the Prevention of Nuclear War.

The conference was highlighted by yesterday's festive, multinational rally and a political victory for the hosts, a Kazakh nuclear group called Nevada-Semipalatinsk, named after the US and Soviet test sites.

On Wednesday, Kazakhstan's Legislature voted unanimously to ask the Soviet government to halt all nuclear explosions at Semipalatinsk, located in the northern steppes of the Central Asian republic.

The American delegation to the conference, in contrast, was outraged to learn its government had set off another underground nuclear explosion in Nevada.

"I feel ashamed and angered," Lown said. "This makes no sense. Why are we conducting nuclear tests just a few days before the summit?"

Gorbachev is to meet President Bush in Washington this week, and the superpowers hope to complete an agreement to reduce long-range nuclear weapons by 30 percent to 50 percent.

The activists sent a telegram urging the leaders to halt nuclear testing. But no serious discussion of the issue is expected at the summit, Lown said, citing the Soviet foreign minister, Eduard A. Shevardnadze.

Conference leaders met with Shevardnadze on Tuesday in Moscow, where he restated the Soviet willingness to stop nuclear testing if the United States does.

Bush and Gorbachev are expected to sign protocols on verifying compliance with a 150-kiloton ceiling for nuclear tests. Although a pair of treaties setting the ceiling were signed in the early 1970s, they have never been ratified by the US Senate, and previous American administrations expressed doubt about Soviet compliance.

US policy, outlined by an American diplomat in Moscow, is that exploding nuclear bombs under the Nevada desert is necessary to test new weapons.

Pittsburgh Post-Gazette: Monday, July 2, 19[illegible]

UPHEAVAL IN THE EAST

Doctors push ban of N-tests

Five from district back from Russia

Star Tribune / Saturday/September 1/1990

Nuclear arms race is a long way from over

. . . START is acceptable only as a way to further the arms control process, to support Gorbachev and to improve U.S.-Soviet relations. A comprehensive test ban treaty will save money, slow proliferation and reduce the likelihood of nuclear war by limiting modernization of nuclear weapons.

Austin American-Statesman

Tuesday, September 18, 1990

Let's follow up on Soviet nuclear test ban

By John O. Pastore
Special to the American-Statesman

Santa Cruz Sentinel - August 4, 1990

People-power can put an end to nuclear weapons testing

24 WEDNESDAY, JANUARY 24, 1990 Washington Post

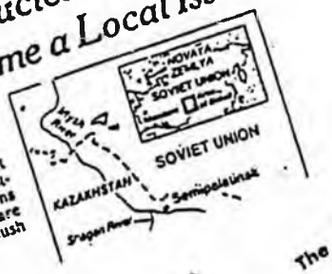
Breaking Pledge, U.S. to Defer Underground Nuclear Test Talks

THE NEW YORK TIMES, SATURDAY, JULY 8, 1989

Soviets Cut Back Nuclear Testing As Hazards Become a Local Issue

By MICHAEL R. GORDON
Special to The New York Times

WASHINGTON, July 7 — The Soviet Union has scaled back its nuclear test program, possibly to ease concerns of Soviet citizens that the blasts are contaminating the environment, Bush Administration officials say.



The Jamestville Gazette / Friday, June 15, 1990 /

Nuclear test ban

Weapons tests are causing a drift closer to nuclear war.

Independence Day, 1990

Las Vegas, Nevada

$600 million test site tab eyed

☐ The money would go to cleaning land contaminated by testing in the 1950s and monitoring ground water.

Section 1 Chicago Tribune, Sunday, August 26, 1990

Nation/world

U.S. spending millions on plan to restart Pacific nuclear tests

INTERNATIONAL HERALD TRIBUNE

ZURICH, SATURDAY-SUNDAY, SEPTEMBER 1-2, 1990

Leakage Is Feared From French A-Tests

ARE THESE PEOPLE TALKING TO ONE ANOTHER?

QUOTABLE QUOTES ON THE COMPREHENSIVE TEST BAN

Secretary of Energy James D. Watkins, Letter to Senate Armed Services Committee Chairman Sam Nunn, April 1990, on a recent DOE study which indicated that the U.S. cannot consider any further limits on testing for 10 years:

"We have not identified any further limitations on nuclear testing... that would be in the U.S....interest" beyond those in the 1974 Threshold Test Ban Treaty.

Ambassador C. Paul Robinson, Chief U.S. negotiator at the U.S.-Soviet Nuclear Testing Talks (NTT) in Geneva which has not met since 1982 when Reagan formally withdrew from the talks, on the same DOE study, June 14, 1990:

"I am not aware that DOE ever made such a statement. That is certainly not the administration's position."

Secretary of State James A. Baker III, Letter to US CTB Coalition, March 30, 1990:

"...the United States is firmly opposed to the move to convert by amendment the Limited Test Ban Treaty into a comprehensive test ban."

Brent Scowcroft, Letter to House Armed Services Chairman Dante Fascell, February 20, 1990:

" After careful review by this Administration, the fundamental position of the United States on nuclear testing remains unchanged: nuclear testing is indispensable to the maintenance of the credible nuclear deterrent which has kept the peace for over 40 years. As long as we depend on nuclear weapons for our security, some nuclear testing will be necessary."

Soviet President Mikhail Gorbachev, May 1990:

"If you could exert as much pressure on President Bush as the Kazak people are putting on me, we could have a nuclear test ban."

October 20, 1990:

"The principal strategy of the U.S.S.R. in this matter has been actions that would lead to a complete end of nuclear testing. We have proved that those were indeed actions, and not words, by our unilateral moratorium on nuclear weapons tests, which, for reasons beyond our control, did not develop into a complete and definitive cessation of such tests, and by our practices over the past year when we have not conducted a single nuclear test."

"It goes without saying that the Soviet Union's pledge to completely ban all nuclear testing at any time and for all times, if the U.S. does likewise, still stands."

French President Francois Mitterrand, May 19, 1989:

"If the United States of America and the Soviet Union give them up, and Great Britain too, we shall follow suit. I am prepared to stop nuclear testing immediately."

Americans Talk Security National Survey #11 Dec. 1988

TABLE 51

NATIONAL DEFENSE ISSUES: NEGOTIATE WITH THE SOVIETS FOR BOTH COUNTRIES TO STOP TESTING NUCLEAR WEAPONS

(Survey No. 11, Question 10a, Item s)

	Strongly Approve	Somewhat Approve	Somewhat Disapprove	Strongly Disapprove	(Not Sure)
TOTAL	67%	18	6	6	3
Party Identification					
Republican	59%	20	9	10	2
Independent	73%	18	5	2	2
Democrat	74%	14	3	5	4
Viewpoint					
Conservative	64%	17	7	9	3
Liberal	75%	15	3	3	4
Region					
Northeast	74%	17	7	-	2
Midwest	70%	18	5	5	2
South	63%	21	6	8	2
West	61%	15	3	12	9
Income					
Under $35,000	72%	16	3	6	3
Over $35,000	66%	20	8	5	1
Education					
High school or less	71%	14	6	5	4
Some college	66%	24	4	6	-
Four year college	66%	27	4	3	-
Post graduate	59%	20	7	9	5
Gender					
Men	66%	19	6	7	2
Women	68%	17	6	5	4
Age					
18-29	77%	10	7	6	-
30-39	67%	24	6	3	-
40-49	65%	19	7	7	2
50-64	63%	21	2	11	3
65+	66%	13	8	3	10
Gender/Age					
Men, 18-39	71%	17	8	4	-
Men, 40+	62%	20	4	10	4
Women, 18-39	75%	18	4	3	-
Women, 40+	66%	16	7	5	6

Approx. 85%

Banning Nuclear Tests – It's Bush's Move

By Philip G. Schrag

FORTY countries, including Egypt, India, Iran, and Iraq, have recently proposed an amendment to the 1963 Limited Test Ban Treaty, which prohibits tests of nuclear weapons in the atmosphere. They want to turn it into a treaty banning all nuclear weapons testing. This initiative presents the Bush administration with a diplomatic challenge and a national security opportunity.

More than 100 countries have joined the treaty over its 26-year life. But nuclear weapons testing by the United States and the Soviet Union, and to a lesser extent by Britain, France, and China, continues at a vigorous pace underground.

Such testing has been vigorously criticized by most countries. In 1987, 128 countries voted for a United Nations resolution advocating the amendment that has just been formally proposed. Only the US, France, and Britain opposed the resolution.

The Limited Test Ban Treaty's amendment clause specifies that a conference to consider amendments must be convened if requested by one-third of the parties. The US, Britain, and the USSR – the three countries that drafted the treaty – are responsible for convening such a conference. Those countries will each have only one vote at the conference, but under the treaty each of them can veto any amendments.

The 40 countries that have now called for an amendment conference are more than a third of the parties. These countries want an end to underground as well as atmospheric testing. What should the US do?

In large part, the answer to this question depends on whether the Bush administration thinks that continued testing is necessary, and, if so, for how long. Until 1981, every American president since Dwight Eisenhower had endorsed efforts to negotiate a comprehensive test ban agreement. Reagan administration officials reversed this longstanding policy, believing that nuclear weapons testing would be necessary indefinitely to develop new types of nuclear weapons and to make sure that the nuclear weapons already in the US stockpile will work. President Reagan also canceled ongoing comprehensive test ban negotiations. But President Bush may take a fresh look at this issue.

There is reason to think that a ban on nuclear testing at this time would enhance American national security. If the US and the USSR stop testing, it will be more difficult for hard-liners in third-world states to argue that their countries needed to test nuclear weapons to acquire international prestige. A comprehensive ban would also help to stabilize the nuclear arms race by impairing the ability of either the US or the USSR to build new generations of nuclear weapons.

The least attractive policy would be US obstruction of this move toward a comprehensive test ban.

Concern about the reliability of stockpiled weapons could be eliminated by giving final proof tests to any types of weapons in the stockpile that have not yet been tested fully, and then freezing existing blueprints. New types of nuclear missiles and bombs would have to be designed to incorporate existing designs.

The problem of verification, long a critical issue in negotiations, has largely been solved by technological advances in seismology.

President Bush could respond in four ways to the 40-nation initiative. Three of them are reasonable. The fourth possibility would be diplomatically isolating and would throw away an opportunity to contribute to nuclear nonproliferation.

First, the President could seize the initiative by reopening negotiations with the USSR toward a comprehensive test ban.

Second, if the President wants to move at a more modest pace toward an eventual comprehensive test ban treaty, he could explore with the USSR a gradual phase-out of nuclear weapon tests over several years.

Either of these approaches could lead to a treaty that would advance American interests, and either of them could convince the 40 nations that the superpowers are engaged in a serious effort to end nuclear weapons testing. As a result, the pressure to hold a large conference, in which the US would have only limited influence, might abate.

Third, the US could endorse the 40-nation initiative, convene the conference promptly, and work within it to help frame a sound, effective amendment. For example, it could insist on suitable verification arrangements and a schedule for an end to testing which permitted final experiments with any weapons that have to be modified to remain reliable without further testing.

The least attractive policy would be American obstruction of this new international effort to move the world toward a comprehensive test ban.

This course would enable the USSR to continue to portray itself as more devoted than the US to arms control. It would also increase the likelihood that by the end of the century, Pakistan, Iraq, Iran, and other nations will test nuclear weapons and deploy the missiles and bombers that could eventually ensnarl the world in a nuclear war.

■ *Philip G. Schrag is a professor of law at Georgetown University. From 1977 to 1981, he was the deputy general counsel of the US Arms Control and Disarmament Agency.*

The Boston Globe

THURSDAY, APRIL 3, 1986

ELLEN GOODMAN

Halting nuclear tests

Bernard Lown hasn't much time to rest on his Nobel laurels. On this achingly beautiful morning, the cardiologist and winner of the Peace Prize is at his desk talking again, or talking still, about nuclear testing.

The co-president of International Physicians for the Prevention of Nuclear War got involved in the arms-control, antinuclear, peace movement – whatever you want to call it – because of his concern about nuclear tests. In the early 1960s, he remembers, when superpowers were exploding nuclear bombs in the atmosphere, "We collected baby teeth, and proved that Strontium 90 entered the food chain."

Nuclear testing was driven underground, but despite a million Hiroshimas in the nuclear arsenal, it hasn't been stopped. In fact, last Monday, the day Lown was interviewed, was the last day in the moratorium the Russians have called and kept by themselves since July. If we go through with our own plans for an April 16 test, the Russians will resume testing and we will have lost yet another chance.

Since last summer, Gorbachev has taken the lead in proposals as well as propaganda. He halted Soviet testing and asked Americans to join in. He asked for 50 percent cuts in nuclear arsenals and a 15-year plan for eliminating nuclear weapons. Only last weekend he offered to meet to discuss ending tests.

The Reagan administration has countered all these proposals by speaking in a foreign tongue: nyet, nyet, nyet. We seem to have switched roles. As Paul Warnke, the former arms-control negotiator, said, the Russians are offering us our own proposals for arms control and we can't "take yes for an answer."

It is as if the superpowers are in a relationship cursed with bad timing. One presses for a commitment and when the other finally comes around and says yes, the first dances away.

Lown knows something about that international role-reversal firsthand. After receiving the Peace Prize, he had a three-hour interview with Gorbachev, but he has yet to receive even an acknowledgement from the White House. On the larger scale, he says with deep frustration, "Every American president has supported test bans until Reagan."

The doctors have won a Nobel Prize, but the patient has not yet taken the first step to recovery: the comprehensive test ban. "If we ask what has driven the arms race, it is the ever greater sophistication of technology," Lown repeats. "If the qualitative change in weapons is what's made the age so unstable and insecure, then stopping the testing will slow the process."

The White House claims, in part, that we need tests to check the weapons we have now. But testing is the starting gun for any arms race. We test for the weapons of the future. It is clear that Reagan prefers a defense *by* arms to a control *over* arms. The summit was the pacifier; "star wars" is the policy.

We have lived with the nuclear arms race for so long and with such a sense of helplessness that ordinary citizens have become nearly immune to the reality, and passive to the possibilities for change. "Imagine yourself walking around your whole life with a revolver pointed at the back of your head," says Lown. "You would say, 'This guy has to be straitjacketed.'" If, however, you feel powerless, you might prefer to look straight ahead.

Today, when the Russians are talking our line, asking us to say yes to our own test-ban proposals, we have to allow this atomic revolver into our peripheral vision. When the government won't agree to America's own proposals, we still have leverage.

Testing is the starting gun for any arms race.

In the Congress, there is a bill that would cut off funds for nuclear testing for six months, unless the Soviets tested. Before the Gorbachev moratorium, such a bill was considered a wild peacenik proposal. Not anymore.

Americans have another recourse that Soviet citizens do not. As Lown puts it, "The American people can shout to the rooftops."

I know no way to stop the April 16 blast, a blast that will be echoed in the Soviet Union. The chorus demanding an end to testing sounds to me like the ragtag pack of peace marchers wandering across Nevada, a voice in the wilderness. But I am reassured by this physician. Having watched the pot of public concern for decades, Lown says: "It's like boiling water. Nothing happens, nothing happens, nothing happens, and then finally there's steam."

Ellen Goodman is a Globe columnist.

Monitoring Nuke Tests

American scientists set up in the Soviet Union

Sounding an old theme, Soviet Foreign Minister Eduard Shevardnadze, on a visit to Britain last week, said the Soviet Union was preparing for a second Reagan-Gorbachev summit—but that no date could be set until Washington responded to Moscow's latest arms-control proposals. To dull any Soviet propaganda edge, the Reagan administration agreed to resume talks—broken off six years ago—about a total nuclear-test ban. But even as the U.S. delegation packed for Geneva, the administration was still bickering about the team's instructions. Hard-liners want to focus on charges that Moscow has violated SALT II and the ABM treaty; the State Department believes the United States should negotiate arms cuts, even while complaining about alleged Soviet violations.

Washington may also propose that both sides reduce underground nuclear testing. (The Soviets have had a unilateral moratorium in place for nearly a year.) The problem is how to verify Soviet compliance with a ban. In one concession, Moscow allowed a group of U.S. scientists to set up the first monitoring station within Soviet borders. Photographer Ted Spiegel, on assignment for NEWSWEEK, *accompanied the U.S. team and filed this report.*

The caravan threaded its way across a rough hillside inside the Soviet republic of Kazakhstan, in an area that has long been closed to Americans. Six U.S. scientists joked with the half dozen Russian scientists who accompanied them. Some of the travelers wore pale-blue T shirts reading "U.S.-U.S.S.R. Nuclear Test Ban Verification Team." They came to a stop just 140 miles from Semipalatinsk, the Soviet Union's main nuclear-test site. The Russian and American workers assembled a wooden shack and placed an orange-barreled seismometer inside. Output lines connected the instrument to a digital recorder. With that, the teams inaugurated the first of three sites that will allow U.S. scientists to detect any unannounced Soviet nuclear tests. "This is a breakthrough," said James Brune, a seismologist from the University of California at San Diego. "If the Russians weren't really serious about test-ban negotiations they wouldn't agree to putting in a lot of monitoring stations."

The Natural Resources Defense Council (NRDC), a U.S. environmental group, and the Soviet Academy of Sciences worked out the seismograph agreement between themselves. But the private accord may push the superpowers one step closer to a total nuclear-test ban. Last May the NRDC negotiated a go-ahead to position seismic equipment in the Soviet Union. In return, the Americans have offered to help the Soviets establish similar monitoring sites around the U.S. nuclear testing ground at Yucca Flat, Nev.

Moscow doesn't really need those sites. The Kremlin has been able to find out about U.S. tests from the seismic data in American scientific journals, while U.S. scientists have had no access to comparable Soviet data. But Moscow clearly hopes to prod Washington into a test-ban accord.

In a makeshift lab, the U.S. scientists watched the first digital readouts on the tape. In unison, three seismometers recorded an earthquake 300 miles away. The tape gave the scientists the high-frequency waves they need to distinguish between natural earth tremors and those caused by nuclear explosions. "We're getting them!" shouted one gleeful scientist.

Bureaucratic mixups: The Soviets had told the Americans they could set up three sites right away, but bureaucratic mixups kept them from establishing more than one in the first 10 days of their visit. And Kremlin officials said the U.S. team might have to suspend monitoring during any Soviet test after Moscow's moratorium ends on Aug. 6. The other news was mixed, too. "Comrade Gorbachev sends his personal best wishes for [your] success," an official said. Both sides applauded. Then the official added, "But no word yet about when we can get to our next monitoring site." Even three stations wouldn't enable U.S. scientists to keep track of all Soviet nuclear activities—and at least until they can, the odds are against a new test-ban accord.

TED SPIEGEL—BLACK STAR

On site: *U.S. and Soviet teams calibrate a seismometer in Kazakhstan*

Chernobyl's Goats

Almost three months after the accident at Chernobyl, the Soviet Politburo told the world last week what went wrong. Workers at the nuclear plant committed "gross breaches" of the rules: they ran experiments in "turbogenerator operations" without getting permission—and the tests themselves didn't follow safety guidelines. The bill to date: $2.8 billion.

More than 200 Soviet citizens are suffering from radiation sickness—30 are still in the hospital—and 28 people have died, the Politburo disclosed. About 385 square miles of land around the reactor are contaminated, and Soviet authorities are concerned about the nearby water basin. But they said the plant is now "under dependable control and is no cause for concern."

The Kremlin sacked four high-ranking officials, expelled the plant's former director from the Communist Party and "initiated criminal proceedings against persons guilty of the accident." The minister of power engineering was only rebuked because he'd been new at the post when the accident occurred. But the Politburo warned that he'd "be subject to a harsher punishment if he has failed to learn a lesson."

by HAROLD EVANS
Contributing Editor

THE HAZEBROOK FOLLY

On Thursday, February 5, unless President Reagan realizes what is happening, he will blow up his last best chance of leaving the world a safer place than he found it. This is more important than Iran. The President has talked of a world where nuclear weapons are "impotent and obsolete." Unfortunately, he has also been induced to make decisions that risk an acceleration of the arms race. He is about to do so again with an ill-timed explosion in the Nevada desert, code-named Hazebrook.

Presidents Eisenhower, Kennedy, Johnson, Nixon, Ford and Carter all secured arms-control agreements—20 of them altogether. President Reagan has nothing to show. For this the Soviets are much at fault—they had no effective leadership for years—but it is too facile to blame everything on the Soviets. Doing that as a reflex can lead to actions against our own national-security interests, and that is what is happening with nuclear tests.

Since August, 1985, the Soviets have conducted not a single nuclear explosion. The U.S. has announced 20. Three times these last 18 months the Soviets have extended their moratorium and invited the U.S. to join as a prelude to negotiating the permanent, verifiable test-ban treaty that both sides repeatedly have pledged their efforts to achieve and that bipartisan leadership in Congress urges on the President. A test ban is crucial because it provides a foundation for progress on arms control, as President Kennedy said when he announced his moratorium on atmospheric testing—now a respected treaty.

On every occasion Reagan has been persuaded to say no to a test ban. One excuse has been followed by another. In 1985 it was said the Soviets had gotten ahead and the U.S. needed to catch up. Well, we did—and how!—with seven extra tests in 1985 and 13 announced in 1986. But, in fact, we were never behind. As was later admitted, there had been no change in the ratio of U.S. to Soviet tests. The U.S. is at least 200 ahead of the Soviets.

Next it was said that the Soviets had been cheating on the 150-kiloton underground limit agreed in 1974. Scientists suggested that the administration's calculation of the power of Soviet explosions was based on a faulty calibration. So it was. In March, 1986, the CIA said it was changing its measure that had overestimated Soviet yields by 20 percent.

Then it was objected that there was no point in resuming talks on a test ban, because tests could not be detected and the Soviets would never agree to on-site monitoring. Well, they did. They invited American scientists to set up verification equipment, and it is operating on Soviet soil. Tougher provisions would be needed in a treaty, but even so the expert consensus is overwhelming that there is no technical difficulty in unmanned monitoring.

The truth is that it's not technology that stands in the way. It's part of a campaign against arms control in a divided administration. Defense Secretary Caspar Weinberger's assistant, Richard L. Wagner, Jr., said it frankly: "Even if effectively verified, a comprehensive test ban would not be in the national-security interests of the U.S."

The underlying proposition here is that the U.S. can "win" an arms race.

That is an interstellar gamble; it is not one that the American people want to take, according to the polls, and it is not what the President himself says he wants. The more the costly race proceeds, with both sides developing different systems, the more difficult the asymmetrical arithmetic of arms control, the more likely the chance of disaster.

Even on the narrow ground of weapons technology the proposition is dubious. A White House study says that through continued testing the Soviets could develop efficient miniature warheads that would allow them to exploit their heavy missiles. On the other hand, a test ban, as Senator Durenberger has said, would "stop menacing Soviet developments while preserving the technological edge the United States enjoys." Warhead designs for Trident D-5, MX and Midgetman have been tested.

Gorbachev has said that if the U.S. resumes testing, the Soviets will follow. We will be back on the competitive spiral of testing, building new weapons and testing again. Here's a chance for Reagan to regain an initiative. He should cancel Hazebrook and probe the Soviet offer. ■

101st CONGRESS

2nd SESSION

S. J. RES. 287

(NOTE.—Fill in all blank lines except those provided for the date, number, and reference of resolution.)

IN THE SENATE OF THE UNITED STATES

Mr. Pell (for himself, Mr. Hatfield, Mr. Mitchell, Mr. Jeffords, Mr. Cranston, Mr. Harkin, Mr. Kennedy, Mr. Kerry, Mr. Matsunaga, and Mr. Simon)

introduced the following joint resolution; which was read twice and referred to the Committee on Foreign Relations

JOINT RESOLUTION

Requesting the President of the United States to negotiate agreements to achieve early prohibition of nuclear explosions.

Whereas the United States, the Soviet Union and Great Britain are committed in the Limited Test Ban Treaty of 1963 and in the Non-Proliferation Treaty of 1968 to seek the discontinuance of all test explosions of nuclear weapons for all time;

Whereas the United States and Soviet Union anticipate early agreement upon verification protocols in the Nuclear Testing Talks in Geneva of the Peaceful Nuclear Explosions Treaty and the Threshold Test Ban Treaty and the President expects, accordingly, to seek advice and consent to ratification of two treaties which were signed in 1974 and 1976 respectively;

Whereas in 1988, a quarter century after the signing of the Limited Test Ban Treaty, states party to the Limited Test Ban Treaty formally proposed an amendment that would broaden its prohibition on testing in the atmosphere, in outer space, and under water to include underground testing;

Whereas the formal request by more than one-third of the parties to the Limited Test Ban Treaty, as provided for in Article II of the treaty, now mandates the convening of a conference to consider such amendment;

Whereas the early prohibition of underground nuclear explosions would constrain the development and deployment of new generations of nuclear arms; reduce reliance upon nuclear arsenals, reinvigorate efforts to prevent nuclear proliferation, and end further radioactive contamination of the environment;

Whereas the reliability of nuclear weapons of the United States as deterrents to nuclear war can be assured by means other than nuclear explosive testing;

Whereas recent advances in verification techniques and recent agreements and understandings between the United States and the Soviet Union regarding in-country monitoring and on-site inspection have helped open the way to effective verification of a comprehensive ban: Now, therefore, be it

Resolved by the Senate and the House of Representatives of the United States of America in Congress assembled, That, at the earliest possible date, the President of the United States should --

(1) proceed with his plan to conclude successfully the current phase of the Nuclear Testing Talks and request Senate consent to ratification of the Threshold Test Ban Treaty and the Peaceful Nuclear Explosions Treaty;

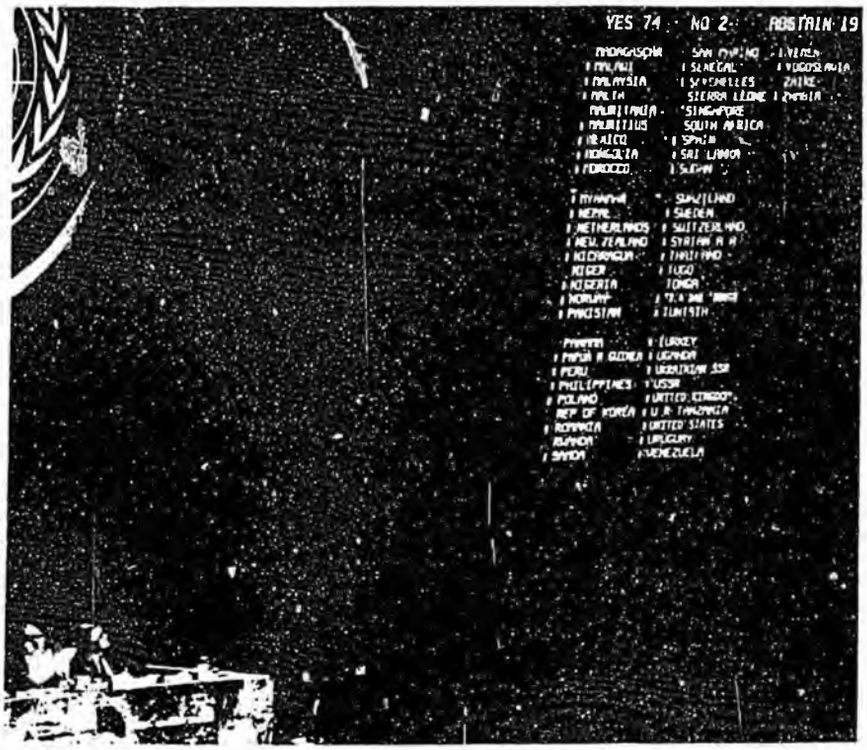
(2) convey to the Soviet Union the desire of the United States to continue the bilateral Nuclear Testing Talks to identify and agree upon a definite timetable for the early achievement of a verifiable comprehensive test ban; and

(3) express to the states party to the Limited Test Ban Treaty the willingness of the United States to prepare for and pursue negotiations in good faith in the Test Ban Treaty Conference called to broaden the Limited Test Ban Treaty into a verifiable Comprehensive Test Ban Treaty.

TEST BAN

January meeting keeps hope alive

By WILLIAM EPSTEIN



UN PHOTO 177212 MILTON GRANT

Voting to reconvene: only the United States and Britain voted against continuing the Partial Test Ban Treaty amendment process.

Overshadowed by the countdown to war in the Persian Gulf, a significant meeting convened from January 7 to 18 at U.N. headquarters in New York. The Nuclear Test Ban Amendment Conference was the culmination of six years' effort by nonaligned states to end the nuclear arms race by changing the 1963 Partial Test Ban Treaty to include a ban on all nuclear tests.

No one expected the two-week conference to produce a test ban. Instead, the real test was a vote on whether to continue the amendment work at a future date. That vote—74 to 2 to reconvene, with 19 abstentions—left the conference's two adamant opponents, the United States and Britain, in not-so-splendid isolation. Seven Western nations that were expected to abstain voted instead to reconvene the conference.

The United States and Britain were reluctant participants in the conference. The movement begun in 1985 by six nonaligned states—Indonesia, Mexico, Peru, Sri Lanka, Venezuela, and Yugoslavia—under the leadership of Mexico's Nobel Peace laureate, Amb. Alfonso Garcia Robles, relied on the amendment provisions of the 1963 treaty. To the surprise of skeptics, the idea gained momentum in a series of General Assembly resolutions. By April 1989 more than one-third of the parties had joined the request for the amendment conference, making it mandatory for the three depositories (states that negotiated the treaty)—the United States, Britain, and the Soviet Union—to convene it. The Soviets supported the amendment proposal but U.S. and British officials announced that they would veto it. They described the conference as a waste of time and money.

One delegate called the U.S. and British insistence that the amendment process stop at the close of the two-week conference "a preposterous notion."

Although any vote on an actual amendment would have required the assent of all three depositories, a vote to continue the proceedings at a later date did not. So, for the first time, the smaller powers succeeded in pressing their views to a vote in a conference dealing with the provisions of a disarmament treaty. The Western nuclear powers always prefer consensus to majority vote, as it gives them an effective veto. In fact, the United States and Britain have urged that all future multilateral efforts on a test ban be left to the Conference on Disarmament in Geneva, where each of the 39 participants has a veto over procedure as well as substance. For 12 years the United States has refused to begin negotiations on a comprehensive test ban at the Conference on Disarmament or anywhere else.

The conference created a number of other firsts. It was the first time that all parties in a multilateral nuclear disarmament treaty were able to engage in actual negotiations on the treaty, and high participation—100 out of 117 parties—indicated the intensity of interest in a comprehensive test ban. By comparison, only 84 out of 141 parties to the Nuclear Non-Proliferation Treaty took part in that treaty's 1990 review. It also was the first time that the amendment procedure had been invoked under any disarmament treaty, and the first time that the non-nuclear states had proposed a detailed verification scheme and a sanctions regime to deter violations of a nuclear disarmament treaty. Some supporters of the amendment process expressed the hope that the new developments in this conference would set precedents for future disarmament efforts.

The conference decided that further work was needed on verification and sanctions, and authorized Conference President Ali Alatas, the Indonesian foreign minister, to undertake consultations to achieve "progress on those issues" and to reconvene the confer-

ence "at an appropriate time."

The nonaligned states first tried to set a September 1993 deadline for reconvening the conference, and to create an intersessional working group to deal with verification and sanctions. The conference clearly would have adopted the proposal embodying these demands, but the 10 sponsors (the original six conference sponsors plus the Philippines, Nigeria, Senegal, and Tanzania) decided to modify the proposal to gain wider support. As a result, seven Western parties joined in the vote to continue the conference. These included three NATO members—Denmark, Iceland, and Norway—as well as Australia, Ireland, New Zealand, and Sweden. Mexico's Amb. Miguel Marin Bosch, a leader of the amendment move, called the vote "an important breakthrough" in a previously solid Western front. In private, delegates from several other Western nations who had abstained expressed their unhappiness with the stubborn refusal of the United States and Britain to begin any negotiations for a comprehensive test ban.

The seven new supporters apparently see the amendment conference as a way to increase pressure on these two nuclear powers to negotiate a total ban, most likely in the Conference on Disarmament. Cooperation between the two conferences could speed the achievement of a new treaty.

The Gulf war had very little impact on the conference except to keep it out of the news. But a number of representatives who believe that a comprehensive ban is essential to prevent the spread of nuclear weapons mentioned that such a treaty would prevent Iraq and other would-be nuclear powers from acquiring an arsenal of sophisticated nuclear weapons.

Some delegates suggested in private that U.S. preoccupation with the war has hardened its opposition to a comprehensive test ban. They hope that after the war, and with further progress on strategic nuclear arms control, the administration and Congress will review the U.S. position. Resolutions supporting the amendment were introduced in both houses of Congress in January—partly because of the impressive activity of 123 nongovernmental organizations participating in the conference.

The *New York Times*, which previously opposed a comprehensive test ban, scolded the administration for its intransigence, saying U.S. delegate Mary Elizabeth Hoinkes "gratuitously offended states that want a total test ban" when she told the conference, "Consideration of testing limitations is a serious undertaking that should be conducted in a serious manner." The January 27 editorial continued: "For the U.S. to insist on testing undermines nuclear arms control and sends the wrong message to potential nuclear powers: 'Do as I say and not as I do.'"

The future work of the amendment conference is now largely up to President Alatas, a supporter of the amendment from its inception. If, as expected, he pursues his mandate as vigorously as he sought consensus at the conference, a comprehensive ban may well be achieved before 1995, when the Nuclear Non-Proliferation Treaty (NPT) is up for renewal.

The NPT renewal gives the non-nuclear states considerable leverage on the United States and Britain. If the latter continue to withhold their cooperation, the non-nuclear states may try to extend the NPT for only a year or two pending the conclusion of a comprehensive test ban, or amend the NPT to specify that a comprehensive ban be concluded by a certain date. Another option is to take the two countries to the World Court. If there is a confrontation on these issues, or if the United States refuses to attend or pay its share of the costs of the next session of the amendment conference, as it has threatened, the NPT could be doomed.

The amendment conference proved a partial success. Conference sponsors feel they have raised the comprehensive test ban once again to a top place on the international arms control agenda. They consider the continuation of the conference a victory. And they believe that with the perseverance of the conference president and activist non-nuclear states, including the seven new Western supporters, the conference could be a turning point in the long struggle to ban nuclear testing and achieve real nuclear disarmament. ■

William Epstein, senior fellow at the U.N. Institute for Training and Research, represented the U.N. secretary-general at negotiations leading to the 1963 Partial Test Ban Treaty and the 1968 Nuclear Non-Proliferation Treaty.

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The First Step: Halt Nuclear Weapons Testing

Defense Monitor in Brief

- U.S.-Soviet nuclear arms agreements have not prevented rapid growth in the number of U.S. and Soviet strategic nuclear warheads.
- Current U.S.-Soviet talks give the erroneous impression that deep reductions in nuclear weapons are about to occur.
- The U.S. and the Soviet Union continue to test and build new, more destructive nuclear weapons.
- Since 1945 the U.S. has conducted 932 nuclear test explosions and the Soviet Union has conducted 638. Neither country needs to continue nuclear test explosions to maintain a secure retaliatory force.
- The flight testing of new ballistic missiles will lead to the development of new, super-accurate, first strike weapons.
- The U.S. could verify with high confidence Soviet compliance with a ban on nuclear test explosions and ballistic missile flight tests.

In 1969 the United States and the Soviet Union began conducting strategic arms negotiations on a regular basis. Since then the total number of U.S. and Soviet nuclear warheads on long-range missiles and bombers has more than quadrupled, from about 5,550 to about 24,000.

It is far from clear that a new arms reduction agreement will be completed any time soon. The strategic arms reduction talks (START) have been going on since 1982 and have not yet produced an agreement. Brent Scowcroft, President Bush's influential National Security Adviser, has been critical of the prospective agreement that might be produced by these talks. Further, many major obstacles remain, including a fundamental disagreement over Star Wars and many thorny problems regarding verification.

Even if a START treaty is signed and ratified, it would still leave the United States and the Soviet Union with far more nuclear weapons than they need for secure retaliatory forces. Finally, if past U.S.-Soviet agreements on long-range nuclear weapons are any indication, a START treaty would not prevent either country from developing new nuclear weapons.

A New Approach

It is time for a new approach. With the recent improvement in U.S.-Soviet relations, President Bush has an historic opportunity to genuinely slow and reverse the nuclear arms competition with the Soviet Union. This could be accomplished through a combination of sensible restraint and bilateral arms limitation agreements that prevent the development of new, more dangerous nuclear weapons.

Past and current arms negotiations have focused almost exclusively on numerical limits for **existing nuclear delivery vehicles** and have neglected limits on the development of **new nuclear warheads and new missiles** to carry those warheads. Both the United States and the Soviet Union continue to develop more destructive nuclear warheads and more accurate ballistic missiles.

The combination of new, more destructive nuclear warheads and new, more accurate ballistic missiles could be used to create weapon systems particularly well-suited for a first strike. Such weapons would compel both the United States and the Soviet Union to put their nuclear forces on a hair trigger during a crisis. In short, **to reduce the likelihood of nuclear war, the United States and the Soviet Union need to stop developing deadly new weapons. The way to accomplish this is through the cessation of nuclear test explosions and ballistic missile flight testing.**

A BAN ON NUCLEAR EXPLOSIONS

Today the United States has about 13,000 nuclear warheads deployed on long-range missiles and bombers. The Soviet Union has about 11,000. Since 1945 the United States has conducted 932 nuclear test explosions and the Soviet Union has conducted 638. Clearly, both nations have more than enough reliable nuclear warheads to maintain strong retaliatory forces.

Nuclear Test Explosions Since 1945

U.S.	932*
U.S.S.R.	638
France	172
U.K.	41*
China	34
India	1
Total:	**1,798**

* includes 20 joint U.K./U.S. tests.

Source: DOE, CDI, NRDC.
Chart prepared by Center for Defense Information.

A nuclear test ban would help stop the development of dangerous new nuclear warheads. By refraining jointly from nuclear explosions testing, neither the United States nor the Soviet Union would be able to ascertain whether new nuclear warheads actually work as designed. Without the opportunity to test, scientists would have little incentive to design new nuclear warheads because they would not have confidence in the reliability of these warheads and there would be no point in putting them in new nuclear weapon systems.

Benefits of Ending Tests

A test ban would prevent both the U.S. and the Soviet Union from developing "earth penetrating" nuclear warheads which burrow deep into the ground before exploding. The United States is currently designing these warheads to destroy underground targets in the Soviet Union such as ICBM silos and command bunkers.

The continued U.S. pursuit of the capability to destroy such targets is both ironic and troubling. The U.S. has identified the Soviet SS-18 missile as the most dangerous Soviet nuclear weapon precisely because it has the accuracy and the destructive power to destroy U.S. ICBM silos and command and control facilities. Certainly U.S. and Soviet missiles armed with new earth penetrating warheads would be even more effective against ICBM silos and command and control facilities than today's SS-18 missile.

The development and deployment of earth penetrating warheads could only raise fears on both sides of disarming strikes by the other. During times of tension, political and military officials, confronted by numerous, highly accurate missiles armed with earth penetrating warheads, might believe that they were in a "use 'em or lose 'em" situation. The pressure would grow to try to beat the other side to the punch by launching nuclear weapons first, before they could be destroyed in a surprise attack. Thus the deployment of earth penetrating warheads might have the perverse effect of provoking officials to initiate the use of nuclear weapons during a crisis.

According to a Pentagon spokesman, the U.S. could develop a new earth penetrating warhead in "about five years." In fact, the U.S. has already conducted a significant amount of research on this type of warhead, having started the development of an earth penetrating warhead for the Pershing II intermediate-range missile in 1979, before canceling the program in 1980.

If both sides continue nuclear testing the Soviet Union will likely follow the U.S. lead and develop its own earth penetrating warhead. Such a weapon would bring the Soviets closer to having the theoretical capability to carry out a disarming first strike against the United States. Its development would make both countries less secure.

Compact Warheads

A test ban on nuclear explosions would also benefit U.S. security by making it extremely difficult for the Soviet Union to develop more compact and efficient nuclear warheads that weigh less and have more explosive power than existing warheads. The United States currently enjoys a large advantage in this area. Its ballistic missiles carry warheads with far greater "yield to weight" ratios than those on Soviet ballistic missiles. If both sides continue to set off nuclear test explosions, it is likely that the Soviet Union will be able to close that gap.

A 1984 report prepared by the Reagan Administration noted that if the Soviets continue nuclear testing, "they could develop efficient miniature warheads with high yield to weight and yield to volume ratios. Such developments would allow the Soviets to exploit fully the fractionation possibilities of their ICBMs." In other words, with the development of lighter warheads, the Soviet Union could take advantage of the large payload capacity of its existing ICBMs and quickly double or even triple the number of warheads on those missiles without adding a single new missile to its arsenal. A ban on all nuclear explosions would work to foreclose this possibility.

X-Ray Lasers

In addition to preventing the development of new nuclear warheads, a ban on all nuclear explosions would prevent the development of nuclear-driven directed energy weapons (NDEWs), including X-ray lasers, hypervelocity pellets, and optical frequency lasers. The most advanced of these potential new weapons is apparently the X-ray laser. The United States is currently conducting research on the X-ray laser under the Strategic Defense Initiative (SDI) program. For the X-ray laser to work as part of a Star Wars

"shield," the X-ray energy would have to be generated by a nuclear explosion in outer space. That energy would be focused and directed against Soviet ballistic missiles in space.

The Soviet Union has also reportedly expressed interest in developing an X-ray laser. In 1985 the CIA stated that in Soviet publications on X-ray lasers "the use of nuclear explosions has been proposed as a method for creating conditions for X-ray lasers."

If both the United States and the Soviet Union continue nuclear testing, both sides could eventually develop X-ray lasers with significant military applications. It is unlikely, however, that an X-ray laser could be used effectively to shoot down ballistic missiles in a nuclear war. The booster rockets of future ballistic missiles could burn out so quickly that the missiles would dispense their warheads while still in the atmosphere. This would render X-ray lasers ineffective because X- rays are not able to penetrate the earth's atmosphere.

Although X-ray lasers would certainly be ineffective against ballistic missiles, they could be used very effectively in another manner. Space-based X-ray lasers, which could strike at the speed of light, would be particularly well-suited to destroy satellites in high orbit (higher than 5,000 kilometers). The U.S. is extremely dependent on these satellites for communications and early warning of missile attack. Soviet X-ray lasers would have the capability to destroy U.S. satellites in high orbits (a capability the Soviet Union does not have now). Preventing the development of Soviet X-ray lasers would therefore definitely be in the interests of the United States.

Genie Still in the Bottle

Today the U.S. is not even close to having an operational X- ray laser or any other nuclear-driven directed energy weapon (NDEW). In a 1988 report the General Accounting Office (GAO) noted that the U.S. X-ray laser is many years away from fruition. In a 1987 study the American Physical Society (APS), the most prestigious organization of American physicists, concluded that "even in the best of circumstances, a decade or more of intensive research would be required" before an informed decision could be made "about the potential effectiveness and survivability of directed energy weapon systems."

There are no indications that the Soviet Union is any closer to developing NDEWs than is the United States. In a 1987 report the Joint Chiefs of Staff concluded that the U.S. and Soviet were equal in directed energy weapon technology. In 1986 the CIA told Congress that it "does not believe that the Soviet Union can deploy nuclear-driven directed-energy weapons without conducting additional explosive tests." Since 1986 the Soviet Union has conducted only 42 nuclear explosions. That is certainly too small a number to develop NDEWs. According to weapons designers at Los Alamos National Laboratory, between 100 and 200 nuclear explosions might be needed to develop such third generation nuclear weapons. Therefore a ban on all nuclear tests would likely preclude both sides from developing NDEWs.

Verification of a Test Ban

There is a large amount of evidence which suggests that the U.S. can confidently verify Soviet compliance with a nuclear test ban. Certainly the U.S. has the capability to verify the compliance with at least a low threshold test ban which would prohibit all but the smallest nuclear explosions.

Today there is a consensus within the scientific community that a U.S. network of high-performance seismic stations positioned just outside the borders of the Soviet Union can detect all Soviet nuclear explosions in hard rock with yields above 1 kiloton (the equivalent explosive power of 1,000 tons of TNT). This consensus is reflected in an authoritative report issued in 1988 by the Office of Technology Assessment (OTA). OTA, a non-partisan analytical arm of Congress, concluded that with a dozen or so seismic arrays along Soviet borders the U.S. "can detect and identify underground nuclear explosions with yields below one kiloton if no attempt is made to evade the monitoring network."

This OTA assessment applies solely to the verification capability of a network of seismic arrays outside the Soviet Union. It does not reflect the broader verification capabilities of non-seismic means of verification and cooperative measures. If an external network is supplemented with seismic monitoring stations inside Soviet territory, reconnaissance and eavesdropping satellites, on-site inspections and data exchanges, many experts believe that the U.S. could confidently verify a complete ban on

A Comprehensive Test Ban in 1963 Would Have Prevented Many of Today's Nuclear Weapons

The United States and the Soviet Union signed the Limited Test Ban Treaty on August 5, 1963, prohibiting nuclear testing in outer space, underwater, and in the atmosphere. The treaty, however, permitted nuclear testing to be conducted underground. This continued nuclear testing allowed both the United States and the Soviet Union to develop smaller, more efficient nuclear warheads, enabling them to develop Multiple Independently Targetable Reentry Vehicles (MIRVs) and cruise missiles. **Since 1963, the United States and the Soviet Union have developed, tested and built the following long-range MIRVed missiles and cruise missiles:**

United States	Soviet Union
ICBMs: Minuteman III; MX.	SS-17; SS-18; SS-19; SS-24.
SLBMs: Poseidon C-3; Trident C-4.	SS-N-18; SS-N-20; SS-N-23.
Cruise Missiles: Tomahawk SLCM; ALCM.	SS-N-21 SLCM; AS-15 ALCM.

ALCM: Air-Launched Cruise Missile
ICBM: Intercontinental Ballistic Missile
SLBM: Submarine-Launched Ballistic Missile
SLCM: Sea-Launched Cruise Missile

Source: Department of Defense, CDI.
Chart prepared by Center for Defense Information.

nuclear testing even if attempts were made to evade the monitoring network.

Numerous Tests Needed

To create a reliable new nuclear warhead the Soviets would have to conduct a series of nuclear explosions, not just one or two. The U.S. usually conducts at least six tests for each new basic weapons design. The development of much more advanced directed-energy weapons and other "third generation" nuclear weapons could require several hundred tests. It would be extremely difficult for the Soviets to evade detection of an entire series of tests.

Furthermore, the Soviet Union would have a strong disincentive to cheat because it would be perceived by the international community as an untrustworthy and duplicitous negotiating partner if it were caught. The potentially high political costs of violating the treaty would far outweigh the marginal military benefits. Above all, the Soviets know that if they were caught cheating the U.S. would then resume testing.

Monitoring in U.S.S.R.

The Soviet Union has recently demonstrated its willingness tc allow the U.S. to install seismic stations in the U.S.S.R. The Soviet Union has already permitted private American scientists, under the auspices of the Natural Resources Defense Council (NRDC), to set up five seismic monitoring stations in the Soviet Union.

On September 14, 1988, U.S. government officials were present at the Soviet test site to monitor a Soviet nuclear explosion. The Joint Verification Experiment (JVE), which also included Soviet observation of a U.S. test in Nevada, was intended to improve U.S. and Soviet capabilities for estimating the magnitude of each other's nuclear explosions. To this end the Soviet government allowed the U.S. officials to set up their own equipment at the test site to measure the size of the explosion. The JVE provides another example of Soviet willingness to allow highly intrusive on-site inspections in order to verify agreements on nuclear testing.

Soviet Compliance

In building its case against limits on nuclear testing the Reagan Administration accused the Soviet Union of "likely" violations of the Threshold Test Ban Treaty (TTBT), an agreement signed in 1974 which limits the yield of nuclear explosions to 150 kilotons. In 1987, however, the directors of the nation's two nuclear weapons labs testified before Congress that there is no clear-cut evidence that the Soviets have violated the TTBT. In 1988 the Office of Technology Assessment (OTA) concluded that, based on the available data, Soviet nuclear testing has been "consistent" with the TTBT limit. Therefore, **the Reagan Administration's charge of Soviet cheating is not supported by the facts.**

On the contrary, it was clearly a politically motivated effort to cloud the debate, confuse Congress and the American public, and justify continued U.S. nuclear testing to build new weapons.

Stockpile Reliability

A test ban would not render existing U.S. nuclear weapons unreliable. The U.S. can insure the reliability of its nuclear stockpile through non-nuclear testing. In 1985 eight renowned nuclear weapon experts, including Norris Bradbury, former director of Los Alamos National Laboratories, told Congress:

"Continued nuclear testing is not necessary in order to insure the reliability of the nuclear weapons in our stockpile. The best way to confirm reliability is to disassemble sample weapons and to subject the components to non-nuclear tests."

They added that, in the past, problems with nuclear weapons have been discovered and fixed without nuclear testing:

"Weapons can also be detonated without their nuclear components in order to insure that the complete assembly operates correctly. Nonexplosive tests are also available for determining whether the nuclear components have deteriorated during storage. If aging problems are found in some components, these components can be replaced with newly fabricated ones, using the original design specifications. In the past these techniques have identified a number of reliability problems. In no case was the discovery of a reliability problem dependent on a nuclear test and in no case would it have been necessary to conduct a nuclear test to remedy the problem."

A test ban would not prevent the U.S. from replacing old nuclear weapons in the stockpile because existing nuclear warhead designs can be remanufactured. In 1986 Admiral Sylvester Foley, then Assistant Secretary of Energy for Defense Programs, told Congress that "the remanufacture of existing, well tested warheads is possible." In a 1987 study, Ray Kidder, a senior scientist at the Lawrence Livermore National Laboratory, stated, "the nuclear weapons in the present U.S. stockpile are sufficiently robust to allow reliable replication, if necessary...It is concluded that the necessary materials and expertise required for the remanufacture of the existing stockpile can and will be available, and that remanufacture can be successfully accomplished."

Only a small fraction of U.S. nuclear tests are conducted for the purpose of maintaining stockpile reliability. According to the Department of Energy (DOE), the U.S. conducted only 6 to 8 nuclear tests between 1970 and 1985 to "correct defects in stockpiled weapons." That is less than three percent of all the tests conducted during that period. Such a small number of tests cannot establish statistically meaningful measures of the reliability of the thousands of nuclear weapons in the U.S. stockpile. Furthermore, since

Soviet Unilateral Testing Moratorium

The Soviet Union began a unilateral nuclear testing moratorium on August 6, 1985 and refrained from testing until February 26, 1987. During that 19 month period, the United States, which refused to join in the moratorium, conducted a total of 26 nuclear explosions. The Soviet Union has repeatedly stated that it is again prepared to stop nuclear testing any time that the United States stops testing.

such a small fraction of the tests are conducted for this purpose, it is obvious that DOE, which runs the U.S. nuclear testing program, does not consider such tests to be very significant.

Over a long period of time after the implementation of a test ban there would likely be a subtle but significant decrease in confidence in overall reliability in the nuclear stockpile. This would erode the very high degree of confidence required for a nation contemplating a "first strike" in which nuclear weapons would have to perform with tremendous precision.

A disarming first strike would require the sudden and swift destruction of the other side's nuclear forces, including its ICBMs, submarines in port, and bombers on the ground. Today's ICBMs are either in silos that have been reinforced with steel and concrete or are mobile. In either case their destruction requires attacking nuclear warheads to detonate very close to the ICBMs with great explosive power. Submarines and bombers, of course, are mobile and must be destroyed before they can escape attack.

Retaliating against cities and industrial facilities is a far easier task since these targets are not hardened to withstand nuclear blasts and do not move. Therefore, the lesser degree of confidence required for effective retaliation would not be significantly affected by a nuclear test ban.

A FLIGHT TEST BAN

Following a nuclear test ban the U.S. and the Soviet Union could agree to ban or limit flight testing of new ballistic missiles. Once the development of new nuclear warheads is stopped, the political climate will be more conducive to the signing of an agreement to stop the development of new ballistic missiles.

Precedents

There are several precedents for new U.S.-Soviet arms agreements to restrict flight testing: the ABM treaty prohibits testing of ABM interceptor missiles on mobile launchers; SALT II prohibited testing of more than one new type of ICBM; and the INF treaty bans flight testing of land-based intermediate- and shorter-range missiles.

The U.S. has proposed flight testing limits in past and present negotiations on strategic arms. The U.S. first proposed flight testing limits to the Soviet Union in January 1958 when President Eisenhower wrote to Soviet Premier Nikolai Bulganin proposing a halt to the testing of missiles in outer space. As part of its initial SALT II proposal the Carter Administration proposed a limit on the number of ICBM and SLBM flight tests permitted per year. In the START negotiations the U.S. is currently proposing a ban on the flight testing of all heavy ballistic missiles.

A FLIGHT TEST BAN IS NOT A NEW IDEA

"A ban on the testing of long-range missiles, if put into effect within six months, might prevent the development of a Soviet operational ICBM capability... it might prove to be in our interest to propose such a ban."

John Foster Dulles
Secretary of State
May 2, 1958

Congress has also passed legislation limiting flight testing. It prohibited the flight testing of U.S. anti-satellite weapons against objects in space from FY86 through FY88. This prohibition was contingent on the Soviets continuing to refrain from such tests (the Soviets have not conducted any antisatellite tests since 1982). In 1988 Congress approved legislation, also based on Soviet reciprocity, prohibiting the U.S. from conducting ballistic missile flight tests with lower-than-normal trajectories that reduce warning time (the bill containing this legislation was vetoed by then President Reagan).

Benefits

A ban on ballistic missile flight testing would reduce fears that the other side is developing the ability to carry out a disarming first strike. It would accomplish this by making it difficult to develop new missiles with pinpoint accuracy and shorter flight times and by reducing confidence in the reliability of existing missiles to destroy the other side's retaliatory forces. Leaders contemplating a first strike would be less likely to make a decision to initiate the use of nuclear weapons in a crisis because they would not be confident that their weapons would perform with the precision required to prevent the other side from retaliating in a devastating fashion.

Effect on Soviet Missiles

A flight test ban would make it extremely difficult for the Soviet Union to develop new ICBMs with enough accuracy to destroy hardened underground military facilities such as ICBM silos and command and control installations. According to former Secretary of Defense Frank Carlucci, the Soviets' two newest ICBMs, the SS-24 and the SS-25, lack the accuracy to destroy hardened targets. In September 1988 he told Congress, "the SS-24 and SS-25 are presently suited most appropriately to soft and medium hard targets--rather than hard targets--due to lower accuracies and reliability." A flight test ban would impede Soviet efforts to improve the accuracy of the SS-24 and the SS-25 to the point where they have the capability to destroy hard targets. The only long-range missile the Soviet Union has today with apparent hard target capability is the SS-18 and the Soviets have agreed to cut the number of these missiles in half as part of a START treaty.

A flight test ban could also prevent the Soviet Union from developing a submarine-launched ballistic missile (SLBM) with sufficient accuracy to destroy very hard U.S. targets. In return the United States would probably have to limit the deployment of the new Trident II SLBM which has already been tested and will have "silo busting" accuracy. The Trident II is scheduled to become initially operational in December 1989.

Preventing the Soviets from developing "hard target kill" SLBMs is particularly important because of the short flight times of SLBMs. Because Soviet SLBMs could be launched close to U.S. borders, they could hit their targets in under 15 minutes. The development of Soviet hard target kill SLBMs would therefore allow the Soviet Union to target

U.S. ICBMs and bombers simultaneously in a surprise attack. This is a capability the Soviets do not have today. As mentioned above, the only weapon that the Soviets have today that has the accuracy and destructive power to destroy U.S. silos is the SS-18 ICBM. The SS-18's flight time to the United States, however, would be about 30 minutes. This would allow more than enough time for U.S. bombers to receive early warning of an attack and get off the ground before the SS-18's warheads landed. Therefore, only a new hard target kill Soviet SLBM could potentially threaten both U.S. bombers and ICBMs simultaneously.

A flight test ban would not only make it difficult for the Soviet Union to increase the accuracy of its existing ICBMs and SLBMs, it would virtually prevent the Soviets from developing new ballistic missiles with first strike accuracy.

Benefits of a Missile Flight Test Ban

"On balance the danger from continued testing clearly outweighs the benefit. Missile tests are good things...when they lead to better and more reliable U.S. missiles. But when they lead to quicker, more lethal, and more reliable Soviet missiles, tests are not good things.

"[It is not enough to ask] what American missile reliability can do for us. We must ask what Soviet missile reliability can do to us. Perfect reliability means a perfectly reliable Soviet first strike against our silos and bombers. Suppose both sides had perfectly reliable, perfectly accurate, and very quick weapons. If the Soviets fired first, their reliable weapons would turn our reliable weapons to ashes...The idea of deterrence through bilateral weapon unreliability runs counter to everyday experience, and takes some getting used to. It's valid nevertheless."

William Colby
Former Director of the CIA
November 14, 1987

Arms Reductions and Missile Accuracy

It is widely assumed that nuclear war plans call for two warheads per hardened target. For example, it is assumed that in a first strike, the Soviet Union would use 2,000 warheads against 1,000 U.S. ICBM silos. If a START treaty is concluded, it might result in the U.S. retaining a smaller number of silos than it has today but it would not impede the Soviet Union from developing more accurate ballistic missiles.

If the Soviets were to develop a missile with such accuracy that they could confidently allocate only one warhead per silo, and the U.S. reduced the number of its silos to comply with the provisions of a START treaty, then the treaty might actually have the unintended effect of making a disarming Soviet first strike more, not less, plausible. A flight test ban would benefit the U.S. by preventing the development of Soviet missiles with accuracy sufficient to destroy silos with only one warhead.

Benefits of a Partial Ban

Given the predictably strong political opposition in the Pentagon to a total flight test ban, it may be difficult to achieve such an agreement soon. In the near term, however, certain mutually beneficial, partial restrictions on flight testing could be achieved. These restrictions could provide the foundation for a total flight test ban in the future.

Specific flight testing restrictions could prevent the development of many dangerous new technologies. For example, such limits could prevent both nations from developing missiles with maneuvering reentry vehicles (MARVs) that could home in on their targets with pinpoint precision. Test restrictions could also prevent the development of SLBMs with lower-than-normal trajectories that could reach targets faster and reduce warning time. Finally, a ban on the flight testing of all MIRVed missiles could lower confidence in the reliability of existing MIRVed missiles and encourage a move toward single-warhead missiles.

MARVs

A ban on the flight testing of precision guided maneuverable reentry vehicles (MARVs) would serve the interests of both the United States and the Soviet Union. MARVs, unlike today's nuclear warheads, would be able to change their course as they streak down toward their targets. A MARV, after being released from the "bus" of its ballistic missile and traveling through space, would reenter the atmosphere and, using advanced sensor technology, home in on its target with extremely high accuracy.

Tests of the first U.S. long-range homing MARVs could begin in the early-to-mid 1990s. There is no evidence that the Soviets have begun testing MARVs but it has been reported that they are expected to do so in the next few years. Therefore, the implementation of a MARV flight test ban would prevent the development of this dangerous new technology on both sides.

Depressed Trajectory

A ban of the flight testing of SLBMs with "depressed trajectories" would also ease fears of a disarming surprise attack. A missile in a depressed trajectory takes a lower-than-normal flight path. As a result, such missiles arrive at their targets much faster than those taking a normal flight path. This means that missiles launched in a depressed trajectory from Soviet submarines stationed 1,000 nautical miles off the U.S. coast could arrive at bomber airfields in five minutes rather than in 13 minutes cutting warning time by more than half. Therefore, U.S. bombers, which even with early warning require at least 6 to 8 minutes to get safely airborne, might not be able to take off before the Soviet missiles arrived. Depressed trajectory SLBMs could also pose a threat to command and control facilities and mobile ICBMs.

Neither the U.S. nor the Soviet Union has extensively tested ballistic missiles in a depressed trajectory. Last year the U.S. Navy told Congress that a ban on depressed trajectory SLBMs would be "a non-intrusive limitation...acceptable for U.S. strategic system flight tests." While it appears that the U.S. Navy has no intention of testing SLBMs in a depressed trajectory, the House Armed Services Committee reported in 1988 that "there are some indications of Soviet plans" to conduct such missile tests.

Now is the time to nip depressed trajectory testing in the bud. Depressed trajectory missiles make no sense for a retaliatory strike: they have shorter range and require more fuel than missiles with normal flight paths. Depressed trajectory SLBMs, however, would be well suited for a surprise attack. By cutting early warning time in half, the aggressor could carry out a surprise attack and potentially undercut the other side's ability to retaliate effectively. A ban on all depressed trajectory flight testing would be in the interests of both the U.S. and the Soviet Union.

MIRVs

It would make sense to ban all further MIRV flight testing. MIRVs, by providing a single ballistic missile with the capability to destroy numerous land-based retaliatory missiles, make a disarming first strike more plausible. Therefore, the extensive deployment of MIRVed missiles could put U.S. and Soviet nuclear forces on a hair-trigger during a crisis, increasing pressure on leaders to launch a preemptive strike.

A MIRV flight test ban would reduce confidence in the reliability of existing MIRVs over time and thus would discourage a decision to attempt a surprise attack. If accompanied by an arms reduction agreement, such as a START treaty, a MIRV flight test ban would also give both countries an incentive to reduce the number of MIRVed missiles and put more emphasis on less threatening single-warhead missiles.

Soviet Interest in a Flight Test Ban

In September 1987 a congressional delegation led by Congressman Tom Downey (D-NY) visited the Soviet Union and inspected a Soviet radar installation near the city of Krasnoyarsk. During this visit members of the delegation discussed a flight test ban, among other proposals, with Soviet arms control specialists. Upon its return the delegation reported to Congress that "all [of these proposals] attracted substantial positive interest from the Soviet side."

There are additional indications that the Soviets may be interested in limits on missile flight testing. In the SALT II negotiations, the Soviets reportedly said they might consider a ban on depressed trajectory missiles if the agreement included limits on how close ballistic missile submarines could come to each other's borders. In 1987, Soviet scientists released a report calling attention to the "danger" of MARVs. They asserted that the development of MARVs "could foster...illusions with regard to the feasibility of waging a 'limited' nuclear war."

Verification of a Flight Test Ban

The U.S. could verify Soviet compliance with either a total or partial ban on ballistic missile flight testing. The Senate hearings on the INF treaty made this clear. After hearing witnesses from the intelligence community, the Defense Department, the State Department and the Joint Chiefs of Staff, the Senate Select Intelligence committee reported that if the Soviets violated the INF treaty by flight testing the missiles covered under the treaty, the violation would be "readily detectable." Certainly it would be easier to verify a flight test ban on even larger strategic missiles being tested at much greater ranges, fully observable by a network of U.S. satellites and radars.

Discouraging Evasion

One way of trying to circumvent flight test ban limits would be through clandestine testing of ballistic missile components in permitted space program launches. Although such tests might provide information about certain components of ballistic missiles, it would not be the same as testing the missile as a complete, integrated system. In addition, there are ways to make circumvention of a flight test ban more difficult. The U.S. and the Soviet Union could: 1) define differences in trajectories between strategic missiles and space launches; 2) require space launches to use different types of booster rockets than those used for strategic missiles; 3) announce all space launches in advance; 4) confine all launches to established areas; and 5) explain the nature and purpose of each launch. These measures would make it extremely difficult to cheat on an agreement limiting ballistic missile flight testing.

A FLIGHT TEST BAN CAN BE VERIFIED

"The probability that the U.S. would detect a single Soviet flight test is certainly higher than 90 percent, given the variety of means the U.S. has to detect these tests. At least 20 tests are required to determine with confidence the accuracy of a new missile. Therefore, even if the U.S. can be confident that it can detect the test of a Soviet ballistic missile only 90 percent of the time, its chances of not detecting one of the 20 Soviet tests is only one in 100 billion billion. In short, a treaty banning ballistic-missile testing altogether could be confidently verified."

Dr. Kosta Tsipis
Director of MIT's Program in Science and Technonology for International Security
March 1985

TAKING THE INITIATIVE

It took two and a half years to negotiate the SALT I Interim agreement, seven more years to negotiate the unratified SALT II treaty, and over six years (so far) to negotiate the prospective START treaty. Not one of these three is now in force and even if they were, they would not prevent either side from developing new nuclear weapons systems. Clearly, these negotiations have not resulted in effective constraints on the nuclear arms competition.

It is time for the United States to take the initiative. The first essential step is a U.S. decision to stop nuclear testing. The Soviets are already on record as stating that they will stop testing as soon as the United States does. A U.S. initiative would demonstrate that the United States is genuinely ready to start a process to halt 40 years of nuclear arms competition.

Conclusions

- The development of new, more destructive U.S. and Soviet nuclear weapons could be slowed and ultimately stopped through a series of initiatives by the U.S. and the U.S.S.R.
- A U.S. decision to stop all nuclear test explosions would be quickly followed by a similar cessation in the U.S.S.R.
- A ban on all nuclear test explosions would dramatically reduce the risk of nuclear war.
- A ban on U.S. and U.S.S.R. flight tests of ballistic missiles would stop the development of dangerous, new first strike missiles in both countries.

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* Principal Analyst This Issue

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sane/alaska

Working For Peace, Justice and Global Security

An affiliate of SANE/FREEZE: Campaign for Global Security

(1,000+ members)

What is SANE/Alaska?

SANE/Alaska is a non-profit activist/educational organization formed in 1982 under the name Citizens Against Nuclear War. In 1987, SANE/Alaska affiliated with SANE/FREEZE: Campaign for Global Security, the largest peace and disarmament group in the nation, with over 180,000 members. SANE/Alaska has over 1,000 paid members from Barrow to Ketchikan.

In 1982, SANE/Alaska successfully sponsored Nuclear Weapons Freeze initiatives in Anchorage and Juneau. In August 1986, Alaskan voters approved our ballot initiative making the promotion of a mutual and verifiable Nuclear Weapons Freeze the official policy of the state. The initiative was endorsed by Gov. Walter Hickel, Gov. Bill Sheffield, Gov. Steve Cowper, Mayor Tony Knowles, Sen. Arliss Sturgulewski and Dick Randolph.

SANE/Alaska's mission is to help organize Alaskans into a citizens movement to reverse the arms race, abolish nuclear weapons and construct a world of peace, justice and respect for the environment.

A major goal of SANE/Alaska is to secure a "peace dividend" targeted for human needs, new infrastruture development and environmental protection. SANE/Alaska also educates and lobbies for federal legislation to assist local communities with the post-Cold-War transition from a military dependent economy to a peace economy.

In addition to public education projects on peace, SANE/Alaska has actively supported resolutions in the Alaska State Legislature promoting the negotiation of a mutual and verifiable nuclear-free arctic treaty between Arctic nations. Since March 1987, SANE/Alaska has worked to prevent air shipments of deadly bomb-grade Japanese plutonium through Alaskan airspace, a serious threat to the state's people and environment.

The group has also supported legislation in the Alaska State Legislature to ban the sale of irradiated food in Alaska until peer-reviewed scientific research proves that the process is safe (food irradiation is already illegal in three states and several countries). SANE's latest special project involves researching Alaska's Permanent Fund stock holdings to establish a socially responsible investment policy.

SANE/Alaska has an office in Anchorage and employs a full-time director, occasional project coordinators and student interns year round. For more information about SANE/Alaska or to get involved, call 272-0621.

Mailing address: 3605 Arctic Blvd., #1717, Anchorage, AK 99503 Phone: (907) 272-0621

SANE/FREEZE Gulf War Actions: What You Can Do

1) **Write letters to the editor and call in to talk shows.** It's not too late to stop the fighting and to save lives. We demand an immediate cease-fire, a negotiated resolution that prevents further outbreaks and lays the groundwork for real peace in the region, and the convening of an international peace conference to resolve all conflicts in the region. We are expressing support for the troops by calling for an end to the fighting. "Stop fighting, start talking." The war will end in some kind of negotiation sooner or later. Let us save lives by making it sooner.

2) **Organize demonstrations.** Have people bring candles, American flags and flowers to erect a shrine to those killed. This will be a time for both mourning and protest. Encourage the participation of religious and labor leaders as well as elected officials. Arrange for the ringing of church bells.

3) **Encourage continued negotiations** toward a swift, peaceful settlement now that war has begun. Ask your Congressperson what he or is doing to end the war now.

4) This conflict could cost up to three billion dollars per day *(Washington Post*, 1-15-91), money we cannot afford to waste. **Demand that the cost of the war start coming out of the Pentagon budget.**

5) **Keep the phone lines busy.** The White House comment line is (202) 456-1111, and the State Department Public Affairs line is (202) 647-6575.

6) **Consider civil disobedience at home offices of members of your Congressional delegation who voted for the authorization of the use of force.**

7) **Support our troops by donating blood to SANE/Alaska's Gulf Blood Drive.** In Anchorage, call the Blood Bank of Alaska, 563-3110 to set up an appointment. Let us know you donated.

SANE/FREEZE Calls for CTB at U.N.

(Note: What follows is the January 9 testimony of Cora Weiss, the International Representative of SANE/FREEZE before the Amendment Conference for a Comprehensive Test Ban at the United Nations in New York City.)

My name is Cora Weiss. I am the International Representative of SANE/FREEZE: Campaign for Global Security. We are an organization of 130,000 members with 241 affiliates in 40 of the United States. Our national office is in Washington, DC and we have an International Office in New York City which maintains working relations with colleague organizations all around the world and as an NGO with the United Nations.

SANE/FREEZE is the largest peace and justice organization in the U.S. It is our history and commitment to a world free of nuclear weapons that brings us before you today. SANE, the Committee for a Sane Nuclear Policy, was founded to prevent nuclear testing in the 50s. The Campaign for a Nuclear Weapons Freeze emerged in the 80s calling for a halt to the production of nuclear weapons. In 1961, SANE worked with women's organizations in building public pressure for the treaty to ban nuclear testing in the atmosphere.

It is appropriate therefore that today I am also representing women for Meaningful Summits, a network of women's organizations and individuals dedicated to the elimination of nuclear weapons, reversing the arms race, and helping governments understand the need to have women in decision making positions whenever the fate of the earth is on the table.

Mr. President, with your permission, I should like to address my own government as well as all the others assembled here.

I would like to tell you that there is no public support in our country for nuclear testing. SANE/FREEZE members have marched in the Nevada desert and have been arrested to bring the horrors of testing to public attention.

As we sit here today the world sits on the edge of its chair frightened about the consequences of the most rapid deployment of military force since the Vietnam War in the Middle East. One of the reasons offered by our administration in an attempt to justify this outrageous military build-up is to eliminate the military and nuclear capability of Saddam Hussein in Iraq.

A test ban is a first and major step toward the elimination of nuclear weapons and until nuclear weapons are eliminated every dictator, every Saddam Hussein will want one. Thus, we must make it impossible for other nations to try to develop their own nuclear arsenals.

As long as work proceeds on nuclear weapons anywhere in the world such weapons will spread like a cancer and thus must be excised.

Weapons of mass destruction are not compatible with the "new world order" that President Bush would like us to support. According to series of United Nations resolutions and highly respected international lawyers the use of nuclear weapons is a crime against humanity. Thus the use of nuclear weapons is illegal under international law. And we know that the concept of international law is being increasingly invoked in Washington.

I would like to speak mother to mother, parent to parent. In 1961, two of our children were infants. They were just losing their baby teeth. A research doctor at Washington University in St Louis, MO was testing babies teeth for the presence of Strontium 90 the deadly cancer-making component of nuclear weapons. At that time the Soviet Union and the United States were testing nuclear weapons in the atmosphere and the radiation fallout was polluting the grass that cows ate. Mothers were feeding the babies milk laced with this deadly element. That's all that we needed to know. Thousands of American mothers organized to protest nuclear testing and when President Kennedy signed the treaty he recognized

(continued on page 13)

(CTB - continued from page 12)

the persuasive role that the women played in educating and activating public opinion. Pushing nuclear testing underground may have put it out of sight, but lethal fallout continues to pollute the earth and the water supply. You might want to take a trip "downwind" of the nuclear test sites in this country so that you can meet the widows and widowers, the victims of thyroid cancer, the victims of leukemia, breast cancer and cancer of the prostate in abnormal numbers.

Evidence is available of the accidental venting of underground tests in Nevada since 1961 which have released as much deadly activity into the atmosphere as did the Chernobyl accident which is thought to have accounted for 10 percent of all previous radiation releases.

Andrei Sakharov, a hero of the American people, worried about the biological effects of Soviet H-bomb tests calculated that as many as 1 million persons will die worldwide for every 50,000 kilotons of radioactivity released. Sakharov's formula implies that the deaths of 14 million persons can be associated with an estimated 700,000 kilotons of radioactivity that have been released since 1945 from testing and accidents such as Chernobyl. The damage to health alone would be reason enough to support a comprehensive test ban.

We believe that the majority of you sitting here today and during these two weeks of conference agree that the time to end nuclear testing is now. It is to Mrs. Hoinkes, the head of the U.S. delegation, and as an American, I would like to include Mr. Kenyon of the United Kingdom, that we must address our remarks. If you agree that nuclear war must never be fought and can never be won then why, pray tell, do you insist on having more nuclear weapons and more sophisticated nuclear weapons? If you didn't want more, you would agree to stop testing.

If you are afraid that nuclear weapons may soon be in the hands of more states, now known as non-nuclear states, then how do you explain the contradiction in opposing the ban on all testing which would stop the spread and future development of such weapons. How will we teach our children to be consistent if our governments are so dangerously inconsistent? All over the world people are questioning the decay of moral values. If governments don't behave morally, surely their citizens cannot be expected to behave morally.

What unites all of us in this room, no matter the flag of our nation, is our susceptibility to deadly diseases from the leakage of nuclear testing whether it is in the South Pacific, in the Soviet arctic or the American West. We could all be lying side by side in a hospital and our political differences would not protect us from lying side by side in a cemetery.

The members of SANE/FREEZE and of Women for Meaningful Summits whom I represent today also ask that you make every effort to establish a continuing mechanism to work out the details of a Comprehensive Test Ban. We believe that such a working committee might be a special sub-committee of the Conference of Disarmament and that all 118 states should support such a mechanism. That will be the only way to guarantee that by 1995, or sooner, the world will rejoice at the announcement that nuclear testing has ended once and for all.

Mrs. Hoinkes, your administration cannot look the public in the eye and ignore our opinion. You, as a woman, as a mother, as an intellectual, should not let yourself be used in such a deadly political act. We count on you to represent public opinion. Tell President Bush and Secretary Baker to support an end to all nuclear testing.

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VOL XLVI NO 56 60 PAGES

TWO SIDES OF PATRIOTISM

JIM LAVRAKAS / Anchorage Daily News

Christopher Toal, a patriot against war: "I saw the real need for an activist, loyal opposition movement in this state."

JIM LAVRAKAS / Anchorage Daily News

Larry Burgess, a patriot against Iraq: "We're not supporting the war necessarily, but if it takes a war to get rid of a tyrant, then that's what we have to do."

Gulf between demonstrators

Local organizers say timing, not patriotism, puts them at odds

By LARRY CAMPBELL
Daily News reporter

P. A-6

Larry Burgess doesn't like war. No one really does, he thinks. But he's always felt that "freedom isn't free. There's a price to pay."

Christopher Toal doesn't like war, either. He thinks there are such things as just wars, but the current battle in the Persian Gulf isn't it — "especially when you see kids going hungry and we spend billions on the B-2 bomber. You've got to ask, 'What's wrong with this picture?' "

Burgess is one of the organizers of the Alaska Support Rally. Saturday, his group pulled together 400 or so people at Delaney Park Strip to show support for American troops in the gulf.

Toal is executive director of SANE/Alaska, the local affiliate of a nationwide peace organization. His group says it also supports the troops, but has shown it through peace demonstrations since the air war began more than a month ago.

Both men say they want the military men and women to come home swiftly and safely. But as the United States began sending troops overseas late last year, battle lines formed on the home front, too. Both Burgess and Toal swear allegiance to the flag, and they're willing to acknowledge each other's patriotism. But they admit they don't really understand each other.

Burgess is 52, married, with children. He's a project coordinator for Chugach Electric Association. He's an Air Force veteran, having done engineering work from 1956 to 1960.

He said Saturday's support rally helps send images to men and women overseas that they need to see from home. War is a necessary evil, but those forced to fight shouldn't feel alone.

"We're not supporting the war necessarily," he said. "But if it takes a war to get rid of a tyrant, then that's what we have to do. I would love to say, 'Let's stop.' But people like Saddam, who says he idolized Hitler, people like that are ruthless. They have to be stopped."

Toal is 38, single and devotes his time nowadays to leading the SANE/Alaska cause. When he was younger, Toal was a welder and mined coal in Colorado. He was passed over in the draft lottery in the early 1970s, when the war in Vietnam was still raging.

> *"If we could just get past the name-calling. They're not warmongers and we're not flag burners. If we could agree on that, we'd get a long way."*
>
> — Christopher Toal

Toal's travels around the country have taken him through America's biggest cities, now decaying with poverty. He says those visions never made sense to him, and became his examples of military spending taking priority over social policy.

He came to Alaska and earned a psychology degree from University of Alaska Anchorage in the mid-1980s. That was when the activist bug really bit him.

"A class called 'Nuclear Weapons and U.S. Policy' really opened my eyes to national security issues," Toal said. "I saw the real need for an activist, loyal opposition movement in this state."

Like a crusader, Toal attacks President Bush, his predecessor, Ronald Reagan, and a decade of Republican foreign policy that included aligning America with leaders like Saddam Hussein of Iraq. At speaking engagements or rallies, Toal is like a champion debater, armed with scores of statistics and a recall of diplomatic history.

"I do my homework," he said. "You can't make your point if you don't know what you're talking about."

For Burgess, it comes down to trusting news reports and world leaders.

"Deep down, in my heart, if what I read and hear is true, I do not approve of what Saddam is doing," Burgess said. "And it's not just Bush in this thing. If it was, I might even question what's going on. But the U.N. coalition is in this. They can't all be wrong."

Toal agrees Saddam should be stopped, but he also thinks the policy-makers can be wrong. Economic sanctions could have starved Saddam out of Kuwait, he says, but perhaps not in time to keep the issue out of the next presidential election.

Burgess doesn't deny that politics may be playing more than a fair part in policy decision-making. "But even if it is all political, Saddam still has to be stopped."

Now that America is in the gulf, he says, the fight should be finished before troops are pulled out. Toal instead points to last week's Soviet peace proposals, and believes a successful cease-fire agreement could end war while an acceptable settlement is negotiated.

But one of the deepest divisions between the two men is the question of timing — is now really the time to debate any of this, while troops are in harm's way?

These two avowed patriots don't agree. Burgess says scenes from home of anti-war demonstrations hurt troop morale. The demonstrators, he believes, should instead be thanking God for the people who died in past battles to protect the right to protest.

Toal, however, believes the troops can understand that his side supports them even as it opposes the policies that put them in the gulf. His group backs a congressional measure called the Persian Gulf Bill of Rights, which would provide $2 billion of economic aid to service members and their families and a $10,000 bonus for returning reservists.

But such details haven't been discussed between the two sides in the weeks of demonstrations. Instead, the two groups hold their own rallies always four blocks apart.

"If we could just get past the name-calling," Toal said. "They're not warmongers and we're not flag burners. If we could agree on that, we'd get a long way."

STATE OF ALASKA

Passed (58.4%)
8-26-86

THE BILL TO BE INITIATED

- - - - - - - - - - - - - -

BY INITIATIVE

A BILL

FOR AN ACT ENTITLED: "AN ACT RELATING TO THE ESTABLISHMENT OF A NUCLEAR FREEZE AS THE POLICY OF THE STATE."

BE IT ENACTED BY THE PEOPLE OF THE STATE OF ALASKA:

SECTION 1. DECLARATION OF POLICY. IT IS THE POLICY OF THE STATE OF ALASKA:

(1) TO RECOGNIZE THAT THE GREATEST CHALLENGE FACING THE EARTH IS TO PREVENT THE OCCURRENCE OF NUCLEAR WAR BY ACCIDENT OR DESIGN;

(2) TO RECOGNIZE THAT THE NUCLEAR ARMS RACE IS DANGEROUSLY INCREASING THE RISK OF A HOLOCAUST THAT WOULD BE HUMANITY'S FINAL WAR;

(3) TO PROMOTE A MUTUAL AND VERIFIABLE BILATERAL NUCLEAR FREEZE FOLLOWED BY REDUCTIONS IN NUCLEAR WARHEAD, MISSILES, AND OTHER DELIVERY SYSTEMS IN ORDER TO HALT THE NUCLEAR ARMS RACE AND TO REDUCE THE RISK OF NUCLEAR WAR.

SECTION 2. IMPLEMENTATION. (A) THE GOVERNOR SHALL CONDUCT THE AFFAIRS OF STATE AND CARRY OUT STATE PROGRAMS IN CONFORMITY WITH THIS POLICY.

(B) THE LIEUTENANT GOVERNOR SHALL DELIVER COPIES OF THIS ACT TO CONGRESS AND THE PRESIDENT OF THE UNITED STATES.

SECTION 3. EFFECTIVE DATE. THIS INITIATIVE SHALL BE EFFECTIVE WHEN ENACTED ACCORDING TO LAW.

SAFETY NO BARRIER TO TEST BAN

By RAY E. KIDDER

Older, less safe weapons are being retired or retrofitted—and nearly all of the most important weapon safety improvements can be made without nuclear testing.

This brief report was prepared in response to a letter of July 17, 1990, by the Honorable Dante B. Fascell, chairman of the House Committee on Foreign Affairs, requesting an assessment of the safety of U.S. nuclear warheads with particular attention to the extent to which additional nuclear explosive tests might be needed to further improve their safety. Chairman Fascell's letter contained five questions concerning this issue that I have attempted to answer as follows:

Are our nuclear weapons safe?

The safety record of our nuclear weapons has been remarkably good. The nuclear safety record of our nuclear weapons has been perfect. In the 45-year history of nuclear weapons there has never been an accident which produced any nuclear yield. There have been only two accidents in which the [conventional] high explosive (HE) contained in the nuclear warhead detonated: the 1966 accident in Palomares, Spain, and the 1968 accident in Thule, Greenland, both involving B-52 aircraft. These detonations would probably not have occurred if the warheads had contained insensitive high explosive (IHE) instead of conventional HE, and could not have occurred had it been the practice not to allow nuclear weapons to be airborne in peacetime.

As you know, questions have recently been raised concerning the safety of three of our artillery-fired atomic projectiles (AFAPs): the W48, W79, and W82. These projectiles do not entirely satisfy existing requirements for nuclear safety. They can be rendered safe by means of a retrofit that does not necessitate further nuclear tests. In the meanwhile, it is my understanding that they have been rendered safe by other effective means. In the longer term, given the reunification of Germany and the demise of the Warsaw Pact, it seems likely that our overseas AFAPs can be returned to the United States and placed in storage.

Questions have also been raised concerning the safety of the SRAM-A [short-range attack missile], with the result that it has been removed from alert aircraft pending a safety review. It is intended that the SRAM-A warhead (W69) be replaced with the SRAM-II warhead (W89) currently under development, a modern warhead that employs IHE and enjoys special fire-resistant features. I believe that the perceived safety problem with the W69 could, if deemed necessary, be fixed by retrofit without requiring a nuclear test. An alternative to retrofit would be to keep the SRAM-A off of Strategic Air Command alert aircraft and out of harm's way until it can be replaced and retired.

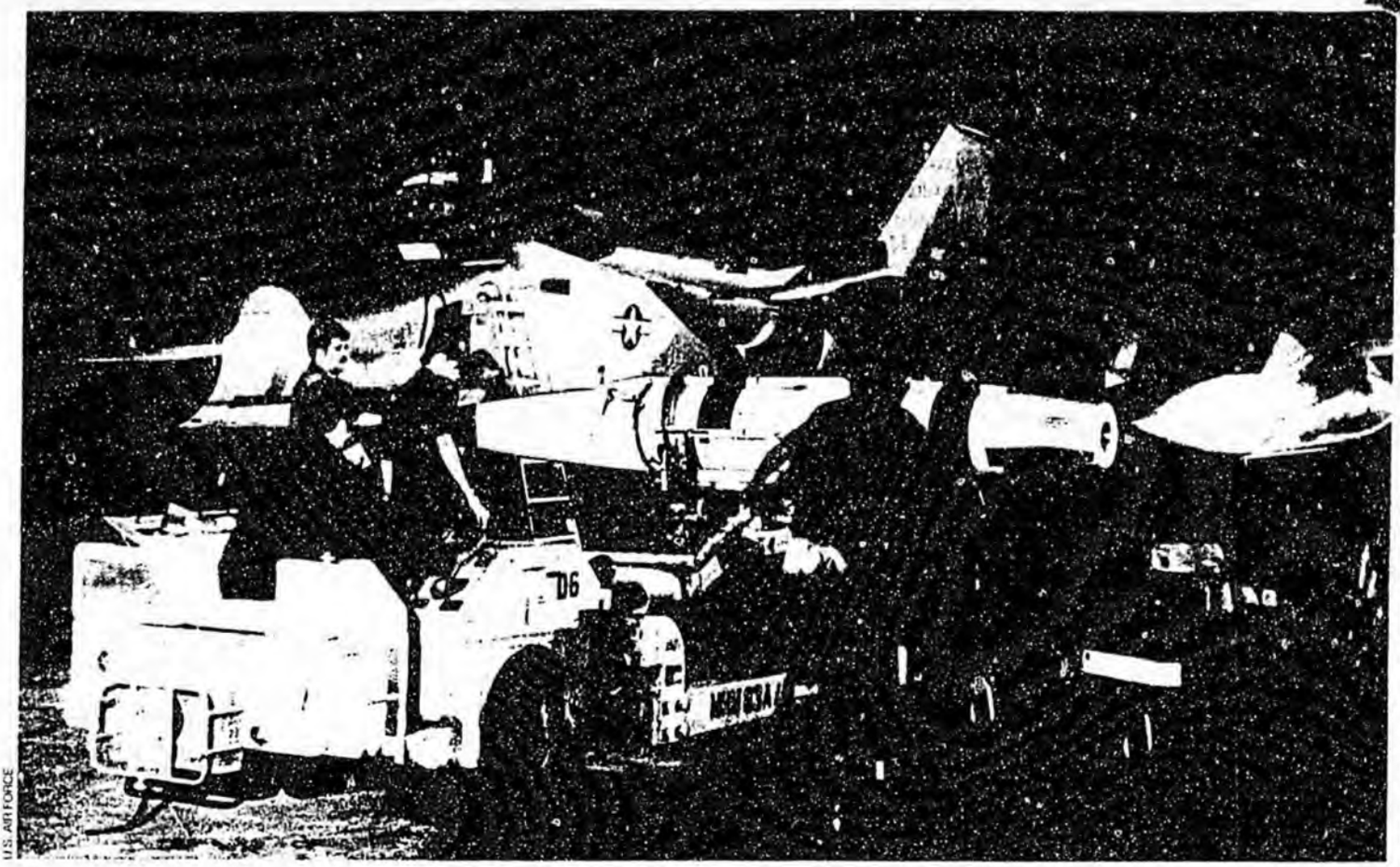
There has been some criticism of the fact that the W88 warhead for the Trident II D5 missile does not employ IHE. It is clear that the safety of the D5 missile would be improved if the W88 warheads were replaced with warheads employing IHE. Safety tests that have been conducted to date suggest that while such improvement is not without merit, it is not necessary to meet current safety requirements.

More than half of the nuclear weapons currently in the stockpile were designed 20 years ago or more, and do not have some of the important electrical, nuclear, and plutonium-dispersal safety features of modern weapons. This is not to say that they are unsafe, but clearly their safety is not up to modern standards. The majority of these old-timers are due for retirement without replacement. Of those that will be replaced, the majority will be replaced by modern warheads already in stockpile. Those remaining will be replaced with weapons currently under development, these latter requiring only a modest number of nuclear tests before being ready for production.

The safety of the existing stockpile needs improvement. But with an appropriate schedule of retirement, retrofit, and replacement of older weapons with the more modern weapons currently in stockpile or under development, the safety of the U.S. stockpile will be well assured; particularly so if the transport of nuclear weapons by air in peacetime is prohibited.

Do we need to increase the number of nuclear tests we conduct to ensure the safety of our nuclear arsenal? Or, do we need to increase the number of nuclear tests we conduct only for the relevant programs in question?

Ray E. Kidder is a nuclear weapons physicist at the Lawrence Livermore National Laboratory, in Livermore, California. Views expressed are the author's alone.



The SRAM-A, shown here being loaded on a bomber during a training exercise, has been withdrawn from active service because it does not use insensitive non-nuclear explosives.

No significant increase, beyond the modest number of nuclear tests required by weapons currently under development, is needed to ensure the safety of our nuclear arsenal.

With respect to those nuclear weapon systems whose safety has been recently called into question, effective corrective measures can be or have been taken that do not require any significant increase in nuclear tests. The AFAPs are now one-point safe. (The condition known as "nuclear one-point safety" is satisfied if, given that detonation of the warhead's HE has taken place at any one point, there is less than one chance in a million of obtaining a nuclear yield exceeding that equivalent to four pounds of HE.) SRAM-A will presumably be replaced by SRAM II. Should a decision be made to replace the W88 warheads in the D5 missile, which does not seem likely at this time, a replacement could be made that would require no more than one or two additional nuclear tests. A further decision to replace the third-stage propellant in the D5 missile with a less hazardous, non-detonatable variety would require missile tests, but no nuclear tests.

Are there ways to deal with the warhead safety question other than through nuclear testing?

There are a number of ways. Improvements can be made in the conditions and operating procedures associated with the storage, transport, and deployment of the weapons. For example, the transportation of nuclear weapons by air could be prohibited in peacetime, as well as their deployment aboard alert aircraft that are in close proximity to operating runways. Aircraft carrying nuclear weapons present the greatest risk of a serious nuclear accident because an airplane crash will subject the nuclear warheads to both violent impact and intense heat of burning missile propellant and jet fuel. Should U.S. land-based nuclear weapons be withdrawn from all overseas bases not directly accessible by sea, air transport of these weapons would not be needed.

Should we add insensitive high explosives to all our nuclear weapons? If so, why?

It has been modern practice to employ IHE in all nuclear bombs and missiles that are deployed aboard aircraft because of the possibility of severe impact and fire stated above. It has not been the practice to employ IHE in the warheads of submarine-launched ballistic missiles (SLBMs), one reason being the less hazardous, more benign environment they enjoy. These practices are supported by the accident record. There have been several aircraft accidents in which fire and impact have led to some dispersal of plutonium, an extremely hazardous radioactive material. There have been no accidents with SLBMs that have resulted in plutonium dispersal of which I am aware. The current exemption of SLBM warheads from the requirement to use IHE carries with it, however, an obligation to observe correspondingly more stringent precautions in the handling, loading, and

deployment of these warheads.

None of the many types of nuclear weapons that entered the stockpile prior to 1979 are equipped with IHE. However, with the exception of three ICBM types (Minuteman II and two types of Minuteman IIIs) and one SLBM type (Trident I C4), all of these older weapons will be either retired, or replaced with modern weapons equipped with IHE. This program of retirement and replacement will accomplish the result of adding IHE to all our nuclear weapons (with three exceptions noted) in the normal course of events. No additional nuclear tests will be needed beyond the modest number required by weapons currently under development.

A means of improving nuclear weapon safety that does not involve the use of IHE and does not require nuclear tests is to upgrade the arming, fuzing, and firing components of our older nuclear warheads to meet modern requirements of electrical safety. These components are sufficiently external to the nuclear package that changes in them can be made without influencing the nuclear performance of the warhead, so that nuclear explosive tests are not needed.

The pace at which the safety of the stockpile is brought up to modern standards could be increased by accelerating the retirement of those weapons that are not planned to be replaced, and by increasing the electrical and nuclear safety of those weapons scheduled for replacement by means of retrofits that would require few if any nuclear tests. During the interval of time before replacement or retirement, an effective means of assuring the nuclear safety of these older weapons would be to equip them with mechanical safing. Such means can assure safety with respect to detonation at a single point (one-point safety) or at any number of points (multi-point safety), and have been in successful use for more than 20 years.

What advantages are there to reconfiguring our nuclear testing program so that instead of matching specific warheads to specific delivery vehicles, we make our warheads more interchangeable with our delivery vehicles? How costly is this? Would the need to conduct nuclear tests be reduced if we reconfigured our nuclear testing program in this way?

MARTIN MARIETTA

Atomic artillery shells, about the size of this conventional Copperhead projectile, may be unsafe. But they will surely be withdrawn from Europe where they have been deployed.

Existing nuclear warheads can be repackaged and incorporated into new delivery vehicles for which they were not originally designed, provided that they will not be required to cope with unacceptably more-stressing conditions in their stockpile-to-target sequence. In this sense, they are already interchangeable. The W84 and W85 warheads that have been salvaged from the ground-launched cruise missiles and Pershing II, eliminated by the recent treaty banning intermediate-range nuclear missiles, are examples of warheads with modern safety features that could be repackaged for use in other weapon systems. The same would be true of many other types of weapons in the current stockpile.

In addition to repackaging existing warheads for use in new delivery vehicles, it is possible to retrofit existing warheads, or to modify warheads in development, for use in existing delivery vehicles other than those for which the warheads were originally designed. An example of the latter possibility would be to modify the SRAM II W89 warheads so that they could replace the W88 warheads now deployed in the Trident II D5 missile. The D5 would then enjoy the advanced safety features of the W89 warhead without requiring significant alteration itself.

Repackaging or retrofitting an existing warhead for a new application eliminates the costs associated with designing, engineering, developing, and testing a new warhead. Depending on the circumstances, production costs may also be reduced. Repackaging or retrofitting therefore can reduce both the cost and the number of nuclear tests that are needed to field a new weapon system capability.

The constraints imposed by restriction to an existing warhead, as opposed to the greater flexibility afforded by a new warhead, are the price one must pay for these savings in cost and reductions in nuclear tests. The cost-benefit comparison will of course be strongly influenced by the difficult-to-quantify benefits of a reduction in nuclear testing.

To conclude, the safety of the existing stockpile of nuclear weapons needs improvement. But with an appropriate schedule of retirement, retrofit, and replacement of older weapons with more modern weapons currently in stockpile or under development, the safety of the U.S. stockpile will be well assured. No significant increase beyond the modest number of nuclear tests required by weapons currently under development is needed to accomplish this result.

The safety of nuclear warheads could be still further improved by utilizing the concept of "separable components" in which the warhead's plutonium and HE are physically separated from each other until the warhead is to be armed. Such a design would virtually eliminate the possibility of plutonium dispersal and would also ensure nuclear safety. Implementation of these safety benefits, however, would be a major and protracted undertaking requiring a very large number of nuclear tests. The cost-benefit aspect of such an undertaking is questionable in view of both the performance penalties that would be paid and its strongly adverse implications for nuclear arms control.

A recurrent theme of this assessment has been the improvement in the safety of our nuclear weapons that would result if their transport by air or their deployment aboard aircraft in close proximity to operating runways were prohibited in peacetime. Given the relaxation in tensions between the United States and the Soviet Union, I believe that such safety measures deserve serious consideration. ■

Council For A Livable World

TO COMBAT THE MENACE OF NUCLEAR WAR

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Comprehensive Test Ban

In 1982 the Reagan Administration formally announced that it would not reopen Comprehensive Test Ban (CTB) treaty negotiations which were started in the Carter Administration. In August 1985 the Soviet Union initiated a unilateral, self-imposed moratorium on nuclear weapons testing and called upon the United States to also stop testing and resume CTB negotiations. To date the Reagan Administration has refused to do so, asserting that a CTB is not in the best interest of the United States. Since the Soviets have stopped testing, the United States has conducted at least eleven underground tests, seven in 1985 and four this year. Fifteen tests are expected in 1986. Both houses of Congress have overwhelmingly passed identical resolutions urging the Reagan Administration to resume CTB negotiations. A ban on all nuclear weapons testing by the Soviet Union and the United States, as well as by other nuclear and non-nuclear countries, had been a national security objective of every American president since Dwight D. Eisenhower.

Negotiations for a CTB treaty between the United States, the Soviet Union, and Great Britain began in 1977. They reached tentative agreement on all substantive points during the first two years, but a final push to conclude a treaty was postponed until after the SALT II Treaty debate. With the Soviet invasion of Afghanistan in 1979 and the suspension of the SALT II ratification process, prospects for agreement diminished. In November 1980 the Soviets were advised that the prospects for the next session were uncertain and that they would be notified by the new Administration if they were to continue. This was never done.

To date, three treaties have been negotiated with the Soviet Union that place restrictions on nuclear testing but do not ban testing outright: the Limited Test Ban Treaty of 1963, the Threshold Test Ban Treaty of 1974, and the Peaceful Nuclear Explosions Treaty of 1976.

LIMITED TEST BAN TREATY OF 1963

The United States, the Soviet Union, and Great Britain had by the end of 1958 conducted over 250 tests in the atmosphere. Rising public opposition to continued testing resulted in a moratorium on nuclear tests by the three countries, which lasted from November 1958 to September 1961. In 1960 President Eisenhower advised the USSR that the United States could not continue to observe the moratorium. In 1961 France conducted an atmospheric test that caused the Soviets themselves to resume testing. However, the United States did not resume immediately.

Thereafter both superpowers resumed nuclear testing at a rapid pace. President Kennedy, after the Cuban missile crisis of October 1962 and under intense domestic and international pressure, opened negotiations with Moscow and London. These negotiations quickly produced the Limited Test Ban Treaty of 1963, which has been ratified by the Senate. The treaty continues to prohibit nuclear weapons testing in the atmosphere, outer space, and underwater. Underground nuclear tests, however, are not restricted. While the treaty sharply reduced nuclear fallout and set several useful precedents for future arms control agreements, its effect on the rate of testing or qualitative advances in nuclear weaponry has been minimal. In fact, the U.S. Joint Chiefs of Staff, at the time, insisted on an aggressive underground testing program as a condition of their support for the partial test ban.

The 1963 treaty fell short of a comprehensive test ban because of unresolved questions regarding the number of inspections needed for verifying compliance and the desire to conclude a treaty quickly. To date, 123 countries have signed the treaty. France and China still refuse to sign and China reserves the right to test above ground. The United States has conducted approximately 817 tests since 1945; and the Soviet Union, around 603.

THRESHOLD TEST BAN AND PEACEFUL NUCLEAR EXPLOSIONS TREATIES

In 1974 Soviet leader Brezhnev proposed to President Nixon that the United States and USSR stop all nuclear testing. Anticipating opposition from Congress and the weapons laboratories, President Nixon countered with a proposal to limit all explosions to no more than 150 kilotons (over ten times the explosive power of the Hiroshima bomb). This agreement became the Threshold Test Ban Treaty, but included a proviso committing the parties to negotiate a limit on peaceful nuclear explosions. The treaty which followed, signed in May 1976 by President Ford and Brezhnev, restricted the yield in tests of so-called peaceful nuclear devices to no more than 150 kilotons. The USSR thought peaceful nuclear explosions useful for civil engineering.

These two treaties set important precedents for future arms control efforts. Both contain provisions for the exchange of information to facilitate verification including the establishment of periodic consultations to discuss uncertain events. The Peaceful Nuclear Explosions Treaty contains provisions for on-site inspections whenever several simultaneous explosions add up to more than 150 kilotons (which some projects might require).

Although signed by presidents Nixon and Ford, neither treaty has been ratified. At present both treaties are in the hands of the Reagan Administration. They cannot be ratified unless the Administration formally submits them to the United States Senate. Meanwhile, both parties have advised each other that they will comply with their provisions and are doing so. If ratified, the exchange of verification information will take place.

STATUS OF CTB NEGOTIATIONS

President Carter began negotiations with the USSR and Britain on a CTB Treaty shortly after he took office in 1977. After two years most of the difficult technical and verification issues had been resolved, and 90 percent of the treaty had been written. Herbert York, the chief test ban negotiator, said "Any time after late 1979, the treaty could have been finished in six months of fairly hard work providing all of the three capitals involved had told their negotiators to get the lead out. None of them were doing that at the time."

Key points of agreement, many representing significant Soviet concessions, included 1) Soviet and U.S. agreement to place a network of satellite-monitored seismic stations in each country to gather verification data from tests; 2)provisions for the use of on-site inspections to investigate suspicious events; 3) an international exchange of seismic and other testing data; 4) Soviet agreement to a moratorium on their peaceful nuclear explosives program (the United States had long ago abandoned its program for lack of effectiveness); 5) Soviet acceptance of a treaty that did not necessarily include France and China; 6) Soviet acceptance of a treaty with a limited duration; 7) Soviet acceptance of a multilateral treaty which could include all other countries.

The Carter Administration initially proposed a treaty of indefinite duration but subsequently requested a three-year treaty to gain the support of the Joint Chiefs of Staff, the nuclear weapons laboratories, and other opponents to a permanent test ban. The laboratories openly worked against any agreement and the departments of Defense and Energy continued to be obstructive. On the Soviet side, President Brezhnev used considerable political capital to overcome opposition from the Soviet military, according to Soviet observers in this country. Consequently, if negotiations reopen, much old ground may have to be gone over again.

ADVANTAGES OF A COMPREHENSIVE TEST BAN

1. **An end to nuclear weapons testing would significantly slow down U.S. and USSR modernization of nuclear weapons whose deployment would greatly increase the likelihood of nuclear war.** New concepts in warhead design focus on developing weapons suitable for "nuclear war fighting." Most of this new generation of weapons is designed to carry out "controlled" and "limited" strikes against the enemy's military forces and command centers or to intercept incoming missiles. Given the nature of these tasks, the weapons will only be credible if their owners have a very high degree of confidence in their ability to perform as intended. If a test ban were concluded, neither side could achieve the level of confidence in new weapons that only actual testing can guarantee and consequently would have much less incentive to produce them. Government scientists have recently predicted a large rise in the number of nuclear explosions required for advanced, third-generation weapons systems, primarily related to the strategic defense initiative, Star Wars. Perfecting just one of the new designs could require 100 to 200 explosions, compared to about six usually required.

2. **A CTB treaty could help contain nuclear proliferation.** Under Article 6 of the Nuclear Non-Proliferation Treaty, which came into force in 1970, the non nuclear weapons states agreed to yield their rights to nuclear weapons provided the superpowers pledged to pursue nuclear arms control, including a CTB. Citing the continued unwillingness of the superpowers to live up to their arms control obligations, some nations have threatened to withdraw from the treaty, while others have refused to join. The third review conference of the Non-Proliferation Treaty took place in September 1985. The conferees sent a strongly worded message to the superpowers to resume negotiations on a CTB treaty.

A multilateral CTB treaty would be a powerful non proliferation measure in its own right. While a country could still build a nuclear device, it would have limited value without testing. In fact, some countries like India and Pakistan which are not party to the Non-Proliferation Treaty and whose nuclear programs are a grave cause for concern have expressed support for a treaty which applies equally to nuclear and non nuclear powers.

3. **A CTB treaty would halt harmful radiation leaks, protecting lives and the environment.** Although underground testing has proven far less dangerous than testing in the atmosphere, accidental ventings continue at the Nevada Test Site, where there has been testing underground since 1963. Some radioactive debris has drifted across Nevada and Utah, harming people and livestock. Throughout the 32-year history of Nevada nuclear testing, test officials have failed to properly notify the public and state health departments of testing activity and of radiation dangers associated with it. The USSR has also had leaks of radioactive material. In addition, the tests produce substantial nuclear wastes whose disposal is a major problem. Finally, harmful radioactive material is left in the ground after each test.

4. **A CTB treaty may be the easiest agreement to achieve as a prelude to a comprehensive freeze on the testing, production, and deployment of nuclear weapons and their delivery systems.** A CTB treaty would accomplish the first step of a Freeze by halting nuclear weapons tests. Successful negotiation of a CTB treaty would also help create a higher level of trust between the superpowers, which in turn would strengthen arms control initiatives such as the Freeze.

5. **A CTB treaty would save billions of dollars.** The United States and other nuclear countries spend millions of dollars each year testing nuclear weapons, as much as $60 million per test. Even more significant would be the billions of dollars saved by not testing future untested weapons systems now in research and development, such as Reagan's destabilizing Star Wars program.

THE ADMINISTRATION'S POSITION ON TEST LIMITATION TREATIES

The Administration announced in July 1982 that it had decided to abandon negotiations on a CTB Treaty until verification measures for the unratified Threshold Test Ban and Peaceful Nuclear Explosion treaties can be "strengthened." In February 1983 the Administration made a formal proposal to the Soviet Union that talks on the Threshold Test Ban Treaty be reopened to include direct on-site monitoring of all tests expected to exceed 75 kilotons. The Administration says it cannot confidently determine whether the Soviets are complying with the treaties as they are now written. It maintains, on highly disputed evidence, that Soviet tests may have exceeded the 150 kiloton threshold on 14 occasions since the treaties were signed. There is reliable evidence both here and abroad that this is not the case.

The Administration's announced position is disingenuous. First, the verification tasks and monitoring systems for a comprehensive test ban are very different from those involved in monitoring a 150 kiloton threshold test ban. And in fact, it is much easier to detect violation of a total ban than to discriminate among explosions with a force of about 150 kilotons.

Second, once the treaties are ratified, the Soviet Union would provide geophysical and test site data that would greatly facilitate precise measurement of their tests. Moreover, the Nixon, Ford, and Carter administrations believed that the treaties as written could be adequately verified; any Soviet cheating that could possibly go undetected would make no militarily significant difference.

Third, and most significant, the primary factor behind the Administration's decision appears to be the desire to continue testing of new warheads, perhaps even over the 150 kiloton threshold. Eugene Rostow, then director of the Arms Control and Disarmament Agency, admitted to the Senate Foreign Relations Committee in May 1982 that he had "run into a profound stone wall" in the form of "whole phalanxes and battalions" of government officials who believe that "given the uncertainties of the nuclear situation and the need for new weapons and modernization, we are going to need testing, and perhaps even testing above the 150 kiloton level, for a long time to come." Richard Perle, assistant secretary of defense, asserted March 24, 1986 on the "MacNeil/Lehrer Newshour" that "even if a test ban were verifiable, it's not in our interest to stop making the improvements that we're making that are leading to a safer and more reliable stockpile of nuclear weapons."

VERIFICATION OF A COMPREHENSIVE TEST BAN

Over the years, verification of compliance has been the greatest obstacle to successful conclusion of a test ban. However, advances in seismology as well as negotiated provisions for verification make a CTB sufficiently verifiable. The Administration's preoccupation with verification has motivated many scientists to elaborate upon their argument that a CTB is verifiable. The problem is not in detecting explosions, but rather distinguishing nuclear explosions from earthquakes.

Lynn Sykes, head of the earthquake studies group at Columbia University, and Jack Everndon, program manager of the U.S. Geological Survey's National Center for Earthquake Research, among others, argue that this distinction can be accurately made with networks of seismic monitoring stations, such as those agreed to during CTB negotiations. They point out that only 0.5 percent of all earthquakes occur within the USSR and are close enough to the surface to be potentially confused with explosions. Furthermore, there are clearly observable differences between the seismic signals of earthquakes and nuclear explosions, down to a one-or-two kiloton yield, regardless of the environment. Nuclear explosions under that level are not useful or practical.

The conclusion is that the unresolved issues over verification are political rather than technical. No treaty can ever be 100 percent verifiable. As Admiral Bobby Inman, former director of the CIA, said, "If you insist on absolute certainty you'll never have an arms control process."

THE NEED FOR PROOF TESTING

Opponents of a CTB have argued the need for continued proof testing, or testing by actually firing existing nuclear weapons, to confirm the continued reliability of stockpiles. This, however, is not necessary to check the reliability of most of our weapons systems and in fact is one of the least used methods. Moreover, there would be no prohibition on testing non nuclear components of our weapons, and it is those that are most susceptible to degradation. Finally, if nations had less confidence in the reliability of their nuclear weapons, they would be less likely to use them.

CONGRESS AND THE TEST BAN

There has been substantial support in Congress for resuming CTB negotiations. In the spring of 1984 the Senate overwhelmingly passed legislation calling upon President Reagan to resume CTB talks. On June 20, 1984, by a vote of 77 to 22, the Senate approved the Kennedy (D-MA)-Mathias (R-MD) amendment to the fiscal year 1985 Defense Authorization bill expressing the sense of the Senate that the President should resume negotiations on a CTB Treaty as well as submit the Threshold Test Ban and Peaceful Nuclear Explosions treaties to the Senate for ratification. On February 26, 1986, the House overwhelmingly passed House Joint Resolution 3, identical to that passed in the Senate in 1984, by a vote of 268 to 148. House and Senate leaders are now considering legislation to cut off funds for nuclear weapons testing as long as the Soviets refrain from testing.

FOR FURTHER READING

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U.S. Congress, House Subcommittee on Arms Control, International Security and Science. Hearings and markup on "House Joint Resolution 3" 99th Congress, First Session, 1985.

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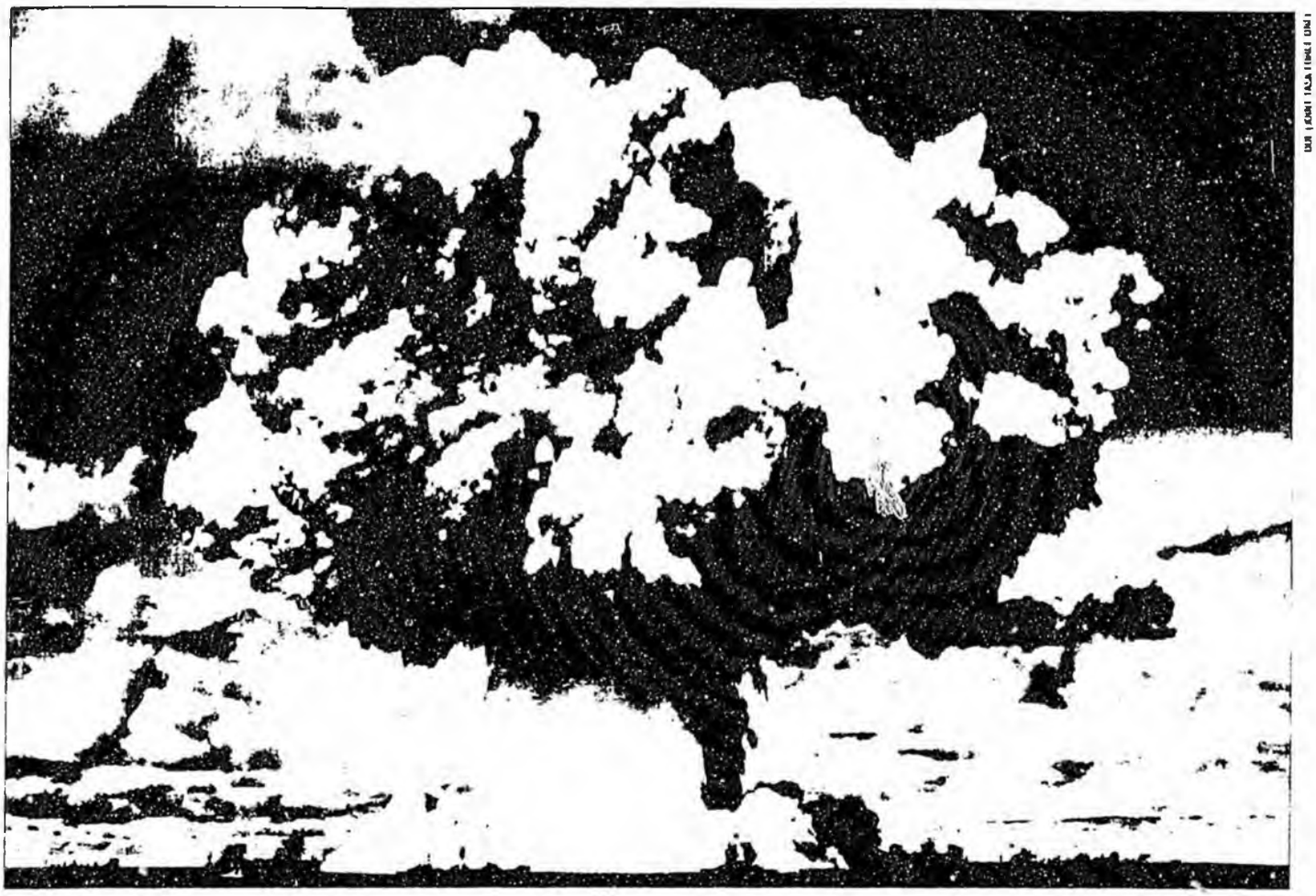
NUCLEAR TESTING



Engine of the Arms Race

"The United States strongly seeks a lasting agreement for the discontinuance of nuclear weapons tests. We believe that this would be an important step toward reduction of international tensions and would open the way to further agreement on substantial measures of disarmament."

President Dwight D. Eisenhower, April 13, 1959

More than a quarter century and 1,000 nuclear explosions after Eisenhower publicly opposed it, nuclear weapons testing still fuels the arms race. Both the Limited Test Ban Treaty and the Non-Proliferation Treaty legally commit the US and USSR to negotiate an end to testing. There are well over 50,000 nuclear weapons in the world, yet the US continues to test new warheads, and the USSR started testing again in February 1987, after a unilateral ban that lasted 19 months. Why do the superpowers continue? Many reasons are advanced, but the main purpose of testing is to develop new kinds of nuclear weapons.

This dangerous pattern must be stopped. A verifiable treaty to end all nuclear testing could be concluded in a short time. All that's lacking is the necessary political determination on the part of our leaders—and we citizens hold the key to creating that determination.

WHY WE MUST CONCLUDE A TEST BAN

An end to nuclear tests "would check the spiraling arms race in one of its most dangerous areas," said President Kennedy. "It would increase our security—it would decrease the prospects of war."[3] His words carry even more truth today, with much larger and more threatening nuclear stockpiles on each side. Here are the main advantages of enacting a test ban:

♦ A test ban would break the momentum of the arms race and increase national security.

The Administration argues the opposite: that continued testing ensures our security. Testing has produced many new, more "advanced" US weapons, such as the MX and Trident II missiles. But it has also allowed the Soviets to modernize their weapons, which can hardly increase our security.

The top military goal of this Administration since taking office has been to regain the ability to "prevail" in any nuclear conflict. Of course, America could only "win" a nuclear war by knocking out Soviet forces in a surprise attack, which requires weapons that are highly accurate, fast, and invulnerable. It also requires the willingness to strike first with nuclear weapons, which has been central to every Pentagon war plan since the first atom bomb was exploded in 1945.[4] Many entirely new weapons systems have been created since then, and more elaborate war games in which to "use" them, but the basic idea has endured with frightening constancy for four decades: maintain a superior nuclear force so that the US can threaten the rest of the world at the first sign of conflict.

New technological developments are what drive the arms race, and these "advances" require testing. Theodore B. Taylor, a former deputy director of the Defense Nuclear Agency, estimates that four million new types of weapons are conceptual possibilities. Even if only a small proportion of these turn out to be practical for development, that's a lot of new weapons types. "Nuclear weapons technology is potentially extremely open-ended," he concludes.[5] The newest weapons concepts, including the x-ray laser, other directed-energy beams, and electromagnetic-pulse bombs, may necessitate hundreds of test explosions, according to Robert W. Selden, director of theoretical physics at Los Alamos National Lab.[6] Although US technology is superior in these areas, the Soviets are conducting research on new warheads, too. A test ban would prevent both sides from making progress on these new weapons. Allowing the development of deadlier and deadlier weapons is in no country's best interest.

♦ A test ban is verifiable.

For many years, concern over verifying a CTB had some validity; now that the world's seismologists assert with near-unanimity that all but the tiniest tests can be detected and measured, the Reagan Administration has been forced to create other reasons for its insistence on continuing tests. "I'm opposed to a test ban even if it were verifiable," admitted then assistant secretary of defense Richard Perle in 1986, who has had enormous influence on nuclear policy since 1981.[7]

The United States has the technology to detect underground nuclear explosions anywhere in the Soviet Union. Soviet tests are already monitored by a global network of seismic stations managed by several Western nations. The seismometers can distinguish earthquake vibrations from those caused by nuclear tests. Two preeminent geophysicists concluded in 1982 that seismic monitoring can detect any militarily useful tests. Now even the chief of verification programs at the Livermore National Lab concedes, "You can define a verification scheme that can give you confidence that there aren't any tests above one kiloton."[8] Satellites enhance this verification ability by monitoring the Soviet land mass with infrared and x-ray sensors. They also observe movement of personnel and equipment that precede nuclear tests.

The Soviet government recently demonstrated its willingness to cooperate with verification measures by allowing US scientists to operate seismic monitoring equipment near their main test site at Semipalatinsk, in a project of the Natural Resources Defense Council, a nonprofit environmental research organization. During the last round of CTB talks in the late 1970s, the USSR agreed to allow US tamperproof seismic monitors within their boundaries. General Secretary Gor-

TEST BAN NEGOTIATIONS: A QUICK HISTORY

The United States and the Soviet Union have both claimed to seek a comprehensive test ban (CTB) since the late 1950s. Although a CTB agreement—a complete ban on all nuclear tests in any location—has not been reached, the intervening years have produced several concrete advances.

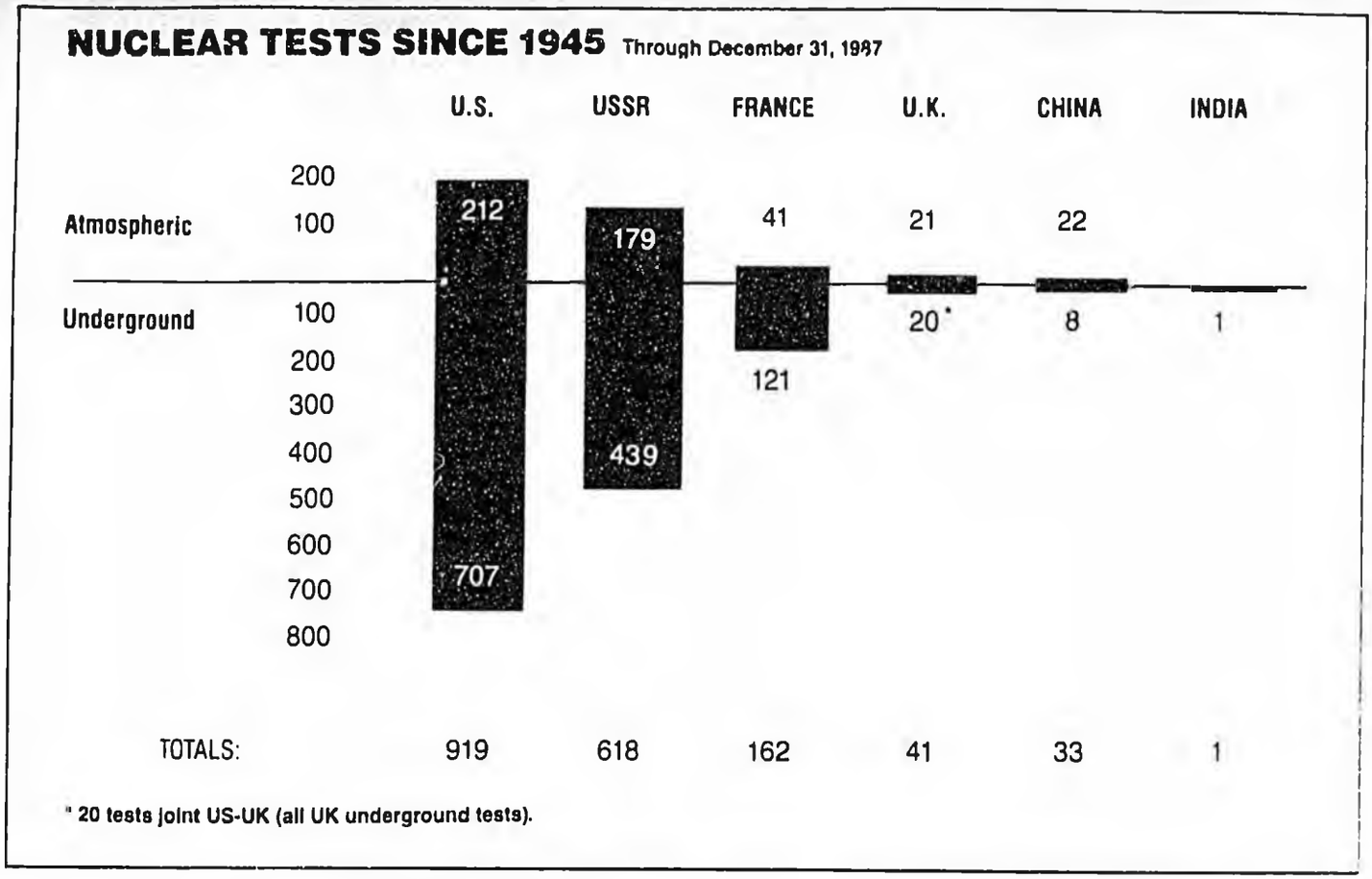
1963: "Yesterday, a shaft of light cut into the darkness," President Kennedy announced after signing the Limited Test Ban Treaty with the Soviet Union and Great Britain.[1] A popular outcry against atmospheric testing compelled negotiation of the treaty; the justified fear of radioactive fallout superseded even Cold War paranoia. But the treaty merely moved tests underground, allowing the arms race to continue its deadly spiral.

1974: The US and USSR again set aside the ultimate goal of a CTB for a compromise—the Threshold Test Ban Treaty—that limited each test to a maximum yield of 150 kilotons (a measure of a bomb's explosive force). The US never ratified the treaty, but both superpowers have observed it. This has curbed the development of new weapons only minimally, if at all.

1980: President Carter broke off test ban negotiations because of political pressure following the Soviet invasion of Afghanistan, the SALT II controversy, and the upcoming 1980 elections. But during the treaty discussions important obstacles had been surmounted, including Soviet agreement to on-site inspection.

"We could have concluded a CTB treaty in 1978 but for the lack of political will on the part of the US."

Paul C. Warnke, Director of the Arms Control and Disarmament Agency 1977-78; chief negotiator during CTB negotiations[2]



bachev has repeated Soviet willingness to accept these verification measures as well as on-site inspection. The obstacles to a test ban are not technical—they're political.

♦ A test ban would help stop the spread of nuclear weapons to other nations.

The 1968 Nuclear Non-Proliferation Treaty, signed by most countries, commits the signatory nonnuclear states to forego developing nuclear weapons. (Conspicuously absent from the list of signatories are all the nations suspected of secretly building nuclear bombs: Argentina, Brazil, India, Israel, Pakistan, and South Africa.) In exchange, the nuclear powers pledged to negotiate "a cessation of the arms race at an early date" and "a treaty on general and complete disarmament."[9] Enacting a test ban would demonstrate that the nuclear powers are serious about these commitments and would remove some of the nonnuclear states' incentive to develop these weapons. By ignoring our pledge we guarantee that eventually many more countries will have nuclear bombs, some of them potentially hostile to the US.

♦ A test ban would benefit public health and the environment.

Moving tests underground has greatly reduced the radioactive contamination of our air, water, and soil — but not eliminated it. Both US and Soviet tests have vented radiation into the atmosphere. The federal government admits that 42 underground tests have vented; fallout from one such test in Nevada was detected in Minnesota and Canada.[10] Only now are some of the diseases caused by extensive exposure to radiation coming to light, as case upon case of cancer and genetic defects appear among nuclear weapons workers and their families.

♦ A test ban would save taxpayers' money.

The testing program has a direct cost of about $700 million a year; research and production of nuclear warheads cause an additional drain on the federal budget.[11] If the US had concluded a CTB in 1978, several strategic weapons programs would not have been developed, including the Trident II missiles and submarines, the MX and Midgetman missiles, and SDI research. Together such programs have drained away more than a hundred billion dollars that could have been spent to improve the quality of life or to lower the massive national debt.

♦ A test ban would not affect the reliability or safety of the nuclear arsenal.

The Pentagon argues that we need to test weapons to make sure they work and, conversely, that they won't go off accidentally. In fact, fewer than 5% of all tests conducted at the Nevada Test Site are to prove the bombs work, and even those are unnecessary, according to Hans Bethe, Paul Warnke, and six other weapons experts who wrote to the chairman of the House Committee on Foreign Affairs in 1985. That letter declared that "the best way to confirm reliability is to disassemble sample weapons and to subject the components to non-nuclear tests."[12] In any case, uncertainty in both nations that the bombs will work is an advantage to preventing nuclear war, since it would encourage hesitation in using them.

Nuclear testing is no longer used to improve safeguards against accidental or unauthorized detonation of nuclear bombs. The safeguards consist of elaborate security procedures and non-nuclear elements of the weapons.

THERE WILL NEVER BE AN END TO THE ARMS RACE. . . UNLESS *WE* END IT.

The Soviet Union unilaterally halted its nuclear testing in August 1985. It repeatedly asked the United States to join its moratorium and negotiate a permanent end to these tests. After the US reiterated its refusal and continued an intensive program of 26 tests over the next 19 months, the Soviets finally resumed testing in February 1987.

The House of Representatives perceived the wiser course and, in 1986 and 1987, responded to pressure from people around the country just like you and voted to cut off funding for nuclear weapons tests. The Senate, however, didn't follow suit. In 1989, a CTB bill has a good chance of passing in both houses of Congress—but only if you make your opinion known.

Citizen action makes all the difference. The ABM Treaty was ratified in 1972 after intense lobbying from voters; it has effectively prevented a missile-defense race. Congress enacted a mutual US-Soviet ban on anti-satellite tests in 1984, despite Administration opposition. This law has prevented the Soviet Union from developing weapons that could disable the satellites the US relies on for warning of attack.

And leaders of the test ban issue in Congress have stated repeatedly that it is the courage of individuals that forces them to take legislative action. Many thousands of people have lobbied their representatives in Congress and helped educate the public on the issue. Since August 1985 over 12,000 people have demonstrated their opposition to testing at the Nevada Test Site and over 3,000 of them have been arrested for engaging in nonviolent civil disobedience.[14]

Tell your elected representatives to cut off all funds for testing. Recent advances in weapons development make finishing the job begun over two decades ago an immediate imperative. We must shut down the engine that powers the arms race: nuclear testing.

LOS ALAMOS SCIENTIFIC LABORATORY

One minute after an underground blast at Nevada Test Site, the surface begins to crater.

Footnotes

1. Address to the nation, 26 July 1963.
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3. American University Commencement Address, 10 June 1963.
4. Michio Kaku and Daniel Axelrod, *To Win a Nuclear War: The Pentagon's Secret War Plans* (South End Press, 1987).
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7. Quoted in Neil Joeck and Herbert F. York, "Countdown on the Comprehensive Test Ban" (U.Cal. Institute on Global Conflict and Cooperation and the Ploughshares Fund, 1986).
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11. Robert S. Norris, Thomas B. Cochran, and William M. Arkin, "Nuclear Weapons Databook Working Papers: Known U.S. Nuclear Tests" (Natural Resources Defense Council, 1986).
12. Letter to Rep. Dante Fascell from Hans Bethe, Norris Bradbury, Richard Garwin, Spurgeon M. Keeney, Wolfgang Panofsky, George Rathens, Herbert Scoville, and Paul Warnke; May 14, 1985.
13. Hugh DeWitt, "Nuclear Labs' Job Is Done" (*Los Angeles Times*, July 11, 1982).
14. Tabulation by American Peace Test.

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