REVIEW OF ARMS CONTROL AND DISARMAMENT ACTIVITIES
99th CONGRESS, 2d SESSION

HEARINGS
BEFORE THE
SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT
OF THE
PROCUREMENT AND MILITARY NUCLEAR SYSTEMS SUBCOMMITTEE
OF THE
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
NINETY-NINTH CONGRESS
SECOND SESSION

APRIL 29, MAY 8, AND MAY 15, 1986

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House of Representatives, Committee on Armed Services, Special Panel on Arms Control and Disarmament, Procurement and Military Nuclear Systems Subcommittee,

Washington, DC, Tuesday, April 29, 1986.

The special panel met, pursuant to notice, at 2 p.m., in room 2118, Rayburn House Office Building, Hon. Beverly Byron, (chairman of the panel) presiding.

OPENING STATEMENT OF HON. BEVERLY B. BYRON, A REPRESENTATIVE FROM MARYLAND, CHAIRMAN, SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT

Mrs. Byron. As announced by the panel's press release and the Congressional Record notices of April 22, 1986 the Special Panel on Arms Control and Disarmament today begins a series of hearings for the calendar year 1986. U.S. arms control efforts now cover a broad array of subjects. The formal process is dynamic, it's taking place in a number of separate but related negotiations, bilateral and multilateral.

Offers and counteroffers are reported almost on a weekly basis. Press reports, unfortunately, do not often distinguish between statements made for public relations effects, or bonafide offers placed on the negotiating table. This is a difficult problem that we have been dealing with.

One purpose of the panel's hearings during the remainder of this year is to keep track of the developments in negotiations. Accordingly, the panel will begin this review process on Thursday, May 1, with Ambassador Henry F. Cooper, and other witnesses will appear in connection with the antisatellite weapons negotiations.

An additional purpose of the panel's hearings is reflected by the hearings schedule for today. That purpose is to provide a record of testimony that the subcommittee and full committee can use to support possible future actions on several arms control related bills that are now pending before Congress.

I want to emphasize the fact that this panel does not have the authority to report legislative matters to either the Subcommittee on Procurement and Military Nuclear Systems, or to the full committee.

The charter of the panel is to study and to hold hearings where appropriate, and to make recommendations. The panel has issued written invitations to Representatives Schroeder, Kramer, Markey,
Hyde, and Porter to appear and testify today in support of various bills which they have introduced.

During the subsequent hearings the panel expects to hear from other public and private witnesses on these bills, and many issues included within them.

I would expect that several of the provisions of those bills will also be debated as amendments to authorizing an appropriations bills as those bills progress through the House. A copy of each bill, a summary, and a brief impact statement are before each member.

Mr. Markey, who is scheduled to appear at 2 has sent his regrets. He cannot appear today because of pressing committee business dealing with the Soviet nuclear reactor accident. I hope he will be able to reschedule his appearance before the panel in the very near future to discuss his bills, H.R. 3100 and H.R. 4542.

Representative Henry Hyde, who along with Representative Badham, a member of this panel, is the sponsor of House Joint Resolution 272, will be our first witness. He will be followed by Representative John E. Porter, who is the sponsor of H.R. 2124. Mr. Porter will be joining the panel around 3 p.m.

I would like to note to the members that we will stay in open session today. We will not address any issues of a classified nature.

As announced by the panel’s press release and Congressional Record notice of April 22, 1986, the Special Panel on Arms Control and Disarmament today begins its hearings for calendar year 1986.

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I would like to note to the members that we will stay in open session today and will not address any issues of a classified nature. I would like to yield to Mrs. Holt at this time for any statement she may care to make.

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STATEMENT OF HON. MARJORIE S. HOLT, A REPRESENTATIVE FROM MARYLAND, RANKING MINORITY MEMBER, PROCUREMENT AND MILITARY NUCLEAR SYSTEMS SUBCOMMITTEE

Mrs. Holt. Thank you, Madam Chairman.

I look forward to this series of hearings with the hope that they will be as enlightening and informative as those that we have had in past years. Also, I want to welcome our witnesses today, and thank them for providing information on the several arms control related bills that are pending before the subcommittee.

Today's hearing, Madam Chairman, illustrates the fact that we are dealing with two contrasting approaches to arms control. On the one hand, the executive branch during several administrations has been attempting to negotiate bilateral and multilateral agreements. On the other hand, some members of Congress apparently want to legislate arms control that would have only a unilateral effect. It appears that the two approaches are in conflict, and that given the Constitutional separation of powers, this conflict will be hard to resolve, especially as national elections approach this year and in 1988.

Our negotiators will soon be returning to their tough and tedious efforts in Geneva and Vienna for additional rounds of negotiations on nuclear and space arms, chemical weapons, troop reductions, and numerous other related issues. It does not help our case, or the case of arms control, if their Soviet counterparts at these negotiations continue to quote various members of Congress, or the votes on nonbinding resolutions in support of Soviet negotiating positions as Soviet Ambassador Israelyan recently did in Geneva.

Madam Chairman, at the risk of seeming to be a voice crying in the wilderness, I believe that we must have more unity of purpose before we can have serious arms control. We must realize that we cannot legislate verification, compliance, or mutual trust, nor can we legislate public support for arms control measures.

The panel's hearings will bring out the facts that can form the basis for reasonable future debates. Too often it appears that in addition to claiming the right to different opinions, many also claim the right to use their own facts. Use of the wrong facts is particularly dangerous where verification matters are concerned.

I hope that the panel will keep in mind that the purpose of arms control is to enhance U.S. security by complimenting our defense.

Thank you, Madam Chairman.

PREPARED STATEMENT OF HON. MARJORIE S. HOLT

Madam Chairman, I look forward to this series of hearings with the hope that they will be as enlightening and informative as those that we have had in past years. Also, I want to welcome our witnesses today and thank them for providing information on the several arms control-related bills that are pending before the subcommittee.

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Mrs. Byron. Thank you, Mrs. Holt.

Mr. Stratton. Madam Chairman, could I make a point of order, or a parliamentary inquiry. I'm not quite sure which it is.

It was my understanding that one of the pieces of legislation that the subcommittee was going to examine was the legislation introduced by the gentlewoman from Colorado, Mrs. Schroeder, H.R. 3442. It's my understanding that the fact that that bill was going to be considered by the panel today was printed in the Congressional Record, and the gentlewoman from Colorado was invited to appear. As a result we have had several hundred letters asking that hearings be held on this legislation, and my parliamentary inquiry—has the Chair received assurance that the gentlewoman from Colorado will be available either today or some time to defend her position on this legislation, and to explain it?

Mrs. Byron. The gentlewoman from Colorado has been invited to appear before this panel this morning. She was unable to be here. I would hope at a future date that she will be able to appear before us.

Mr. Stratton. This was the bill that she was so successful in getting the Rules Committee to add to the supplemental appropriations bill, and I would think that she would want to be on hand to explain it.

Mrs. Byron. Thank you, Mr. Chairman.

Mr. Hyde, let me welcome you here today. I apologize for starting a little bit late. As you're well aware, we just had a vote over on the floor. So if you will proceed.

STATEMENT OF HON. HENRY J. HYDE, A REPRESENTATIVE FROM ILLINOIS

Mr. Hyde. Thank you, Madam Chairman, and my distinguished colleagues.

Let me by way of preface say that most homilies that I have heard in my life usually start off with a quotation from the Bible. They set the text and the tone. And I'd like to do that today. I'd like to quote from our colleague, Congressman Markey, who unfor-
tunately isn’t here, but his colleague from Massachusetts is here, and so I feel free to quote Congressman Markey.

I think this sets the tone for where we are in this issue.

On the 26th of February, 1986, Congressman Markey said in the Congressional Record, and I quote, “in the long run I believe a world of unreliable nuclear weapons would be a much more secure world.”

Also, Congresswoman Schroeder on that same date is quoted in the record as saying, “a testing moratorium worked miracles for President Kennedy.”

Now, parenthetically, President Kennedy said after the Soviets broke the testing moratorium by a series of 40 tests, President Kennedy said, and I quote, “we know enough about broken negotiations, secret preparations, and the advantage gained from a long test series never to offer again an uninspected moratorium.”

I would like to thank the gentlewoman from Maryland for holding these hearings, and also for inviting me to testify on behalf of my resolution H.J. Res. 272.

The nuclear testing issue has emerged as one of the most controversial and highly politicized arms control issues of the day. It is the current nuclear freeze issue, only now it’s called comprehensive test ban.

Given the interest in this issue expressed by both Secretary Gorbachev and many of my colleagues, I find it remarkable that we know as little about this question as we do.

As a result, these hearings will offer a body of testimony which will greatly contribute to congressional consideration in the future.

My resolution addresses one facet of the nuclear testing debate, mainly the question of whether testing limitations, particularly a comprehensive test ban, should lie within the overall arms control process, where these testing limitations belong.

Some of my colleagues feel strongly that the United States should aggressively pursue the immediate negotiation of a comprehensive test ban treaty with the Soviet Union. They argue that a test ban at the present time without any additional reductions in the strategic inventories of the United States and the Soviet Union is a stable, and hence, an acceptable state of affairs. I disagree. I’m convinced that the facts don’t support this belief.

As a result, I introduced H.J. Res. 272 because I felt it was necessary to emphasize the proper position of the test ban in the overall arms control process; namely, as a logical follow-on to militarily significant and adequately verifiable strategic arms reductions.

My resolution is a sense of the Congress resolution, which is the appropriate way, in my opinion, to deal with this issue. It doesn’t mandate that the President do something, nor does it attempt to cut off funds for the United States testing program, as do other bills being offered by some of my colleagues.

Most importantly, my resolution does not put us in the dangerous position of attempting to negotiate a comprehensive test ban treaty at a time when we are still heavily reliant upon our nuclear forces as the ultimate guarantor of our nation’s security.

As Secretary Shultz recently stated before the Foreign Affairs Committee, calls for the immediate negotiation of a comprehensive
test ban treaty are an attempt to, and I quote, "put the cart ahead of the horse" in the overall arms control process.

Still, another recent witness before the committee, former Carter Secretary of Defense, Harold Brown, stated that a comprehensive test ban was a "red herring," which did not contribute significantly to the arms control process.

Mr. Brown should know what he's talking about. Aside from being a former Secretary of Defense, he's a physicist and former Director of the Lawrence Livermore National Laboratory, which designs nuclear weapons.

I believe one of the major shortcomings of Congress' earlier decision on a proposed test ban is that the essential homework on this issue has yet to be done. Frankly, this proposal has been forced upon the House by outside groups. Its importance derives more from its attraction as a winnable political issue than its merit as a genuine arms control proposal.

Because of this I feel it's extremely important that Congress, in particular, the relevant committees in both Houses, make every effort to study in detail all facets of this question.

As you know only too well, Madam Chairman, this is an extremely complex issue, which raises basic questions of both policy and technology. None of these questions are easy to answer. Proponents of a comprehensive test ban treaty, or an unverified and unnegotiated testing moratorium, have tried to make the testing debate almost exclusively a discussion of verification as if this was the only unanswered question in the test ban area. This is far from the truth.

Other absolutely basic questions must be answered first.

What role does strategic nuclear weapons play in the overall military balance between the United States and the Soviet Union? Would a test ban at the present time seriously destabilize this balance?

What is the role of nuclear testing in determining the safety and reliability of our nuclear weapons? Can we really afford to have a sizeable nuclear arsenal increasingly untested, and still be responsible for the security and safety of the military personnel who must work with these deteriorating weapons and the public at large?

Is a test ban the correct way to move away from a strategic policy based upon mutual assured destruction, or does it ignore the present need for nuclear weapons given the adversarial relationship which continues to exist between the United States and the Soviet Union? Can we actually divorce a test ban from the current state of our relationship with the Soviet Union?

What verification technology exists today in the nuclear testing area? Is it sufficient at the present time to adequately verify a test ban treaty? Will the Soviets accept a treaty with the type of intrusive verification methods which would inevitably be required to even approach adequate verification of a test ban?

Will a test ban seriously harm other areas of research, such as the Strategic Defense Initiative, which hold promise for moving us away from our current reliance on offensive nuclear weapons?

What about the continued development of Midgetman? What would be a test ban's effect on the Soviet strategic weapons program?
If a test ban is instituted, would it really be an arms control regime which we could live with? Little or no thought has been given to how a test ban at the present time, absent an arms reduction agreement, would affect the strategic arsenals of both nations.

According to its supporters, a test ban's greatest strength is the uncertainty which it would create. Is that really the type of nuclear world we want to live in? One in which there is no formal process for reducing nuclear weapons in an equitable and mutually verifiable way; one in which arms control is based upon random and unpredictable deterioration of the nuclear arsenals in both nations?

Does a nuclear test ban affect both sides equally, particularly given our nuclear force asymmetries, and the relative age of the systems on both sides? Does a test ban give up one of the few areas where we have a clear edge over the Soviet Union, qualitative superiority? What happens to the conventional imbalance?

How would we justify this imbalance in a test ban environment where our technological superiority would be deliberately stifled? Will we be able to retain our scientists in a dead program the way we know the Soviets will?

If we have any reasonable doubts about any of these issues, then what does history and common sense tell us about assigning the benefit of that doubt? Treating this as a soft, innocuous, confidence-building measure is extremely dangerous.

I have heard people say time and time again on the floor that the President isn't serious, that he isn't sincere about arms control. I look at some of these proposed bills, and one must wonder whether there is a degree, the requisite degree of sincerity, or seriousness is perhaps a better word, behind them.

I don't oppose a test ban. My resolution states that a test ban has its time and place in the overall arms control equation. However, its place is not as a precursor to a major arms control agreement. Indeed, a test ban treaty at the present time might well serve as the death knell for a major arms reduction breakthrough.

Would the Soviet Union continue to pursue arms reductions in a test ban environment? Personally, I think not.

My resolution puts a test ban in its proper place in the arms control process as a logical follow-on to a militarily significant and adequately verifiable arms reduction agreement. This is a sound policy driven by a realistic appraisal of the arms control process in its totality, not wishful thinking fed by political frustration at the current pace of the arms reduction negotiations in Geneva.

Let me just close by saying with particular reference to Mrs. Schroeder's proposed cut off of funds for any future testing as long as the Soviets don't test—we get nothing for it. They have their modernized intercontinental ballistic missiles, the SS-24, and the SS-25. We're still struggling to produce an MX, and I don't think I will live to see the day when there are 50 of those produced. They want to halt the SDI. And this clearly is a ploy to stop us from proceeding with the SDI.

We give up an incentive for deep, verifiable, and militarily significant reductions, and at the same time we can no longer test for improved designor to modernize our weapons, we will not know the weapons effects nor stockpile reliability.
Now, Mr. Markey, Berkeley Bedell, and Senator Kennedy, have all said it's a good thing to have us lose confidence in our nuclear stockpile. Well, I can only say that for 40 years we've had peace in Europe because of the reliability of our nuclear stockpile. And if we're going to lose confidence in that, we better have something to replace it. I'm unwilling to have a piece of paper signed by the Soviet Union to replace our nuclear deterrent.

Certainly in conventional weapons, and I've got the data all here—you know it better than I—the Soviets have overwhelming superiority.

So it just seems terribly unwise to cut off funds for testing. To take off the table our nuclear deterrent, you leave Europe and you leave us very vulnerable.

Coming on the heels of House Joint Resolution 3, which was bad enough in my humble opinion, which called for ratification of the threshold test ban treaty, and negotiation—at least it called for negotiation—of a comprehensive test ban treaty now. To now approve Mrs. Schroeder's resolution, signals to the Soviets that they don't have to negotiate seriously because Congress will intervene and force Mr. Kampelman and his team struggling in Geneva to make unilateral concessions.

This is a very serious problem. You're addressing it seriously, and I salute you for it, and I welcome any questions you may have.

PREPARED STATEMENT OF HON. HENRY J. HYDE

I would like to thank the gentlewoman from Maryland for holding these hearings, and in particular, for inviting me to testify on behalf of my resolution, H.J. Res. 272.

The nuclear testing issue has emerged as one of the most controversial and highly politicized arms control issues of the day.

Given the interest in this issue, expressed by both Soviet General Secretary Gorbachev and many of my colleagues in Congress, I find it remarkable that we know as little about this question as we do. As a result, these hearings will offer us a body of testimony which will greatly contribute to congressional consideration of this issue in the future.

My resolution addresses one facet of the nuclear testing debate, namely the question of where testing limitations, particularly a comprehensive test ban, should lie within the overall arms control process.

Some of my colleagues feel strongly that the United States should aggressively pursue the immediate negotiation of a comprehensive test ban treaty with the Soviet Union. They argue that a test ban at the present time, without any additional reductions in the strategic inventories of the United States and the Soviet Union, is a stable and hence acceptable state of affairs.

I disagree and am convinced that the facts do not support this belief. As a result, I introduced H.J. Res. 272 because I felt it was necessary to emphasize the proper position of a test ban in the overall arms control process, namely as a logical follow-on to militarily significant and adequately verifiable strategic arms reductions. My resolution is a sense of the Congress resolution—which is the appropriate way to deal with this issue. It does not mandate that the President do something, nor does it attempt to cut off funds for the United States testing program, as do other bills being offered by some of my colleagues.

Most importantly, my resolution does not put us in the dangerous position of attempting to negotiate a comprehensive test ban treaty at a time when we are still heavily reliant upon our nuclear forces as the ultimate guarantor of our nation's security.

As Secretary of State George Shultz recently stated before the Foreign Affairs Committee, calls for the immediate negotiation of a comprehensive test ban treaty are an attempt to "put the cart ahead of the horse" in the overall arms control process. Still another recent witness before the committee, former Carter Secretary of Defense, Harold Brown, stated that a comprehensive test ban was a "red herring" which did not contribute significantly to the arms control process. And, Mr. Brown should know what he is talking about. Aside from being a former Secretary of De-
fense, he is a physicist and former Director of the Lawrence Livermore National Laboratory which designs nuclear weapons.

I believe that one of the major shortcomings of Congress' discussion of the proposed test ban is that the essential "homework" on this issue has yet to be done. Frankly, this proposal has been forced upon the House of Representatives by outside groups. Its importance derives more from its attraction as a "winnable" political issue, than its merit as a genuine arms control proposal. Because of this, I feel it is extremely important that Congress, in particular the relevant committees in both Houses, make every effort to study in detail all facets of this question.

As you know only too well, this is an extremely complex issue which raises basic questions of both policy and technology. None of these questions are easy to answer. Proponents of a comprehensive test ban treaty or an unverified and unnegotiated testing moratorium have tried to make the testing debate almost exclusively a discussion of verification, as if this was the only unanswered question in the test ban area. This is far from the truth.

Other, absolutely basic questions must be answered first.

What role do strategic nuclear weapons play in the overall military balance between the United States and the Soviet Union? Would a test ban at the present time seriously destabilize this balance?

What is the role of nuclear testing in determining the safety and the reliability of our nuclear weapons? Can we really afford to have a sizeable nuclear arsenal, increasingly untested, and still be responsible for the security and safety of the military personnel who must work with these deteriorating weapons and the public at large?

Is a test ban the correct way to move away from a strategic policy based upon mutual assured destruction, or does it ignore the present need for nuclear weapons, given the adversarial relationship which continues to exist between the United States and the Soviet Union? Can we actually divorce a test ban from the current state of our relationship with the Soviet Union?

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Will a test ban seriously harm other areas of research, such as the strategic defense initiative, which held promise for moving us away from our current reliance on offensive nuclear weapons? What about the continued development of Midgetman? What would be a test ban's effect on the Soviet strategic weapons program?

If a test ban is instituted, would it really be an arms control regime which we could live with? Little or no Thought has been given to how a test ban at the present time, absent an arms reduction agreement, would affect the strategic arsenals of both nations. According to its supporters, a test ban's greatest strength is the uncertainty which it would create. Is that really the type of nuclear world we want to live in? One in which there is no formal process for reducing nuclear weapons in an equitable and mutually verifiable way, one in which arms control is based upon random and unpredictable deterioration of the nuclear arsenals in both nations.

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Will we be able to retain our scientists in a "dead" program the way we know the Soviets will?

If we have any reasonable doubts about any of these issues, what does history and common sense tell us about assigning the benefit of that doubt treating this as a soft, innocuous, confidence-building measure is extremely dangerous.

I do not oppose a test ban. As my resolution states, a test ban has its time and place in the overall arms control equation. However, its place is not as a precursor to a major arms control agreement. Indeed, a test ban treaty at the present time might well serve as the death knell for a major arms reduction breakthrough. Would the Soviet Union continue to pursue arms reductions in a test ban environment? Personally, I think not.

My Resolution puts a test ban its is proper place in the arms control process—a logical follow on to a militarily significant and adequately verifiable arms reduction agreement. This is a sound policy, driven by a realistic appraisal of the arms control process in its totality, not wishful thinking fed by political frustration at the current pace of the arms reduction negotiations in Geneva.
Expressing the sense of the Congress that a complete cessation of nuclear test explosions must be related to the ability of the United States to maintain credible deterrent forces and that any test ban agreement must be verifiable and must be made in the context of deep and verifiable arms reductions.

IN THE HOUSE OF REPRESENTATIVES

APRIL 30, 1985

Mr. HYDE introduced the following joint resolution, which was referred jointly to the Committees on Armed Services and Foreign Affairs

JOINT RESOLUTION

Expressing the sense of the Congress that a complete cessation of nuclear test explosions must be related to the ability of the United States to maintain credible deterrent forces and that any test ban agreement must be verifiable and must be made in the context of deep and verifiable arms reductions.

Whereas a viable nuclear deterrent is at present necessary for the security of the United States;

Whereas the United States, in seeking its long-term goal of a ban on the testing of nuclear weapons, must improve its present abilities to verify such a ban;

Whereas the United States Government has concluded, based upon a thorough evaluation of the evidence, that the Soviet
Union has repeatedly violated the Threshold Test Ban Treaty;

Whereas the interest of the United States in verification improvements has been demonstrated by repeated proposals to the Soviet Union to bring verification of the Threshold Test Ban Treaty up to adequate standards;

Whereas the United States has proposed onsite nuclear test inspections by Soviet and United States experts; and

Whereas the President appealed to the Soviet Union at the United Nations on September 24, 1984, to "cooperate in this undertaking and to reciprocate in a manner that will enable the two countries to establish the basis for verification for effective limits on underground nuclear testing."

Now, therefore, be it

1 Resolved by the Senate and House of Representatives
2 of the United States of America in Congress assembled,
3 That it is the sense of the Congress to—
4 (1) continue United States efforts to gain agreement by the Government of the Soviet Union to measures which will improve verification of the Threshold Test Ban Treaty and the Peaceful Nuclear Explosions Treaty;
5 (2) continue to urge the Soviet Union to comply with the one hundred and fifty kiloton threshold limit of the Threshold Test Ban Treaty;
6 (3) continue United States programs which work to improve the verification capabilities for worldwide monitoring of compliance with a nuclear test ban; and
(4) continue United States nuclear testing programs for maintenance and modernization of the United States deterrent force while simultaneously working toward the long-term goals of a verifiable nuclear test ban within the context of deep and verifiable arms reductions.
Mrs. BYRON. Thank you, Mr. Hyde.

Let me thank you for your statement covering a multitude of areas that we all agree are extremely technical.

There are certain areas that I have problems with as a member. Constantly being questioned by individuals and having to respond to the criticism, or the questioning about this administration is seriousness about arms control.

Now, you touched on that briefly, and I wish you would elaborate a little bit more on that. I have no question in my own mind about the seriousness of this administration's commitment to arms control. What I would like from you would be a couple of the answers that you give well-meaning individuals that do not see any progress in arms control, well-meaning individuals that probably, because they have not been involved in arms control, do not realize the enormous technical issues that have to be resolved before you can see some movement.

I think we've seen some problems within the press making statements before anything really has been achieved, and then seeing it from that aspect.

Mr. HYDE. Well, Madam Chairman, I think negotiating with the Soviet Union is about as tough an undertaking as one can engage in. One has to be a master poker player.

I read a book some years ago by Foy Kohler, a diplomat, How to Negotiate with the Soviet Union, and he related his experiences some years back. Of course, we tend to mirror image. We think they want the same things we want.

Henry Kissinger in his book, White House Years, says that we want peace when we negotiate with them, and they want victory. We're really not approaching each other at the same level, or with the same ends in mind. And for us to not understand that, may be a serious mistake.

That isn't to say that negotiation is fruitless. That isn't to say there aren't things they want. But we ought to make them pay a price instead of falling over ourselves to give away the store, in light of Helsinki, in the light of Yalta, in the light of treaty after treaty after treaty. We look like Joe Cornassle, just falling off the turnip wagon in our zeal to get them to have a ceremony for signing a piece of paper.

We have technological verification, developments. Corrtex is one of them. The President on August 14th said to the Soviet Union, "if you're serious we will give you Corrtex. You put it in our country, we'll put it in your country," and the President said, "I'll push for ratification of the threshold and the peaceful nuclear explosion test ban treaties."

Now, if you're really serious about it why not have verification, modern verification, and we'll push for the treaties. But they haven't even responded. They haven't responded.

Now, because the administration isn't making initiatives all the time, and offering something new, I think we're just playing poker, and I think it's good, and I think we have a good team over there. I'd like us to get off the back of our negotiators for whatever political advantage can be gained. But perhaps I am too cynical in interpreting the motives of some of the players in the arms control game. I do know that one of the proudest boasts of a Member of
this House is that we stopped antisatellite testing, and he's cited that as a tremendous victory. This reminds me of the book salesman who was selling Bibles, $10 Bibles, but he put a $20 bill inside the cover. Of course, he was selling thousands of them. Someone said, "how do you do that?" He said, "volume."

Well, as you know, we got an arms control agreement. But we got nothing for it. And it wasn't even an agreement. It was unilateral forebearance of something to our disadvantage.

So I think we're serious, and I wish we'd attribute a modicum of good faith to our negotiators. I think it would help us.

Mrs. BYRON. Let me go into one other area that I have everybody in agreement almost, and that is the verification. This has been a sticky point between the United States and the Soviets for so long.

We have seen for the first time this year in a new series of talks in Geneva broken into three different areas. Do you feel that we should maybe go into another area and treat verification as a complete, separate issue in dialog, or should it be part of each of the three different discussions that are currently being negotiated?

Mr. HYDE. I don't see how we can agree to undertake anything that requires them to forego testing without adequate verification. It would just be stupid for them to take our word, but far more stupid for us to take their word.

I think the two concepts are inextricably linked in verification, and there's no problem with it. We have the means to do it, but it requires an intrusive technique, Cortex. But if they're serious about it, why don't they respond and let's do it.

Mrs. BYRON. Mrs. Holt.

Mrs. HOLT. Thank you, Madam Chairman. Certainly just to follow on that discussion of verification, this has always been a deep concern to me over the past four or five years. We talked with Marshall Ogarkov and some of the members of the Communist Party in the Soviet Union about that question. You know, why can't we? And they constantly said "oh, we have national technical means of verification. You know what we're doing; we know what you're doing." But they always avoid that specific on-site anything that we put in there that we could monitor.

Even as recently as March 25, Ambassador Issraelyan, who is the Soviet representative to the Conference on Disarmament, said "for us verification is not a problem. Should the United States agree to stop all nuclear explosions on a reciprocal basis, appropriate verification of compliance with a moratorium would be fully insured by national technical means, as well as with the help of international procedures, including on-site inspection when necessary." They always hedge on it. I think that certainly when we as an open society, have offered the opportunity for them to be here, as the gentleman has said, we have offered the opportunity to place devices on site that could be monitored by us, we've always been refused, I think that refutes the fact that it's the President, or this administration, that's dragging its feet on it.

So I certainly appreciate the gentleman appearing here today, and the great battle that he has fought on the House floor to try to give assistance to our negotiators. I think that they do have a thankless job, and they need not our constant battering them, but our support.
Mr. Hyde. Let me just say this, Congresswoman Holt, there is a split in the scientific community on verification. There is in every scientific community on many things. But I’m just suggesting to you that there is a responsible body of scientific opinion that a nuclear explosion in a cavity would conceal a 10 kiloton explosion. Once or twice a year a 10 kiloton explosion could escape detection by hiding it in an earthquake.

Now, assume for the sake of argument that the opinion is equally divided. To whom do you give the benefit of the doubt on a thing like this? My God, if you guess wrong you’ve lost everything.

So as long as there is a responsible scientific body of opinion that national technical means, and seismographs, and things that we have now, are not fool proof, we make a terrible mistake.

If the Soviets are sincere, why not let us put Corrtex at the site and let them put it on our site. What could be fairer? We’ve offered them the technology. If they refuse to take it one must question their sincerity, it would seem to me.

Mrs. Holt. I certainly agree with the gentleman. I think that’s a very good point that was made there.

We have had that information, and certainly with the land mass that they have, and the kind of geography there, it would certainly be very easy.

Mr. Hyde. They conceal the debris, and they conceal the radiation. You have nothing to measure if they conceal it, and they have methods to do that.

Mrs. Holt. Historically we’ve seen how they abide by the agreements that they’ve made. President Kennedy said let’s don’t even fall into that trap again. Those weren’t his words, but paraphrasing—

Mr. Hyde. We’re not only short of breath, we have a short institutional memory, and that’s a pretty serious disability.

Mrs. Holt. To me that’s the most telling thing—that they’ve never lived up to it before, and they have benefited from our agreeing to it.

So thank you very much.

Mr. Hyde. Would you reconsider your retirement?

Mrs. Holt. Thank you.

Mrs. Byron. Mr. Mavroules.

Mr. Mavroules. Thank you very much, Madam Chairman.

Welcome, our dear friend, Mr. Hyde, very distinguished Member of the Congress.

Mr. Hyde. Thank you.

Mr. Mavroules. I’m delighted with your testimony here this afternoon, Mr. Hyde. I kind of take issue with you on a couple of areas.

Number one, when you refer to the Markey bill I happen to be one of the coauthors of that bill, and no where in that bill do I see that we mandate the President to take any action. It’s a sense of Congress, as a matter of fact, and he gives to them all the flexibility necessary to bring about some kind of meaningful talks relative to a nuclear freeze amendment.

Mr. Hyde. If I could, Mr. Mavroules, I did not address myself to Mr. Markey’s bill. I’ve addressed myself to Mrs. Schroeder’s bill. The only thing I’ve addressed myself with relation to Congressinan
Markey was his quote of February 26 in the Congressional Record where he said he believed a world of unreliable nuclear weapons would be more secure. That I take serious issue with.

Mr. MAVROULES. Very good. I have no argument with that.

I wanted to refer to H.R. 3100, Henry, because Congressman Markey will be testifying before the committee. He's tied up this afternoon.

You bring out some very good and very poigna: points, by the way, when you talk about the conventional forces. I think consideration must be given to the conventional forces, and the numbers thereof, in any consideration given to any kind of a nuclear freeze across-the-board.

I think that's a good point that you brought up, but I want to talk about attitude, if I could, just for a moment. Not the attitude of Members of Congress, by the way, but the attitude of people who are spokespersons who come before the same panel, this very same committee, in singing their own personal tune.

How can we honestly say that we're serious about arms control agreements when we have the Richard Perles who are representing the Defense Department, and in some areas the State Department, stating to this committee that we need every single weapon system coming down the line.

The question remains, Mr. Hyde, we've been talking now about arms control for the last 5 or 6 years. I believe headway is being made. I'm delighted to see that, by the way. We're talking with the Soviet Union. I'm hoping Mr. Gorbachev will come to this country. I'm hoping Mr. Reagan does go to the Soviet Union, and we continue the dialogue.

That's on the one hand. On the other hand, those who come before this very same panel are the ones who are proposing the greater growth and the escalation of nuclear weapons.

Now, what we're trying to do—when I say we, I am referring to H.R. 3100—is to stop the next generation of nuclear weapons on both sides, the United States and the Soviet Union. And nowhere is there to be found anything that cannot be agreed to in a verifiable manner.

So we're not putting pressure on anyone. It is a sense of Congress. We were asking, requesting the President to take certain actions. Those are his decisions. He doesn't have to follow the dictates of this committee, or anyone else in the Congress.

By the same token, if in his opinion they cannot be verified, or that the Soviet Union is not abiding by it, he can come right back and do what he wants to do.

What do you find wrong with that?

Mr. HYDE. Well, you're certainly not describing the Schroeder bill when you say that.

Mr. MAVROULES. I'm not talking about the Schroeder bill.

Mr. HYDE. OK. Now, it would seem to me if I were Secretary Perle, I would do exactly what he does. I wouldn't want to negotiate with you, or with this committee, about what we'll give up in the area of arms control. I would rather negotiate at Geneva.

But if I am Mr. Perle and I come before Congress I would also say what we need from "A to Z". We need it all. Then I'd go to Mr. Kampelman, and say, well, if you want to give up something we'll
give up something. So I see no insincerity in Mr. Perle asking for the whole buffet of weapons here. That's probably a good tactic, assuming that it is a tactic. I don't know. So I wouldn't fault Mr. Perle for that.

We negotiate with ourselves so much that they can just sit and wait. If I were a Russian I wouldn't know who to deal with. You know, deal with Mr. Fascell, deal with Mr. Aspin, or deal with Mr. Foley, or deal with Mr. Wright. Who is Kampelman, do you know?

Mr. MAVROULES. Let me just ask this question.

Mrs. HOLT. Will the gentleman yield on that point? Can I just ask the question.

In the Markey legislation, H.R. 3100, doesn't it say that the restrictions contained in this section shall take effect only if during the 30-day period beginning on the date of enactment the government of the Soviet Union communicates to the President that the Soviet Union will join with the United States in observing a bilateral halt in the testing?

Mr. MAVROULES. Everything about the bill though, Mrs. Holt, is a sense of Congress. If you look at the first two paragraphs then——

Mrs. HOLT. But then it says appropriated fund., may not be obligated or expended for the testing or deployment during that period of time.

Mr. MAVROULES. I think what we're doing, actually you're giving the President the flexibility to administer as he surely is the Commander in Chief, he is the President, and we're giving to him all that is required so that he can guarantee our national security. So you can interpret that any way you want. But we do give the flexibility to the President.

Mr. Hyde, I agree with you. I think the members of our group in Geneva are outstanding. In my judgment they're doing a very good job, of course, but they get their orders from Washington regardless of what positions they may be taking at the negotiating table. You and I know that the orders are coming down.

One thing that bothers me, and I think it should bother an awful lot of people, is when we talk about a deterrent factor, when you talk about capability, and I agree with you. I think the Soviet Union does have an edge on the United States in land based missiles at this point. But if you take any other part of it, you're talking air, and sea, I think we have a qualitative edge.

The point is I'm kind of——

Mr. HYDE. Is that conventional though, Mr. Mavroules?

Mr. MAVROULES. Excuse me?

Mr. HYDE. You forget conventional.

Mr. MAVROULES. I mentioned conventional before, and I said that should be part of any negotiations.

Mr. HYDE. Is that a shortcoming of Mr. Markey's bill?

Mr. MAVROULES. Well, I cannot speak for others. I am only speaking for myself, Mr. Hyde, and those things can be corrected, by the way, when they come on the floor, and I think you make a very good point. I agree with you.

But the thing that I'm trying to get across is that I think we kind of degrade our own capability, and I don't think we ought to
do that even as Members of Congress. I'm not referring to you. I'm referring to the rhetoric that takes place.

I think we have a qualitative edge in the ocean, under the ocean. At least that's what I hear from our people. I think we have a qualitative edge in the air. That's what I'm being told by our own people from the Pentagon.

So, therefore, I think we've got to take some kind of a freeze, so long as we have the deterrent factor in place, to guarantee our security seriously. We're trying to stop the next generation of nuclear weapons.

Mr. Hyde. Are you satisfied with B-52's as our major penetrating bomber?

Mr. Mavroules. You have a B-1 bomber coming off the line right now.

Mr. Hyde. Will a freeze permit us to have that? I thought you were opting for a freeze?

Mr. Mavroules. I don't think it's spelled out that a freeze will stop the B-1 bomber. I don't think it's spelled out that a freeze will stop an ATB. That is the sense of Congress that we're relating to the President to negotiate. If the President feels that we need the ATB for national security, and we cannot do without it, then he can agree to it.

Mr. Hyde. But don't you think Congress urging the President to do something is kind of showing your cards to the other side? Can't we just meet with Mr. Kampelman and express our reservations, and hopes, and aspirations? Congress is going off on its own and saying do this, but I don't hear anybody telling the Russians what they should do.

Mr. Mavroules. Was the action of the Congress to stop the negotiations? We heard the story—

Mr. Hyde. No, it was the—

Mr. Mavroules. You and I, I think, in most cases, are in agreement. But I heard the argument on the MX missile, if you recall, the argument made more than one time on the floor of the House. On the one hand a position taken by the administration stating it was not a bargaining chip. The very next day, very next day, our negotiator in Geneva stating it is a bargaining chip.

Mr. Hyde. Nick, of course it's a bargaining chip, but don't ask the administration to say it's a bargaining chip. I'd love to play poker with the gentleman.

Mr. Mavroules. Don't let the administration mislead the Congress.

Mrs. Holt. Will the gentleman yield?

Mr. Mavroules. Excuse me. If the administration has taken a position, and seeking support of members of Congress, then don't mislead them. Play up front with them.

Mr. Hyde. But Congress should not ask questions like do you really want this, or is this a bargaining chip, and assume that the Soviets aren't paying attention. I mean, really.

Mr. Mavroules. As a matter of fact, the MX missile at that time had never been brought up on the table in negotiations in Geneva.

Mr. Hyde. Everything is a bargaining chip, depending on what you can trade it for.

Mrs. Holt. Will the gentleman yield?
Mr. MAVROULES. Yes, I will.
Mr. MAVROULES. I want to ask you one more question.
Mr. MAVROULES. Ask me whatever you'd like.
Mrs. HOLT. I'm really concerned about this piece of legislation. It says in here the following definitions apply for purposes of this Act. Strategic bomber, the term strategic bomber means the following aircraft. The Soviet Backfire, Bear, Bison, Blackjack and Fencer aircraft. The United States B-52, B-1-B, FB-111, F-111, and advanced technology bomber aircraft.
Now, it sounds to me as if they're really cutting off all our—
Mr. MAVROULES. If you want to ignore the first two paragraphs of the piece of legislation, Mrs. Holt, that's your prerogative. I would say that the first two paragraphs circumvent any other part of the legislation.
Thank you, Mr. Hyde, for being with us.
Mr. MAVROULES. We appreciate it very much.
Mrs. BYRON. Mr. Courter.
Mr. COURTER. I just, Nick—thank you, Congressman Hyde. I found your testimony very interesting, right on the money, as it normally is. Maybe I'm confused, Nick. I really want to find that you said the first two paragraphs of the Markey bill controls?
What first two paragraphs are you referring to?
Mr. MAVROULES. Sense of Congress, the H.R. 3100 will express the sense of Congress.
Mr. COURTER. What page?
Where it says it's the sense of Congress?
Mr. MAVROULES. Yes.
Mr. COURTER. Yeah, but that is not a preamble to the bill. That is a sentence that comes after the section. So any reading of this document would in my mind, I think in anybody's mind, lead one to believe that the sense of Congress language attaches to section 3 only, not section 4, 5, 6, 7, 8, et cetera, because it's not in the beginning of the bill. It's only as it pertains to that particular section. But I suppose we could ask the author whether this is—I think it's clearly—
Mr. MAVROULES. That's my interpretation, Jim.
Mrs. HOLT. Would the gentleman yield?
Mr. COURTER. Not quite yet. I don't think it's supportable from a legal standpoint, interpretation, because you have section 8, and section 8 says nothing about it being a sense of the Congress resolution, and it specifically says that obligated funds shall not be expended. So it seems to me that it's really cutting off the ability to spend money for testing for a period of time. It concerns me a great deal.
Just two other observations. There's no sense in my asking questions of Congressman Hyde because, number one, I know what his answers are going to be, and number two, I agree with those answers.
But there is I think, a false impression that Americans have, and that's the fact that we're forever building more nuclear weapons, we're piling them one on top of another, and, therefore, we have many more today than we did in the 1960's, that we have a much higher megatonage and yield in our nuclear stockpile today than
we did in the 1960’s, the 1950’s, and that is really not the case at all.

We have fewer nuclear warheads than we did 20 years ago, and the amount of megatonage, or yield in the arsenals, is about one third today, talking about the United States, than it was in the early 1960’s.

So when we talk about adding constantly a new growth of weapons, I think that is quite misleading. Obviously our weapons today are smaller, and they’re more accurate. But we’re not just adding one pile of nuclear weapons on top of another pile of nuclear weapons.

It seems to me that even—and I don’t often agree with the editorial position of the New York Times when it comes to strategic doctoring. I do when it comes to some other issues. When it comes to strategic doctoring I don’t. But the New York Times about 4 or 5 weeks ago strongly editorialized saying that going along with a nuclear freeze without getting something for it, without promise of the Soviet Union that they’ll do the same, is giving away something without getting something for it.

So when you have the New York Times editorializing in essence against the Markey amendment, and some of these other proposals, it seems to me that hopefully we’re coming in the right direction, and we’ve come a long way.

I think some of these resolutions are terribly dangerous to the long-term security of this country, and I congratulate members of Congress, like Henry Hyde, because it’s difficult to take some of the positions that the Congressman does. But on the other hand, he’s bright. I applaud him for it. With the New York Times editorial finally, and some others, I think perhaps we’re getting the editorial writers, and the newspaper elite in the Northeast, recognizing the danger that can come from just a simple comprehensive ban on the testing of nuclear weapons without getting substantial concessions from the other side in return.

I yield to the Chairlady.

Mrs. Byron. No, I just wanted to bring up the point that Congressman Markey we hope to have here discussing his bill in the future, and I hope you will have an opportunity at that time to ask him questions on his legislation.

Mr. Stratton.

Mr. Stratton. I don’t have any specific questions, but it seems to me that the legislation that I mentioned at the beginning of the hearing, namely, the legislation introduced by Mrs. Schroeder, would put us in the position where we were dependent upon the Soviet Union for any testing that we might undertake. The legislation requires that the President has to have a clear knowledge that the Soviets have exploded a weapon, and only after the President had certified that, then we would be able to test one of our weapons.

However, the problems involved in the threshold test ban treaty, which we have already encountered, demonstrate that nobody can be certain exactly whether there has been a test made, or whether it has not been made. Then the Soviets have been very inventive, and clouding, on short-circuiting the extent of an explosion so that we might not even be aware of it.
So, this legislation which I think is one of the most dangerous pieces of legislation that I've seen in a long time, would turn over to us—turn over to the Soviet Union the question of whether we could test our stockpile, and I can't conceive of anybody being in favor of that kind of legislation.

Would the gentleman from Illinois have that general feeling about the legislation as well?

Mr. HYDE. Well, of course, I think Mrs. Schroeder's legislation doesn't even call for negotiations. It is an arbitrary cut off of funds. I don't know what you do with the personnel that have been working on these programs, or the scientists, and then you're held hostage to the Soviet Union until it decides when in its good time it is propitious for it to break out of the moratorium, as they did in 1961 with 40 explosions, while we were standing there trying to recapture our program people, and get geared up so that we could play catch up, and we're still playing catch up as far as ICBM's are concerned.

It is—I just can't think of anything to recommend it except the charm of the chief sponsor.

Mr. STRATTON. That's an outstanding observation.

Mrs. BYRON. Mr. Ray.

Mr. Ray. I just want to thank the gentleman from Illinois for coming, and giving his very fine presentation on your bill there, and appreciate your strong support.

Mr. HYDE. Thank you, sir.

Mrs. BYRON. Thank you very much. I appreciate, as does the rest of the panel, for taking the time to give us your insight as I said, on a complicated subject.

Mr. HYDE. Thank you.

Mrs. BYRON. I look forward to hearing from you again.

Congressman Porter. Welcome to the committee. My colleagues will be back in just two seconds. We have asked you to come today to testify on a bill that you have before Congress. We're trying to get a rundown of all of the members that have legislation in areas that we think we have some interest in, and we appreciate you taking your time to appear before us today.

STATEMENT OF HON. JOHN E. PORTER, A REPRESENTATIVE FROM ILLINOIS

Mr. PORTER. Madam Chairman, I appreciate very much the chance to testify.

I want to say that I think both you and I, and the other members of the subcommittee, agree that our country needs a strong and effective chemical deterrent. It's clear that if the Soviets insist on keeping their chemical weapons, we must do the same.

In a perfect world of expanding resources, therefore, I might support the modernization of our chemical stockpile, but not in the way that the Department of Defense has planned.

Following the recommendations of the GAO, the Congress rejected funding for the Bigeye bomb last year. Recent developments indicate that this weapon continues to be plagued by problems. No major changes have been made to the weapon since the Congress rejected funding.
On March 17 the GAO completed its most extensive review of the Bigeye ever, and I would urge you and members of the subcommittee to review this classified report before making any funding decisions on the Bigeye bomb.

Last year's continuing resolution contained a number of restrictions on the Bigeye. Section 1411(d) blocked all funding for the Bigeye unless the Secretary issues a report stating the specific operational requirements of the bomb, and the actual performance of the weapons during operational tests.

Given the fact that nothing has changed concerning the design of the Bigeye since Congress rejected funding, we should not change that policy now. Funding for the 155 millimeter GB-2 chemical round should also be questioned. The purity of the agent produced by the binary shell should be compared to that contained within the unitary shell.

Also, the fragmentation hazard of the unitary shell is far greater than that of the binary.

Much has been made of the fact that the new 155 millimeter binary shell will have a longer range than its unitary counterpart. Nevertheless, under the current plan, the United States will destroy its stockpile of eight-inch chemical artillery shells that have a longer range than the new binaries.

The condition of the stockpile has also been called into question. Excluding the ill-fated M-55 GB rockets, which are now being demilitarized the number of leakers among the artillery projectiles is extremely small.

There have been a number of allegations concerning the catastrophic failure of the stockpile. Any estimates not backed up by experimental data it seems to me, Madam Chairman, are purely speculation. The initial results of the Army's accelerated aging tests indicate that the stockpile will remain healthy long after you and I. I would urge your staff to review the results of these tests.

Madam Chairman, the political implications of this program are only now being realized. West German news magazines and television have already run stories on the upcoming NATO binary decision. Their parliament, the Bundestag, is scheduled for a full debate on this issue within the next week. Clearly, the issue is becoming politicized, and could divide the Alliance, as we all feared that it could.

The ruling CDU conservative party in Germany is telling the German people that an approval of the U.S. binary proposal will mean the removal of all chemical weapons from Germany.

If this is true, we will be left without a prompt and effective chemical deterrent based in Europe. We will be forced to attempt deployment of our stockpile in the midst of a general European crisis. Given the performance of the West German government in response to Libyan terrorism perpetrated in West Berlin, our confidence that they would allow such a crisis deployment is diminished and must be questioned.

Curiously, the Soviets and their East German allies continued their repetitive call for a chemical free Europe. The United States has objected to this idea because it would mean the withdrawal of our chemical forces thousands of miles further than that of the Soviets.
If we go ahead with the current Department of Defense (DOD) plan, we will fulfill the Soviet goal without a corresponding Warsaw Pact withdrawal even from Eastern Europe. It would leave us without any chemical deterrent whatsoever at the point of confrontation.

Rescinding last year's amount and canceling this year's request would save $250 million. Cancellation of the total program will save $2.6 billion. These funds would help soften the cuts necessary to burden the DOD budget in line with any budget that attempts to meet the Gramm-Rudman deficit targets.

In sum, Madam Chairman, canceling the program would preserve our European deterrent without dividing the alliance, prevent funding for weapons with dismal records, such as the Bigeye, and soften the cuts that must be taken by more important defense programs.

It would also prevent the repetition of the long and arduous legislative battle that has engaged the Congress over the last 4 years.

I look forward to working with you and with members of the subcommittee on these matters to preserve our chemical deterrent, and to control the budget.

Mrs. Byron. Thank you, Mr. Porter.

Let me touch a little bit on the European NATO discussions that you brought into your comments.

Do you think that the outcome of that is going to be one that everybody has agreed already that is a foregone conclusion? Do you feel that there is going to be any opportunity to have an enlightened discussion within the Bundestag, or do you think it's a foregone conclusion that there will be——

Mr. Porter. Well, I don't know, Madam Chairman, about the enlightened discussion. I know that the way that the North Atlantic Council, which, under the law, is required to sign off on the new U.S. binary weapons, is one of consensus. I'm not so sure the consensus will be there. It is obviously a great political problem, and one that I worry a great deal about from the standpoint of the United States keeping its chemical deterrent.

My great fear from the beginning has been that in the rush toward binaries we will end up with binaries, but all of them will be positioned in the United States, and we will lose our unitary deterrent that exists in West Germany. The European component strikes me as being the only useful deterrent to the Soviet aggression with chemical weapons.

So, I don't know whether it's a foregone conclusion.

Mrs. Byron. Do you have any concern about many of the weapons, the chemical weapons, that are currently stored in European nations being outdated?

Mr. Porter. Do I have any concern about their condition in being outdated?

Mrs. Byron. Yes.

Mr. Porter. No, I think the aging tests have indicated that the chemical purity is very high, the leaking tests that the Department has conducted indicate that they're in good condition, with very, very few leakers among the artillery projectiles. It is forward deployed. It's available. Unitary weapons are on the battlefield, a
more efficient weapon than any binary could possibly be. Fragmentation as an additional hazard is higher.

I see no reason to replace them. I think stirring up this whole pot is going to damage the United States in the long run. Particularly in view of Bhopal, and what has happened very recently in the Soviet Union, we may end up having absolutely no chemical weapons in Europe where we had a secure stockpile there for 35 years. That, to me, is going in the reverse direction we ought to be pursuing.

Mrs. Byron. The calculations on moving binaries to Europe in a quick basis, you feel that that is an unrealistic approach?

Mr. Porter. Well, the only reason presumably you would move them to Europe would be in the event of the Soviet Union attacking in West Germany. Let’s say they break through at the Fulda Gap where most experts think they would likely go. Then we massively airlift chemical weapons to Europe.

First, it strikes me that chemical weapons would be a very low priority in that event, just to start with. We wouldn’t massively airlift them, but we would be lifting medical supplies, normal ordnance, and a lot of other things first.

Let’s say we did decide we had to have these things at the front. If I were the Soviet field commander there, and had the intelligence that the United States was airlifting chemical weapons, I could only imagine the United States was about to use them on me, and I think it would more likely precipitate a first use by the Soviet Union than a deterrent.

Second, if you look at the amount of airlift capability that is needed to move sufficient amounts of chemical weapons to the front, it’s tremendous in terms of its weight and its use of aircraft. So I think it would be a nondeterrent in that event. In fact, it might even precipitate Soviet first use.

Mrs. Byron. We had had some fairly extensive discussions on carrying the binary weapons on U.S. ships in our discussions. Do you oppose carrying binaries on U.S. ships?

Mr. Porter. No, but it seems to me that if we’ve got countries like New Zealand saying they won’t allow a nuclear reactor ship into its port, or a ship carrying nuclear weapons, we’re likely to be persona non grata in a lot of ports around the world when we say our ships are carrying chemical weapons.

I think it just strikes me as a bizarre way to deter chemical warfare. The best way to deter it is to have the stockpile at the front available and ready to use. We’ve had it that way for years. Now we’re going to say, well, let’s take the risk of building what we presume to be a safer weapon system even though we’ve had no safety problems with the unitaries, and say, we’re going to risk losing that stockpile. That, to me, is just not very good policy.

Mrs. Byron. We also had a fairly extensive discussion, and really most of the focus, on chemical weapons in the NATO Alliance.

At the same time I think we have to look also at the Middle East, and also to the Far East on chemical weapons as a potential threat. Yet most of the dialog we have had within this body has been the consultation of our NATO allies.
Do you think that we should just deal basically with our NATO allies on that, or should we broaden the spectrum for those discussions?

Mr. Porter. Well, it strikes me that we should set some goals in mind. One would be the elimination of chemical weapons, if that's possible.

I've heard and seen the administration proposals, and work on this. It strikes me that if we don't trust verification with the Soviet Union on things such as underground tests, we are never going to be able to find ways to verify whether they're building or stockpiling chemical weapons. They are so easy to hide.

So our concentration probably ought to be on proliferation of those weapons among other nations. Again, a very, very difficult thing though first to negotiate, and second, ever to make certain that they're not being built and stockpiled. It's much harder to verify.

Mrs. Byron. I think looking back in history, one of the areas that concerned me so terribly, and that is the fact that back during the First World War with mustard gas what a horrendous usage we saw at that time. That has been fairly successful up until just recently, yet, we have seen documented to my satisfaction, fairly concurrent evidence of the use of chemicals in certain areas of the world, and I think this is one of the things that does concern so many of us where we have not in our own country modernized at all, moved forward in a R&D manner, that we are beginning to see a movement in—

Mr. Porter. I had four Iraqi soldiers, or veterans, in my office about three weeks ago telling me about what was going on that they saw at the front in that war between Iran and Iraq.

Mrs. Byron. So it is not just within the NATO Alliance, which is what concerns me.

One other area which we spend, and I know your legislation deals mainly in chemicals, but I think another area that we need to look at is in binaries, and biological warfare. And I think that's an area that we probably will be beginning to hear some more dialog on in the future.

Mr. Porter. I was just going to say I am really not terribly familiar with that part of the subject, but my understanding is that most military experts who look at that look at it and say this would really never help us in time of war. It might backfire on us and kill more of our troops than theirs. And that we don't believe that the Soviet Union after some experimentation back in the early 1960's, and before, in this area is probably really pursuing biological weaponry.

But it is something you always have to worry about.

Mrs. Byron. Mr. Stratton.

Mr. Stratton. No questions.

Mrs. Byron. No questions?

Mrs. Holt.

Mr. Porter. Sam, you missed your chance. We'll wait until we get to the floor, I suppose.

Mrs. Byron. He's saving his thunder.
Mrs. HOLT. Mr. Porter, I'm sorry. I missed your testimony. I had a phone call. But I've heard your discussions on several occasions, and it was a little different.

Mr. PORTER. You didn't say which direction, Marjorie.

Mrs. HOLT. I'm an optimist.

I'm concerned about the idea that the NATO nations should make a decision on accepting peacetime forward deployment. Do you think that's right?

Mr. PORTER. Well, I don't think the legislation, and I agree with your concern, that's what we were discussing when you came in, I don't think the legislation quite says that. It doesn't say that they have to agree to the forward deployment. They have to agree that binaries should be part of our chemical deterrent force, the U.S. chemical deterrent force. Not that they would actually deploy them on their soil.

No, I think there is some great worry about stirring up this pot when we've got a perfectly good chemical deterrent sitting there that we could end up losing and getting nothing in its place. That bothers me a lot.

Mrs. HOLT. Have you talked with the representatives of the West German Social Democratic Party about the issue?

Mr. PORTER. No.

Mrs. HOLT. Has any of your cosponsors, anybody?

Mr. PORTER. I can't speak for them. I don't know. Dante Fascell could have talked to some of them. I don't know.

I talked to some West German people 3 years ago, but I haven't talked to anybody recently, no.

Mrs. HOLT. All right. Thank you very much. Thank you for appearing here.

Mr. PORTER. Thank you.

Mrs. BYRON. Mr. Ray.

Mr. RAY. Thank you, Mr. Porter, for coming here and giving us your testimony today.

You were saying that we have a good enough stock right now. We don't need any more. Is that what you're saying?

Mr. PORTER. Well, I'm saying, Richard, that in a perfect world where we could count on simply replacing one stockpile with another, binaries might be wonderful if we didn't have to pay for them when we can't afford them, and if we could deploy them where we want to deploy them. But this is not a perfect world. We can't afford them in the first place, and in the second place, we may have real troubles keeping the ones we've got because we've gotten into this new weapons system, and that worries me a great deal.

Third, what we've got is effective, in good shape, available, useful, and provides a deterrent, an adequate deterrent to any Soviet first use. We've got enough chemical weapons, projectiles, forward deployed right now, to keep up a barrage in Western Europe for many months. That is a deterrent. It strikes me that that's exactly what we ought to have to deter Soviet first use, and I'm just worried that we're going to lose that. I think we're making a mistake by going into this in its highly charged political atmosphere.
Mr. Ray. Well, I know you're well versed on this, and probably much more so than I am, but we have had a lot of people come before this committee who have told us that our stocks are in pretty bad shape, that they are leaking, that they're very difficult to cool out and repair, and throw away, and very dangerous to do that.

In fact, we had one witness to testify that while we had plenty of rockets, we didn't have any rocket launchers, and no tubes whatsoever. Do you have any information about that?

Mr. Porter. Yes. The M-55 rockets with GB everyone agrees are a problem, they are leaking, we've got to demilitarize them, and we are demilitarizing them.

When I talk about our stockpile, I'm not including any of those kinds of munitions whether they're the M-55's, or the spray tanks, or the underground bulk storage. All I'm talking about is our usable stockpile, which is military—that is artillery projectiles.

There I don't think they're telling you there's any leakers, or any high percentage. The last DOD tests of that stockpile, showed only six-ten thousandths of one percent leakers. Almost zero.

Sure, chemical weapons are dangerous weapons. So is high explosive ordnance. So are nuclear bombs. You've got to take very great precautions in handling them. No one doubts that. But it seems to me that those precautions have been taken. We've had 40 years with no incidents whatsoever. They are as safe as weapons can be.

Yes, I'd like to go to binaries. But it seems to me that the dangers of doing that right now are pretty heavy.

Mr. Ray. How would we deal in long range delivery, behind enemy lines, for instance?

Mr. Porter. Well, the long range delivery is focused on the Bigeye bomb. It's designed to go up to 200 or 300 miles behind enemy lines. I've looked at it; I've been out there both at the plant and the testing grounds where they are testing the weapons system. It simply strikes me that, first, it's not ready for production because it's still got a lot of technical flaws in it; second, that we really ought to ask ourselves before we go ahead and decide whether we want to use a deep strike weapon, whether the risking of a pilot in an expensive aircraft, when the pilot is irreplaceable and the aircraft is expensive, is really the best way to deliver this ordnance in a deep strike.

We ought to ask ourselves whether we shouldn't be using some kind of a cruise missile, or a rocket that would do the same thing, and accomplish the same objective without risk of expensive equipment, but I'm no expert on that, and I simply raised the question and ask people like you to raise it with the DOD and see what they think.

Mr. Ray. Well, rocket type attack sounds much more practical to me also. I would have to agree.

Today, just as a matter of information, a representative from Great Britain was in to see me, and he says that they're so fearful of what might occur with a chemical strike from the Soviets that they are seeking a manufacturer in this country who will manufacture up to 50 million disposable type, protective type clothing.

Mr. Porter. I certainly agree with that. I've been supportive of all of the money for defensive measures, and all of the money for
R&D. My only question has been on producing a new binary weapon, and what we do with it when we get it produced.

Mr. Ray. Well, I appreciate your testimony, and I really appreciate the fact that I know you're dedicated and sincere in what you're driving at.

Mr. Porter. Well, you're very kind. Thank you, Madam Chairman. Thank you, members of the committee.
To prohibit the production of lethal chemical weapons, to encourage the negotiation of an international agreement to stop the production, proliferation, and stockpiling of lethal chemical weapons, and to encourage the improvement of defenses against the effects of the use of lethal chemical weapons on the Armed Forces.

IN THE HOUSE OF REPRESENTATIVES

APRIL 18, 1985

Mr. PORTER (for himself, Mr. FASCELL, Mrs. ROUKEMA, Mr. ACKERMAN, Mr. AuCOIN, Mr. BARNES, Mr. BERMAN, Mr. BOLAND, Mr. BONIOR of Michigan, Mr. BONKER, Mr. CROCKETT, Mr. DYMALLY, Mr. EDGAR, Mr. FEIGHAN, Mr. FISH, Mr. FRENZEL, Mr. GARCIA, Mr. GEJDENSON, Mr. GLICKMAN, Mr. GOODLING, Mr. GREEN, Mr. GUNDerson, Mr. HALL of Ohio, Mr. HOPKINS, Mr. KASTENMEIER, Mr. KOSTMAyER, Mr. LANTOS, Mr. LEACH of Iowa, Mr. LEVINE of California, Mr. MAVROULES, Mr. MOakLEY, Mr. McKERNAN, Mr. PEASE, Mr. PURSELL, Mr. RODINO, Mrs. SCHNEIDER, Mrs. SCHROEDER, Mr. SOLARZ, Mr. SMITH of Florida, Mr. ROBERT F. SMITH, Ms. SNOW, Mr. STARK, Mr. STUDDS, Mr. TORRICELLI, Mr. UDALL, Mr. YATRON, Mr. WEBER, Mr. WEISS, Mr. WHITTAKER, Mr. WOLPE, and Mr. ZSCHAU) introduced the following bill; which was referred jointly to the Committees on Armed Services and Foreign Affairs

A BILL

To prohibit the production of lethal chemical weapons, to encourage the negotiation of an international agreement to stop the production, proliferation, and stockpiling of lethal chemical weapons, and to encourage the improvement of defenses against the effects of the use of lethal chemical weapons on the Armed Forces.
Be it enacted by the Senate and House of Representa-
tives of the United States of America in Congress assembled,

SECTION 1. PROHIBITION ON PRODUCTION OF LETHAL CHEM-
ICAL WEAPONS.

Notwithstanding any other provision of law, an agency
of the Government may not obligate or expend appropriated
funds after the date of enactment of this Act for the produc-
tion of lethal chemical weapons.

SEC. 2. NEGOTIATION OF A CHEMICAL WEAPONS AGREEMENT
WITH THE SOVIET UNION AND OTHER COUN-
TRIES.

It is the sense of the Congress that the President should
intensify ongoing efforts to achieve an agreement with the
Soviet Union and other countries establishing a mutual and
verifiable agreement to stop the production, proliferation, and
stockpiling of lethal chemical weapons.

SEC. 3. PROTECTING UNITED STATES ARMED FORCES
AGAINST CHEMICAL WEAPONS ATTACKS.

It is the sense of the Congress that the Department of
Defense should, on a priority basis, improve the capabilities
of the Armed Forces to detect, and to protect members of the
Armed Forces against the effects of, the use of lethal chemi-
cal weapons in attacks upon the Armed Forces.
SEC. 4. AGREEMENTS WITH NATO ALLIES CONCERNING PREPOSITIONING OF ANY NEW CHEMICAL WEAPONS.

It is the sense of the Congress that any new lethal chemical weapons must be stockpiled and available in those areas where land attacks would most likely occur in order to present a credible deterrent. Therefore, an agreement with the governments of the other countries of the North Atlantic Treaty Organization must be concluded before the Congress will consider repealing the prohibition contained in section 1 of this Act.

SEC. 5. FEDERAL BUDGET DEFICIT.

It is the sense of the Congress that funding for the production and procurement of new lethal chemical weapons and related facilities is unwarranted in light of the Federal Government's large budget deficit.

SEC. 6. DEFINITION OF LETHAL CHEMICAL WEAPON.

As used in this Act, the term "lethal chemical weapon" means—

1. any toxic chemical (solid, liquid, or gas) which through its chemical properties, is intended to be used to produce injury or death to human beings, and

2. any unique device, instrument, apparatus, or contrivance (including any components or accessories thereof) which is intended to be used to disperse or otherwise disseminate any toxic chemical.
Mrs. Byron. Thank you, Mr. Porter. If there are no further questions—does the staff have any questions? We will be adjourned until Thursday. [Whereupon, at 3:35 p.m., the subcommittee was adjourned.]
Mrs. BYRON. Good morning, Ambassador. This morning, the panel is pleased to again to have Ambassador Donald Lowitz who is the U.S. representative to the United Nations Conference on Disarmament in Geneva. The Conference on Disarmament—or CD—is the world's principal multilateral disarmament negotiating forum. Its 40 members represent the five nuclear weapons states and every geographical region.

The CD agenda, and the agenda of its ad hoc working groups, include chemical weapons, conventional weapons, nuclear test ban and effective verification methods relating to arms control and disarmament measures.

As the panel has heard from other U.S. negotiators, arms control negotiations are not conducted in a vacuum. The Soviet Union, for example, closely follows every U.S. political development and quickly interprets those developments to its own advantage. Ambassador Lowitz may be able to provide some insight on this with regard to negotiations within the CD.

This afternoon, at 2 p.m., the panel will receive testimony from representatives of the Departments of State, Defense and Energy on the probable arms control and national defense impacts of several bills now pending before the subcommittee.

It is my hope that the panel will remain in open session for both this session and the afternoon session. However, if questions should arise that require the disclosure of classified information, the panel can take those matters up following all unclassified testimony and questions at the end of each session.

It is my feeling that we should remain in open session as long as possible because I think the issues that we are discussing here are extremely important. They are ones that should be shared with the American public in as many instances as possible.

Before asking you to proceed, Mr. Ambassador, I would recognize Mrs. Holt for any comments she might have to make.

Mrs. Holt. Thank you. I have no comments. I certainly want to welcome the Ambassador. We appreciate his taking time from his
schedule to come and educate us. I would like to introduce a visitor we have in the room, a parliamentarian from New South Wales, Australia, Mr. Peter Collins, who is with us this morning. Welcome.

Mrs. BYRON. Do you wish to proceed?

STATEMENT OF HON. DONALD S. LOWITZ, U.S. REPRESENTATIVE TO THE UNITED NATIONS CONFERENCE ON DISARMAMENT

Ambassador Lowitz. Thank you, Madam Chairwoman. I have a statement I would like to deliver at this time and then will be happy, to answer any and all questions.

It is a pleasure to appear again before your panel to report on the activities of the Conference on Disarmament during the spring part of its 1986 session. I previously appeared before you on September 10 of last year to describe the work of this 40-nation Conference during its 1585 session.

As the principal multilateral forum for global arms control negotiations, the Conference is the focal point for international discussions of a chemical weapons ban and nuclear test ban issues. In September, I reported on the work of the Conference on a comprehensive ban on chemical weapons. This year the Conference is continuing to give high priority to this very important objective. In addition, the issues of arms control arrangements affecting outer space has received attention.

I will spend a few minutes today summarizing recent CD activities and briefing you on our efforts to ensure that members of the CD understand the U.S. approach on important arms control-related topics. Among these topics are the strategic defense initiative, the bilateral nuclear and space arms talks and compliance with arms control agreements.

In the CD's Ad Hoc Committee on Chemical Weapons, negotiations on a complete and verifiable prohibition of chemical weapons are moving ahead slowly. The United States draft convention, which was introduced in the Conference by Vice President Bush a little more than two years ago, continues to be the touchstone for the negotiations. It remains the only detailed draft convention before the CD. While technically not the basis of the negotiations, it nonetheless provides the basic structure and approach for the future convention.

Although drafting of convention text is underway in some areas, several major verification issues must be resolved before a convention can be completed. The unwillingness of the Soviet Union to deal seriously with these issues continues to block progress. Prominent among these issues are provisions for dealing with compliance problems and for monitoring selected segments of the commercial chemical industry to ensure they do not produce chemical weapons.

In addition, considerable work remains in negotiating detailed procedures for implementing provisions that are already agreed upon in principle. Not only is it essential to have a sound general approach, but we must also ensure that the provisions for implementation are carefully developed. As every good lawyer knows, "the devil is in the details."
The United States strongly desires to accelerate the efforts to ban chemical weapons. We attach great importance to the commitment made at the November Summit by President Reagan and General Secretary Gorbachev to intensify work on all aspects, including verification. We are seeking to make progress both in the CD itself and through supplementary bilateral discussions with the Soviet delegation.

While the pace of the negotiations remains far from satisfactory, it has picked up somewhat. During the spring part of the 1986 session, the Soviet delegation finally began to spell out its views on one technical aspect of chemical industry monitoring. In addition, it elaborated on General Secretary Gorbachev’s comments made in his statement of January 15 concerning elimination of chemical weapons production facilities. It appears that differences in this area have narrowed and that the Soviet delegation will permit international on-site inspections of such facilities. These are positive developments, and we welcome them. But we are disappointed that the Soviet delegation has not yet responded constructively to U.S. proposals on challenge inspection, on the general approach to chemical industry monitoring, and on a number of other key aspects.

It is clearly not possible to predict when the negotiations on this convention will be completed. Much painstaking work remains. It is not yet clear that the Soviet Union is prepared to agree to the full range of verification mechanisms necessary to ensure compliance. An important factor in the success of the negotiations will be the continuation of the United States’ binary chemical weapons program. The decision taken last year by the Congress appears to me already to have had some effect in prompting a more constructive Soviet approach to the negotiations.

Let me turn now to the nuclear test ban issue. So far this year, the Conference has not been able to agree on a framework for pursuing a detailed consideration of this issue. The United States and its allies support such work within the structure of a committee having a non-negotiating mandate. As you are aware, our policy specifies that negotiation of a test ban is not appropriate at this stage of the disarmament process. However, the Soviets and their allies, as well as the neutral nonaligned group of 21 states, have insisted that negotiations begin now. The result has been a deadlock on resuming the detailed examination of issues begun by the Conference in 1982 and 1983.

Nevertheless, the Conference’s Group of Scientific Experts, which has been investigating ways to exchange and analyze seismic data in support of monitoring an eventual test ban, has continued its work with the strong technical and political support of the United States. The group is in the final stage of preparing a report on the test of global seismic data exchange and analysis it carried out in late 1984.

Two important Soviet representatives have visited the CD this year to make statements that dealt with the nuclear test ban issue. Georgy Kornienko, First Deputy Minister of Foreign Affairs, addressed the CD on February 20, and Andronik Petrosyants, Chairman of the State Committee for the Utilization of Atomic Energy, on April 3. The March 29 statement of General Secretary Gorba-
chev and a Soviet Government statement of April 11 were also made a part of the CD record, at USSR request. These statements and statements made by the USSR Ambassador to the CD, Viktor Issraelyan, were consistent on a number of points: they pushed Soviet initiatives for a moratorium and resumption of nuclear test ban negotiations; expressed Soviet willingness to go to any lengths to ensure adequate verification; but fell quite silent regarding details that they felt might make that verification effective.

In addition, Ambassador Issraelyan, in his March 25 statement, recalled the 1984 Senate action on a resolution calling for test ban negotiations. He also noted the House action on February 26 adopting H.J. Res. 3, which also calls for such negotiations. Ambassador Issraelyan claimed that this call was "in harmony with demand of the whole world."

I have frequently set out the United States policy on the test ban issue and the place it takes in our approach to nuclear disarmament. There is in the CD, I believe, a clear understanding of the reasons for the United States position.

On the issue of outer space arms control, Madam Chairman, after considerable effort, the Conference was able to agree at the end of April to re-establish its committee with a mandate to consider all aspects of the question of an arms race in outer space. As in the case of the nuclear test ban issue, the United States, while willing to consider this topic fully, has not identified any specific elements that should be made subject to negotiation and agreement. I expect that during the summer part of our session, this committee will vigorously pursue its work.

Clearly relevant to the outer space issue are the U.S. Strategic Defense Initiative and the bilateral nuclear and space arms talks between the United States and the Soviet Union. The delegation has made available to many members of the Conference both documentation and briefings on these subjects by officials such as Ambassador Kampelman. Our intent here was to ensure that the U.S. views are accurately known in the Conference.

Finally, the important question of compliance with arms control agreements has been a matter for special attention by the U.S. delegation. We have stressed the importance we attach to strict compliance with all the terms of agreements. We have also made it clear that the international community of nations has a responsibility to take all appropriate action to respond to and rectify instances of noncompliance. On April 17, I made a detailed plenary statement outlining our views on this subject.

This completes my prepared remarks. I should be happy to respond to any questions you might have.

Mrs. HOLT. Madam Chairman, may I be recognized for a motion?

Mrs. BYRON. You certainly may.

Mrs. HOLT. I move the chairman be authorized to go into Executive Session for today and five additional consecutive days of hearings for the purpose of receiving classified material affecting the national security. It requires a roll call.

Mrs. BYRON. Will the clerk call the roll?

Mr. KLEIN. Mrs. Byron.

Mrs. BYRON. Aye.

Mr. KLEIN. Mr. Mavroules.
Mr. KLEIN. Mr. Ray.
Mr. Ray. Aye.
Mr. KLEIN. Mr. Spratt.
[No response.]
Mr. KLEIN. Mr. Stratton.
Mr. STRATTON. Aye.
Mr. KLEIN. Mrs. Holt.
Mrs. HOLT. Aye.
Mr. KLEIN. Mr. Badham.
[No response.]
Mr. KLEIN. Mr. Courter.
Mr. COURTER. Aye.
Mr. KLEIN. Five votes in the affirmative.

Mrs. BYRON. Thank you.

Let me touch a little bit on many of your arguments made last year when we had the debate on the binaries, it would force the Soviets to address the issue of a comprehensive chemical ban much more seriously. As you noted on page four, the decisions taken last year have already been met by the Soviets with some more constructive approaches to negotiations.

Could you elaborate a little more on the mechanisms of what you have seen and what you perceive, any change in that area?

Ambassador Lowitz. Surely. When the decision was taken last summer, the initial reaction of the Soviet Union was a rather strident polemical attack on the binary program and the whole modernization program. That was followed by a period of a few weeks where they basically did not participate actively in the chemical weapons negotiations.

Then I believe, when they realized that—

Mrs. BYRON. You think that was a time they were re-thinking what had transpired waiting for answers to come back from Moscow?

Ambassador Lowitz. Well, there is always the possibility that that was the case. There is also the possibility that they were instructed to take that sort of position to see how it would play out within the Conference and especially with the nonaligned, and when it was apparent that the nonaligned were not going to jump on the band wagon of a negative approach, I think the Soviets then realized that they would have to again participate, and I think as they came to understand that the modernization program was, in fact, going on, that they have become somewhat more forthcoming, but they still have a long way to go.

My own conclusion is that we surely are better off with the modernization program as a means to prod them and as an incentive for them to continue.

Mrs. BYRON. Have the Soviets come up with any counter offers to the U.S. proposals to strengthen the verifications on the chemical weapons production? Has that made any change, that area?

Ambassador Lowitz. Well, on the questions of verification, of course, since the summit meeting and the January 15 statement and subsequent statements, they have spoken a great deal more about verification and have given indications that verification in their eyes is also an important subject.
What has happened, however, is that when you get past these lofty statements, there hasn't been a great deal of explanation, and we have continued to press them to try to get specifics on what they mean by verification, what it is they have in mind, but they have not been very forthcoming.

In the area of production facilities, they have indicated now that they would consider on-site inspection. So there has been a very small amount of movement. But on the major questions of verification, items such as challenge inspection, they have not been forthcoming at all.

Mrs. Byron. The reaction by other members of the CD has been positive toward our proposals?

Ambassador Lowitz. Yes. Surely our allies, and I would say a very substantial majority of the nonaligned, appreciate what we are trying to do. I think they share the basic goals the United States had in putting forth the convention and are supportive of the provisions. I think that is shown largely by the fact that it is our draft treaty which really dominates the negotiations and the discussions. It is the document to which we and others most often refer, because it is the most specific and it contains the kinds of elements that the nonaligned realize are important, from their standpoint, in having an effective plan.

Mrs. Byron. We heard a fairly large amount of discussion recently in Europe, as well as here, urging us to look more closely at a chemical weapons free zone. If binary production is allowed to go forward, and since in the language of our legislation there will be no deployment upon European soil at this present time, wouldn't that be a stronger case for a chemical weapons free zone in Europe becoming more attractive?

Ambassador Lowitz. I think from the standpoint of the United States, and I think of our allies, a chemical weapons free zone in Europe is not a desirable approach. I think that the worldwide ban is a much more desirable and much more important approach.

For one thing, if we wound up with a chemical weapons free zone, that would mean the Soviet Union would merely remove its chemical weapons behind its borders from which they could easily be moved back into other parts of Europe or from which they could strike much of Europe without moving them, whereas for the West, we would have to move everything back to the United States, and that would put us at a significant disadvantage.

In addition, the problems in negotiating a chemical weapons free zone are basically no more difficult than in the problems of the worldwide ban. It makes much more sense to spend the same amount of time in dealing with the entire problem. So I think, and I think our allies surely share the view, that there is no merit in a chemical weapons free zone negotiation.

Mrs. Byron. Mrs. Holt, do you have any questions?

Mrs. Holt. Well, I guess this question of verification is one that has always disturbed me. In discussing the nuclear test ban issue, do you feel that our actions here in the Congress have any impact on the state of the negotiations? Do you feel that they are waiting us out trying to see what the Congress is going to do on that particular issue?
Ambassador Lowitz. I don't know that it is a question of waiting us out or waiting to see what Congress will do. Surely within the Conference on Disarmament, our position on test ban and on the whole range of test ban issues, the question of verification and what we deem necessary to make existing treaties acceptable is well known, and I think well understood.

If you are suggesting from the standpoint of whether or not resolutions and such dealing with the test ban issue are productive or counterproductive, I would have to say I believe they are counterproductive because it displays differences in opinion that I think the Soviet Union is very anxious to exploit and, in fact, did attempt to exploit in the Conference in the speeches that were made.

Mrs. Holt. Actually, pointed to the fact that we were considering unilateral or going ahead without the administration's approval.

Mr. Stratton. Would the gentlewoman use the microphone?

Mrs. Holt. I thought I was using it. I am sorry. I am saying some very profound things here.

Well, then, on the verification issue, you say that there was an expressed Soviet willingness to go to any lengths to assure verification, but they fell quite silent regarding details. I guess they are saying the same old things that they have always said, "Sure, we will go along with on-site inspection, but we have to control the sites." Have they gone any further than that?

Ambassador Lowitz. They have talked much more frequently about the acknowledgment of the need for verification, both in chemical weapons and test ban issues. In the test ban issues they have talked about on site inspection, if necessary and as required, always with a kind of condition or a limitation on it, without ever spelling out what they mean by that.

So they have made these rather lofty statements but have not yet put them into any concrete terms. In describing it at one point in the Conference and discussing it with some of my colleagues, I said it was as if they had come out with a preview of what they were going to say and do, but they have not yet produced the movie that lives up to the preview.

Mrs. Holt. I notice in Mr. Issraelyan's speech of, I am not sure of the date, but that he did say "including on-site inspection when necessary." Did they define "when necessary"?

Ambassador Lowitz. They have not defined it, and in many instances the approach they take is that verification is something you only discuss in context of negotiations and then when you get into the negotiation, our experience has been that it becomes the last thing they want to discuss within the negotiation.

Mrs. Holt. Thank you, Madam Chairman.

Mrs. Byron. Mr. Ray.

Mr. Ray. Thank you, Madam Chairman.

Mr. Ambassador, we are very pleased to have you this morning. Would you think that the recent disaster, the nuclear disaster which has contaminated a good portion of the area around that reactor, might soften up the Russian viewpoint now, since at no time in history have we seen this kind of contamination of any kind, and now that we are dealing with the aspect of a chemical weapons ban, I just wondered if they might have a little change in philosophy now that this might have occurred. I was wondering whether
you had an opinion on whether this would have an effect on negotiation or not.

Ambassador Lowitz. I really have not seen enough that I would want to venture any opinion on it. When the disaster occurred, the Conference had ended. Some of us were in Geneva for a meeting on the Weapons Review Conference, and there was, of course a lot of corridor discussion about it, but very little discussion on the part of the Soviet delegation or the other Eastern Bloc delegations. They really did not want to talk about it.

So, I think it is hard to assess, at this point, whether or not it would have any effect. Due to the closed nature of the society, I don't believe that public opinion within the Soviet Union is going to have any effect. I just don't think one can tell yet.

Mr. Ray. I noticed for the first time, like yesterday and today, though, the publicity on the evacuation of children away from those areas to Moscow, to summer camps, the slaughtering of their cattle, contamination of food and feed and that kind of situation, it would appear to me it would bring home the realization to the Soviet people now that they are sitting in an environment which could be very detrimental to them. As a matter of fact, facilities could be targeted by a country in a situation like that which would further contaminate the Soviet Union.

I thought it might lead to a softening of their position, especially once they realized just how drastic such contamination would be in the world.

Ambassador Lowitz. Well, I suppose that is a possibility. One question that I guess I would have is the extent to which what we are hearing is also being heard within the Soviet Union. I don't know if we know that.

Mrs. Byron. Mr. Courter.

Mr. Courter. Thank you, Madam Chairman.

There is some talk—obviously the Congress, the House, in particular, and the Senate, to a degree, has had a difficult problem in moving and doing the research and funding procurement for binary weapons, which is something that some of us believe is necessary for deterrent and necessary to take the place of the unitary types of chemical weapons we have today.

The question I have is, if the Congress zeroes the money, the line item, for procurement of binary weapons, how will that, in your professional opinion, affect your negotiation of the eventual elimination of chemical, biological, and toxic weapons that you are negotiating right now? Is that going to help, or is it going to hurt?

Ambassador Lowitz. Well, I think clearly it would hurt and that it would be counterproductive. As I said earlier and in my testimony, I feel very strongly that the fact that modernization program went into effect has acted as an incentive for the Soviets to move ahead. They have such a wide advantage in chemical weapon capacity that not having some incentive makes it hard for one to believe that they would be very serious. Even now we have to question their seriousness.
But I think to have embarked on a program and to then, in effect, walk away from it or put it on hold, would send out a signal that would not be helpful to the negotiation.

Mr. Courter. I don’t know how much we can talk about this in open session, but, of course, we can talk about the fact that it has certainly been mentioned in the media. It is my understanding that at the present time there is a Soviet chemical and biological weapons facility in Sverdlovsk in the Soviet Union. It was alleged there was an accident there that caused the destruction of a lot of animals, and this is all in violation of one, if not two, arms control agreements, I think, the Geneva protocol of 1925, and the Biological Weapons Convention of 1975. Is there any discussion? What type of response do you get when you mention the evidence that we have on violations by the Soviet Union of existing arms control agreements; the very subject that is the subject matter of your negotiations? Can you mention any of it?

Ambassador Lowritz. Of course, the whole area of compliance is one that we have continually tried to bring to the forefront at the Conference. And in the course of doing that, we have relied to a large extent on the Soviet noncompliance reports. We have had briefings, we have made that available. We have talked about it in statements that I and other members of the delegation deliver.

So we have tried to heighten the awareness of the Conference and of the world, in general, to the importance of compliance and the need to profit from our experience and to make sure that treaties that we might now enter into give us the highest possible assurance that there will be compliance. So that is something that is kept very much in the forefront.

The question of the Biological Weapons Convention will be addressed at the Review Conference that we will be having in September. I think, without any doubt, there is a great deal of common understanding of the problem, of our viewpoint, and I think there are many other countries that concur, especially in our position on the violations of the Biological Weapons Convention.

Mr. Courter. Do you think the Chernobyl disaster in the Ukraine in the Soviet Union with respect to the nuclear generating facility, do you think the way the Soviet Union handled that negatively affects their position at the negotiating table, does it enhance your position, does it have any impact at all on the negotiations that you are carrying out at the present time?

Ambassador Lowritz. Well, I think it is a factor. I think that in a body like the Conference, where the nonaligned and neutral countries are the main group that we deal with, 21 of the 40 countries are neutral or nonaligned, they are very much aware of the very great differences in our two societies, the openness, the freedom within the Western Society and the contrary situation in the Communist world, and I think this just buttresses their understanding of this.

I just returned from Geneva on Sunday, and I was interested to see that the question of the delay in the announcement and the way the Soviet Union handled it seems to have gotten a great deal more attention in the European press than in the American press. So I think there was a great deal of consternation on the way it was handled, and I think but don’t know this for a fact, that there
is the understanding that this couldn’t happen in our society and not be disclosed immediately.

Mr. COURTER. The last question, thank you, Madam Chair, I appreciate your indulgence.

In the United States, it is obvious that there are probably hundreds of laboratories, unfortunately, clandestine secret laboratories, where heroin and cocaine are being manufactured and packaged. We spend hundreds of millions of dollars trying to find them. We have FBI agents all over the place, we use wire taps, we have hundreds of thousands of police officers who spend a great deal of their time, if not all of their time, in combating that type of crime and locating the big honchos who work with the laboratories and finding out where the laboratories are. We have no idea where they are even in the United States.

Therefore, now—with no wire-taping facilities in the Soviet Union, no hundreds of thousands of police officers in the Soviet Union, no internal FBI mechanism in the Soviet Union, and with chemical and biological weapons being able to be produced in small laboratories, is verification at all possible?

Ambassador LowITZ. Well that of course, you know, raises the question and the reason for our insistence on the kind of verification and compliance regime we have built into our draft treaty, because it is a very serious problem. Chemical weapons are easily produced, and we are concerned about the potential for clandestine production after we would have a treaty. So you have hit upon what is the core of the problem, and we have to be very vigilant, and try to come up with a treaty that will give us as effective a means of verification as possible.

Mr. COURTER. That is the key, I suppose, the most effective verification if possible. You would have to admit it is impossible to verify with 100 or 99.5 percent confidence whether the Soviets are complying in that kind of a society with a chemical and biological weapons ban. Don’t you agree?

Ambassador LowITZ. Well, yes, we have to.

Mr. COURTER. It is impossible.

Ambassador LowITZ. One of the reasons we built in the concept of a challenge inspection, of an inspection on demand, is that it should provide a deterrence—

Mr. COURTER. If you know where to demand, to look.

Ambassador LowITZ. Well, yes, but I think within limits, it is never going to be 100 percent, you are absolutely right. No way.

Mr. COURTER. I appreciate that. Thank you very much, Madam Chair.

Mrs. BYRON. Mr. Stratton.

Mr. STRATTON. Thank you, Madam Chairman.

Mr. Ambassador, I am a little confused with respect to our position on chemical weapons in the treaty that has been placed before the Conference on Disarmament. It would appear to me that our basic objective is to get a chemical capability in the United States that could deter the Soviet Union or any other country from expending chemical weapons against us. That, it seems to me, is the major job that we are trying to do.
Do I understand that one of the objectives in the legislation, in the treaty is to propose chemical weapons free zones? Is that part of the treaty?

Ambassador Lowitz. No. The treaty would eliminate the production, stockpiling, use and require the destruction of all chemical weapons and chemical weapons production facilities. It would be a total worldwide ban. So the world would be a chemical weapons free zone once the convention went into effect. That remains the priority goal of the United States, to see the completion and ratification of such a convention.

But in the interim, we have to look at the reality of the world in which we live, and that is that the Soviet Union has a very substantial advantage in chemical weapons capability. We have not produced chemical weapons in 17 years, they have continued to produce throughout that 17-year period. We are now faced with a question of whether or not we have an adequate deterrent. As I understand it, I think that the purpose of the modernization program is not to come up with a greater capability than anyone else, but to maintain the necessary capability, the necessary deterrent power, until such a time as a chemical weapons ban would become a reality.

We have made very clear in the Conference and elsewhere that if we get the convention, we will be only too happy to cease whatever states of modernization we are in and abide by the total ban on chemical weapons.

Mr. Stratton. What you are saying is that if this proposal in the treaty of everybody having no chemical capability whatsoever, if that comes to pass, then we will simply throw them all away, after all of the efforts that we have made in this body to provide a chemical deterrent against the massive capability that the Soviets have. It seems to me that this is an exercise in futility.

I sat in on the Geneva Conference and Second Conference on Disarmament, and I saw Mr. Issaelyan railing against our charges that they were providing chemical weapons in Southeast Asia. It seems to me that we are in a bad position when we don’t even have a capability ourselves. The first item on this piece of legislation that the chairperson of this panel is proposing is legislation to prohibit the production of chemical weapons. The White House, the National Security Council, all of them recognize that until we get a chemical capability, we have a very strong disadvantage as far as the Soviet Union is concerned, and yet we are going through the charade in Geneva “Let’s not have any chemical weapons at all.”

Ambassador Lowitz. Well, I don’t think the two are inconsistent. I think what the administration and what the legislation proposes is that we maintain and create a sufficient chemical weapons capability so that the deterrent factor is maintained.

At the same time as we are doing that, it seems to me that it is important to look at the ultimate goal, which would be to have a world free of chemical weapons at which point the deterrent capability would not be required of anybody. However, we cannot sit by and do nothing until we know that that is a reality, and I think that is the purpose of the modernization program.

Mr. Stratton. I understand what you are saying, but I think we are in somewhat of an anomalous position. We also, and the Presi-
dent himself has indicated, would like to eliminate all nuclear weapons, but that too is not something that we are going to really undertake seriously if the Soviet Union continues to have its overwhelming capability.

Thank you, Madam Chairman.

Mrs. BYRON. Mr. Spratt.

Mr. SPRATT. Thank you, Madam Chairman.

Mr. Ambassador, thank you for testifying. You say in your statement that we have agreed in principle to a number of provisions, but these have not been worked out in detail. Could you tell us on what subject matters there has been agreement in principles?

Ambassador Lowitz. Well, we have worked out some agreements on the questions of dealing with production facilities, declaration of stocks, a number of procedural aspects, so we have made a start in some areas, but we still have a way to go.

Mr. SPRATT. What you mean by that is each side is declaring facilities within its boundaries which are dedicated to chemical production?

Ambassador Lowitz. Yes. One would be the question of declaring the facilities and then, ultimately, the procedures for the elimination of those facilities.

Mr. STRATTON. Has the Soviet Union declared a list of facilities in the Soviet Union which are dedicated to chemical weapons production?

Ambassador Lowitz. No. We are not at a point where anybody is declaring facilities, and that would clearly be one of the issues. I think it has to be recognized that within at least the confines of the Conference on Disarmament, the Soviet Union has never really admitted that they have chemical weapons. So we are dealing with a situation where they just don't acknowledge the existence of them. Obviously they have them, but it is not something they are willing to admit.

Mr. SPRATT. So we really haven't gotten to the point of listing and identifying facilities in each country which are dedicated to chemical production which would be shut down if they were in agreement then?

Ambassador Lowitz. No, that would be something that would come about at a time when a convention went into effect.

Mr. SPRATT. What we are doing now is attempting to develop definitions and procedures by which we would establish the method of declaration of facilities?

Ambassador Lowitz. That would be one of the items, yes.

Mr. SPRATT. What was the U.S. Governments' position on verification prior to the submission of the Bush Treaty, the draft treaty submitted by Vice President Bush two years ago? How does our position on verification and challenge inspection in this proposed treaty differ from our position prior to that?

Ambassador Lowitz. Well, I am not totally conversant with what went on prior to that time; it predates my involvement. It is my understanding that in the chemical weapons field, we have always been very wary of the problems that chemical weapons have caused because of the ease of production, the ease of movement and the realization that we would need a very strict kind of verification regime. As this process developed over a period of time, we ended
up with the kinds of verification provisions that suggested in the 1984 draft treaty.

Mr. SPRATT. Would you describe in practical terms how the verification regime proposed in our draft treaty would work?

Ambassador LowITz. I think it is important to keep in mind that there are a number of different methods of verification. A challenge inspection involves each party to the convention having the right to demand immediate access, access within 24 hours, to determine whether or not there was something that was in violation of the obligations under the treaty. As we have written it, an obligation would be something that a state party would assume and could not refuse. In our judgment this would provide a deterrent quality which is very important because of the nature of chemical weapons.

Mr. SPRATT. Would this access include on-site inspection of facilities, internal access to refineries and chemical manufacturing plants?

Ambassador LowITz. Because of the differences in our political systems and the fact that they don't have private industry, our proposal would include our private chemical industry as well as the Soviet industry so that the right to challenge would be equal in both situations.

Mr. SPRATT. How would we handle that constitutionally? If we have such a treaty and if the Soviets demanded to see a Dow Chemical, DuPont or Monsanto plant, demanded to be admitted on premises inside the refinery of the chemical plant? How would we handle such a demand upon a private firm?

Ambassador LowITz. Well, currently there are laws in other areas that give us access to private industry for various inspection reasons. We would have to follow that kind of process. In a situation where there was a direct government connection, a contract or something, the situation would be even simpler.

Mr. SPRATT. There are plenty of refineries and chemical distilling plants. I am not trying to make life tough for you.

Ambassador LowITz. I think we also have to keep in mind that the challenge inspection will run both ways. As we perceive it, there will be an element of restraint or consciousness in how any state uses it, because they will know it can be used against them. I think you are referring to the sort of frivolous challenge that would lead to getting into a place that had no direct connection to chemical weapons. I don't think under the regime that is a likely situation.

There are other steps. Challenge inspection is not the first step which would be utilized or something that would be used in every case. However, in our judgment, it is something that is very important to have available and it should have a substantial deterrent effect.

Mr. SPRATT. Would this demand for verification be made directly to the Soviet Union, or would it be made to some sort of standing international body?

Ambassador LowITz. There would be a mechanism that would be created through the convention, and an inspection team, and there is—if you want, we could submit something that would show what that is in the present draft treaty.
Mr. SPRATT. I think it would be helpful to have it in the record, if you could submit it. I understand there is also a question before you even reach the question of verification of production facilities, there is an issue about verification as to the destruction of existing stocks.

[The following information was received for the record:]

“6. The Executive Council shall promptly notify all Parties of the initiation of any fact-finding procedures and shall provide all available information related thereto to any Party upon request. All Parties shall also be promptly notified of the refusal by a Party of any request made by the Committee or its subsidiary organs as part of a fact-finding inquiry. All reports regarding the fact-finding activities conducted under this Article, as well as on-site inspections under Articles X and XI shall be distributed promptly to all Parties.

“7. The provisions of this Article shall not be interpreted as affecting the rights and duties of Parties under Articles X and XI or under the Charter of the United Nations.

“ARTICLE X

“Special On-Site Inspection

“1. In accordance with the provisions of this Article and Annex II, each member of the Fact-Finding Panel shall have the right to request at any time a special on-site inspection of any other Party, through the Technical Secretariat, to clarify and resolve any matter which may cause doubts about compliance or gives rise to concerns about a related matter which may be considered ambiguous, of:

(a) any location or facility subject to systematic international on-site inspection pursuant to Articles III, V and VI; or

(b) any military location or facility, any other location or facility owned by the Government of a Party, and as set forth in Annex II, locations or facilities controlled by the Government of a Party.

“2. A request shall be handled in the following manner:

(a) Within 24 hours of the request, the Technical Secretariat shall notify the Party to be inspected and designated an inspection team in accordance with paragraph 3 of this Article; and

(b) Within 24 hours after the receipt of such notification, the Party to be inspected shall provide the inspection team unimpeded access to the location or facility.

“3. Each Party may solicit from any member of the Fact-Finding Panel a request for an inspection of any other Party under this Article.

“4. Any special on-site inspection requested through the Technical Secretariat shall be carried out by inspectors designated from among the full-time inspectors of the Secretariat. Each inspection team shall consist of one inspector from each member State of the Fact-Finding Panel, except that if the Party to be inspected as a member State of the Panel, the team shall not include any inspector from that State. The team shall promptly provide a written report to the requesting Party, the inspected Party, and the Fact-Finding Panel. Each inspector shall have the right to have his individual views included in the report.

Are you closer to agreement on this issue than on the issue of verifying ongoing production?

Ambassador LowITZ. The Soviet Union has indicated agreement to permit inspections of the destruction of chemical weapons. We have not worked out all of the details, because in large measure the Soviets are not always willing to spell out exactly what they mean about the verification. However, it is an area where we are in closer agreement than last month.

Mr. SPRATT. They recently tabled, I understand, a new proposal with respect to the verification of existing stocks. Could you tell us how that differs from their previous position?

Ambassador LowITZ. They have not tabled anything at the Conference on Disarmament. General Secretary Gorbachev made a speech in Berlin which indicated that there would be a substantial presentation at the Conference on Disarmament on something that
would move the negotiations along. That was followed by a statement by Ambassador Issraelyan where he made some statements concerning production facilities, which moved towards accepting provisions in our draft treaty. However, it still leaves a fair amount to be discussed and explained.

We submitted questions and are seeking further explanation. It did not solve the overall problems, as had been heralded, on challenge inspection or other areas of verification, but it was clearly some movement.

Mr. SPRATT. With regard to a chemical weapons free zone, you said would, if there were such a zone and if the West Germans were to agree to it, we would have to move back everything to the United States, which would put us at a terrific disadvantage. It is our understanding from sources within the administration and from members of the Bundesrat, who were here just two days ago, we are now proposing to the West Germans if they will approve our force goal proposal before NATO with regard to weapons modernization, we will in the next few years withdraw our unitary munitions now stored in West Germany, and we will store the binary chemical munitions, which would place them exclusively in the United States.

Consequently, are we not creating, for storage purposes at least, a chemical weapons free zone de facto on our part which will put us at a tremendous disadvantage, as you said?

Ambassador LowITZ. Well, I am not conversant with the specifics that you have just described, and I think if you wish, we could surely submit something for the record.

On the question of a unilateral chemical weapons free zone, I understand what you are saying, and that is the reason why we feel it is so important to move ahead on the universal ban, because we do have to maintain a deterrent capability.

I think that the question of a chemical weapons free zone is one where most allies, if not all of the European allies, share our view. It is not a desirable or sensible approach, and we should not countenance that. I'm sure that it poses political problems for some of the countries in Europe, but I just don't think that it makes sense.

Mr. SPRATT. Your predecessor has—he is a good friend of ours—

MRS. HOLT. Ambassador Fields.

Mr. SPRATT [continuing]. Testified the third-world nations, the nonaligned nations participating in this Conference, were helpful in the sense that they viewed themselves as being potential victims of chemical weapons, and that one possibility for a deal with the Soviet Union lay in kind of manipulating their opinion or winning their allegiance to our position and posing pressure on the Soviet Union.

Are they pressuring the Soviet Union at this time to conclude an agreement?

Ambassador LowITZ. They share our view, our concern about chemical weapons and the need for a treaty. To an extent, some of the nonaligned countries are serving that purpose, and serving that purpose effectively. The Swedes play a very important role in the Conference and in the chemical weapons negotiations. The Pakistanis have been playing an ever-increasing role in it.
I would have to say I am still not satisfied because I would like to see additional pressure put on the Soviets. I do think that the nonaligned share our views on the need for a chemical weapons ban, the need for one that is effective and has stringent verification provisions. Overall, I must agree that they are very helpful and supportive.

Mr. SPRATT. Thank you, sir.

Mrs. BYRON. Let me delve into another area. We spent a lot of time on chemicals, and the nuclear testing, I think, is one we also touched on briefly. I would like to go more into depth on that.

On page five, you discussed Ambassador Issraelian's March 25th statement and noted that he also noted the House action on H.J. Res 3. Was that brought up, do you think, to show there was a diversity between Congress and the administration, that they were split on the issues? Had this been discussed previously by the Ambassador on a one-to-one relationship with you, or do you think that was just in a passing phase of his statement, which was a very long speech that day?

Ambassador LowITZ. No, I think on the question of test ban, the Soviet Union has tried very hard, in a very major public relations campaign, to make distinct differences in our view and their view, and they would like to be able to pick out areas where the Legislative Branch and the Executive Branch would differ on an issue which is as key as this.

So I don't think it was a passing element, but I think it is something that is part and parcel of the way they attempt—

Mrs. BYRON. He devoted almost a full page to that issue on H.J. Res 3, and he was quoting the wording of the resolution verbatim. So I think it leads us to be concerned that we don't present a United front on some of those issues.

Ambassador LowITZ. I think that is correct.

Mrs. BYRON. The Soviet position that would perhaps permit a threshold test ban and peaceful nuclear explosion treaties to serve as a test bed for verification by negotiating the installation of seismic arrays within the Soviet Union, has there been any change in their position in this area?

Ambassador LowITZ. Well, of course, within the conference, we don't, we are not dealing specifically with either of those treaties. I think the President and the administration have made clear to the Soviet Union on a number of occasions that we seek to discuss with them in any fashion or any forum that they want our concerns about the verification capabilities of those two treaties in an attempt to work out what we believe would be satisfactory additional verification mechanisms so that those treaties then could go forward and be ratified.

The Soviet Union position, as I understand it, is that you have to ratify first, and then they will be willing to talk about it. The President's invitation to have them come and witness testing was for that purpose. The proposal concerning the Corrtex method has also been for that method. As yet, at least, to my knowledge, there has been no public indication of any change in their position, and surely within the Conference they have been strong in rejecting those sorts of overtures.
Mrs. Byron. I think one of the things that interest me so much with the CD is the fact you are dealing with 40 different nations, many of them nonaligned, and it gives us a working relationship that is not in a formal structure to deal with some of our—above and beyond our allies, the nonaligned nations have been extremely helpful to us over the years.

Has there been any discussion recently among our allies or the nonaligned ones that we work closely with about the efforts to impose legislative moratorium on the nuclear testing?

Ambassador Lowitz. Specifically, the nonaligned, to my recollection, have not dealt with the question of our legislation. They, of course, were very supportive of the Soviet moratorium pronouncements because the Soviets in that sense play into what is a key issue for the nonaligned. The nonaligned have as their primary goal a test ban. By the same token, I think they understand and appreciate our position, although they don't support it.

So I think that they are aware of what governs our position, and specifically they have not raised with me questions dealing with the legislation. I mean, they are surely aware of it, and they have heard the Soviet speeches.

Mrs. Byron. And then, just for my last curiosity, have they ever officially responded to the President's offer to visit the test site to observe a test using the Corrtext monitor?

Ambassador Lowitz. Has the Soviet Union?

Mrs. Byron. Yes.

Ambassador Lowitz. They have not officially responded, but in their speeches, both in general speeches and surely in the ones at the Conference, and in some private discussions that I have had, for one, with Mr. Petrosyants, it was clear to me they were rejected.

Mrs. Byron. Once again, if there are no further questions, I appreciate you taking the time to come out and give us an update and wish you well on your next round.

Ambassador Lowitz. Thank you very much.

[Whereupon, at 11:15 a.m., the panel was adjourned subject to the call of the Chair.]
To provide for a comprehensive bilateral and verifiable freeze between the United States and the Soviet Union on the testing, production, and deployment of nuclear weapons systems.

A BILL

To provide for a comprehensive bilateral and verifiable freeze between the United States and the Soviet Union on the
testing, production, and deployment of nuclear weapons systems.

Be it enacted by the Senate and House of Representa-

tives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Comprehensive Nuclear

Weapons Freeze and Arms Reduction Act of 1985”.

SEC. 2. FINDINGS.

The Congress makes the following findings and decla-

rations:

(1) The greatest challenge facing human civiliza-

tion is to prevent the occurrence of nuclear war by ac-

cident or design.

(2) The effects of nuclear explosions directed at

military targets would not be confined to these targets

and would inevitably cause catastrophic damage to

human society and the natural environment on a scale

unprecedented in history.

(3) The testing, production, and deployment of nu-

clear weapons systems with the accuracy and explosive

power to destroy an adversary's heavily protected mis-

siles and command centers heightens mutual fears of a

“first strike” and fosters a preemptive nuclear war-

fighting mentality which is dangerously removed from

the real-life consequences of nuclear explosions.
(4) A comprehensive, mutual, and verifiable nuclear weapons freeze would halt new destabilizing developments in nuclear weaponry, diminish fears of preemptive nuclear attack, improve the deterrent effectiveness of existing nuclear forces by enhancing their survivability, and put an end to the wasteful and, in the eyes of the global community, immoral competition in nuclear armaments.

(5) National verification techniques, operating in conjunction with International Atomic Energy Agency safeguards on civilian nuclear facilities and supplemented by negotiated cooperative procedures for the inspection of ambiguous events and facilitates, would be sufficient to detect any change in the status of Soviet nuclear forces during a comprehensive freeze that would represent a threat to our national security.

(6) An immediate, mutual pause by the United States and the Soviet Union in the testing and deployment of nuclear weapon systems will break the momentum of the arms race, build confidence on both sides, and facilitate negotiations to halt and reverse the arms race.
SEC. 3. NEGOTIATIONS CONCERNING THE COMPREHENSIVE FREEZE.

(a) CALL FOR IMMEDIATE FREEZE NEGOTIATIONS.—It is the sense of the Congress that the President should immediately invite the Soviet Union to enter into serious negotiations with the United States in order to reach agreement at the earliest possible date on the terms of a comprehensive freeze.

(b) NOTIFICATION TO SOVIET UNION OF U.S. INTENTIONS TO ENGAGE IN A BILATERAL HALT IN TESTING, PRODUCTION, AND DEPLOYMENT.—The President should communicate to the Soviet Union the intention of the United States to engage in a bilateral halt, in accordance with this Act, in the testing, production, and deployment of nuclear weapons systems.

SEC. 4. NEGOTIATIONS CONCERNING NUCLEAR WEAPONS REDUCTIONS.

It is the sense of the Congress that—

(1) both during and after negotiations for a comprehensive freeze, the President should pursue mutual, steady, annual, percentage reductions in nuclear arsenals; and

(2) a comprehensive freeze is entirely consistent with, and an essential component of, mutual stabilizing reductions in nuclear forces.
SEC. 5. CONGRESSIONAL OVERSIGHT OF VERIFICATION PROCEDURES.

(a) REQUIREMENT FOR HEARINGS ON VERIFICATION PROCEDURES.—The Permanent Select Committee on Intelligence of the House of Representatives and the Select Committee on Intelligence of the Senate shall each begin oversight hearings on verification procedures for the comprehensive freeze.

(b) PARTICIPATION BY OTHER COMMITTEES IN HEARINGS.—

(1) SENATE.—The Select Committee on Intelligence of the Senate shall allow members of the Senate Committee on Armed Services, members of the Senate Committee on Foreign Relations, and members of the Subcommittee on Defense of the Senate Committee on Appropriations to participate in its hearings pursuant to subsection (a).

(2) HOUSE OF REPRESENTATIVES.—The Permanent Select Committee on Intelligence of the House of Representatives shall allow members of the House Committee on Armed Services, members of the House Committee on Foreign Affairs, and members of the Subcommittee on Defense of the House Committee on Appropriations to participate in its hearings pursuant to subsection (a).
(c) Requirement for Report on Verification Procedures.—Following the hearings pursuant to subsection (a), but no later than 6 months after the date of enactment of this Act, the Permanent Select Committee on Intelligence of the House of Representatives and the Select Committee on Intelligence of the Senate, shall each submit a report to their respective House on the adequacy of United States monitoring systems and existing agreed procedures for verifying Soviet compliance with the comprehensive freeze.

(d) Information to Be Included in Report.—The report required by subsection (c), which shall be prepared in both a classified and an unclassified form, shall include—

(1) an assessment of the nature and extent of Soviet activities and installations involved in the testing, production, and deployment of nuclear weapons systems;

(2) an assessment of current United States capabilities to monitor changes, that would pose a threat to our national security, in the status of Soviet nuclear forces under the comprehensive freeze; and

(3) an assessment of additional monitoring systems and cooperative procedures that may be required to increase monitoring confidence of certain aspects of a comprehensive freeze.
SEC. 6. OPERATIONAL PLAN FOR UNITED STATES IMPLEMENTATION OF THE COMPREHENSIVE FREEZE.

(a) PREPARATION OF OPERATIONAL PLAN.—The Director of the United States Arms Control and Disarmament Agency shall immediately begin preparing an operational plan for implementation by the United States of the comprehensive freeze.

(b) CONSULTATION.—In preparing the plan required by subsection (a), the Director shall consult with the Secretary of Defense, the Secretary of Energy, and other appropriate federal officials.

(c) REPORT ON OPERATIONAL PLAN.—No later than 9 months after the date of enactment of this Act, the Director shall submit to the Congress a report on operational plan prepared pursuant to subsection (a). This report shall specify—

(1) procedures for the cessation of activities and closure or conversion of facilities affected by the comprehensive freeze;

(2) a program for the retraining and re-employment of Government and defense industry personnel directly affected by the termination of nuclear weapons-related activities; and

(3) a program of economic adjustment assistance for those communities whose local economy may be ad-
versely affected by the sudden shift in the pattern of
Government expenditure.

SEC. 7. SEMIANNUAL REPORTS ON FREEZE NEGOTIATIONS, 

SOVIET COMPLIANCE, AND VERIFICATION.

(a) REQUIREMENT FOR SUBMISSION OF REPORTS.—

At the times specified in subsection (b), the President shall
submit to the Congress a report, in both classified and unclas-
sified versions, which describes in detail—

(1) the status of United States and Soviet efforts
to negotiate a comprehensive freeze;

(2) Soviet military activities during the preceding
6 months relating to the testing, production, and de-
deployment of nuclear weapons systems; and

(3) any uncertainties concern verification of the
comprehensive freeze, the status of efforts to reduce
those uncertainties, and the national security implica-
tions of those uncertainties.

(b) TIMES FOR SUBMISSION OF REPORT.—The first
report pursuant to subsection (a) shall be submitted no earlier
than 7 months and no later than 8 months after the date of
enactment of this Act, and subsequent reports shall be sub-
mitted at 6-month intervals thereafter.
SEC. 8. FUNDING RESTRICTIONS ON TESTING, PRODUCTION, AND DEPLOYMENT OF NUCLEAR WEAPONS SYSTEMS.

(a) Restrictions Conditioned on Soviet Willingness to Observe a Bilateral Halt in Testing, Production, and Deployment.—The restrictions contained in this section shall take effect only if, during the 30-day period beginning on the date of enactment of this Act, the Government of the Soviet Union communicates to the President that the Soviet Union will join with the United States in observing a bilateral halt in the testing, production, and deployment of nuclear weapons systems.

(b) Restrictions on Testing and Deployment.—

(1) In General.—Appropriated funds may not be obligated or expended for the testing or deployment of nuclear weapons systems, unless the Congress expressly provides otherwise in a joint resolution enacted pursuant to section 10 following a Presidential request pursuant to section 9.

(2) Effective Dates of Restrictions on Testing and Deployment.—

(A) In General.—Except as provided in subparagraph (B), the restrictions on testing and deployment contained in paragraph (1) shall take effect 30 days after the date of enactment of this Act.
(B) SPECIAL RULE FOR CERTAIN NUCLEAR MISSILES.—The restrictions contained in paragraph (1) shall not take effect with respect to the testing and deployment of nuclear missiles with a range of 600 kilometers or less until one year after the date of enactment of this Act.

(c) RESTRICTION ON PRODUCTION.—

(1) IN GENERAL.—Appropriated funds may not be obligated or expended for the production of nuclear weapons systems, unless the Congress expressly provides otherwise in a joint resolution enacted pursuant to section 10 following a Presidential request pursuant to section 9.

(2) EFFECTIVE DATE OF RESTRICTION ON PRODUCTION.—The restriction on production contained in paragraph (1) shall take effect one year after the date of enactment of this Act.

(d) INTERPRETATION OF PROVISIONS.—The restrictions contained in this section—

(1) apply with respect to any funds appropriated or otherwise made available by the Congress for any fiscal year, including any funds which have been obligated but not expended;

(2) apply notwithstanding any other provision of law, including any Act authorizing the appropriation of
funds for the testing, production, or deployment of nuclear weapons systems and any Act or joint resolution appropriating funds for the testing, production, or deployment of nuclear weapons systems; and

(3) do not preclude the use of funds for necessary expenses resulting from the suspension or cancellation of existing contracts relating to the testing, production, or deployment of nuclear weapons systems.

SEC. 9. PRESIDENTIAL REQUEST FOR FUNDING FOR NUCLEAR WEAPONS SYSTEMS.

(a) SUBMISSION OF REQUEST.—Subject to subsection (b), the President may request that the Congress remove, in whole or in part, funding restrictions contained in section 8 on the testing of nuclear weapons systems, on the production of nuclear weapons systems, and on the deployment of nuclear weapons systems.

(b) CERTIFICATION WHICH MUST ACCOMPANY REQUEST.—A request may be made pursuant to subsection (a) only if the President certifies to the Congress that—

(1) the Soviet Union has failed to demonstrate a restraint with respect to nuclear weapons systems which corresponds to the restraint being shown by the United States pursuant to this Act; or
(2) continuation of the funding restrictions would cause significant and irreparable damage to the national security of the United States.

(c) **Time for Submission of Request.**—Except in exceptional circumstances, a request pursuant to subsection (a) should not be submitted to the Congress before the first semiannual report is submitted pursuant to section 7.

**SEC. 10. REQUIREMENT FOR EXPEDITIOUS CONGRESSIONAL ACTION ON PRESIDENTIAL REQUEST FOR FUNDING OF NUCLEAR WEAPONS SYSTEMS.**

If the President submits a request pursuant to section 9 for the removal (in whole or in part) of funding restrictions contained in section 8, the Congress shall promptly begin consideration of a joint resolution which would grant that request and shall complete its consideration of that joint resolution (including such amendments as the Congress considers appropriate) no later than 30 days after receiving the request.

**SEC. 11. DEFINITIONS.**

(a) **Definition of Comprehensive Freeze.**—For purposes of this Act, the term "comprehensive freeze" means a bilateral and adequately verifiable halt by the United States and the Soviet Union in all testing, production, and deployment of nuclear weapons systems. Included in a comprehensive freeze would be all weapons systems designed primarily for use in a nuclear conflict.
(b) **Definitions of Testing, Production, and Deployment of Nuclear Weapons Systems.**—The following definitions apply for purposes of this Act:

1. **Testing.**—The term "testing of nuclear weapons systems" means—
   
   (A) the testing of nuclear explosive devices;
   
   (B) the flight testing of nuclear missiles; and
   
   (C) the flight testing against targets in space of anti-satellite (ASAT) and anti-ballistic missile (ABM) weapons.

2. **Production.**—The term "production of nuclear weapons systems" means—
   
   (A) the operation of facilities for the production of plutonium and highly enriched uranium for use in nuclear explosive devices;
   
   (B) the operation of facilities for the manufacture of nuclear fission and fusion components for nuclear explosive devices;
   
   (C) the operation of final assembly facilities for nuclear explosive devices;
   
   (D) the operation of facilities for the final assembly of strategic bombers.
   
   (E) the operation of facilities for final assembly of missile stages for nuclear missiles;
(F) the operation of facilities for the manufacture of individual stages for nuclear missiles; and

(G) the production of other components dedicated for nuclear weapons systems.

(3) DEPLOYMENT.—

(A) IN GENERAL.—The term “deployment of nuclear weapons systems” means—

(i) the deployment of any new strategic bomber type, or the deployment of any units of an existing strategic bomber type above the number deployed as of the freeze date;

(ii) the deployment of any modification of existing strategic bomber types which would be verifiable by the other nation, unless the modification is primarily for the purposes of safety or deployment of the modification was begun before the freeze date;

(iii) any deployment or modification of ballistic-missile submarines which would cause the aggregate number of missile launch tubes deployed to be greater than the number deployed on the freeze date;
(iv) the deployment of new nuclear missile types, or the deployment of any missiles of an existing nuclear missile type above the number deployed on the freeze date;

(v) the deployment of any launchers for new nuclear missile types, or the deployment of any fixed or mobile launchers for an existing nuclear missile type above the number deployed on the freeze date; and

(vi) the deployment of new types of nuclear explosive devices, or the deployment of any units of an existing type of nuclear explosive device above the number deployed on the freeze date.

(B) Clarifying Provisions.—

(i) Ballistic missile submarines.—

Subject to the limitations in subparagraph (A)(iii), nothing in subparagraph (A) shall be construed to prevent ballistic missile submarines from being replaced or modified in any way.

(ii) Hardening of fixed missile launchers.—Improved hardening of fixed missile launchers shall not be considered to
be a deployment of nuclear weapons systems for purposes of subparagraph (A).

(iii) NEGOTIATED REDUCTIONS.—Nothing in subparagraph (A) shall be construed to impede a negotiated agreement on reductions in any nuclear weapons system permitted to be deployed under the definition contained in subparagraph (A).

(c) DEFINITIONS OF OTHER TERMS.—The following definitions apply for purposes of this Act:

(1) NUCLEAR MISSILE.—The term "nuclear missile" means a missile whose primary mission requires it to deliver a nuclear explosive device.

(2) STRATEGIC BOMBER.—The term "strategic bomber" means the following aircraft (which have as their primary mission the delivery of nuclear weapons):

(A) The Soviet Backfire, Bear, Bison, Blackjack, and Fencer aircraft.

(B) The United States B-52, B-1B, FB-111, F-111, and Advanced Technology Bomber aircraft.

(C) Any other aircraft of comparable range-payload equipped with internal bomb bays or external weapon-carrying hard points.
(3) **NUCLEAR EXPLOSIVE DEVICE.**—The term "nuclear explosive device" means any warhead, bomb, or other explosive device which uses fissionable materials.

(4) **EXISTING TYPE.**—The terms "existing nuclear missile type", "existing strategic bomber type", and "existing type of nuclear explosive device" mean a type of missile, bomber, or explosive device that was deployed by the nation as of the freeze date.

(5) **NEW TYPE.**—The terms "new nuclear missile type", "new strategic bomber type", and "new type of nuclear explosive device" mean a type of missile, bomber, or explosive device that was not deployed by the nation as of the freeze date.

(6) **FREEZE DATE.**—The term "freeze date" means—

(A) for purposes of negotiations between the United States and the Soviet Union concerning the comprehensive freeze and reductions, the date agreed to for implementation of the comprehensive freeze; and

(B) for purposes of the funding restrictions contained in this Act, the date of enactment of this Act.
To provide for a mutual, simultaneous, verifiable cessation of the testing of nuclear warheads effective on or before January 1, 1986, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

September 26, 1985

Mrs. Schroeder (for herself, Mr. Frank, Mr. Hayes, Mr. Edwards of California, Mr. Studds, Mr. Dellums, Mr. Kolter, Mr. Leland, Mr. Fauntroy, Mr. Weaver, Mr. Savage, Mr. Mitchell, Mr. Lowry of Washington, Mr. Murphy, Mr. Mrazek, Mr. Crockett, Ms. Kaptur, Mrs. Burton of California, Mr. Seiberling, Mr. Clay, Mr. Conyers, Mr. Weiss, Mr. Kastenmeier, Mr. Towns, Mr. Rahall, Mr. Levine of California, Mr. Vento, Mr. Bosco, Mrs. Kennelly, Mr. Moody, Mr. Lehman of Florida, Mr. Martinez, Mr. Wirth, Mr. Rangel, Mrs. Collins, Mrs. Boxer, Mr. Oberstar, and Mr. Mineta) introduced the following bill; which was referred jointly to the Committees on Foreign Affairs and Armed Services

A BILL

To provide for a mutual, simultaneous, verifiable cessation of the testing of nuclear warheads effective on or before January 1, 1986, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
3 SECTION 1. SHORT TITLE.
4 This Act may be cited as the "Simultaneous Nuclear
5 Test-Ban Act".
SEC. 2. FINDINGS.

The Congress finds—

(1) that the mutual and simultaneous cessation of the testing of nuclear warheads by the United States and the Soviet Union would give a positive indication of a sincere desire by both nations to end the nuclear arms race;

(2) that such an indication would provide the proper climate for current and future nuclear arms control negotiations; and

(3) that the Soviet Union has declared a cessation on the testing of nuclear warheads beginning on August 6, 1985, to last for a 5-month period and has stated that if the United States joins in the cessation, it will remain in effect indefinitely.

SEC. 3. SENSE OF CONGRESS.

(a) CESSATION OF NUCLEAR TESTING.—(1) It is the sense of Congress that the President, before January 1, 1986, should declare that the United States will cease the testing of nuclear warheads and will invite the Soviet Union to meet with the United States to enter into negotiations for the conclusion of a Comprehensive Test Ban Treaty at the earliest possible date.

(2) If such a cessation of the testing of nuclear warheads takes effect, the United States should continue the cessation of the testing of nuclear warheads so long as the Soviet
1 Union refrains from the testing of nuclear warheads and sub-
2 stantive Comprehensive Test Ban Treaty negotiations are in
3 progress.
4
(b) Resumption of Comprehensive Test Ban
5 Talks.—It is the sense of Congress that during a cessation
6 of the testing of nuclear warheads described in subsection (a)
7 the President should actively seek resumption of the compre-
8 hensive test ban talks between the United States, Great Brit-
9 ain, and the Soviet Union in order to achieve a Comprehen-
10 sive Test Ban Treaty.
11
SEC. 4. LIMITATION ON USE OF FUNDS.
12
(a) In General.—If the President does not declare a
13 cessation of testing nuclear warheads as described in section
14 3(a), then during the six-month period beginning on January
15 1, 1986, no funds appropriated or otherwise made available
16 by Congress may be obligated or expended by the United
17 States for the testing of nuclear warheads.
18
(b) Authority if Soviet Union Tests.—(1) If the
19 President certifies to Congress after January 1, 1986, that
20 the Soviet Union has on or after that date tested a nuclear
21 warhead, then beginning on such date funds may be obligated
22 or expended by the United States for such testing.
23
(2) The President shall include with any certification
24 under this subsection—
(A) an unclassified report summarizing the basis for the certification; and

(B) a classified report describing in detail the activities of the Soviet Union that are the basis for the certification.

SEC. 5. VERIFICATION OF CESSATION OF TESTING.

The Congress determines that—

(1) existing national technical means of verification are adequate to provide confidence during the six-month period of the cessation of nuclear testing referred to in section 4(a) that no nuclear test can be conducted that would lead to a military advantage for either participant;

(2) the comprehensive test ban talks referred to in section 3(b) can build upon verification procedures already developed and incorporated in previous treaties and agreements to provide long-term mutually acceptable verification measures; and

(3) these verification measures would include, at a minimum, provisions for on-site inspection, cooperative measures for the exchange of seismic data, and the establishment of a monitoring committee of experts.

SEC. 6. ANNUAL REPORT.

Three months after a cessation of the testing of nuclear warheads takes effect under this Act and annually thereafter
while such cessation remains in effect, the President shall report to Congress—

(1) on the progress being made by the United States in negotiating nuclear arms control agreements with the Soviet Union; and

(2) on whether the President believes that continuation of the cessation of nuclear testing is in the national security interest of the United States.

SEC. 7. DEFINITION.

For purposes of this Act, the term "testing of nuclear warheads" means the detonation of a nuclear explosive device.
To prohibit the obligation or expenditure of funds appropriated to the Department of Defense or the Department of Energy for the development, explosive testing, or production of strategic defense systems incorporating nuclear explosive devices.

IN THE HOUSE OF REPRESENTATIVES

APRIL 9, 1986

Mr. Markey introduced the following bill; which was referred to the Committee on Armed Services

A BILL

To prohibit the obligation or expenditure of funds appropriated to the Department of Defense or the Department of Energy for the development, explosive testing, or production of strategic defense systems incorporating nuclear explosive devices.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. CONGRESSIONAL FINDINGS.

Congress makes the following findings:

(1) The Strategic Defense Initiative Organization of the Department of Defense and cooperative programs under the management of the Department of
Energy are carrying out research programs that are designed to investigate the feasibility of a non-nuclear defensive shield that the President describes as a defense that will render nuclear weapons impotent and obsolete.

(2) Deployment in outer space of a nuclear bomb-pumped X-ray laser or any other nuclear explosive device is prohibited by the Outer Space Treaty of 1967.

(3) Testing of any defensive nuclear explosive device in outer space or in the atmosphere, regardless of the purpose for which that device is intended to be used, is prohibited by the Limited Test Ban Treaty of 1963.

(4) Testing of any defensive nuclear explosive device with a yield in excess of 150 kilotons would be prohibited by the unratified Threshold Test Ban Treaty of 1974, which the United States has indicated it will not undercut.

(5) Field testing or deployment of anti-ballistic missile systems (or components of such systems) that are air based, sea based, space based, or mobile land based are prohibited by the Anti-Ballistic Missile Treaty of 1972.
(6) Conclusion of a comprehensive nuclear test ban treaty between the United States and the Soviet Union would eliminate the need to provide the United States with a hedge against possible development, testing, production, and deployment by the Soviet Union of directed energy weapons powered by nuclear explosive devices.

SEC. 2. PROHIBITION ON USE OF FUNDS FOR DEVELOPMENT, TESTING, OR PRODUCTION OF STRATEGIC DEFENSE SYSTEMS.

No funds appropriated to the Department of Defense or to the Department of Energy may be obligated or expended—

(1) for the development, explosive testing, or production of strategic defense systems that are designed to incorporate nuclear explosive devices; or

(2) for components of such systems that are designed to incorporate nuclear explosive devices.
Supporting the President's commitment to arms control policies, understandings, and agreements leading to genuine, lasting reductions in nuclear weapons and their delivery systems and the ultimate elimination of such weapons from the world's arsenals.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 24, 1985

Mr. KRAMER (for himself, Mr. HUTTO, Mr. DAUB, and Mr. KOLBE) submitted the following concurrent resolution; which was referred jointly to the Committees on Armed Services and Foreign Affairs

CONCURRENT RESOLUTION

Supporting the President's commitment to arms control policies, understandings, and agreements leading to genuine, lasting reductions in nuclear weapons and their delivery systems and the ultimate elimination of such weapons from the world's arsenals.

Whereas, in his inaugural address of January 21, 1985, President Ronald Reagan declared, "For the sake of each child in every corner of the globe, we seek, one day, the total elimination of nuclear weapons from the face of the Earth";

Whereas the primary task of the United States Government is to defend the Nation and its people;
Whereas national security is best provided by a prudent combination of military defense and effective, enforceable arms control agreements and understandings that provide for significant reductions in existing weapons stocks and that set strict limits on the development, numbers, use, and capabilities of weapons;

Whereas present strategic and arms control policies have proven inadequate in addressing the Soviet strategic capability developed since the early 1960's and in protecting the strategic position of the United States and its allies;

Whereas, as the President observed in his inaugural address, "for decades, we and the Soviets have lived under the threat of mutual assured destruction";

Whereas proliferation of nuclear weapons and missile technologies threaten to make the United States and its allies, the Soviet Union, and other nations subject to the threat of a terrorist attack by an irresponsible party, an attack against which there is presently no defense;

Whereas the development and deployment of strategic defense systems would serve to provide an enforcement mechanism for arms control agreements and understandings and to provide a defense against such a terrorist attack;

Whereas, as the President stated on January 21st, "such a shield would not kill people, but destroy weapons; it would not militarize space, but help demilitarize the arsenals of Earth [and] could render nuclear weapons obsolete";

Whereas the negotiating framework for comprehensive arms control talks arrived at on January 8, 1985, by Secretary of State George Shultz and Soviet Foreign Minister Andrei Gromyko offers a significant opportunity for a breakthrough
in arms control leading to genuine, lasting reductions in nuclear weapons and their delivery systems;

Whereas in 1962, as part of a general and complete disarmament proposal, the Soviet Union called for an "an agreed and strictly limited number of intercontinental missiles, anti-missile missiles and anti-aircraft missiles in the 'ground-to-air' category, to be retained by the Union of Soviet Socialist Republics and the United States of America"; and

Whereas, in his inaugural address the President declared that "there is only one way safely and legitimately to reduce the cost of national security, and that is to reduce the need for it": Now, therefore, be it

Resolved by the House of Representatives (the Senate concurring), That the Congress supports the President's commitment to arms control policies and proposals that provide for—

(1) substantial and lasting reductions in strategic nuclear weapons and their delivery systems to levels below that at which massive offensive retaliation is feasible, and for the ultimate total elimination of such weapons; and

(2) the development and deployment of nonnuclear defensive technologies to ensure—

(A) that any failure to adhere to the terms of arms control agreements and understandings will not endanger the safety of the United States, its people and allies, and
that a terrorist nuclear missile attack from any quarter would be neutralized.

These policies and proposals provide for and encourage the United States, the Soviet Union, and other world powers to move away from reliance upon offensive weapons to reliance on defensive weapons for their strategic defense.

SEC. 2. The Congress supports the President in the negotiation of new arms control agreements and pursuit of new arms control understandings with the Soviet Union—

(1) under which compliance is verifiable with a very high degree of confidence;

(2) which entail offsetting reductions in offensive weapons with sufficient defensive weapons capability to guarantee the safety of the parties should either fail to fulfill its offensive arms reduction obligations, either explicit or implied;

(3) which provide for incremental implementation of simultaneous and symmetrical reductions in offensive weapons and increases in defensive weapons; and

(4) in which the ultimate, stated objective is the elimination of nuclear weapons from the arsenals of all nations.
AFTERNOON SESSION

Mrs. Byron. This afternoon the panel will continue its hearings on the arms control and national security implications of six bills that are pending before the Subcommittee on Procurement and Military Nuclear Systems. This session follows the panel's session of April 29 when our colleagues, Representatives Henry Hyde and John Porter, appeared as the sponsors of H.J. Res. 272 and H.R. 2124, respectively. I am advised that Representative Markey, the sponsor of H.R. 3100 and H.R. 4542, is scheduled to appear next Thursday, on May 15, 1986.

I want to again emphasize that the panel is not authorized under the Rules to report legislation. Our purpose is to create a useful record and to make appropriate recommendations to the subcommittee.

Our witnesses today are Mr. John H. Hawes, representing the Department of State; Mr. Frank J. Gaffney and Mr. Douglas J. Feith, representing the Department of Defense; and Mr. Don Ofte, representing the Department of Energy.

The departmental representatives have been asked to analyze the bills under consideration and to present the administration's views respecting their potential effects on arms control and national defense if enacted.

I will ask the witnesses to be seated at the table at this time and to proceed with their prepared statements. When the prepared statements have been presented, we will then proceed with questions and answers. If there are matters that must be presented in closed session, the panel will go into executive session following the presentation of all of the unclassified matters.

Before asking Mr. Hawes to proceed with his statement, I will recognize Mrs. Holt.

STATEMENT OF HON. MARJORIE S. HOLT, A REPRESENTATIVE FROM MARYLAND, RANKING MINORITY MEMBER, SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT OF THE PROCUREMENT AND MILITARY NUCLEAR SYSTEMS SUBCOMMITTEE

Mrs. Holt. Thank you.

Madam Chairman, I want to welcome our witnesses this afternoon. Because the bills that we are considering include almost every major arms control issue, it is important that a very clear record be generated. I believe, without doubt, that we will face many of these issues as amendments to the fiscal year 1987 authorization and appropriations bills.

When this series of hearings began, I expressed my very deep concern about attempts to legislate arms control or unilateral action, as some of these bills would attempt to do. I believe that some of these attempts to legislate, instead of negotiating arms control measures, are actually damaging to the arms control process. We have heard testimony to that effect right along.

We have seen evidence that the Soviets seize upon such legislative attempts as evidence of deep divisions within the United States that simply do not exist. I cannot believe that the people of the United States would stand still for unilateral or unverifiable
actions. And despite the language of these and other bills using the
words "mutual" and "verifiable", the result would be something
very different.

Thank you. I look forward to your analysis.

Mrs. Byron. You may proceed.

STATEMENT OF JOHN H. HAWES, PRINCIPAL DEPUTY ASSISTANT
SECRETARY FOR BUREAU OF POLITICO-MILITARY AFFAIRS,
DEPARTMENT OF STATE

Mr. Hawes. Thank you. I have submitted a statement for the
record. With your permission, I would propose to briefly summarize
that, if that is okay with you.

The administration is committed to achieving effective, verifiable
and significant arms control agreements. We are engaged in negoti-
atations in Geneva, we are engaged in Vienna on conventional force
reductions, in Stockholm on confidence building measures, and in
the UN Conference on Disarmament in Geneva on chemical weap-
on and other issues.

The centerpiece of the entire arms control effort is nuclear weap-
on. The President has as a long-term goal the abolition of nuclear
weapons. We have advanced concrete proposals in each of the nu-
clear reduction negotiations, we have advanced concrete proposals
in the conventional and chemical weapons areas. As we pursue
each one of those, the administration is very conscious of the need
to weigh our arms control proposals and our arms control activities
in the context of our overall national security policy. Arms control
is not something you pursue in a vacuum, it is a major constituent
element of national security policy, just as are strategic force mod-
erization, our conventional forces, our alliances and our diploma-
cy. It is in that context, Madam Chairwoman, I would like to com-
ment on particular pieces of legislation before the committee.

Mrs. Byron. You may proceed.

Mr. Hawes. The administration finds Joint House Resolution 272
very consistent with our view of arms control and national security
policy. It correctly, from our point of view, puts the issue of a nu-
clear test ban in the context of our requirement to maintain effec-
tive deterrents, it correctly states the relationship between new
agreements and compliance with past agreements, it looks serious-
ly at the issue of verification, and it particularly looks at the re-
quirement for this country to maintain an effective nuclear deter-
rent as long as that is the basis of our ability to maintain peace
and stability.

The President has said that a comprehensive test ban is a long-
range U.S. objective in the context of significant arms reductions, a
conventional balance and a situation where we will no longer have
to depend on nuclear deterrence for peace and stability. We do not
at this point have such a situation, and in that context, we share
the view of House Joint Resolution 272; we should not now proceed
with a comprehensive test ban.

By contrast, Madam Chairman, House Resolution 3442 calls for a
mutual, simultaneous and verifiable cessation of testing. The ad-
ministration would strongly oppose such a resolution. As I have
said, so long as this country and our allies and our friends are de-
dependent on a nuclear deterrent for our peace and security, we must maintain a testing program. A U.S. test moratorium, and certainly an unverifiable comprehensive test ban agreement with the Soviet Union would preclude our ability effectively to maintain a credible deterrent.

We have, Madam Chairman, similar problems with House Resolution 3100, which would freeze testing, production and deployment of all nuclear weapon systems, not just nuclear warheads, but also delivery vehicles, missiles, planes, ships. We have over a number of years argued that a freeze is a very ineffective, inappropriate way to go about arms control, that it codifies existing Soviet advantages and imbalance. If you are to be serious about arms control, you need to devise effective agreements which will eliminate those imbalances: you need to spend your negotiating energies on ways to verify real reductions in forces, not simply on different ways to verify an unbalanced freeze.

House Concurrent Resolution 35, Madam Chairman, is in our view a welcome statement of support for the arms control objectives of this administration. We feel that it accurately reflects the President's goal of achieving a balance in deterrent forces, and it also accurately reflects the President's objective of finding out whether it is possible to develop a greater reliance on defensive systems as against an offensive deterrent, as is presently the case.

We oppose, on the other hand, House Bill 4542, which would cut funding for strategic defense systems involving nuclear devices. The Strategic Defense Initiative is a very important research program, one of the largest research programs in recent decades, designed to see whether indeed we can develop an affective strategic defense system. Most of that program is a non-nuclear program, looking at non-nuclear technologies to intercept ballistic missiles.

There are, however, potentially interesting areas of the SDI program which do involve nuclear explosive technology. We feel that unless we are able to investigate those technologies, we cannot make the most efficient use of our SDI effort for our own decisions on a future deployment of a defensive system, nor can we judge the abilities of the Soviet Union, which is also doing research in this area, to use nuclear explosive technologies for such purposes. Therefore, we would oppose that resolution.

We would similarly oppose Resolution 2124, which would apply a unilateral ban on U.S. production of chemical weapons. The resolution states it is in favor of negotiating a global ban on the production and stockpiling of weapons. So is the administration. This administration has been committed for a long time to such a negotiated ban. Vice President Bush over two years ago tabled a proposal for a ban in Geneva, and we are actively negotiating on it at this point. I believe Ambassador Lowitz discussed this with your committee this morning.

We believe it is inconsistent with the objective of serious negotiations in Geneva which seek to ban Soviet production and stockpiling, along with all other production and stockpiling of chemical weapons, to unilaterally renounce that capability, since it is clearly our perception the Soviets would have no incentive to negotiate if they believed the U.S. might unilaterally renounce the possibility
of building chemical weapons. Therefore, the administration cannot support that resolution.

Thank you, Madam Chairman.

Mrs. Byron. Let me touch on a couple of questions, but first of all I think we will take the testimony from the three other witnesses and do the questions all at one time.
PREPARED STATEMENT OF JOHN H. HAWES

Madam Chairman, Members of the Special Panel on Arms Control and Disarmament:

I am pleased to have this opportunity to appear before you to discuss Administration positions on proposed legislation currently under consideration by this panel and the Committee.

This Administration is committed to the goal of serious, verifiable, and effective arms control. In several different arenas -- the Nuclear and Space Talks in Geneva, the Conference on Disarmament, the Conference on Disarmament in Europe, and the Mutual and Balanced Force Reduction talks in Vienna -- we are engaged in dialogue with the Soviets. These efforts cover a gamut of forces and weapons systems -- nuclear, chemical, and conventional. All are important, but the centerpiece remains the negotiations on nuclear weapons. The President has established the long-term goal of the ultimate elimination of nuclear weapons. And with that in mind, he has made concrete proposals in each of the nuclear negotiations. He has also made major proposals on conventional and chemical weapons control, recognizing that if we are to maintain peace and stability, we cannot neglect imbalances in these other areas as we seek to achieve major reductions in nuclear weapons.

Arms control policy cannot be viewed in isolation. It is a central element of national security policy, affecting the force and options available to the US, its allies, and our potential adversaries. As such, all components of arms control policy ---
be subjected to the rigorous scrutiny that we devote to the development and selection of weapons systems, the maintenance of our alliances, and the overall conduct of our international relations.

Let me comment on each of the several bills under consideration.

House Joint Resolution 272 states that a cessation of nuclear testing must be verifiable, related to our ability to maintain a credible deterrence and made in the context of deep and verifiable arms reductions. The resolution embodies many of the Administration's long-term policies concerning arms control and national security. Deterrence is at the center of US national security policy. H.J. Res. 272 rightly points out elements of arms control which contribute to deterrence: compliance with existing agreements, means of verifying compliance with confidence, and the maintenance of a credible, modern strategic force. As the President has stated, a comprehensive test ban remains a long-term objective of the US in the context of a time when we do not need to depend upon nuclear deterrence to ensure international stability and security, and when we have achieved broad, deep and verifiable arms reductions, substantially improved verification capabilities, expanded confidence building measures, and greater balance in conventional forces.
While we seek to enhance national security and that of our allies through arms reduction negotiations, we must remind ourselves that not all arms control agreements have measured up to our expectations. Soviet noncompliance with existing agreements has raised fundamental questions. Verification of arms control agreements presents significant challenges.

Verification and compliance issues have arisen in connection with the Threshold Test Ban Treaty (TTBT). The U.S. has complied fully with the 150-kt yield limit for underground nuclear tests. Soviet activities, on the other hand, constitute a likely violation of their legal obligations under the TTBT, as noted in the President's December 23, 1985, report to the Congress on Soviet non-compliance. The U.S. is not seeking ratification of the TTBT and its companion Peaceful Nuclear Explosions Treaty as they now stand since they are not effectively verifiable. On a number of occasions over the past three years we have attempted to engage the Soviets in discussion on practical steps to resolve our verification concerns on these two treaties so we can move forward to their ratification. I understand that Mr. Gaffney will discuss in some detail these steps so I will not take the time to do so here.

To strengthen and encourage confidence and movement in offensive arms reductions, we must examine objectively and seek
resolution of the questions of verification and Soviet non-compliance, issues which are critical to the success of all forms of arms control. We believe that H.J. Res. 272 recognizes these issues and therefore fully support Rep. Hyde's valuable effort in that regard.

Let us now turn to House Resolution 3442, which calls for a "mutual, simultaneous, verifiable cessation" of nuclear warhead testing. The Administration is opposed to this legislation. Nuclear testing is essential to US maintenance of a credible, safe, effective, and survivable nuclear deterrent. I believe that the effect of this legislation, its assertions to the contrary, would be to bring about a unilateral US nuclear testing moratorium leading to an unverifiable comprehensive nuclear test ban. This would weaken our national security.

To repeat, any limitations on nuclear testing must be compatible with our security interests and must be effectively verifiable. H.R. 3442 incorrectly asserts that national technical means of verification are adequate to determine that a nuclear test can be conducted that would lead to a military advantage. In light of the verification problems as well as our ongoing discussions with the Soviets, we believe that this proposed legislation would be counterproductive. It would project an image of internal discord on arms control matters and thereby weaken our hand in Geneva and our preparations for the next summit.
Soviet posturing and propaganda aside, we are engaged with the Soviets in a negotiating process which holds the promise of progress in the broad range of arms control issues, including nuclear testing limitations. Congressional actions which offer the Soviets the hope of success, or even partial success, at no cost in the negotiations, could derail this process.

In the area of nuclear testing, neither a moratorium nor a comprehensive test ban would contribute to the cause of security, stability and peace under existing conditions. It is our view, therefore, that the action called for by this legislation does not serve the interest of the United States, our Allies and our friends. It would undercut the initiatives we have underway and risk serious damage to our security in the process.

While we are actively investigating in the SDI research program technologies that may one day make the U.S. less dependent on offensive nuclear weapons for our security, nuclear weapons will remain for the foreseeable future the key element of our deterrent. In such a situation, where both the U.S. and our allies must rely upon nuclear weapons to deter aggression, a moderate level of nuclear testing will be required.

In the nuclear testing area, our position has consistently been that what is needed now is to achieve effective verification of the Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty (PNET). To date, the Soviet Union has yet to
accept any of our approaches to enhance verification of these treaties. We believe that it is not productive for the Soviet Union to refuse to consider necessary improvements on an existing treaty which would permit concrete progress on this issue and to insist instead that they are only prepared to discuss a comprehensive cessation of nuclear testing, which as we have made clear, remains a long-term goal but not a near-term prospect.

House Resolution 3100 calls for "a comprehensive bilateral and verifiable freeze between the United States and the Soviet Union on the testing, production, and deployment of nuclear weapons systems". While the Administration shares the concern of those seeking to reduce the risk of war, the nuclear freeze is not an effective or realistic way to achieve this objective. The freeze would preserve existing Soviet military advantages, prevent the needed modernization of US and NATO nuclear weapons, and reduce incentives for the Soviets to negotiate seriously for radical and verifiable arms reductions. In addition, a freeze can not be effectively verified.

Given the scope of the Soviet modernization programs and relative US restraint, US testing, production and deployment of nuclear weapons systems are required to ensure the continued effectiveness of our deterrent, and to ensure the reliability and safety of the US arsenal. It is vital that we ensure the essential strategic balance which has enabled us to keep the peace between East and West.
Although the resolution calls for a "verifiable freeze", the Administration still has concerns with the problem of verification and the national security implications of a freeze with the Soviets. There is nothing in the legislation to provide for effective verification. The energies required to negotiate such an arrangement can be better directed to real reductions of offensive nuclear weapons.

The US has learned through experience to be extremely cautious concerning uninspected and unverifiable moratoria. As President Kennedy said in 1962 when the Soviets broke the testing moratorium, "We know enough about broken negotiations, secret preparations, and the advantages gained from a long test series never to offer again an uninspected moratorium."

In summary, the Administration cannot support H. R. 3100. A nuclear freeze is unacceptable. A way must first be found to achieve essential verification capability and to fulfill our national security objectives: modernizing our offensive nuclear retaliatory forces over the near term; negotiating radical reductions in existing and planned offensive nuclear arms; and taking steps now to determine future options for ensuring deterrence and stability over the long term through the introduction of effective strategic defenses.

Turning to House Concurrent Resolution 35, I would like to say that the sentiments expressed in Representative Kramer's
resolution in support of the Administration arms control objectives are welcome, especially as we begin a new round of arms control negotiations with the Soviet Union in Geneva. As the resolution affirms, the President remains committed to seeking arms control agreements which embody significant reductions in nuclear weapons to equal levels, with a particular emphasis on those systems which have a destabilizing effect on the strategic balance.

Over the long-term, the President's goal of achieving a transition to a deterrent balance more reliant on defense, should defenses prove feasible, is a critical element of our position. We welcome congressional support for this strategy.

I would like now to turn to House Resolution 4542, which would cut off funding for strategic defense systems incorporating nuclear explosive devices. The Strategic Defense Initiative (SDI) is one of the most important defense programs this country has ever undertaken. Our program objective -- to examine carefully the feasibility of a broad range of advanced technologies which offer a hope for reducing, and perhaps ultimately eliminating, the threat of ballistic missile attack -- enjoys significant public support. H.R. 4542 would have the effect of halting research in an important field of investigation for SDI and, accordingly, is opposed by the Administration.
SDI offers the hope of moving to a safer, more stable basis for deterrence, while at the same time creating real incentives for the Soviets to negotiate reductions in existing offensive nuclear arsenals. Most Strategic Defense Initiative research concerns non-nuclear technologies, in accordance with the President's goal of eventual non-nuclear defenses. However, we also are exploring concepts which would use nuclear energy to power devices that could destroy ballistic missiles and warheads at great distances. This work is necessary to determine the feasibility of these concepts for future SDI options, as well as to understand the potential impact of any similar systems that an adversary might develop. The Soviets have pursued nuclear-driven directed energy research. Thus, a particularly important aspect of our own research is to understand the extent to which nuclear-driven directed energy weapons, if used by the Soviets, could destroy space-based elements of US surveillance systems or counter a future US strategic defense system.

A prohibition of the obligation or expenditure of funds as proposed by this legislation would force cancellation of important elements of the program and delay progress required for a decision in the early 1990s on the feasibility of effective strategic defenses.

Turning to House Resolution 2124, the conclusion of an agreement which would eliminate the growing threat of chemical weapons once and for all through a global ban, is our priority.
objective in the area of chemical weapons. The Administration appreciates, therefore, the reaffirmation in H.R. 2124 of Congressional support for U.S. chemical weapons arms control objectives.

The Administration opposes any legislation, however, which would limit the nation's capability to deter the use of chemical weapons against its armed forces, pending achievement of a chemical weapons ban. The Soviet chemical weapons capability presents a serious global challenge to our national security and that of our allies. The Soviets have persisted in a chemical weapons buildup far beyond any defensive need while the US has unilaterally refrained from chemical weapons production for the past 17 years. Thus it is important to the security of the United States, as well as to the credibility of deterrence and our alliance commitments, to restore a credible chemical weapons retaliatory stockpile at the earliest possible date.

Experience indicates that the Soviets will not, without compelling reason, negotiate away an important military advantage which is increasingly in their favor when they can simply wait for U.S. unilateral chemical disarmament through deterioration of our retaliatory stockpile. Improvements in CU defensive measures alone, in the absence of a credible retaliatory capability, will not adequately deter the use of chemical weapons against US forces.
The Administration's plan to modernize the chemical retaliatory stockpile would result in a much smaller and more easily transportable stockpile. This increased mobility would make unnecessary the deployment of such a limited stockpile to any one geographic region in time of peace. The decision to modernize U.S. weapons stockpiles, to be used primarily in support of American forces, should not depend upon the political processes in foreign countries as H.R. 2124 would require.

While the Administration would like to accelerate the process of negotiations, the prospects are dim so long as the Soviets refuse to address the remaining verification issues seriously. Since last year's authorization by Congress to begin the modernization of our retaliatory chemical weapons stockpile, it appears the Soviets have recognized the American commitment to restore a credible chemical weapons deterrent and may well have concluded that it is in their interest to negotiate more seriously in the face of that deterrent.

We should not abandon this successful arms control strategy.

The Chemical Weapons Modernization Program protects our already large investment in conventional defense improvements, raises the nuclear threshold and encourages serious negotiation toward an effective CW treaty.

Thank you for your attention. I will be pleased to answer your questions following the presentations of my colleagues.
STATEMENT OF FRANK J. GAFFNEY, JR., DEPUTY ASSISTANT SECRETARY FOR NUCLEAR FORCES AND ARMS CONTROL POLICY, DEPARTMENT OF DEFENSE

Mr. GAFFNEY. If I may proceed next. I am Frank Gaffney from the Department of Defense. I would like to address with the committee several of the resolutions which fall within my area of expertise as the Deputy Assistant Secretary for Nuclear Forces and Arms Control Policy. With your permission, after I complete my discussion of one of the resolutions touching specifically on nuclear testing limitations, I would ask your permission to have Secretary from the Department of Energy follow up with some important technical points which undergird our policy in this area and then, in turn, ask you to give your attention to my colleague, Doug Feith, who will comment on the chemical weapons related resolution before the committee.

Mrs. BYRON. Fine.

Mr. GAFFNEY. I would propose to submit for the record my rather lengthy statement which I hope will touch in greater detail than any of us have time for today on all of the resolution that I think I can comment on and simply make a few general observations drawn from that testimony.

I would like to pick up where Mrs. Holt left off, if I may, because I think it would be difficult to comment usefully on any of these resolutions without drawing attention to the context in which these resolutions are being offered and in which the Congress must consider them and in which the Executive Branch must look at them. And in that context, of course, is that we find ourselves in the midst of active negotiations with the Soviet Union on a wide variety of issues, some of which are touched upon here.

Indeed in my area, we have with the Soviet Union in the person of General Secretary Gorbachev an exceedingly important commitment. This was made, you will recall, in the joint statement issued by Mr. Gorbachev and Mr. Reagan after the Geneva Summit, and in that statement the two leaders committed their nations to work to achieve accelerated progress in identified areas of common ground, two of which were mentioned, one of which was to accomplish an appropriately applied 50 percent reduction in strategic offensive arms. The other area of common ground was an interim agreement affecting long range intermediate nuclear forces.

For our part, we are seeking to implement fully and vigorously and conscientiously this commitment. We regard it as a solemn one, and we regard it as one, if implemented equally faithfully on the Soviets' side, could clear the way for meaningful, verifiable arms controls agreements.

We are confronted, unfortunately, with an apparent unwillingness on the Soviets' part to do likewise.

Indeed, I think you might say colloquially, far from pursuing accelerated progress in areas of common ground, the Soviets appear intent upon changing the subject. This is a tried and true tactic on the part of the Soviets. We have seen them cite time after time some obstacle to arms control, which justified in their view no progress. We have seen it in the past in connection with INF forces, we have seen it in connection with the SDI program, most
recently we have seen keen interest on their part in a comprehensive arms control proposal, which would somehow envision solving all of the arms control problems simultaneously and in a comprehensive fashion. And, of course, we have seen great emphasis placed in recent months by them on the essentiality for arms control of ceasing nuclear testing.

Now, in our view, the extent to which we permit ourselves to be drawn into these distracting and I believe counterproductive arms control gambits, the less likely it is that we will in fact make progress in the identified and agreed areas of common ground.

And I think Mrs. Holt absolutely correctly pointed to the vital role of the Congress plays in keeping the focus, the national focus and the international focus, on the areas where progress can be made and should be made by agreement and not permitting the national focus and the international focus to be drawn away into blind allies and dead ends.

If I could say a few words about four of the specific resolutions before you, and this will be a very cursory treatment, starting with H.R. 3100, I have addressed it at some length in my statement. I think those of you who witnessed and participated in the great freeze debate will see that there isn't much novel in my critique of the freeze amendment or freeze resolution as it is presently packaged.

Indeed, I think it is fair to say that our view in 1983 was that a nuclear freeze, a verifiable nuclear freeze, call it what you will, was a bad idea. It was a bad idea then, and it is a bad idea now. It is bad arms control. And what is worse, it is unverifiable. It is potentially destabilizing, and it is certainly counterproductive to have the national focus once again taken up with arguments about this freeze concept.

Turning to H.R. 4542, the Markey resolution, which would ban U.S. nuclear related research in the SDI program, I would simply suggest that this amendment or this resolution, were it enacted, would be a formula for insuring that only the Soviet Union retains in its SDI program a nuclear option. And this must nationally be a matter of enormous concern to us, as we think not only about our ongoing efforts to realize a credible and effective SDI research program, but also the very real consideration that must be part of that research program as to what steps, what capabilities will the Soviets have to counter it. And with or without a U.S. SDI program to counter our strategic offensive forces which today, and of course for the foreseeable future, our nuclear deterrent will rely very heavily upon.

It goes without saying that it will also make it much more difficult for us to anticipate technological developments in this area, which if you hear some of the proponents of the nuclear-driven strategic defense technologies, you will know they are indeed extremely promising. I think for all of these reasons this resolution would be ill-advised, and we hope that you will not support it.

Let me turn lastly to the resolutions before you addressing nuclear testing per se. First, H.R. 3442, the Schroeder Amendment previously, and I guess now a resolution. We have had occasion since the Soviets began in August or July, actually last year, to promote this idea of a testing moratorium, to reconsider all of the argu-
ments that have previously been made on behalf of such an arms control stratagem both as a stepping stone to a comprehensive negotiated test ban and as perhaps an end in itself. I am struck by the fact, Madam Chairman, that a very important consideration in those deliberations was our ability not simply to think about this as a hypothetical abstract concept, but to reflect back upon the actual experience the United States had in living under for three years, from 1958 to 1961, an uninspected, unnegotiated informal nuclear test moratorium.

I think, as Secretary Ofte discusses the technical questions for you and the issues that, as I said, bear directly upon our policy in this area, he will make note of some of the real significant and pernicious effects that that testing moratorium had on our deterrent posture during the period and the years shortly thereafter.

In short, we believe, based upon our experience under the testing moratorium and given our experience subsequent to it, that U.S. national security and the collective security we afford, together with our allies, to the free world depends upon a credible nuclear deterrent.

In turn, the credibility of that nuclear deterrent depends critically upon its safety, its reliability and its effectiveness. In a word, without nuclear testing our nuclear deterrent posture will be unsafe, unreliable and ineffective, if not immediately, then over time. We think present and foreseeable world conditions do not permit us responsibly to contemplate such a development.

May I just say a word about the relationship between this resolution and H.R. Res. 3 which the House recently adopted. I think anyone who is troubled to read the Schroeder resolution will be struck not only by the rhetorical flavor of it, which is quite akin to that of H.J. Res. 3, but also the operative portion, the paragraph dealing with funding limitation.

Madam Chairman, this resolution bears no similarity to H.J. Res. 3, because whereas H.J. Res. 3 was a nonbinding sense of Congress' statement, this resolution would impose upon the United States an uninspected moratorium quite akin to the experience and to the informal arrangement we had in the late 1950s, early 1960s.

Now, it might be argued that it would do so contingent upon the Soviets not resuming testing themselves. One of the difficulties here is that one could not be sure that the Soviets, in fact, had not resumed testing. And, as with the freeze, simply saying that this will be a verifiable moratorium doesn't make it so. In fact, we could very ourselves, once again, in the extremely disadvantaged position we were in in 1958 through 1961, unable to either maintain the features of our nuclear deterrent, which I have stressed for you today, or to respond appropriately if and when the Soviets break out of their own testing moratorium, as they did in 1961.

If I could take just a moment to share with you a particularly apt quote which describes the very real problem that we face with such an informal uninspected moratorium. It comes from someone who was in a position to know. It comes from President Kennedy on whose watch the breakout from the uninspected moratorium by the Soviet Union took place.

The President said, and I quote,
We know enough now about broken negotiations, secret preparations and the advantages gained from a long test series never to offer again an uninspected moratorium. Some may urge us to try it again, keeping our preparations to test in a constant test of readiness, but in actual practice, particularly in a society of free choice, we cannot keep top flight scientists concentrating on the preparation of an experiment which may or may not take place on an uncertain date in the future, nor can large technical laboratories be kept fully alert on a standby basis waiting for some other nation to break an agreement. This is not merely difficult or inconvenient, we have explored this alternative thoroughly and found it impossible of execution.

Finally let me just say I think H.J. Res. 272, sponsored by a member of this committee, Congressman Hyde, very nicely tracks with our view of the proper priorities in the testing arena, areas in which we ought to work to make progress in testing arms control, and is fully deserving the committee and the Congress' support, and it has the administration's.

I thank you very much.

Mrs. Byron. Thank you very much for your testimony.
Prepared Statement of Frank J. Gaffney, Jr.

Madam Chairman, I would like to thank you for inviting me to contribute to the Special Panel's deliberations on several arms control-related bills now pending before the subcommittee. These bills involve issues of direct and profound importance to the national security of the United States and that of our allies and friends:

- the credibility of our nuclear forces, upon which the Western alliance must continue to rely for the foreseeable future to deter Soviet aggression;
- and important aspects of the Strategic Defense Initiative research program -- a program that could one day make us less dependent on offensive nuclear arms for our security.

Given the magnitude and complexity of these issues, as well as the hard historical experience that we can draw upon in formulating our nation's defense and arms control policies, it is very disappointing to see that the sponsors of three of the bills that you have asked me to address have chosen to advance simplistic, discredited, and indeed reckless approaches. In my testimony today, I will explain why these bills, were they to gain significant support in the House, would serve to weaken our defense and arms control policies even if they ultimately were rejected -- as I am confident they would be -- by the Congress.

At the outset, however, I would like to emphasize a point made by DAS Hawes. We must not lose sight of the fact that our top priority at the Nuclear and Space Talks in Geneva has been and
will continue to seek deep, equitable, and effectively verifiable reductions in the offensive nuclear forces of both sides. We welcome the support for the President's commitment to such reductions that is expressed in H. Con. Res. 35.

The U.S., in fact, has placed concrete proposals for such reductions on the negotiating table. Moreover, at the Geneva summit, President Reagan and General Secretary Gorbachev agreed on the principle of 50 percent reductions, appropriately applied, in U.S. and Soviet nuclear arms, and on the idea of an interim INF agreement.

The Soviets, Unfortunately, have yet to respond to our proposals in a constructive and concrete fashion at the negotiating table. Instead, they have continued a pattern of public posturing and putting up artificial obstacles to progress, thereby seeking to divert Western opinion from the fundamental issue of arms reductions. The Soviets' "obstacle-a-year" campaign first focused on NATO's INF deployments, then SDI, and most recently nuclear testing. But the Soviet commitment at the summit to the principle of 50 percent reductions remains, and it would be nothing less than irresponsible for the United States, in effect, to release them from that commitment.

This brings me to H.R. 3100, which proposes a "comprehensive, mutual, and verifiable freeze" on U.S. and Soviet testing, production, and deployment of nuclear weapons systems. This proposed legislation would have the effect of wiping out the Soviet commitment at the summit to work toward deep reductions. It would be a serious step backward for several reasons:
A freeze would reward the Soviets for their unprecedented military buildup during a long period of relative U.S. restraint and would lock in appreciable Soviet advantages. For example, the Soviets today have a great advantage in prompt hard target capability and a 3-to-1 advantage in ballistic missile throwweight. A freeze would not only perpetuate these and other Soviet offensive nuclear advantages, it also would magnify the importance of Soviet strategic defense and conventional force advantages that would be unconstrained by a nuclear freeze.

A freeze would prevent the United States from undertaking necessary steps to modernize our forces and stop the erosion of the basis of deterrence caused by the Soviets' offensive nuclear buildup and extensive strategic defense efforts. Roughly 75 percent of U.S. strategic nuclear weapons, for example, are on launch systems over 15 years old, whereas over half of comparable Soviet weapons are on launch systems that are 5 years old or less. A freeze would weaken our deterrent not only by killing vital modernization programs -- including the Trident SSBN, the B-1 bomber, and the Peacekeeper ICBM -- but also by hastening the obsolescence of aging U.S. systems that require improvement to maintain their safety and effectiveness.

A freeze would divide the U.S. from its allies and friends. One serious consequence of a freeze would be to undercut the U.S. commitment to our NATO allies in 1979 to deploy
new LRINF missiles in Western Europe unless the Soviets agree to reduce their large and growing LRINF arsenal. Only when the Soviets were convinced that NATO would follow through on the agreed deployments did they agree to come back to the negotiating table and now, at least, they are talking about reducing their LRINF forces -- albeit with some unacceptable preconditions.

- Finally, contrary to the assertions of freeze advocates, a freeze could not be effectively verified. The United States cannot effectively monitor important aspects of the complete range of Soviet efforts -- including but not limited to testing, production, and deployment -- to modernize their nuclear offensive and strategic defense capabilities. And contrary to the assertion contained in H.R. 3100, we could not effectively monitor changes in Soviet nuclear forces that would represent a threat to our national security. This is a particularly grave concern in light of the record of Soviet violations of arms control agreements.

In short, Madam Chairman, a freeze would derail -- not facilitate -- any prospect for real arms reductions. If the United States were to shift its attention to negotiating a freeze as outlined in H.R. 3100, the dangers posed by Soviet force advantages and their non-compliance with existing arms control agreements would be left untouched. And the possibility of deep, equitable, and effectively verifiable reductions would be postponed again -- perhaps indefinitely. It would be ironic indeed
for the U.S. to have abandoned the principal of deep reductions at the very moment that our perseverance has forced acceptance at least in principle of it by the Soviets.

H.R. 3442, whose objective is to push the Administration into negotiations with the Soviets on a comprehensive test ban (CTB) or face a cutoff of funds for nuclear testing, is as flawed and misguided as a freeze -- and for some of the same reasons. As you know, the United States and its allies have relied upon nuclear weapons to deter Soviet aggression for nearly forty years. Today and for the foreseeable future, there are no practical or acceptable alternatives available to us to ensure our security. And as long as we must depend on nuclear weapons to ensure our security, we must continue to test these weapons.

It is only through actual explosive testing of our nuclear devices that we can ensure the safety, reliability, effectiveness, and survivability of our weapons; the directors of the national weapons laboratories have been unequivocal on this point. Moreover, nuclear testing is essential for our modernization programs needed to respond to a dynamic Soviet threat.

While DAS Ofte (DOE) can provide additional information on the technical requirements for nuclear testing, I would like to focus on a few of the serious policy implications that H.R. 3442 fails to address.

A joint moratorium to be followed by CTB negotiations has nothing to do with demonstrating a "sincere desire" by the United States and Soviet Union to "end the arms race," as stated in the bill's findings. A CTB would not reduce existing nuclear stockpiles
or be a first step toward making nuclear weapons impotent and obsolete. Ironically, it could make them both larger and more dangerous. Indeed, it could cause further proliferation of nuclear weapons as states currently possessing such systems compensate for degraded confidence in their untested weapons by adding more primitive and probably more devastating weapons.

Nor would a joint moratorium or CTB provide, as the bill claims, a "proper climate" for current and future arms control negotiations. Again, the message to the Soviets would be loud and clear: that message would be that the United States does not expect them to follow through on their commitment in Geneva to 50 percent reductions, appropriately applied, in nuclear weapons. The message also would be that the United States does not really care even in the wake of proven Soviet cheating about effective verification of arms control agreements, because a CTB is, in fact, not verifiable. So what we have here is a proposal for an uninspected, unverifiable moratorium to be followed by negotiations on what would be an unverifiable CTB.

The Soviets broke the 1958-61 testing moratorium with the most intensive test series in history. The Soviets also have shown themselves willing to violate signed agreements even where the fact of their violation would be unmistakable to the United States. We must therefore ask ourselves how much more likely it must be that they will cheat on an agreement fraught with ambiguities and verification uncertainties like a CTB, and where the military advantages of cheating are significant.

If the backers of this bill really were serious about the issue of nuclear testing limitations, they would be actively
supporting President Reagan's initiatives to establish a dialogue with the Soviet Union to arrive at necessary verification improvements for existing agreements in this area -- namely the Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty (PNET). In his most recent initiative of March 1986, the President provided General Secretary Gorbachev with a description of a technical method known as CORRTEX, which is the most accurate and least intrusive method we know of for measuring the yield of a nuclear explosion. He also offered, without any reciprocal Soviet obligation, that Soviet experts visit our Nevada test site during the third week in April to discuss verification methods, examine the CORRTEX system more closely, and monitor the yield of a planned U.S. nuclear weapon test. The President stated that if our two countries could reach agreement on the use of an effective verification system incorporating CORRTEX, we would be prepared to move forward on the ratification of the TTBT and PNET. The Soviets, however, have thus far not responded in a constructive manner to the President's proposals. In a speech on April 8, General Secretary Gorbachev had this response to the President's proposal. "We, naturally, have not accepted it and will not accept it."

As long as the United States and our allies and friends must rely upon nuclear weapons to deter aggression, nuclear testing will continue to be required. As the President has stated, a CTB remains a long term objective of the United States. Such a ban, however, must be viewed in the context of a time when we do not need to depend on nuclear deterrence to ensure international security and stability, and when we have achieved broad, deep and verifiable arms reductions, substantially improved verification capabilities.
expanded confidence-building measures, and greater balance in conventional forces. For our part, the United States is energetically pursuing negotiations and discussions with the Soviet Union on concrete steps in all of these areas. We have made clear our strong view that Soviet calls for an immediate and unverifiable testing moratorium are not a basis for meaningful progress to this end.

H.J. Res. 272, introduced by Congressman Hyde, recognizes the need to place the question of a CTB in the context of maintaining a credible deterrent to aggression, achieving real arms reductions, and improving our verification capabilities. This bill also supports the President's efforts to achieve essential verification improvements to the TTBT and PNET. We therefore support H.J. Res. 272.

Next, I would like to explain why the Administration is opposed to H.R. 4542, which would prohibit funding for strategic defense systems incorporating nuclear explosive devices.

As the Administration has stated on many occasions, the SDI is a research program to determine the feasibility of a defensive system to counter the threat posed by ballistic missiles. The research is focused primarily on nonnuclear technologies. It is critical to the SDI program, however, to explore the feasibility and significance of nuclear directed energy concepts, so as to ensure that among other things, the potential threat they could pose, if developed by the Soviets, can be properly considered within the overall SDI program.

The Soviets have no constraints about pursuing such research or using nuclear weapons or nuclear-driven directed energy weapons (NDEW) in their defense systems. The antiballistic missile (ABM) system now deployed around Moscow uses nuclear warheads. The
Soviets have done research on NDEW -- some even earlier than our own. As a result, an important aspect of our SDI program has always been to understand the feasibility of NDEW in countering U.S. retaliatory forces or in destroying space-based elements of U.S. surveillance systems and a future U.S. strategic defense system.

NDEWs also may be useful as part of a future strategic defensive system. A NDEW could direct narrow, intense beams of energy in selected directions to destroy attacking missiles or reentry vehicles at distances of hundreds or thousands of miles in space. In contrast to the approaches of some early ABM designs, which used traditional nuclear weapons, with such nuclear-driven directed energy defensive systems, there would be far fewer explosions and they would be in space, so there would be no harm to people or damage to structures on the ground.

Finally, let me emphasize that the SDI research program, including the work we are doing to explore concepts which use nuclear energy to power defensive systems, is permitted under existing international treaties.

In summary, Madam Chairman, the United States is committed to seeking deep, equitable, and effectively verifiable reductions of Soviet and American nuclear arms. This commitment has the support of our allies. At the Geneva summit, the Soviets agreed on the principle of 50 percent reductions, appropriately applied. We must not allow ourselves to be diverted, either by a Soviet propaganda campaign on testing or the pursuit of simplistic and dangerous "quick fixes," from our commitment to the real reductions that we are seeking.
STATEMENT OF DONALD OFTE, PRINCIPAL DEPUTY ASSISTANT SECRETARY FOR DEFENSE PROGRAMS, DEPARTMENT OF ENERGY

Mrs. Byron. Next to testify will be—-

Mr. Ofte. I am Don Ofte, Deputy Assistant Secretary for Defense Programs in the Department of Energy. I have a rather lengthy statement which, with your permission, I would like to submit for the record—-

Mrs. Byron. We would be delighted to have it for the record.

Mr. Ofte [continuing]. And try to summarize some of the points of views of the Department in response to these bills we are discussing today.

Because the scope of all these measures, if enacted, are so broad and has such a profound potential impact on our program, I brought with me today Major General Ken Withers, Deputy Assistant Secretary for Military Affairs; Ed Badaloto, our Deputy Assistant Secretary for Security Affairs; and Mr. John Minhart, our Acting Deputy Assistant Secretary for Nuclear Materials.

When we examined the context of all these proposals, we found they could do violence to our ability to conduct any kind of testing and likewise would affect our ability to keep our production complex operating and also to produce nuclear materials, all of which would in very short order do, if all enacted, great damage to our nuclear weapons stockpile.

We, accordingly, then strongly oppose H. Res. 3100, 3442, 2124 and 4542. And we do endorse vigorously House Joint Resolution 272 and House Concurrent Resolution 35.

To start with our testing, that has been a subject of much testimony in both the Houses of Congress this year as we have gone through our authorization and appropriation hearings, our laboratory directors from Los Alamos, Livermore, and Sandia have come in and testified vigorously as to the necessity of maintaining a reliable and viable nuclear stockpile, testing is required as long as that is going to be a linchpin in our deterrent posture.

The nuclear weapons production testing and deployment freeze, we would find with what we know today to try to verify that in a closed society in a country the size of Russia as being virtually impossible to make verifiable, and to enter into something like that without having great assurance of verifiability would be a risk the society should not undertake. A comprehensive test ban is likewise one that we think is probably not verifiable. We think the means we have available today would not be able to detect tests that go under several kilotons of yield, and there are things of military significance that can be done at that level which would give a society that were not going to scrupulously observe the terms of a treaty an advantage over this country.

The most alarming, if you will, proposal of these in terms of the test ban initiative is to enter into a moratorium whereby we would be legislated into compliance with a moratorium we are not capable of really verifying. And we have great difficulty in ourselves trying to be anguine with the prospect the other side would really observe such a moratorium for any great length of time, and my own opinion is that it would not be long after we were into that
type of arrangement with the other side when they would start preparing in the most clandestine way they could for the breakout that would be reminiscent of 1961.

We had a track record of sorts that we could look at in terms of performance historically of related events going back to the Kiston affair in Central Russia where large sections of their country were made highly radioactive, we think, by a series of careless practices in terms of large radioactive material.

Likewise, when Cosmos came in, and landed in Northern Canada, the Russians’ response was not a sharing with the world as to what they thought was in there or what the hazards were. We have the limited test ban treaty experience where we have found radionuclides outside the borders of the Soviet Union and made that known to them, but that type of activity continues.

The threshold test ban treaty, we are convinced that in the past the Soviet Union has indeed tested beyond the limitations of that treaty, and we do not have adequate means to verify that such that we would offer that for ratification at this time.

Before leaving that, we have made an offer to the Russians to share our Corrtex technology with them, invited their scientists to come and visit our test site to see that demonstrated and made that an unconditional offer, and that has been rejected. The offer still stands if we could get into that type of a confidence building mode with them to adequately verify the threshold test ban treaty, then that would be something the administration would offer to the Senate for ratification.

Now, we have had several expressions recently by the chairman and other spokesmen for the Soviet Union where they have offered to be more open than they have been in the past, and invited national means for verification and invited international groups to come in and inspect questionable events. But I must reflect that when we look at what has been happening for the last ten days in Chernobyl and the lack of any forthcoming posture by the Soviet Union in reporting to their neighbors what was going on at Chernobyl, and try to think of how they would be open on something as vital to their national security as nuclear weapons testing when they won’t even share with the world what is going on in a reactor, I just can’t believe the offer of a more open posture with regard to nuclear testing verification can be accepted at face value.

We are very much in support of House Joint Resolution 272 that Congressman Hyde offers. We agree that it puts the proper relationship between the horse and the cart, that the first initiative you need to nail down is a reduction in nuclear weapons before you go into something like CTB, and our verification technology has to be greatly improved before we would be willing to move toward anything like a CTB; and likewise our dependence on nuclear weapons and our stockpile has to be less total to our well-being than it is today.

We also support Congressman Kramer’s Concurrent Resolution 35. We recognize and are convinced very deeply that the need to pursue the Strategic Defense Initiative research with nuclear-driven experiments is vital. We have to understand what that capability, what that threat is to the architecture of any SDI program.
We have to understand what the threat is to what we have today in the way of our own weapons in the way of space assets.

The DOE SDI program is approximately 15 percent of the total SDI program in this country. General Abrahamson made it very clear there are critical milestones in the early 1990s the DOE has to provide in order for him to be able to look into the future to see what the structure of that defense has to be. Emphasizing again where we are in SDI is in the research mode, and likewise we have to recall that we think very strongly that the Russians have been engaging in this type of research for quite some time.

Madam Chairman, our nuclear deterrent has been very effective for the last 40 years in not only deterring nuclear war, but in deterring any conventional warfare between nuclear powers. We think that for the foreseeable future, that is going to continue and the maintenance of our nuclear deterrent absolutely requires testing.

Madam Chairman, this concludes my remarks. I would be glad to take any questions.
PREPARED STATEMENT OF DONALD OFTE

Madame Chairman, Members of the panel: I sincerely appreciate the opportunity to re-emphasize the views of the Department of Energy on legislative issues of interest to the Special Panel on Arms Control and Disarmament.

By providing a forum for discussion of these important issues, the Panel is providing a valuable service to the Congress and the nation. We hope that by participating in these hearings we can help serve the cause of better public understanding of issues that we see as crucial to the security of the United States.

It is the Administration's policy to maintain a strong, effective nuclear deterrent. This policy must be kept in the forefront of our deliberations on arms control issues and particularly those relating to a nuclear test ban. As expressed by the President on March 7, "Any limitations on nuclear testing must be compatible with our security interests and must be effectively verifiable. Because of the continuing threat that we face now and in the foreseeable future, the security of the United States, its friends and its Allies must rely upon a credible and effective nuclear deterrent."

The Department of Energy has the statutory responsibility for research, development, testing, and production of nuclear weapons. The Assistant Secretary for Defense Programs has those weapons programs under his jurisdiction. This includes funding and programmatic oversight for the Livermore, Los Alamos, and Sandia National Laboratories and the Nevada Test Site. For the sake of completeness and coherency, I shall today reiterate our previously stated views on the general topic of nuclear test limitations, and subsequently shall address six pieces of legislation under current consideration.

In the 40 years of their existence, nuclear weapons have been used only to end a war, never to start one. From the standpoint of the U.S., the fundamental purpose of these weapons is to keep the peace. This is the context in which we address the question of a nuclear test ban: would it...
serve the cause of world peace? Those of us in the Department of Energy, who have studied the problem for many years, have serious reservations about whether a nuclear test ban would serve that cause. We are concerned that a test ban could greatly limit our ability to respond to varying military challenges. We are concerned that, by casting doubt on the reliability and effectiveness of our nuclear deterrent, a test ban could make world war more likely rather than less. And we are concerned that a test ban would have the effect of weakening this country relative to other nations that do not share our own desires for a free and peaceful world.

To amplify on these concerns, let me address four specific points. First, it would limit our ability to certify and maintain the reliability of the weapons currently in our nuclear stockpile. Second, a comprehensive test ban would prevent the modernization of our nuclear weapons force. Third, it would have asymmetrical effects on the United States and the Soviet Union, resulting in weaker U.S. military position. And fourth, it could have an adverse rather than beneficial impact on some important problems of arms control.

To address these points, it is necessary to note first why we conduct nuclear tests? We test in order to:

- modernize or modify nuclear explosives for new weapons systems;
- maintain and certify the performance of deployed weapons;
- make weapons safer, lighter, more tamper-proof, and more sparing in the use of nuclear materials;
- investigate nuclear explosion effects on military systems and communications; and
- better understand the physical phenomena of nuclear explosions.

I am well aware that many proponents of a test ban do not see these as desirable objectives. On the contrary, they see one objective of a test ban as being the prevention of new weapons development. While this may be an emotionally attractive argument, it ignores what we have learned from the past 40 years of world history. During that period, nuclear deterrence has been a success story virtually without historical precedent—deterring not merely
nuclear attack, but any aggression by one nuclear power against another. Of course, the shape of nuclear deterrence has changed immensely during the time in question. We have varied the size and characteristics of our nuclear arsenal in response to technological development and the nature of the threat to our national security. Back in the 1950s, modernization of the arsenal generally meant bigger bombs. By 1960, the total destructive potential in our arsenal was actually four times as great as it is today. Those huge weapons were necessary for deterrence because of the larger, less accurate delivery systems of the day. During the 1960s, smaller missile systems such as Minuteman, Polaris, and Poseidon demanded smaller and more efficient warheads. Today, the military requirements for attacking hardened targets have led to the development of new, extremely accurate missiles with their own unique constraints on warhead size and shape. Meanwhile, the need for warheads in other applications, such as air defense, has risen and fallen over the years. It would be most naive of us to assume that the military needs of 1996 are going to be the same as those of 1986. Discarding our capability to meet those needs would not serve the cause of peace. We should also be aware that modernization does not affect only weapon effectiveness: it also affects safety. Modern weapons incorporate explosive materials that are less susceptible to accidental detonation; they permit reduced radiation levels for nearby personnel; and they incorporate safeguards to prevent any accidental or unauthorized use. All these improvements require new weapon designs, and these designs must be tested. Testing is an essential, indispensable part of the research and development process.

My second point is that even in the case of existing weapons, we need to be able to conduct nuclear tests if we are to maintain confidence in the continuing reliability of those weapons. A nuclear weapon contains much chemically reactive material, and is subject to the effects of aging and corrosion just as any other chemical structure. In the history of our nuclear weapons program, we have discovered many cases in which weapons could have been non-functional as a result of such problems. It is certain that a test ban would exacerbate the situation; we know this as a result of our last experience with an extended moratorium in 1959-61. Certain warheads introduced during that moratorium were subsequently found, after the
resumption of testing, to have fundamental design flaws. They would not have worked. At previous hearings, we distributed reading materials to the panel that document the history of our experience with these reliability problems. Now it is true that in many cases problems can be discovered and apparently resolved by non-nuclear inspections and tests. In other cases, though, remedial action involving the nuclear components themselves can be confirmed only through nuclear testing. Contrary to what has sometimes been suggested, rebuilding warheads according to older design specifications is generally not feasible—because, for example, of unavailability of materials or manufacturing facilities. Likewise, the individuals who originally designed and built a weapon are unlikely to be available when it comes time for reconstruction years later. Finally, there is an inevitable problem of human nature: when technology gives us the capability of doing a job in a better way, there is an almost irresistible temptation to make improvements. That's fine—so long as the improvements can be tested. All of these considerations lead us to the general conclusion that we cannot, over an extended period of time provide complete assurance of the reliability of weapons without being able to test them. Once again, I am well aware of the argument of those who say that is a good thing—that the world would be a safer place if the nuclear weapons weren't so reliable. I need only ask whether you would really trade the peace and stability of the last 40 years for a period in which war might be deterred by weapons that might or might not work the way they are supposed to. We are working with situations that are far too dangerous to accept that kind of uncertainty.

Proponents of a nuclear test ban or a nuclear freeze commonly preface their proposals with the words "mutual and verifiable." My third point today is that in reality a nuclear test ban could be neither mutual nor fully verifiable. Often, this is the result of fundamental cultural differences: we know from direct negotiating experience that practices we view as unacceptable or even illegal are treated by the Soviet Union as allowable within the context of specified treaty provisions. This asymmetry in the understanding of compliance is the reason the U.S. pays so much attention to verification. When we talk about verifiability, we are basically asking: can the other side get away with clandestine testing in violation of a test ban? Our experience with the detection of underground tests gives an
indeterminate answer—yes if it's a very small test, no if it's a big one. But you quickly get bogged down in a numbers game when you try to draw the line between small and big. There are many factors—just how the test is conducted and just how it is monitored—that determine whether an underground test can be detected or not. Most experts would agree that a test of 40 to 50 kilotons could almost be certainly be detected; but it is equally certain that tests at lower levels could be successfully hidden. In any event, it is certain that some small tests and probably an occasional big one could be conducted covertly. Thus, the other side could continue to conduct low-yield nuclear experiments. They could test some new design theories. They might be able to test the primary or "trigger" stages of new weapons and that would be of great significance to the Soviet program during a period when the United States was doing no testing whatsoever.

There are other reasons why we believe that a test ban would have more of an effect on this country than on the Soviet Union. The delivery systems used by this country have always been smaller than their Soviet counterparts. We have carefully optimized our warhead designs to accommodate those capabilities. But it is precisely that optimization which has forced us to the more sophisticated designs that are most sensitive to precise manufacturing characteristics, and most in need of testing to verify that the often subtle effects of design decisions are really the same as what has been theoretically predicted. If the Soviet designs are more rugged than ours, because of the conservative approach made possible by the weapons' greater weight, then they are also less dependent on testing. There are also other asymmetries. If the Soviet Union were to develop problems with their own stockpile, their closed society will make it far easier for them to conceal the existence of such problems for geopolitical advantage. The Soviet Union also has far more control over its work force. In anticipation of a possible end to a test ban or moratorium, they could direct their scientists and engineers to remain in the weapons design business. We, of course, cannot do that, and our experience indicates that within a few years of a test ban many of our top weapons scientists would be moving into work with more professional opportunity. Finally, the Soviet Union could conduct illegal tests in other areas, notably in far outer space. Such tests would not be exorbitantly
expensive, and would then be virtually unrestricted in terms of yield. If it were masked by the sun, for example, a test of many megatons could go undetected. We of course do not know whether any of these possibilities would actually come about. I point them out merely to indicate that we have to look at a "mutual and verifiable" test ban with a certain amount of skepticism. The effects of such a ban are not likely to be mutual, and the ban is not going to be fully verifiable.

My final point about a nuclear test ban has to do with our whole approach to the subject of arms control. A test ban restricts research and development; it does not control the level of armaments. In virtually all other areas of arms control negotiation, we have taken the position that arms control should not control research and development. The ABM treaty, for example, restricts deployment of weapons but explicitly permits continued R&D. In the case of nuclear weapons, we have seen that testing is an integral, essential part of the R&D process. We do not believe that controlling or restricting that process is a reasonable way to proceed toward arms control. It would do nothing whatsoever to reduce the number of nuclear weapons deployed in the world. It might even result in an increase in such numbers: If weapons are believed to be less reliable, there will be a tendency on the part of military planners to demand more of them in compensation. Newer mobile and survivable weapons, of special interest because of their stabilizing effect on the strategic balance, could be unavailable to us in the presence of a test ban. This would further exacerbate an existing imbalance that favors the Soviet Union in that area. We cannot see that a test ban would be beneficial in terms of restricting nuclear arms, and we can see many ways in which it could be detrimental.

These considerations suggest an important point that deserves special attention. We sometimes tend to focus too much on the "costs," or potential disadvantages of a test ban without looking as critically at the other side of the ledger: what are the benefits of a test ban? We believe that those benefits are largely symbolic, to the extent that they exist at all. Most proponents of a test ban see it as advantageous that a ban would prevent
modernization of nuclear arsenals, thus slowing the nuclear arms race. Our view is that so long as geopolitical realities force us to rely on a policy of nuclear deterrence, it is foolish for us to do anything other than develop the best, most reliable, and safest weapons that we can. Other proponents have argued that modern weapons could be developed to use existing or off-the-shelf warheads. We would argue first, that such adaptation is rarely possible without at least some nuclear testing, and second, that we should not regard ourselves as having the perfect foresight that will let us know just what weapons we will require in future years. Proponents of a test ban have in some cases argued that the decrease in our stockpile reliability would be beneficial, in that reduced reliability would lessen the likelihood of nuclear weapon use. We would argue that this, again, ignores the policy of nuclear deterrence on which world peace has depended for four decades. Without the credible threat of response with reliable and effective nuclear weapons, we believe that we would be increasing the risk of non-nuclear conflict between the superpowers -- conflict that could very possibly escalate to the nuclear level anyway as soon as one side sees itself as losing. These considerations, in our judgment, reduce the test ban to the role of a possible confidence-building measure, a gesture which might lead to further steps toward more meaningful disarmament. Even this advantage is highly speculative: a test ban could well lead us away from further arms reductions as both sides, doubting the reliability of their nuclear weapons, might increase their numbers. Thus, we see no value beyond symbolism in such a ban. Our argument is not only that there are serious risks in a test ban, but that in reality there are few if any compensating benefits.

To sum up our general views: we believe that a nuclear test ban poses serious dangers for the United States. It would place the effectiveness of our nuclear deterrent at risk, without symmetrically affecting that of the other side. It represents poor arms control, in that it provides no reduction in armaments. While we realize that it is seen by many as a symbol of arms control, we do not see that it has any value beyond symbolism. On the contrary, we think that it would have the wrong impact on our whole policy of nuclear deterrence.
Again, we appreciate the panel's interest on our views concerning specific legislation. The panel has asked for these views on six different bills and resolutions. Some of these bills are extensive and complex and in the interest of time we will address them from the broad perspective.

H. J. Res. 272 and H. Con. Res. 35

I would like to turn first to two Resolutions that we believe are particularly reasonable and appropriate. They are philosophically similar and address closely related issues. I am referring to H. J. Res. 272 and H. Con. Res. 35.

The objective can be stated simply: To continue the United States testing program for maintenance and modernization of our deterrent force while simultaneously working toward the long-term goals of a verifiable nuclear test ban within the context of deep and verifiable arms reductions.

This is our objective, and we have been consistent and steadfast in our support of this goal. The defense of the free world depends today upon a strong nuclear strategic deterrent. The President's vision is a world eventually free from the threat of a nuclear strike. Toward this end we are pursuing a vigorous research program aimed at developing technologies that will provide the framework for a defensive, rather than offensive, strategy. H. Con. Res. 35 emphasizes just this view. Simultaneously we have taken the initiative to develop verification capabilities (CORRTEX) to monitor the Threshold Test Ban Treaty, as highlighted in H. J. Res. 272 and we have extensive research programs to improve our ability to monitor a CTB.

We urge adoption of these two pieces of significant legislation as positive and constructive steps toward a safer and more secure world.

H. R. 3100

The proposed legislation contained in H. R. 3100 raises serious concerns in maintaining world peace. The proposed freeze in testing,
production, and deployment of nuclear weapons systems would have a significant detrimental impact on the deterrent effectiveness of existing nuclear forces. The maintenance of high confidence in the performance of currently stockpiled weapons is critical to a strong deterrent posture. Continued testing is necessary to achieve this. Without testing and the ability to produce new components, fissionable materials and other material such as tritium, or remedy reliability problems that may appear, we could not avoid increasing degradation of performance and, ultimately, loss of weapon capabilities altogether.

With respect to the bill's proposal related to verification, unless more reliable means to verify test ban compliance becomes available, no verification assurances can now be provided in any of the areas of testing, production or deployment.

Another impact of H. R. 3100 would be that the prohibition of operation of facilities for the production of material for weapons also impacts the same facilities which provide fuel for the Navy's nuclear fleet. The nuclear fleet consists of 13 surface ships and 135 submarines, which constitute approximately 40 percent of the Navy's principal combatants including the entire undersea strategic missile deterrent force. If the source of fuel for these ships were to be eliminated the consequences to the U.S. defense posture would be extraordinarily serious.

In summary, the legislation proposed in H. R. 3100 poses serious dangers for the United States by placing the effectiveness of our nuclear deterrent in a degraded state.

H. R. 3442

H. R. 3442 would legislate U.S. compliance with the announced Soviet moratorium on nuclear testing. The Department of Energy has several objections to this proposed legislation.
First, adherence to this principle would in effect turn this aspect of U.S. strategic policy over to the Soviet Union. The United States would be forced into an effective test ban, with all the strategic disadvantages we have previously noted, with the continuation of that ban contingent on Soviet decisions to resume or not to resume testing. The nuclear deterrent on which the security of the U.S. and its allies has depended for 40 years would be made hostage once again to Soviet policy.

Second, contrary to its own finding that the bill would "provide a proper climate for arms control negotiations," it would in reality undercut the U.S. negotiating posture on all arms limitation proposals including necessary verification measures. Since it would in effect impose a test ban with no negotiations whatsoever, the bill would send a message to the Soviet Union that they need not negotiate seriously on any arms control treaties; they need merely try to pressure the Congress into imposing unilateral arms control on the United States.

Third, the proposal incorrectly assumes that we will be able to obtain unequivocal and publicly demonstrable information regarding a resumption of Soviet testing. As you well know, there is great disagreement within the scientific community regarding our ability to detect low-yield Soviet tests. An attempt to determine whether or not Soviet testing had resumed would be a trigger for endless, divisive debate, during which time U.S. testing policy would remain under suspension.

We believe that H. R. 3442 would weaken U.S. defenses, hamstring U.S. negotiators, and make our testing policy reliant on inadequate information about Soviet testing.

H. R. 4542

H. R. 4542 would prohibit the use of DOD or DOE funding for the development, explosive testing, or production of SDI weapons that use nuclear explosive devices as a power source. We do not believe this bill is in our national security interests.
DOE is doing research on nuclear directed energy weapons (NDEWs) in support of SDI. Although SDI is placing primary emphasis on nonnuclear defensive weapons, it is important to understand what can be achieved with NDEWs. The most important reason for doing such research is to understand the threat U.S. offensive and defensive systems might face from the Soviets. In February 1985, Secretary of Energy Herrington and Secretary of Defense Weinberger signed a joint policy statement that gave Soviet threat assessment as the primary reason for doing research on NDEWs. We suspect that the Soviets have been active in this area for a number of years. We do not know what they have accomplished in NDEW development, but we do know that they possess the basic scientific understanding necessary to make significant progress. NDEWs might be extremely capable as a counter to defensive weapon deployments in space or other military space systems and it is important to understand what technology is possible in this area.

It is obviously desirable for a defensive system not to have to rely on nuclear explosives. However, NDEW concepts do serve as a hedge providing options, understanding physics issues and demonstration of key technologies.

H. R. 4542 suggests that our NDEW programs might violate existing treaties. It should be emphasized that these programs are research efforts. As such, we can accomplish the necessary research within the limits of all existing treaties. It will be many years before treaty compliance even becomes an issue.

Specifically, we see no need to conduct nuclear explosive tests of NDEWs in space or in the atmosphere, just as we do not see the need to do atmospheric tests for development of our strategic offensive weapons. Furthermore, we can conduct our current research efforts completely within the bounds of the 150 kt TTBT limit. As far as deployments in space are concerned, we are far from having anything ready to deploy, and there are other ways to deploy such systems, such as in the pop-up mode.

H. R. 4542 talks about the advantages of a CTB in stopping development of NDEWs, but there are serious problems with verifying a CTB at low yields.
Much NDEW research can be conducted at low yields, and we would have no assurance that the Soviets were not secretly carrying out research in this area.

In summary, we do not believe H. R. 4542 to be good legislation. It would unilaterally stop vital U.S. research efforts to assess adversary threats and does not guarantee cessation of Soviet activities.

**H. R. 2124**

H. R. 2124 calls for the termination of production of lethal chemical weapons, negotiations with the Soviets to stop producing and stockpiling such weapons, increased DOD capabilities for detecting and protecting against them and conclusion of NATO agreements to maintain a stockpile as a credible deterrent.

The expertise on this matter resides with the Defense Department. The Energy Department is involved in the early stages of the development of inspection procedures which might be applicable to on-site verification of treaties such as the one envisioned here. Effective verification is an essential prerequisite for this and any other such treaty. Whether a treaty prohibiting the production and stockpiling of chemical weapons could be effectively verified is, at this time, uncertain.

As an overall impression, and in summary, we are concerned that the bill does not take into account the requirement that effective verification be a part of such treaty proposals.

Madame Chairman, that concludes my testimony. I would be happy to answer any questions.
Mrs. Byron. We have a vote on the floor. I think this might not be a bad time to suspend for about ten minutes and let the members go over and vote and come right back for the next testimony. [Recess.]

STATEMENT OF DOUGLAS J. FEITH, DEPUTY ASSISTANT SECRETARY FOR NEGOTIATIONS POLICY, DEPARTMENT OF DEFENSE

Mrs. Byron. If you want to continue the testimony, then we will have questions as soon as our fourth witness is through.

Mr. Feith. Thank you. I am Douglas Feith, Deputy Assistant Secretary of Defense for Negotiations Policy. I would like to address only H.R. 2124, dealing with chemical weapons and the chemical weapons negotiations in Geneva.

Mrs. Byron. Good because everybody else has addressed them all, and we have been very surprised with their views.

Mr. Feith. The beginning of analysis of the chemical weapons issue, I believe, has to be recognition of the nature and the scale of the chemical weapons capability of the Soviet Union and the threat that this poses to the U.S. Armed Forces. The threat is formidable and could prove decisive, we believe, in a war. The Soviets’ willingness to use chemical and toxin weapons is an established fact that highlights for us the importance of the threat.

Now, our security interests impel us to work to minimize the risk of chemical warfare, which means to minimize the risk that an adversary would initiate chemical warfare against us or our allies as a matter of policy and legal obligations arising under the 1925 Geneva protocol, the United States will never initiate chemical warfare.

So the question is how do we accomplish this, how do we minimize the risks of the initiation of chemical warfare? Pending achievement of a global comprehensive chemical weapons ban, a goal I hasten to point out that is not within our unilateral capabilities to achieve cooperation from the Soviet Union, among others, is required. Pending achievement of such a ban, the United States aims to deal with the chemical weapons threat through the development of an effective retaliatory capability, hence the administration’s proposal program for chemical weapons binary modernization.

Now, the preferred course, and I think there is widespread agreement across the political spectrum on this, the preferred course for dealing with the chemical weapons problem is for the United States not to come to end our unilateral 17-year production moratorium, but the preferred course would be to achieve a comprehensive chemical weapons ban. But we have to be realistic about the prospects.

This is a hard arms control problem, and what makes it hard is that chemical weapons can be militarily significant in very small quantities and chemical weapons are easy to stockpile secretly, clandestine production would be easy, and so the verification problems, the problem of feeling confident that one could ascertain whether the other side is complying with the ban, that problem is very great, and we need to be realistic about the prospect of an imminent resolution of the problem.
It will require, if it is going to be solved, a willingness on the part of all parties to ban to open their countries up to an unprecedented degree to inspections. One way to look at it, is there is a price to be paid for all countries who want an effective, comprehensive chemical weapons ban. It is a matter of considerable pride that the Reagan Administration has, after a pretty agonizing review of the options, has decided that it is willing to pay the price necessary to make chemical weapons arms control work, and we have committed ourselves to the unprecedented degree of openness in order to try to make these arms control negotiations work.

But many other countries, most prominently the Soviet Union, are disinclined to open themselves up so that the international community can be confident that the ban was being complied with. And I think the Soviets will remain disinclined if they think they can get the benefits of the treaty without the treaty. In other words, if they believe that the United States will allow the complete deterioration of our chemical weapons retaliatory capability, then there is no reason for the Soviets to pay for a chemical weapons ban in the form of the kinds of concessions that are required to make the ban effective.

Now, I hasten to point out also that this is not a so-called bargaining chip argument in favor of the modernization program, we need to modernize because we face a military threat and because the political or arms control solution is not immediately available, we need to deal with that threat militarily. That is the reason for the modernization program. We are not arguing we want the modernization program simply as a bargaining chip.

Nevertheless, we believe that if we do not proceed with modernization, there is no realistic chance of a treaty at all. Now, H.R. 2124 purports to encourage achievement of a chemical weapons ban. It would, if enacted, accomplish the opposite of its purpose.

Thank you.

Mrs. Byron. Thank you very much.

Let me proceed on some questions now of members of the panel. Let me start out, first of all, with anyone that would care to respond. Former Secretary Harold Brown commented that a comprehensive test ban is a red herring in the arms control process. Would we have to look at a freeze on strategic weapons? What would it do to our ability to defend Europe from a conventional Warsaw Pact assault? Do you feel that those two tie together somewhat?

Mr. Gaffney. If I may comment, it seems to me that there is an internal inconsistency in the arguments that you tend to hear about a CTB by its advocacy. On the one hand, they tend to suggest its principal virtue is that it will result in a symmetrical reduction of the confidence each side has in its nuclear arsenal and that would thereby be a disincentive for either party to contemplate using nuclear weapons.

Now, when we make the argument, in response in part to that argument, that such a reduction in confidence would have to come at the expense of confidence in the safety and the reliability, as well as the effectiveness of our nuclear weapons, we usually hear from the CTB advocates, "No, no, there are other ways you can
maintain that confidence.” There will be no degradation in confidence.

Secretary Ofte has addressed this point. If I may, what your question draws out is that even if there were this hypothetical symmetrical reduction in confidence, we would face an underlying asymmetry in conventional defense, in chemical defense, in biological defense, which I fear in the absence of a credible nuclear deterrent, a credible, effective, safe, reliable nuclear deterrent, could precipitate or at least could encourage the Soviets to contemplate aggression.

So I think that you are absolutely right in raising this concern. Even if the enthusiasm about CTB were right, the net effect for the U.S. and Western security would not be positive.

Mrs. BYRON. Would the proponents of H.J. Res. 3 have argued there is no need to destroy nuclear devices for purposes of testing our existing stockpiles for reliability—I like your comment on that—and following that, if we don't test new weapons, how can we develop new weapons, and aren't we increasing the number of weapons which we really don't need? Aren't we drastically increasing the megatonnage of the weapons?

Mr. OFTE. If I may take that one. In terms of, first of all, the reliability of our stockpile, in the absence of nuclear testing, we have found over the years many of the defects that were very powerful in terms of degradation of performance in nuclear weapons by testing and likewise some things that were exposed by nontesting means as being deficient in weapons that require a design fix to restore the weapon to usefulness. The only way you know you have done that is to, once again, go back and test. So that we are inextricably tied to testing as long as we want to maintain a verifiable stockpile.

In terms of our new weapons development, if we were not able to test them, even though we might have lots of confidence in all of the componentry that went into a weapon, it would be tantamount to designing a new aircraft and having full confidence in all of the myriad parts, but nevertheless flying it until you put it out for use the first time, and I don't think any of us would want to get in such an aircraft, and we likewise would not want to put such a weapon in the stockpile.

So it would greatly inhibit our ability to advance or modernize our stockpile.

Mrs. BYRON. It seems that about five percent of all the tests are reliability tests and the real purpose of the majority or 95 percent of the tests is to develop new generations of weapons such as the x-ray laser.

Mr. OFTE. The sum total of the expertise that resides with the weapon designers in our laboratories is made up of the experience they get through all of the tests that we do, and the phenomenology of nuclear weapons explosion is so complex we don't understand it at all on a total basis in the absence of testing, so that while it is true that we run a very small number of what we call stockpile reliability tests, one to two a year, we gather the data from all of our test that provide us the kind of background, if you will, to know when you are looking at something in the stockpile or something in a production that deviates from the specifications laid
down by the labs, is this important or is it not, and how does that affect the reliability?

And those kinds of judgments are made by people that are active in the nuclear weapons design through testing and all of its precedent activities. And if you don't have that combination at the end, it is like any scientific enterprise, you just don't get there on a truly, solely highly hypothetical basis. You have to empirically test what you design to make sure it really works. Is that sufficient?

Mr. Hawes. I think there is a very serious question of putting the cart before the horse, or, as you noted, Harold Brown's statement that the CTB was essentially a red herring. The question of nuclear weapons is a question of very, very large stockpiles today on both sides. It is an area where we have proposed very serious reductions in strategic weapons and intermediate range weapons, where we believe that the priorities in arms control must attend to the reduction of the stockpiles in a balanced and stabilizing way.

As long as we have nuclear weapons and as long as we depend on those weapons, we want them to be effective, reliable and safe. The entire testing program, whatever the particular objectives of any test may be, serves those interests.

To focus in the initial phase on eliminating testing, while leaving a very large stockpile on both sides, is not to serve the purpose of a stable nuclear balance. It is certainly not to serve the purpose of deterrence.

We in the West are disproportionately dependent on nuclear deterrence vis-a-vis the Soviet Union. As my colleague, Mr. Gaffney has pointed out, the Soviets have major advantages in conventional and chemical forces which we have historically sought to counter with nuclear deterrence. That situation continues today and will continue for some time in the future despite our best efforts.

Mrs. Byron. Mr. Mavroules.

Mr. Mavroules. Thank you very much, Madam Chairman, I appreciate this opportunity.

Let me commend all four gentlemen for articulating your positions very well, at least in trying to demonstrate your point of view. I think it is very helpful from where I am coming from, the couple areas I disagree with you on I would like to get into with you.

I have a number of questions, Madam Chairman, I would like to submit for the record, and perhaps you can respond to those at a later time. I would appreciate it very much.

I made up my mind since last week that if the authors of all of these bills that are coming before us are unwilling to come before us and articulate their positions, I am not going to take a position of trying to defend them, so, therefore, I am on my own this afternoon.

Mr. Gaffney. Does that mean you won't support them on the floor either?

Mr. Mavroules. I didn't say that. However, let me just ask a couple questions. Let me ask one question, because it was mentioned in one of our testimonies this afternoon. In your judgment, do we have a credible nuclear deterrent today?

Mr. Gaffney. There seems to be.

Mr. Mavroules. Seems to be.
Mr. GAFFNEY. It is deterring today.
Mr. MAVROULES. Are there any areas, again in your judgment, where the Soviet Union is so-called far superior to the United States qualitatively?
Mr. GAFFNEY. It is easier to list the areas in which they are not, sir.
Mr. MAVROULES. You are not going to answer my question.
Mr. FEITH. One obvious area is the area I addressed, which is in chemical weapons.
Mr. MAVROULES. I have no argument there. Mrs. Byron and I both had the opportunity to talk with our Ambassadors a couple years ago, and if we were ever, ever to negotiate an agreement with the Soviet Union in chemical warfare or chemical weapons systems and we did not have a verifiable clause, we would be foolish. I want to make that very clear. I just want to throw it out, and perhaps I can get a straightforward answer.
In what areas are they far superior to the United States qualitatively today?
Mr. GAFFNEY. Could I make a general observation first?
Mr. MAVROULES. Sure.
Mr. GAFFNEY. I am not trying to be facetious.
Mr. MAVROULES. I want a dialogue. I am upset with some of my colleagues who offer bills and don't speak for them.
Mr. GAFFNEY. I think you have put your finger on an important point. We have for decades relied upon significant qualitative edge in most, if not all, areas of weaponry, nuclear as well as conventional, to offset what has been from literally the end of the Second World War in a number of areas profound quantitative disadvantages. And I think the history of the post-war era is a history where we have seen the quantitative advantages on the Soviet's side, if anything, increase over time and the qualitative advantages we once enjoyed be reduced and in some cases eliminated.
If I may give you an example, because, as I say, it really is easier as you go through the relevent indices of nuclear weapons, which is my area of expertise, to talk about strategic forces, theater forces and so on, looking at those areas in which we enjoy a decided advantage rather than trying to enumerate all of the areas in which the Soviets enjoy a significant advantage.
But let me give you an example of the problem. It is very difficult to make an apples-and-apples comparison, but at the risk of over-simplifying it, it has often been said, if we cannot make the statement we should trade our forces for theirs, which is often elicited under cross-examination in Congressional testimony.
Mr. MAVROULES. I didn't ask that question.
Mr. GAFFNEY. I appreciate it. I thought I had to preempt you. You could find yourselves in a situation where you were implicitly saying we have qualitative, if not quantitative, advantage. The example I would give you is the comparison between, say, a SS-18 intercontinental ballistic missile and a MX. Recognizing the SS-18 has been in the Soviet inventory and several modifications for a number of years, it is one of their fourth generation missiles, the fifth generation is now entering deployment. It is usually said, and I think fairly so, missile for missile the most modern generation, we don't even have it yet.
I won't assign blame for that, but the most modern generation of U.S. intercontinental ballistic missiles is roughly comparable to the Soviet SS-18, comparable not because their guidance system is as effective or as sophisticated as ours, comparable not because the propellant system is as efficient as ours, but comparable because in a military sense, in a war fighting sense, if you will, it is roughly comparable to, if not in some ways superior to the MX, and they have had it deployed in substantial numbers for years.

You can over-simplify this by saying that what matters particularly is the throw-away capability of that missile. The throw-away of the missile is far superior——

Mr. Mavroules. Isn't it more important to determine that both the SS-18 and MX missile are very accurate and they do the job?

Mr. Gaffney. In an apples-to-apples sense, yes, sir. If you take the SS-18 as but one element of a vast and increasingly capable Soviet system, I think you come up with a net result that in most, if not all, respects there is at a minimum a declining parity, as I think Harold Brown put it, if not a disadvantage on our side.

Mr. Mavroules. I think we make a mistake if we take each item individually. When you do that, you are getting away from the main factor, do we have a credible deterrent system today? I think we do, and I think you all know that—we do. I just want to make a point here this afternoon, and perhaps we can kick it around.

Madam Chairman, do I have a little flexibility to continue here? There are not too many members.

Mrs. Byron. Go ahead. Mr. Courter will not complain.

Mr. Mavroules. No, I appreciate it.

The point I am trying to make—by the way, let me give you another opinion I have. If we were negotiating in Geneva today only on strategic, long-range and intermediate, and if we are not making headway in conventional weapon systems and number of people, then we are talking a very foolish position. Let me make that very clear, and I have felt that way from day one. That is one advantage that they would certainly hold over our heads.

I am going to ask another question. This is a general question. You know, we have frustrations here in Congress, whether you agree with the administration or not on the policies, on the foreign policies, but now we are in our sixth year and nothing has happened, absolutely zero has happened except an awful lot of rhetoric, and we have been getting an awful lot of double talk by some of our people, and I am ashamed to make that remark, but it is true, double talk with reference to weapons systems needed for a particular negotiating venture.

I resent that very much, and I am not pointing the finger to any of the four of you or any one of your four, but the point is we are in our sixth year now, and we continue to grow and grow on our side, and the Soviet Union continues to grow, escalation is enormous. Whether you want to reduce—if you want to reduce nuclear warheads, that is one matter, but now you are pushing the state of the art and they are in their fourth or fifth generation, we are in our third generation of escalation, devastating weapons, by the way.

When the hell are we going to stop? How do we hit that trigger mechanism that we say "enough is enough" and guarantee the de-
terrent that we now have and certainly guarantee the security of
the Soviet Union? They would want that.

Another statement was made just a few minutes ago when you
talked about SDI, and I won’t get into the technicalities of it, but
you know the President made the statement, be it a conventional
bomb, that will take out the Soviet offensive missile, you know
darn right we will in other areas, other than conventional systems,
I think the American people have a right to know that.

Do you people conflict with the President’s statement, are you
following the policy of the President?

Mr. Gaffney. I believe we are.

Mr. Mavroules. How come that statement was made and we
have research and development in other areas?

Mr. Gaffney. Well, the statement has also been made the Presi-
dent’s objective is to make nuclear weapons obsolete, and we are
here testifying in support of a program, as well as a budget it sup-
ports, that calls for the production of more modern, more effective
nuclear weapons. You could argue in a very simplistic fashion
those are inconsistent or we are not supporting the President’s
vision, but I think you appreciate, Congressman, the President’s
vision in both the area of SDI and in the area of realizing a goal of
eliminating nuclear weapons that those are very long-range goals,
they are very idealistic and in the meantime, we are doing the pru-
dent thing in hedging our bets.

Mr. Ofte. On your question, sir, if I may, Secretary Weinberger
and Secretary Herrington signed a joint letter to try to clarify the
issue that you raise that if you are truly trying to research a non-
nuclear SDI system, why are you doing these nuclear tests in asso-
ciation with that, and it is vital in the minds of both departments
and the administration totally that we have to understand what
the capabilities are of a nuclear-driven SDI weapon. And in order
to do that, you have to do that by finding out what those systems
are capable of.

Mr. Mavroules. I can appreciate that, and I know where you are
coming from. Can you guarantee the American people that particu-
lar warhead or system that knocks out the Soviet system will be
non-nuclear? Do you guarantee me that?

Mr. Ofte. No, sir. Because I can’t see into 1990. But it is in that
timeframe that type of determinations will be made.

Mr. Mavroules. Yesterday it was being sold to the American
people, and you know it as well as I do, it was being sold to the
American people on a conventional weapons system. Am I correct,
or am I wrong? There was a public statement made by the Ameri-
can public.

Mr. Gaffney. I think you might be over-simplifying it. The com-
plexion of the program has been from day one there was going to
be an element of the research in which we explored, as Mr. Ofte
says, nuclear power systems, if you will.

Now, I believe personally that you don’t have to be a whiz at
physics to appreciate there is a distinction between a device which
powers a defensive system and destroys nuclear weapons with that
power source. And an actual nuclear weapon which is used for, for
example—
Mr. MAVROULES. I don't think that is what I asked. I think I asked the question as to a warhead. If indeed it is going to be a warhead, can you guarantee me it is going to be non-nuclear?

Mr. HAWES. I think the answer is that in the context of a very broad research program, the majority of the research efforts are indeed, as you postulate, conventional research efforts, but we believe it would be irresponsible to close out what many scientists have identified as potentially productive areas and decisions on which research areas deserve further exploration depends on doing some of this research.

Mr. OFTE. I think it is General Abrahamson's goal today to, when a system is deployed, that it be non-nuclear. I don't think that has changed from the beginning. But we cannot avoid being sure that we understand what this technology says.

Now, as for guaranteeing, I think it is like trying to visualize today what your nuclear weapons stockpile ought to look like in 1995 or 1996. It is very difficult to do, and in fact, you know, that leads us back to why stockpile modernization has to continue a pace. We know that the threat changes, that what they do to counter what we have today changes, and likewise a program, if it is going to remain viable as a deterrent, has to change.

Mr. MAVROULES. I really appreciate your responses. I really do, because you are being very honest, and I can appreciate that. I am trying to, the impression I am trying to make, and hopefully effectively, is that is not the impression the American people have throughout the country.

Mr. HAWES. If I may, sir, I would like to respond briefly to the other part of your question which was that we have been at this a number of years, and haven't yet achieved results. When do we see a stopping point? I want only to say that we regard this with a similar note of frustration. That history has not been easy. Just to take recent history and to recall a few points: up until the fall of 1983, we negotiated in START in Geneva, the Soviets walked out of the talks in November of 1983 on the pretext we had made negotiations impossible by deploying longer range INF systems in Western Europe.

They then spent the next year sulking because they had walked out of the talks and were unable to find a pretext to get back in. They finally came back with the argument that INF or START, it should be space weapons. They were ultimately convinced that arms control talks indeed could look at all those issues, but had to look at them in the context of the full range of offensive systems as they existed, and we were able to get the Geneva talks started again on a broad agenda.

Not easy, it took some diplomacy on our part, but we got the Geneva talks started again. We have since then had some exchanges, the Soviets have finally come forward with major substantive positions on both START and INF, late in our view, inadequate in our view, but they have come forward with them. So it is a frustrating history, but I think there are reasons for that.

Mr. GAFFNEY. Could I add a point?

One of the things that I would like, if I may, to have inserted into the record is this chart, awfully small, and I think you are familiar with it, because it shows in an unclassified matrix the
actual numbers of nuclear weapons that have been in the U.S. stockpile, and their explosive power in megatonnage.

And I want to make sure that the record reflects in response to your comment about sort of this buildup continuing and continuing, that it be clear that we are in fact roughly one-third below the number of nuclear weapons that were in our stockpile in the late 1960s, and the actual megatonnage is about a fourth of what it was previously.

If I may come back to one of the other resolutions, what has made this transformation of our arsenal, and what we all would agree is a highly desirable direction possibly is our ability to test nuclear weapons, because it has allowed us to introduce newer, safer, more reliable and interestingly less devastating, more accurate nuclear weapons in what we believe constitutes at lower levels of numbers, at lower levels of megatonnage a more credible deterrent.

Mrs. Byron. Will the gentleman yield?

The proponents like to say that with the testing and the development of new weapons we are drastically increasing the megatonnage. Your statement was diametrically in contrast to that?

Mr. Gaffney. That is right.

Mr. MAVROULES. I want to thank all of you. You can show me all the charts you want, and you are correct, you ought to do that, but let's not forget that the state of the art today is supreme.

We are purchasing the state of the art. The Soviet Union is doing the same thing, and what you are doing today could double tomorrow.

Somewhere along the line, we all agree, there has to be a stop to this nonsense, and by the way, don't get the impression we are the bad guys and they are the good guys.

I would like to speak to the Soviet Union the same way we did in 1973 in Geneva.

Thank you for your responses.

Mrs. Byron. Mr. Courter.

Mr. Courter. Thank you very much.

And, once again, maybe I don't know who is best to answer these questions, the Departments of Energy and Defense, I guess, maybe the State Department is involved here, too.

Specifically with respect to the test, or not the test but one of the bills of Mr. Markey from Massachusetts, H.R. 4542, the one that prohibits nuclear devices with respect to strategic defense systems, and you are not the author of the bill, but I would like your opinion on whether, I guess the question is, whether that is, do you think, narrowly enough defined and written to exclude only nuclear weapons as an explosive device, the actual explosion being a defensive system, or is it broadly enough written to prohibit strategic defense systems, the device of which is for the creation of the energy, the energy, therefore, being used to propel something, or for the creation of laser or something else? And I think you understand my question. I would like your opinion.

Would this amendment, if passed and signed into law, block things like X-ray laser testing, so forth?

Mr. Ofte. Yes, sir.
Mr. COURTER. Have you spoken to the author of the amendment as to whether that is his intent?

Mr. OFrE. I have not.

Mrs. BYRON. The author has been invited to come testify.

Mr. COURTER. The same as Mrs. Schroeder of 3442.

Mrs. BYRON. On Thursday of next week, the author of 3100 and 4542 is scheduled.

Mr. COURTER. Good.

Mrs. BYRON. The author of 4100 and 4542 is scheduled to testify.

Mr. Markey is scheduled next Thursday.

I am hoping Mrs. Schroeder will come at that same time and testify.

Mr. COURTER. Can any one of you give me the name of a United States physicist, scientist that has definitively made the statements that through international technical means, and through the deployment international technical means, and through the deployment of seismic devices, that we can guarantee that we would have complete confidence in Soviet compliance to a comprehensive test ban treaty?

I don't recall anyone so testifying. I have heard people say, well, down to maybe five kilotons, maybe even two, but I don't recall anybody testifying saying we can monitor this carefully enough to know that no testing is taking place.

Mr. GAFFNEY. I wouldn't purport to be a complete student of the literature, but I think where you have used words like complete confidence and know, and certain reasonable confidence or reasonably sure or adequate verificaiton, that sort of thing.

To the best of my knowledge, no one has signed up to absolute confidence, and I don't know on what basis they possibly could. It simply is unsupportable.

Mrs. BYRON. Would the gentleman yield?

Professor Lynn Sykes of Columbia has testified before the Policy Panel to that effect.

Mr. COURTER. To what effect?

Mrs. BYRON. To——

Mr. COURTER. The effect that he would have total confidence?

Mrs. BYRON. Down to five.

Mr. COURTER. Not below five.

Mrs. BYRON. Not zero.

Mr. COURTER. The confidence ability to monitor Soviet testing below five kilotons and that is the best they have got.

Mrs. BYRON. And for his testimony, probably ten.

Mr. COURTER. I would disagree. That is correct.

The next question is, if the Soviet Union would not honor a comprehensive test ban treaty, but would test down to five kilotons, and even the strongest advocates of comprehensive test ban say, according to one testimony, that we would have lack of any confidence knowing beyond that.

The question is, I know the United States, because if not the morality of our leaders, and that is part of the case, but the openness of our society would have to comply with the comprehensive test ban.

If the treaty was signed to day, and we went 10 or 15 years without testing, and the Soviet Union went 10 or 15 years at a very low
threshold level such that even the proponents of a comprehensive test ban would say we don't know whether testing or not, would that have a material effect in the aggregate on their nuclear capabilities versus our deterrent nuclear capabilities?

Mr. OFRÉ. No question about that. It would put us in a very negative situation especially for a period of 10 years. There are all sorts of downsides to what happens to your capability in a moratorium situation.

As you say, in this society, there is no way that we could clandestinely engage in subterfuge, if we were to want to test in that situation, we would have to renegotiate the treaty. In a closed society-like the Russians have, there would be no exodus from their nuclear weapons laboratories of their resident's expertise. They have guns, gates and guards, and those folks would stay right where their government wanted them to be.

In this society when we had a three-year moratorium back in 1958 to 1961, we saw a bleeding, if you will, away from our nuclear weapons program of many of our very brightest people.

The United Kingdom had a moratorium for a period of approximately eight years and they found the same thing taking place in their laboratories, so in a free society you just cannot maintain the sharp edge of very high technical confidence this discipline requires.

If we were to be trapped in that type of a situation for a period of 10 years, what would emerge at the end of that period would be a fair superior capability on the Soviet side than we would have here.

Mr. GAFFNEY. You have been a leader on the Hill in the area of calling to the attention of your colleagues and the world a problem we have with present agreements of Soviet compliance.

I think what you have identified is a novel and different problem than the one we face today; that is, the ability of the President of the United States to in the future understand some kind of regime of this sort, to persuade the Congress, to persuade the American public, to persuade the allies, that the Soviets are in fact doing illicit testing, when the independent indicators, the signatures, the evidence will be so tenuous, arguable, so ambiguous as to pale by comparison to the evidence we have today of present Soviet violations.

For example, the Krasnoyarsk radar: I personally said that the likelihood that the President would have the evidence and be able to sue it in a decisive way to persuade the United States to resume testing because he believed the Soviets were testing, would be extremely problematical.

Mr. COURTER. Yes.

Mr. HAVES. Over a period of 10 or 15 years, you also have the problem that various delivery systems become obsolescent. We have attempted to design warheads specifically for the next generation of delivery systems and you would not be able to do so very simply.

Mr. COURTER. I have heard a great deal about the fact that we simply have to do something. This is crazy what we are doing, the Soviet Union keeps building and we keep building, and, therefore, and as much as I have mentioned it before and as many times, I
appreciate the unclassified chart that clearly indicates to any observer that the statement we keep building is massively misleading to the American people, because they have, they may have the improper understanding of strategic defense and maybe it was oversold.

Maybe there was too much of an emphasis on the non-nuclear components, and that may be so, but on the other hand, I think the American people are incredibly misled as to the levels of the nuclear arsenals today versus 20 years ago.

Midgetman, if I did a poll in my district, 99.9 percent of the people would probably say that we have probably five times as many nuclear weapons and probably ten times the destructive powers of those weapons on now than in the 1960s, and you know, certainly it has not been people like yourselves that have created that misunderstanding, and as far as I am concerned, it was created purposely, in order to gain advocates for a particular point of view. It wasn't malicious but created purposely.

I want to thank you. I have no other particular questions, none that I can think of right now, and I think these proposed bills and therefore, probable amendments are particularly nefarious and dangerous, and they appeal to a frustration that we want to have a safer world and live without nuclear weapons, but it is important that we go about this process in a logical, clear-eyed way without people’s vision of a new world order taking place very soon.

I appreciate your testimony, and, obviously, between now and probably the time of the debate, I may be talking to you separately for additional information.

Thank you very much.

Mr. Graffney. I had hoped to do this before Congressman Mavroules left, but you have reintroduced an element that ought to be equally clear. I am not sure I could produce a comparable chart in unclassified form for the Soviet Union’s stockpile.

I think I can safely say that there is no evidence that it has had a similar trend in either the numbers of nuclear weapons or in their explosive power.

Mr. Courter. The lines would probably be going in the opposite direction I would imagine as well.

Thank you very much, Madam Chair.

Mrs. Byron. Professor Sykes and his friends have said we can monitor Soviet tests down to five kilotons; and belo... that, tests are unimportant and have no military value.

If the tests have no military value, then why it is important for arms control to ban them, just a little hypothetical for you to think about.

Mr. Ray.

Mr. Ray. I want to thank the distinguished panel for the good testimony that you have given us. My concerns and my questions have been focused on by yourselves and my colleagues. And, Madam Chairman, I have no questions at this time.

Mrs. Byron. Mrs. Holt.

Mrs. Holt. Thank you, gentlemen.

Mrs. Byron. Mr. Stratton, do you have any questions?

Mr. Stratton. Yes, Madam Chairman.
You indicated that the gentlewoman from Colorado might be attending next week to defend her legislation, and I may have arrived too late, but I wonder if any of the experts that are here before us has, during the time that testimony was going on, has commented on H.R. 3442?

Mr. Gaffney. With vigor.

Mr. Stratton. You have.

Mr. Gaffney. We would be happy to do it again, if you like.

We feel very strongly about it, Mr. Stratton.

Mr. Stratton. I didn't want to pass up that analysis in the record, because it strikes me that this is a very dangerous piece of legislation, when we turn over the care of our nuclear deterrent to the Soviet Union, particularly when they are as careless as they are with their own nuclear deterrent.

Mr. Gaffney. I am afraid that there may be a syndrome developing on the Hill, Congressman, Mr. Stratton.

Mr. Stratton. There are a lot of them.

Mr. Gaffney. This is particularly troublesome to those of us who are responsible for nuclear weapons and related defensive systems and for arms control. We saw it manifested in its most frightening manifestation to date in the legislation adopted by the appropriators last year on the ASAT issue, the idea being as long as the Soviets didn't test ASAT, we must forego testing an ASAT.

Members present are all familiar with the foolishness, absurdity and the very risky proposition that is entailed in that idea. If it is dangerous when it comes to develop an anti-satellite system in the face of the Soviets foregoing a further test, the syndrome is even more pernicious when it comes to the idea that as long as the Soviets feel, for whatever reason, that it is in their interest not to test their nuclear weapons, we should similarly forego testing ours, notwithstanding our past experience, notwithstanding the real considerations with respect to safety, reliability and effectiveness of our deterrent that are involved, and it would be very, very, a very sad day in the history of this nation and of this Congress if it were to take a further step down this path to yield once again to this syndrome, and to introduce into law a binding unilateral moratorium on the United States when it comes to nuclear testing, notwithstanding this proviso that we have talked about, that, of course, it would stop as soon as the Soviets tested, for reasons that Congressman Courter and I discussed a short while ago.

I hope that you and like-minded colleagues will prevail in resisting this syndrome in the future.

Mr. Stratton. We are certainly going to try very hard.

Mrs. Byron. Let me follow that up because you must have been reading over my shoulder.

My next question was in relationship to SDI and stated with regard to the research, H.R. 4542 would be a major stumbling block to any SDI development.

In SDI research, the U.S. is far ahead, and by that same formula, however, if that were to be the case, we would then be precluded from any testing.

How can we deploy a ballistic defense system without any testing?
Mr. Gaffney. Well, it is going to be up to you and your successors ultimately to make that decision, but my personal conviction is that it is extremely unlikely that you will be willing to invest substantial sums of money in any weapons system let alone a highly controversial defensive system without adequate testing.

I am mindful of the raging controversies about infantry fighting vehicles, anti-aircraft weapons systems and the like, which are substantially less sophisticated, less complex, and substantially well-tested in important respects, known cases, and there is great concern that they have not in fact been adequately tested, and I suspect at least as high a standard will be applied to some of these other systems in the future.

Mrs. Byron. Mr. Feith, you have not been brought into this discussion in the amount I think you should, and I can't let you get away.

Mr. Gaffney. This is the only time in my experience that has been the case.

Mrs. Byron. We will make sure that it happens today.

The proponents of binary production have unequivocally stated their support for the funding for defensive gear for personnel, to withstand chemical attacks.

With that in mind, how important is it that we need for chemical deterrence in your opinion?

And also the other argument we have currently is the forward deployment of binary chemical weapons. How important do you feel that is?

Mr. Feith. Madam Chairman, the chemical defense program, to develop a means to protect our forces from the effects of chemical weapons is of great importance. It actually accounts for a much larger portion of the total chemical weapons funding request from the administration than does the actual binary modernization.

It is important to note, though, that without in any way belittling the enormous importance of work in the defensive chemical field, that alone would not represent an effective deterrent to chemical warfare by our adversaries.

I would go so far as to say it would be highly inviting to an adversary to initiate chemical warfare, if it accomplished nothing other than forcing our forces to don their protective gear.

There are, aside from the military utility of chemical weapons in killing people and in contaminating areas generally, there is the specific military utility that derives from forcing the other, the opposing forces to put on very bulky clothing that makes it virtually impossible to perform one's mission over a period of more than literally a few minutes, and even when you are performing your mission before heat prostration or other problems take over, you are not performing it with the kind of efficiency that you would if you were free from wearing and functions like of a space suit.

It is not the case that we could deal effectively with the military threat posed by our adversary's chemical capability by increasing funding for defense.

On the forward deployment issue, it is our judgment that as desirable as forward deployment is, and I believe you referred to the current discussions which are focusing on deployments in Europe and our discussions with our NATO allies, as desirable as forward
deployment in Europe might be from certain points of view, there is clear military value to enhancing deterrence through forward deployment.

Nevertheless, we believe that binaries, because of the fact that they are safe and much more easily transported and much more easily handled on naval vessels, for example, binaries would allow us to maintain an effective deterrent even without forward deployment.

Again, I would not want to say that it is not desirable, but I think it is important to note that it is our judgment and this is a judgment that has often been stated by General Rogers, the Supreme Allied Commander in Europe, that it is not necessary for effective deterrence to deploy binary munitions on European territory.

Mrs. BYRON. I have just one final question, and it was brought up this morning also in the hearing with the Ambassador, and there has been some concern expressed that the challenge inspection would compromise many of our private U.S. corporations such as Dow, DuPont, et cetera.

With that in mind, what impact would a challenge inspection have on the DOE and DOD facilities?

Mr. FEITH. When I referred to the agonizing review that the administration went through in connection with the proposal of our draft treaty to ban chemical weapons, I was specifically referring to that issue. Nobody relishes the prospect of Soviet inspectors walking around in American military facilities.

The way we have to deal with the problem, when we were thinking of how we are going to handle the chemical weapons arms control issue, though, was to start by asking, what is it that we would need to see on the other side, in order to have some confidence that we could ascertain that they were complying with the treaty.

Because of the high military significance of even relatively small quantities of chemical weapons, it became clear that we needed what we have dubbed the open invitation challenge inspection provision; in effect, it is an anywhere, anytime kind of challenge inspection provision.

Having decided that that is what we need, and that it would be irresponsible in the extreme to, as Congressman Mavroules put it, it would be irresponsible in the extreme to conclude a chemical weapons ban without effective verification.

And I would say, in particular, an effective challenge inspection provision to deal with the problem of undeclared stockpiles or production facilities, we said, All right, well, if we are going to ask for anywhere, anytime inspection from the Soviets, we have to be willing to grant it ourselves, and we confronted the fact that we had never before in history proposed a mandatory challenge inspection regime of that kind, and we realized that it would require us to commit ourselves to opening all military and government, and all relevant privately owned facilities, because the Soviets would demand that and if we are going to make a proposal, what we need from them, we have to be willing to grant the same on our side.

This was a very, very hard decision to make and discussed at great length within the Pentagon, and ultimately it became clear that our choice was between committing ourselves to that degree of
openness or abandoning the negotiations, because there is just no point if you are not going to have an effective challenge inspection regime.

And ultimately, the Joint Chiefs of Staff, personally reviewing the question, decided that the value of an effective chemical weapons ban, if we could really achieve one, was worth the inevitable security risk entailed in that degree of openness.

It also happens to be that we began thinking about ways of minimizing the security risks, which would be in everybody's interest if such a treaty came into being, and the net assessment as it were, was that it is worth committing ourselves to that degree of openness in order to make chemical weapons arms control work.

Once the Chiefs approved this, that was the major obstacle to overcome and the President reviewed the question and he too decided that it was worth making this proposal in order to try to make chemical weapons arms control bear fruit.

Mrs. Byron. Okay. I appreciate the candor.

Yes, you want to get the last word?

Mr. Gaffney. No, Ma'am. I want you to get the last word in.

I just want to offer, because I think the experience of the moratorium, the informal un-inspected moratorium is so important and because some have argued that in fact it was we who precipitated or gave the Soviets a basis for resuming testing, I would like to offer to the committee, if I may, for the record a chronology of the events surrounding the end of that period which might be useful.

Mrs. Byron. Fine. Thank you very much.

I appreciate once again the panel. It has been a very good discussion all the way around, and I think we have got a better understanding, not that I was surprised by your perspective on any of the bills we have discussed, but it has given us some very technical background that we needed to have to debate these issues.

Does the staff have any questions?

Mr. Klein?

Mr. Klein. Thank you, Madam Chair.

Mr. Gaffney. Mr. Hawes, I believe both of you were familiar with the history of the test ban negotiations during the Carter Administration between 1977 and 1980. There is a recent Soviet article which quotes, I hope misquotes, a Member of Congress to the effect that since 1968 to the time of the present administration, U.S. policy consisted of support for talks of a total ban of nuclear tests, and "total" meaning, I suppose, for all time and of all kinds of whatever intensity.

I seem to recall that we had hearings before the predecessor, this panel, back in 1978, and that the negotiations at that time were for only about a two- or three-year test ban and that the concern that brought about the limitation of the test ban to three years or two years or five years at the most, was the reliability of the stockpile, and I think Mr. Leslie Gelb, then Assistant Secretary of State in the Carter Administration, and Mr. David Gifford, who was the Assistant Secretary of Defense for ISA, testified to that effect.

Mr. Gaffney. Mr. Klein, I only wish that my corporate memory was half as good as yours. You are indeed a national asset when it
comes to knowledge about these issues, and the committee has been very fortunate to have a person with your character as well as your expertise available to it.

I say this not as a gratuitous remark, because I was just told that Mr. Klein was shortly to leave the committee, and I wanted to pay tribute to you, as a former colleague and those of us who work with the committee.

Your characterization and recollection is correct in that the Carter Administration came to understand in the course of looking very carefully at this issue itself, that there were real restraints on what could be done and more importantly, perhaps, what should be done in the area of comprehensive nuclear test bans.

Mr. Klein. Is there something to that effect someone could submit for the record?

Mr. Gaffney. Yes, sir.

Mr. Klein. Thank you.

Mrs. Byron. The committee will now be adjourned.

Once again, I do appreciate you gentlemen.

[Whereupon, the panel went into executive session, and subsequently adjourned at 4:10 p.m.]
STATEMENT OF HON. BEVERLY B. BYRON, A REPRESENTATIVE FROM MARYLAND, CHAIRMAN, SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT

Mrs. BYRON. Our witness this morning is the Honorable H. Allen Holmes, Assistant Secretary of State for Politico-Military Affairs.

I have asked Mr. Holmes to bring the panel up to date on the status of negotiations on the control of conventional weapons as well as those dealing with strategic systems modernization. I have also asked Mr. Holmes to address the status of the Mutual and Balanced Forces Reduction, MBFR, Talks in Vienna, including any Warsaw Pact responses to the NATO proposal that was made late last year.

The 38th round of the MBFR negotiations were concluded on March 20 of this year. I note in Chairman Gorbachev's statement of January 15, 1986, that he indicated that progress could be made in the MBFR talks and also that the Soviets might be ready to moderate their position on verification.

We are also very interested in learning whether any of this has happened.

As a matter of interest, the Conference on Confidence and Security Building Measures and Disarmament in Europe, the CDE, reconvened in Stockholm on April 16 of this year. The purpose of these negotiations is to reach an agreement that will reduce the risk of military confrontation in Europe. I know that the panel will be interested in an update on the CDE negotiations in Stockholm.

As the Assistant Secretary of State for Politico-Military Affairs, Mr. Holmes is particularly qualified to speak for the Department of State on the political ramifications of arms control initiatives and the effects that legislation that the Congress may pass can have, or may have had, on those negotiations.

Because of the importance of Mr. Holmes' testimony, and the interest of the public in these matters, I hope that the panel can remain in open session as long as possible.

This afternoon, starting at 2 p.m., the panel will resume testimony on various arms control-related legislation referred to the subcommittee for action. Representative Edward J. Markey and Representative Patricia Schroeder will testify in support of their bills, H.R. 3100 and H.R. 4542 and H.R. 3442, respectively. Following

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their testimony, at approximately 3:30 p.m., the panel will convene in executive session to receive a classified briefing on verification technology and methodology from the Department of Energy.

I want to recognize Mrs. Holt for any statement she may have, and then you may proceed, Mr. Holmes.

Mrs. Holt. Thank you, Madam Chairman.

I welcome the Secretary today and look forward to hearing his testimony. I would hope, Mr. Holmes, that you can address three areas that I believe are of vital interest.

First, are the Soviets really serious about negotiating equitable and verifiable arms control agreements or, on the other hand, are they merely acting out an elaborate charade for propaganda purposes?

Second, the proponents of a bilateral nuclear test ban frequently state that a comprehensive cessation of testing is necessary to assure the continued adherence of third world countries to the non-proliferation treaty. That somehow, if the Soviet Union and the United States ceased testing, countries such as Israel, South Africa, South Korea, Chad or Upper Volta will not obtain nuclear weapons. Is there validity to this contention.

Third, it is often said that if we legislate or take unilateral actions of one kind or another, such as stopping SDI, stopping the ASAT, or stopping chemical weapons, that this will create a "favorable climate" so that the Soviets can make concessions. Is this a valid assumption?

Madam Chairman, I would also like to have the Secretary address the question that is seldom addressed. That question is: given the status of conventional forces worldwide today, if nuclear weapons were to disappear from the arsenals of all countries, would we not be making the world safe for conventional war? In other words, is there validity to the contention that the mere presence of nuclear weapons constitutes a threat of war?

Thank you.

Thank you very much, Madam Chairman.

Mrs. Byron. You may proceed, Mr. Holmes.

STATEMENT OF H. ALLEN HOLMES, ASSISTANT SECRETARY OF STATE FOR POLITICO-MILITARY AFFAIRS

Mr. Holmes. Good morning.

Thank you, Madam Chairman. In the interest of time, I would like to ask your permission to have my prepared remarks inserted into the record and limit my oral statement to a review of the highlights of my testimony.

Mrs. Byron. Very good.

Mr. Holmes. I welcome this opportunity to appear before you this morning to address the issues of arms control and modernization of our strategic and conventional forces—two issues which are closely linked. Experience confirms what you would expect—the Soviets actively pursue arms control when they perceive it in their national interest to do so. If the United States unilaterally allows its deterrent capability to deteriorate, the Soviets have no incentive to negotiate seriously about arms control.
My primary objective today is to emphasize this Administration's commitment to the dual goals of defense modernization and genuine and effective arms control. We seek agreements which will achieve deep, equitable and effectively verifiable reductions in the nuclear arsenals of the United States and the Soviet Union. We seek agreements which will strengthen strategic stability and truly diminish the nuclear danger.

We do not want only signing ceremonies and photographs of leaders toasting each other. We want meaningful agreements. We want agreements that work. Through such agreements, we seek to achieve a safer world and to work toward our ultimate goal of eliminating all nuclear weapons.

This administration has vigorously pursued its arms control objectives. At the Nuclear and Space Talks in Geneva we have put forth concrete proposals: In START—a 50 percent reduction in strategic nuclear weapons, appropriately applied. In INF—a realistic schedule for the total elimination of LRINF missiles. In Defense and Space—an “open laboratories” initiative designed to build confidence on both sides that our respective research for strategic defense is not offensive in nature.

At the Conference on Disarmament in Geneva, we have put forth a draft treaty banning the production, stockpiling, transfer and use of chemical weapons and providing for effective verification. At the MBFR talks in Vienna, we—along with our allies—have made a proposal on reduction of conventional forces in Europe. At the Conference on Disarmament in Europe, we and other Western nations have proposed a package of concrete confidence and security building measures to prevent the use of armed force for political intimidation.

We are implementing with the Soviet Union a new agreement to upgrade the direct communications link, the “Hotline”. And we have conducted exploratory expert-level discussions on the concept of “Nuclear Risk Reduction Centers”.

The Soviet response to these proposals and initiatives has been, to put it mildly, disappointing. While the U.S. has made a concerted effort to build on the Summit commitment to pursue actively those areas of common ground, i.e. 50 percent reductions in strategic forces, appropriately applied, and an interim INF agreement, the Soviets seem more interested in playing a propaganda game aimed at Western public opinion than in serious and confidential negotiations at the bargaining table.

As you know, Round Five of the Nuclear and Space Talks began last week. I hope that the Soviets will begin to talk in earnest about practical measures to implement the mutual commitments which President Reagan and Mr. Gorbachev made at the Summit.

A fundamental tenet of U.S. security policy is the interdependence of arms control and effective defense and deterrent capabilities. Given the rapid and continuing growth in Soviet military power, the U.S. and its allies have had a direct security interest in redressing, by their own modernization efforts and through arms control if possible, current and emerging imbalances in nuclear and conventional forces.
We must have confidence that deterrence will function effectively at all times, especially in periods of tension and crisis, and at all levels of potential conflict.

A stable and effective deterrence requires strategic modernization, conventional force improvements and arms control. These go hand-in-hand. We must complete the modernization of our forces to restore a strong defense posture and maintain the military balance. Failure to do so would undercut U.S. arms control negotiators, denying them the necessary credibility to negotiate arms control agreements resulting in a more stable deterrent at lower force levels.

The President's force modernization program has been underway since 1981 and much progress has been made. I feel certain that we are now in a much stronger position, both militarily and politically, than we were before this program yielded any concrete results. With the exception of the Peacekeeper missile and ASAT, the Congress has largely supported our modernization goals. Because we have worked together, we have achieved results in which we can all take pride.

Together we have firmly demonstrated to the Soviets that we have the national will to embark on a planned course of military improvements and see it through. All of these efforts to modernize are fully consistent with our arms control objectives, and will contribute to stability.

Let me now address several issues which I am sure will be of concern to the panel. I will turn first to the Strategic Defense Initiative.

The SDI research effort is one of the most important defense programs this country has ever undertaken. SDI offers the hope of moving to a safer, more defense-reliant basis for deterrence, one based increasingly on defenses rather than the threat of mutual retaliation.

SDI also creates real incentives for the Soviets to negotiate reductions in existing nuclear arsenals.

I believe that SDI provided a prime motivation for the Soviets to return to the negotiating table. I see SDI as encouraging meaningful negotiations on arms control, as well as an approach to a more secure and stable environment.

We need to keep this program strong, healthy and moving forward. If we are to have informed answers to the questions that debate raises, as well as convince the Soviets of the seriousness of our commitment to investigate effective strategic defenses, we must fund SDI at requested levels.

I strongly urge this panel to do whatever it can to ensure that the SDI research program is fully funded.

In addition, I urge the panel to oppose legislation which would cut off funding for research on strategic defense systems incorporating nuclear energy as a source of power for certain directed energy weapons. The Soviets have pursued nuclear-driven directed energy research. Thus, a particularly important aspect of our own research is to understand the extent to which nuclear-driven directed energy weapons, if used by the Soviets, could destroy space-based elements of U.S. surveillance systems or counter a future
U.S. strategic defense system. The administration opposes legislation which would restrict our research effort.

I would like to comment now on our antisatellite program, ASAT. The President has expressed his deep concern at the erosion of congressional support for this program. He considers the program to be critically important in deterring Soviet use of their ASAT against our satellites and, should deterrence fail, in denying the Soviets the use of their space systems to target our land and sea forces.

The satellites that serve U.S. and allied security are few in number and of great importance. They would be difficult to replace rapidly if successfully attacked. At present, our satellites in lower-earth orbit are threatened by the Soviets' co-orbital ASAT, which has been operational for over a decade. While it is admittedly not the most modern ASAT system, it is a real military capability, ready to be used.

The U.S. ASAT program, still in its testing stage, is the only antisatellite program the United States now has that can offset the present one-sided Soviet advantage. At present, it offers our best near-term ASAT option for countering Soviet targeting satellites, which would threaten U.S. and allied terrestrial forces in a conflict.

Let me review briefly our continuing efforts to find a suitable ASAT arms control proposal.

You know that for some time we have been studying specific ASAT limitation proposals in order to identify those which would be equitable, verifiable, and in our national security interests. The current Soviet proposal for a ban on so-called "space strike arms", including a comprehensive ban on ASATs, is not a serious arms control measure, but rather is designed to force a halt to our research on SDI.

Despite our repeated explanations of why a comprehensive ASAT ban would be unacceptable, difficult to verify, and not in the interests of either side, the Soviets have stuck rigidly to their proposal.

In order for the ASAT arms control agreement to be "effectively verifiable", it would be necessary to negotiate more limited, specific, clearly defined provisions and more cooperative verification measures. In the current Geneva Defense and Space Talks, the Soviets have provided no such specific proposals, even though their position in the 1979 ASAT arms control negotiations called for such limited proposals.

The Soviet Union's preferred outcome for ASATs is clear—elimination of the U.S. ASAT program while the Soviets' own, fully operational ASAT capability continues unrestricted. Congressional action which eliminates funds for the U.S. Miniature Vehicle program, or prohibits a meaningful test program, has the effect of fulfilling the Soviet goal, even though this would not be the intention.

Such legislation sends the wrong signal to the Soviets and to our allies. It hurts us in any negotiating forum, since it only encourages attempts by our negotiating partners to go over the head of the administration, and to gain their objectives via direct appeals to the U.S. media or to the Congress, rather than at the bargaining table.
I sincerely hope that, in the light of our common interest in maintaining a strong national defense while negotiating arms control agreements that truly serve the interests of the United States, you will not support curtailment of the U.S. Miniature Vehicle ASAT program, and will join in our efforts to lift the ban on ASAT testing. The result we are all seeking—an enhancement of our national security—is too important for us to be working at cross-purposes.

I would like to turn briefly to the issue of nuclear testing which you had an opportunity to explore in depth with other administration witnesses last week.

The administration supports a verifiable Comprehensive Test Bank as a long-term goal. But for a test ban to strengthen global peace and security, certain conditions must precede its implementation. Simply put, these conditions do not exist today.

The United States and its allies rely on nuclear weapons for deterrence. As long as we continue to depend on a secure and credible nuclear deterrent as the ultimate guarantor of peace with freedom, it is difficult to envision circumstances where some level of testing would not be necessary to ensure the safety, reliability, effectiveness and survivability of our nuclear weapons.

Thus, as we have stated often, the CBT remains a long-term objective of the United States, but in the context of achieving broad, deep and verifiable arms reductions, substantially improved verification capabilities, expanded confidence building measures, and greater balance in conventional forces, and at a time when a nuclear deterrent is no longer as essential an element as currently for international security and stability.

The U.S. is currently involved in discussions with the Soviet Union in these areas. We have made clear our strong and continuing view that Soviet calls for an immediate and unverifiable nuclear testing moratorium are not a basis for meaningful progress.

The issue of verification remains a difficult problem that is essential to an effective and sustainable arms control process, including the area of nuclear testing. The secretive, misleading way with which the Soviets handled the recent tragedy at Chernobyl underscores the importance of provisions for effective verification in any arms control agreements.

Over the past three years we have placed the highest priority in the nuclear testing area on finding an effective means of verification of the 1974 Threshold Test Ban Treaty, TTBT, and the 1976 Peaceful Nuclear Explosions Treat, PNET. We have suggested concrete means of building confidence by extending a unilateral and unconditional invitation to the Soviet Union to send experts to measure directly the yield of a nuclear test at our test site. You received extensive detail last week about this and other initiatives of the President.

You have under consideration legislation that attempts to force the United States into CBT negotiations or to join a Soviet moratorium. We oppose such legislation. It would undercut the initiatives the President has proposed to make progress on nuclear test limitation issues. Such legislation would set back prospects on a broad range of arms control efforts, including the achievement of deep, stabilizing, and verifiable arms reductions.
I urge you to oppose measures that would force us to halt testing under conditions that would weaken our national security.

With regard to chemical weapons, the administration's primary goal is the conclusion of an agreement to eliminate completely and finally the steadily growing threat posed by these weapons through a comprehensive, effectively verifiable global ban.

Soviet chemical weapons are a serious challenge to our national security and to the security of our allies. The Soviets have continued to build up their chemical weapons stockpile far beyond any defensive need while the United States has unilaterally refrained from chemical weapons production for the past 17 years. Thus, it is important to the security of the United States, as well as to the credibility of our deterrence and alliance commitments, to restore a credible chemical weapons retaliatory stockpile to the U.S. arsenal as soon as possible.

It is clear from Soviet behavior that they are highly unlikely to negotiate away their important military advantage in chemical weapons—which is increasingly in their favor—if they can simply wait for U.S. unilateral chemical disarmament through deterioration of our retaliatory stockpile. Since last year's authorization by Congress to begin the modernization of our retaliatory chemical weapons stockpile, it appears the Soviets have recognized that we are committed to restoring a credible chemical weapons deterrent.

I hope that the Soviets have concluded that it is in their interest to negotiate more intensively in the face of that deterrent. Certainly negotiations in Geneva over the past several months have been more serious, although I cannot predict a near-term agreement.

I understand that legislation pending before the Armed Service Committee would prohibit the production of chemical weapons in an effort to encourage a CW ban. Such legislation would be counterproductive. It would have exactly the opposite effect to that intended and would remove any incentive the Soviets have to negotiate seriously a ban on chemical warfare. As such the administration strongly opposes this legislation.

On the matter of chemical weapons proliferation, in March we held a useful initial round of discussions with the Soviets on ways to prevent CW proliferation. In these discussions we seek no special, separate or formal non-proliferation agreement. Rather, we have set forth the measures which we are taking to limit the further dangerous spread of chemical weapons, and urged the Soviets to take steps themselves to this end. It is useful to note that the U.S. CW modernization effort was no inhibition to these discussions.

We are very grateful for the expressions of support from the Congress for our goals and objectives; we encourage your participation in the process. However, let me once again emphasize the harmful nature of legislation that restricts or inhibits programs with direct effect on ongoing negotiations. We cannot let the Soviets rely on legislative initiatives which unilaterally concede programs without trade-offs at the bargaining table.

The President's national security priorities are designed to accomplish a straightforward series of goals: Extend the protection of our strategic deterrent capability; attain sufficient conventional force strength to defend ourselves and our allies; maintain suffi-
cient strength to provide incentives for the Soviet Union to accept meaningful arms reduction agreements; and pursue research on a strategic defense system that could enable us to make the transition from deterrence based primarily on offensive nuclear systems to one relying primarily on defensive systems.

These goals will not be achieved overnight. Success will require a determination to remain strong and resist politically expedient calls which would limit the administration's ability to negotiate from a position of strength. The Congress plays a crucial role in the effort to achieve these goals and objectives. We look forward to continued cooperation and consultation.

Thank you for the opportunity to appear before you; I am prepared to respond to your questions.

Mrs. Byrón. Thank you, Mr. Ambassador.

Let me compliment you on a very comprehensive statement, I think you covered most of the bases that we were concerned about. I am sure that everyone is curious about the latest Soviet proposals with regard to the intermediate nuclear forces.

Could you give us details with regard to the latest proposal, how it will be made different from other Soviet proposals and also how it is going to be playing in the European arena?

Mr. Holmes. Madam Chairman, you are referring to the INF negotiations?

Mrs. Byrón. Yes.

Mr. Holmes. That is an interesting question, because yesterday, when we were waiting for General Secretary Gorbachev's television address, the Soviet delegation in Geneva asked for a special session today in the nuclear and space talks. Just before coming up here, I received a preliminary report. The proposal was on INF; they tabled an INF treaty text. We have not had a chance to do a thorough analysis of it yet, but from a preliminary reading, it appears to incorporate the INF elements of the proposal that Gorbachev made on January 15. It does not seem to offer any new elements.

Mrs. Byrón. In other words, it is readdressing the original proposals in January?

Mr. Holmes. Yes.

Mrs. Byrón. Do you think there is going to be any effort on the part of this administration to once again accelerate talks on a comprehensive test ban due to Gorbachev's latest moratorium extension to August?

Mr. Holmes. Our view remains that a comprehensive test ban treaty is a long-range goal of this administration. We believe in a step by step approach. We continue, as I have said in my statement, to rely on nuclear weapons as a major component of our strategic deterrent. We hold the goal of a comprehensive test ban treaty in the same time frame as a goal of a comprehensive elimination of nuclear weapons. These are two long-range goals; we believe that we should proceed on parallel tracks on a step by step basis toward those goals.

Now, we have worked very hard at putting into place an effective verification system to enable us to submit the Threshold Test Ban Treaty and the Peaceful Nuclear Explosions Treaty to the Senate for ratification. Our President has made a number of proposals, several in 1983, a proposal in 1984 at the United Nations
and more recently in 1985, an unconditional unilateral proposal which invited the Soviets to send experts to the Nevada Test Site, bringing their instruments. This would enable the Soviet scientists to calibrate their instruments, observe tests and learn about the geology of our testing site.

This unilateral invitation remains unanswered. The President, however, has continued to press the issue. On March 14, he suggested that our experts get together at the Nevada Test Site, where we would share with them the new CorrTeX hydrodynamic system which we have developed for measuring the yield of nuclear tests. We have offered to explain this to them, to share it with them, to let them come to our test site and observe a test. We think this is an important step.

As you may know, our present system of teleseismic monitoring tests is not very accurate. It can be off by as much as a factor of 2. That means that if a test were conducted with an expected central yield of 150 kilotons, our teleseismic monitoring equipment could register the yield somewhere between 75 and 30 kilotons.

CorrTeX, which requires on-site emplacement and on-site monitoring, involves putting a cable either into the cavity where the test is conducted or in a satellite hole near by. With CorrTeX the yield measurement could be off up to a factor of 1.3. That means that a 150 kiloton test would register between 195 and 105 kilotons. That is still not perfect, but it is better. The President has said that if we can agree on a good, sound verification system, using that technology, he would submit the two treaties I have mentioned to the Senate for ratification.

We think that would be a substantial step in the direction of the long-range goal of a comprehensive test ban.

Mrs. Byron. Let me talk a little bit about the floor action today, and that is beginning deliberation on the budget, and it appears that the defense spending will be in the 290 area once we compromise with the Senate.

The House Budget Committee has come in with a lower figure. Have our allies expressed any concern with regard to what amounts to a really basic zero growth defense budget. At the same time one of the issues that we hear consistently here in Congress is how to get NATO countries to foot a larger part of the defense bill and our need to reduce U.S. strength in Europe.

Are there ongoing efforts to get NATO to foot more of the defense bill in light of this zero growth that we are beginning to find?

Mr. Holmes. Madam Chairman, as you know, we have worked hard in NATO to hold out a standard of 3 percent growth in real terms on an annual basis. Although the record is far from perfect, some allies have met that goal. In fact, some have exceeded it. Others have fallen short of that goal. It is our view that it is important for the United States to continue to set an example and to be able to meet at least that minimum goal.

Mrs. Byron. Mrs. Holt.

Mrs. Holt. Thank you, Madam Chairman.

The question that I asked in my first statement I would like to ask again. Do you think there is any validity to the statements that we hear frequently that if we stop testing, if we and the Soviets stop testing, that that will prevent any other countries, any
third world countries going ahead with development of nuclear weapons? I think we discussed this in Lisbon when we met with you there, but I will like to hear your answer for the record.

Mr. Holmes. Well, I think the short answer to that is that every sovereign country is going to make its own strategic decisions based on the strategic realities and their own national security problems as they see them. Certainly allied countries look very carefully at what the United States does because of the interdependence of our deterrent systems.

But in the final analysis, each country is going to make its own determination and its own decision. We have no evidence that in the event of a comprehensive ban between the United States and the Soviet Union other countries would produce their own nuclear weapons.

Mrs. Holt. Thank you.

Thank you, Madam Chairman.

Mrs. Byron. Mr. Stratton.

Mr. Stratton. Thank you, Madam Chairman.

Mr. Holmes, last September under the leadership of the Chairman, this subcommittee visited Geneva and had an opportunity to talk with the American negotiators and to get some of their ideas as to what could be done in these negotiations.

In fact, the period that we were there covered what was supposed to be a fairly dramatic moment, when the Secretary of State and the Foreign Minister of the Soviet Union, Mr. Shevardnadze, delivered a proposal to President Reagan that would eliminate some 50 percent of the weapons presumably on the Soviet side, and shortly thereafter our negotiators tabled a similar proposal that would cut 50 percent from our point of view.

Obviously the items that were included in those 50 percent figures were not similar, but it appeared to those of us in the committee that we were very close to a, some kind of an opportunity for agreement, at least on these weapons that had been cited on both sides.

Yet—and I think my own impression was that the negotiators were simply optimistic that here is something we can at least put our teeth into. But the days and weeks and moths have gone by and the negotiators have been sitting in Geneva, one of the most competent left because he didn’t feel there was really much that was going on, Senator Tower.

Could you explain to us why, what the problem is when you have got something that would appear to be almost equal on both sides, and yet somebody is holding things up? Are the Soviets toying with us or just what is happening?

Mr. Holmes. Thank you, Congressman.

I can tell from your comment that you share our frustration with the START negotiations in Geneva getting down to business and agreeing on what a definition of strategic should include in the way of weaponry, I think this is the kernel of the problem.

As you know, we have sought in these negotiations to zero in on the most destabilizing intercontinental systems, particularly the beasts, the SS-18 and some of the weapons that have massive yields. These are the ones that we think are the most destabilizing and should be dealt with in our proposal, which lives up to that 50
percent ideal, zeroing in on ICBMs, on sea-launched ballistic missiles and on bombers equipped with air-launched cruise missiles.

The problem is that the Soviet definition includes over 1100 long-range INF missiles and aircraft that we have, our forward-based systems, carrier-based aircraft, and, in the bomber area, gravity bombs and short-range attack missiles—systems which clearly are not strategic, but which they have proposed to be included in these discussions.

Earlier in the early 1970s they started out in the same way including a lot of systems, perhaps for negotiating purposes, that are not truly strategic. In so doing, they do not include over 2000 weapons of their own, which by their definition, are not strategic because they cannot reach U.S. territory—although that is debatable on some of their systems—but which can devastate our allies’ cities. This is clearly not a strategic definition that we will accept.

So we continue to probe, argue, force, and press the discussions in Geneva. We are doing that today in Round Five as we try to get the Soviets to come to grips with a sensible strategic definition so that we can get down to a serious negotiation.

Mr. Stratton. Wasn’t there an attempt or perhaps more recently a proposal for cutting back on the INF weapons on both sides and then my impression was that our NATO allies got a little bit skittish over that proposal because having put a lot of their agony and blood into getting the cruise missile and the Pershing situated as a deterrent to the Soviet SS-20s, they felt that the Soviet proposal as you have more or less indicated would do nothing more than just to leave the SS-20s in with no alternative on our side.

Mr. Holmes. Following the January 15 proposal by Gorbachev, which included INF components, we made a tentative decision to make a new proposal, and as is our custom, we consulted with our allies in Europe and in Asia. As a result of that consultation we made a proposal on February 24 which called for the total elimination of this class of missiles on a global basis in three years, by the end of 1989.

I would add that this proposal was thoroughly backed by our NATO allies and by the Japanese. This is the proposal that we currently have on the table.

Under this proposal, we call for a reduction in the LRINF—long-range INF ground-based systems—to 140 launchers by the end of 1987. In the following year there would be a further 50 percent reduction. There would be a total elimination by the end of 1989. This would apply to all of the systems, not only in the European part of the Soviet Union, but also in the Asian part. In the process there would be concurrent proportional reductions globally on our part.

At the same time, we believe it is important to put constraints on the short-range INF systems so that the Soviets could not circumvent the intent of the agreement and threaten our allies. I would like to make one last point—we also insist very strongly that we have an adequate verification system. In this round we are engaging the Soviets in a more detailed discussion of verification procedures which we think are very important to negotiate in parallel with the limitations and reductions of the LRINF systems.
Mr. Stratton. Thank you.

Mrs. Byron. Mr. Spratt.

Mr. Spratt. Thank you, Madam Chairman. Thank you for your testimony, Mr. Holmes.

In your testimony you state that the, one purpose of our open labs proposal to the Soviet Union is to have mutual assurance that SDI development efforts are directed towards systems which are defensive in nature and not offensive in nature.

Mr. Perle testified before us the other day and he agreed that quite a few of the systems now being explored for SDI have offensive as well as defensive potential, specifically with respect to satellites. This is what we were discussing. He agreed that any system that could take out a ballistic missile for defensive purposes offensively—obviously had offensive applications as well.

How do you therefore clarify this object of open labs? If it is just to provide for mutual assurance that this is only defensive—how is that assurance ascertained when these weapons have offensive as well as defensive purposes?

Mr. Holmes. I would make two comments. First of all, if the Soviets will accept our invitation and join us in an open labs proposal and actually come and visit where we are conducting the research, we are confident that they will come to be satisfied that we say what we mean—that we are researching the possibility of a strategic defense program which would allow us over time to move increasingly toward a defense reliant regime.

On the other hand, the fact that some weapons being researched in the SDI program could conceivably endanger a satellite makes the point of why it is so difficult in our ASAT discussions with the Soviets to come up with proposals that are verifiable and that do not endanger our national security interests.

Mr. Spratt. That was the context of our discussion with Mr. Perle, but the point remains, I don't see the meaning in your statement that object of open labs is to assure both sides that these weapons don't have offensive purposes. They do have reciprocal offensive purposes because anything potent enough to take out an ICBM obviously has other purposes than power defense.

Mr. Holmes. I would not use the term "purpose". The purpose is as stated by the Administration. The purpose is to develop defensive systems against ballistic missiles. It is conceivable that some of these systems involving directed energy weapons or kinetic energy weapons could also damage satellites, or could even conceivably start a fire on the ground, but I think the question is: What is the objective, what is the purpose of these systems?

If the purpose of developing weapons is to have a major strike capability against targets on earth, you wouldn't choose an SDI system to do that. There are other, much more efficient, much more lethal weapons which we already have in our inventory for that purpose.

So I think the question has to do with the objective of the program.

Mr. Spratt. I voted for SDI funding not at the full level the administration is requesting, but nevertheless I supported it but I do have concerns and one is that the Soviet response to the program will be, one, to continue pursuing their own efforts in this area so
that each of us is building our own SDI, number two, to step up research in countermeasures for the components that make up our SDI program and number three, as a hedge against those two alternatives to develop or to deploy more offensive weapons so that they could saturate any defense system we might deploy.

Those seem to me to be a conceivable set of possibilities that don't necessarily have to happen but it could happen. If that happens is it not true that SDI could lead to a less stable and secure environment instead of a more secure and stable environment? I am using your language in your testimony. But a possible recourse is a less secure environment, is it not?

Mr. HOLMES. SDI engineers are trying to answer the President's challenge as to whether or not the systems which seem to offer promise would in fact enhance stability. The engineers are obviously looking at several aspects SDI. They are looking at the military capability, they are also looking at the cost-effectiveness of the system. I think that you put your finger on that aspect when you mention the possibility that the other side could saturate any defensive system with more offensive weapons.

I think that is one of the critical elements of the challenge before the SDI engineers—to develop an SDI program which is cost-effective in a way that any incremental addition to the offensive capability of the other side would be clearly more expensive than incremental additions to any defensive system.

Mr. SPRATT. Does the system have to be cost-effective at the margin?

Mr. HOLMES. Yes.

Mr. SPRATT. He means as I understand that the next incremental unit to be produced must cost less than the next incremental offensive unit that either side could develop and deploy, and his analysis therefore does not include the sunk cost or the cost of research and development up until that point of production.

In other words, he is saying we are not talking about average unit cost. We are talking about incremental and marginal cost. So consequently that criterion for SDI as I understand it does not include a criterion as to the total cost of production, the total cost of development, is that correct? If I made myself clear.

Mr. HOLMES. I am not sure that I understand the question, and I don't have an answer to it. I would be glad to respond subsequently to your question if you like.

Mr. SPRATT. The two gentlemen behind you nodded their heads as I asked the question. Possibly they understood the question.

Mr. HOLMES. I am informed by my colleague, Jim Holmes, that essentially your description is correct, that the sunk costs are not included and it is the average incremental cost as you described it.

Mr. SPRATT. One question about the directed energy program that is generated by the nuclear explosion, the lasers that are generated by nuclear explosion.

We have had testimony here from the Department of Energy concerning nuclear programs, about the potential of such a system. It seems to be increasingly agreed that it would be difficult to deploy a nuclear directed energy laser system by the submarine pop-up deployment method, that if it were used at all it would have to be deployed in space, it cannot be ground-based because as I un-
derstand it, the laser beams cannot penetrate the earth's atmosphere, it has to be somewhere in the exo-atmosphere in order to be effective, and given the four minute launch time of the Soviet booster system, you don't have enough time to launch a submarine-based missile which would then put into effect this directed energy missile.

Therefore, does this directed energy system with nuclear lasers have application in SDI or are you saying we need to do it because it has potential ASAT applications. The Soviets may be also developing it for that purpose, and we must be doing something that parallels their efforts in this area?

Mr. HOLMES. First of all, I would prefer on what is essentially an engineering question to respond in writing. Since I am not an engineer I want to be accurate before this committee.

Mr. SPRATT. Could you also submit for the record if you would the status of Soviet efforts in this area. You refer to their ongoing research efforts in this area, and it would be helpful if you could give us what knowledge you have on that. Perhaps it would be classified.

Mr. HOLMES. Be glad to, Congressman.

Mr. SPRATT. Thank you.

Mrs. BYRON. We have a vote on the floor. We will be back in about 10 minutes.

Mr. HOLMES. Fine. I will wait.

Mrs. BYRON. Mr. Ray has a few questions, Mr. Badham may have a few, I have a few more and I believe Mr. Klein has a couple.

[Recess.]

Mrs. BYRON. Mr. Ray had a couple of questions and said he will be back. In the meantime, let me go into some that I have that are of concern.

One of the issues that you were talking about on page 5, urging us to fully fund the SDI research program and proposals. I see a fairly large battle coming up on that on the floor.

From your aspect, which is not a DOD aspect, but from the political-military aspect of it, do you think that the fully funded—you also talked about the ASAT program which in my mind I tie the two together as a joint hand-in-hand program because I think one is going to revolve around the other—do you feel that if we do not fully fund at that level, it is going to be a difficult question to answer on the political aspect within the arms control talks with our NATO allies?

Mr. HOLMES. Madam Chairman, I believe that once the President has made a considered judgment on what he requires for his program and has submitted that to the Congress, it stands as a, presidential judgment which our allies see as well as the Soviets with whom we are negotiating. Given the longstanding effort by the Soviets—over 20 years—in developing defensive systems against ballistic missiles, we believe that it is important to fund fully this program and to convey a position of firmness vis-a-vis the Soviets in our negotiations in Geneva.

Mrs. BYRON. Let me ask another question. We have a hearing scheduled this afternoon with two of our colleagues before this panel on bills that they have, and how do we answer the debate on
the Markey and Schroeder bills on the test-ban issue? That is one that I find is going to be very difficult to answer on the Floor of the House because many of our colleagues feel that a comprehensive elimination of all testing of nuclear weapons whatsoever should be moved forward with most urgent haste.

How do you answer a colleague's questions on those two bills, Mr. Holmes?

Mr. HOLMES. Well, I am not sure which particular aspect you are referring to, but take for a moment the question of the safety of nuclear weapons. Given the fact that we have to continue to rely on nuclear weapons for the foreseeable future to maintain our security, it is very important that at a minimum the safety of our stockpile be assured.

I might point out that had it not been for a vigorous testing program over the years, we wouldn't have today as safe a system of triggering nuclear explosions in our weapons as we have.

In the early years, we used ordinary explosives to trigger the nuclear reaction. Today, because of this testing program, we use insensitive high explosives that are many times safer than the old system. That is just one example of what testing has allowed us to do in developing the safety side of nuclear weapons.

Mrs. BYRON. The Markey bill would prohibit the obligation or expenditure of funds proposed to the DOD or Department of Energy or the development of explosive testing or production of systems incorporating nuclear explosive devices. That would cripple any of our programs that we have under development.

Mr. HOLMES. It would seem to and we would have to oppose that very strongly.

Mrs. BYRON. Mr. Ray.

Mr. RAY. Thank you, Madam Chairman and, Mr. Holmes, welcome.

I am kind of familiar with the environment in which you have to work in there and I know it is somewhat frustrating from time to time.

Last year there was a proposal by the Soviets for a chemical-free zone, and I think it was unacceptable to us, but did we make any effort for negotiations or tradeoffs or anything—we have hence discussed with the Soviets in exchange for a chemical-free zone, that they might give us verification on where their chemical manufacturing facilities were and offer them up to us to take a look at?

Mr. HOLMES. I am not aware that we did. As a general proposition, I could say that we are opposed to discrete chemical-free zones.

It is virtually impossible, given the size of chemical weapons, to be able to establish a zone that one could be certain—in light of imperfect verification—that in fact the zone was clear. It would be so easy to move these small weapons back and forth across borders.

So it is not a concept that we favor. We prefer the approach that is embodied in the draft treaty for a total ban on the production and stockpiling and use of chemical weapons that the Vice President tabled in Geneva in 1984.

Mr. RAY. In any area that you work in, do you by chance—has the discussion of tactical missiles, not nuclear missiles, which might be targeted from the Warsaw Pact countries against our in-
stallations in Western Europe, runway type or tactical missiles—have there been any discussions on that?

Mr. HOLMES. Yes.

First of all, in MBFR that has not been a subject that has been discussed. However, in our INF discussions, we are very interested in putting constraints on the short-range INF systems that the Soviets have, particularly the Scaleboard and the SS-23. These are systems that have ranges between 500 and 925 kilometers. These are extremely threatening systems if left unconstrained. Even with the elimination of long-range INF missiles, they would still be threatening to our allies and indeed to our forces stationed in the Federal Republic of Germany.

So we have a provision in our proposal for a LRIINF treaty to limit those systems.

Mr. RAY. Do I understand that they have forward deployed some of these missiles into the Warsaw Pact countries?

Mr. HOLMES. That is correct. They have deployed some in Czechoslovakia and in East Germany.

Mr. RAY. In doing so, they could reach the United Kingdom from that forward deployment, I suppose?

Mr. HOLMES. I am not sure. As I say, the maximum range of the Scale Board I believe is 925 kilometers.

Mr. RAY. So do you say some discussions are going on about these weapons?

Mr. HOLMES. Yes. This is something which we have discussed not only among our allies in the Special Consultative Group in NATO, which I chair, but also with the Soviets. This is something which is part of our proposal and will remain so.

Mr. RAY. Are they responding at all in this respect?

Mr. HOLMES. They have not yet responded.

Mr. RAY. I think it is kind of obvious that we are going to have to have some countermeasures to this particular weapon simply because it denies us air superiority, will prevent our airplanes from getting off the ground and so forth.

Mr. HOLMES. We have offered two ways of constraining the short-range INF systems. One way would be to cap the number of these weapons at the level the Soviets had as of January 1, 1986. We would retain the right to match them.

Another way would be to establish a freeze at the levels present on January 1, 1982. At that time we did have some short-range INF systems in the form of the Pershing I, which we do not have today.

Mr. RAY. My concern—and this will be my last comment—my concern is it further weakens the air defense system that we have which is already weak enough.

I thank you for coming to talk to us today and thank you for your comments.

Thank you, Madam Chairman.

Mrs. BYRON. Mr. Badham.

Mr. BADHAM. Thank you, Madam Chairman.

Mr. Holmes, you comment in your prepared statement on SDI and you, I guess believe from the ton of your statement that that is a very necessary facet of what it is that you are doing; is that cor-

Mr. Holmes. The SDI program is a Defense Department program, but we support it. Also, SDI has an impact on the discussions in Geneva in the defense and space talks.

Mr. Badham. You view it from your standpoint as being important to the whole process of arms control?

Mr. Holmes. Yes.

Mr. Badham. Yesterday it was reported in the press that 6,500 people, for want of a better definition, signed a non-participation pledge as far as saying that they would not work on anything that had to do with SDI.

How do things like that affect you in your work?

Mr. Holmes. I am not familiar with this pledge that was signed. Was this in California or—

Mr. Badham. It was reported in The Washington Post and The Washington Post doesn't particularly think very much of California anyway, so I imagine it was nationwide, but I was waited on by a scientist a couple of weeks ago from California and he told me that he had signed this pledge and he wanted to come tell his Congressman why.

I wondered if you might have any comments on that sort of thing. 6,500 sounds like a large group of people who signed a pledge that they don't want to do anything on SDI?

Mr. Holmes. We think it is an important program and that it is potentially an important adjunct to our national security. We think that it can have a beneficial impact on our ability to get the Soviets to negotiate downwards our nuclear arsenals. I think it is regrettable that individuals who are qualified to make contributions to a research program would refuse to do so. In the final analysis, however, it is the right of any citizen to make that decision for himself.

Mr. Badham. The MBFR talks, are we making any progress there at all?

Mr. Holmes. Well, we are very disappointed with the Warsaw Pact response to our December 5 proposal. We developed that proposal. It was a major proposal that attempted to build on elements in an earlier Warsaw Pact proposal. The major point was that for many years we had insisted on a prior agreement on data, including the number of Soviet forces present in the NATO guidelines areas. In an effort to break open this negotiation and to move forward, we agreed, in what is a historic reversal of a longstanding NATO position, to defer insistence on prior agreement on data until after the reductions. We agreed to replace this with a very intrusive verification system of inspection which would allow some 30 inspections a year which would allow us to check on the reductions and on observance of the freeze.

The Soviet response to that has been extremely disappointing. We picked up on something that they had found as a barrier, but they have said basically that they would retain the right to veto these inspections and that they would not include all of their forces that are withdrawn in the counting procedure.

They have said that there could be inspectors at the exit and entry points, but, for example, their annual rotation of some 200,000 troops in the Warsaw Pact would not be included in that count.
So this was a very disappointing reaction. We are starting up again at the next round; we hope that they will take more seriously their often professed agreement that verification and on-site inspection is an important part of this process.

Mr. Badham. Thank you, Mr. Secretary.

Mrs. Byron. Mr. Ray, do you have any other questions of the witness?

Mr. Ray. No other questions.

Mrs. Byron. I have one area that I would like to touch on. Since we are going to be finding elections coming up both in Great Britain and Germany in the near future and a chance that one of the opposition parties in both countries may come into power, what are the thoughts on arms control agenda of either the Socialist Democratic Party in Germany or the Labor Party in Great Britain? Do we see a change in the thrust on arms control negotiations with the possibility of change in party structure there?

Mr. Holmes. Madam Chairman, I would be reluctant in open session to speculate on what the programs of the opposition, which might represent future governments in those two countries, would be. I would only note that the Social Democratic Party of the Federal Republic in a past government, led by Chancellor Helmut Schmidt, called for the United States to introduce, to modernize its long-range INF deployment in Germany——

Mrs. Byron. Let me make the suggestion—I did not want to go closed, but it is a point that concerns me from my perspective as chairman of the panel and I think we have the authority to go closed today, so if you don’t mind, we will go closed for a few minutes of testimony.

[Whereupon, at 11:40 a.m., the special panel adjourned, to reconvene pursuant to other business.]

Afternoon Session

Mrs. Byron. This afternoon the panel will receive testimony from the sponsors of three arms control-related bills that are pending before the Subcommittee on Procurement and Military Nuclear Systems.

First, the Honorable Edward J. Markey will testify in support of the bill H.R. 3100, a bill that would provide for a legislated comprehensive freeze on the testing, production, and deployment of nuclear weapons and nuclear weapons delivery systems.

Congressman Markey will also testify in support of H.R. 4542, a bill that would prevent the use of any funds appropriated in past years, or in future years, by the Department of Defense or Department of Energy for the development, explosive testing, or production of strategic defense systems, or components of such systems that are designed to incorporate nuclear explosive devices.

In effect, H.R. 4542 would apparently legislate a unilateral halt to ongoing nuclear-driven directed energy research programs being carried out by the Department of Defense and Department of Energy.

Following the testimony and any questions of Congressman Markey, the Honorable Patricia Schroeder will testify on behalf of
H.R. 3442, a bill that would provide for a legislated moratorium on the testing of nuclear warheads, that is, detonation of a nuclear explosive device, for a 6-month period beginning on January 1, 1986.

According to the bill, funds could be used for testing nuclear warheads prior to the expiration of the moratorium if the President can certify and provide detailed supporting evidence that the Soviet Union has tested a nuclear warhead.

A copy of each of these bills and analyses is before each Member. The panel has heard previous testimony on the three bills being considered this afternoon which has pointed out the bills may contain ambiguities. The panel will be glad to hear from the primary sponsors of the bills exactly what they are intending to achieve with respect to arms control.

At approximately 3:30 today, the panel is scheduled to receive a classified briefing on arms control verification technology and methodology. The briefers will be Mr. Bryan Siebert, Jr., the Acting Director of the Office of International Security Affairs within the Department of Energy, and Mr. Ron Ewing, Director of Systems and Technology Division, also within DOE's Office of International Security Affairs.

This briefing will require the panel to go into closed session. I hope that the Members will stay for this informative briefing.

Mr. Markey, we are delighted to have you here and you may proceed.

STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE FROM MASSACHUSETTS

Mr. Markey. Thank you, Madam Chairman.

We have put together a more comprehensive document to submit to the committee and I would ask that this be included in the record in its entirety and I have summary statements that I will make on behalf of the two bills that I am here to testify on, but this offers extensive documentation for the legislative justification.

Mrs. Byron. That will be made a part of the record.

Mr. Markey. Mr. Chairman, in addition to inviting me to speak on the nuclear freeze, you have also asked me to testify on behalf of H.R. 4542, a bill I have introduced to prohibit the development, explosive testing, or production of strategic defense systems or components incorporating nuclear explosive devices.

Since development and production of such systems is at least a decade away, the operational restriction of the bill is the prohibition on explosive testing of Nuclear Star Wars systems such as the X-ray laser. The bill is intended to permit the DOE's national weapons laboratories to continue research and even non-explosive laboratory testing of SDI systems and components that incorporate nuclear devices.

The bill was drafted in this manner to make it consistent with existing limitations on Nuclear Star Wars weaponry, such as the Outer Space Treaty of 1967, which bans deployment of nuclear weapons in outer space, and the ABM Treaty of 1972, which bans the field testing or deployment of space-based, sea-based, air-based, or mobile land-based ABM systems or their components. It is also
designed to be compatible with a Comprehensive Test Ban Treaty, which would ban any test explosions of nuclear weapons.

Indeed, this bill complements a very important part of the overall nuclear freeze concept—the effort to halt the explosive testing of all nuclear warheads.

As you know, the administration opposes negotiating a test ban, and has been desperately seeking some public justification for its failure to halt nuclear weapons testing. It has become increasingly clear that neither verification nor the new argument against a CTB—"reliability" testing—present insurmountable obstacles to negotiation of a CTB. The real reason the administration opposes a Comprehensive Test Ban Treaty is that it wants to keep on testing and deploying new nuclear weapons.

Chief among the new nuclear warhead technologies being pushed by the National Weapons Laboratories is the hydrogen bomb-pumped X-ray laser. This program essentially seeks to harness the X-rays emitted from the detonation of a hydrogen bomb, and direct this energy through space to destroy Soviet ballistic missiles in their boost or mid-course phase. More recently, there has been increasing talk of using X-ray lasers as an antisatellite weapon to destroy Soviet star wars defenses.

Setting aside for the moment the questionable technical and military merits of this program, I believe that the American public has a right to get some answers to the following questions: Why are we accelerating the Nuclear Star Wars budget, conducting a vigorous series of X-ray laser test explosions, and refusing to even negotiate for a comprehensive test ban when the President is telling the American people that the SDI will be non-nuclear and that his goal is to eliminate nuclear weapons from the face of the earth?

I do not agree with members of this panel who suggested in last year's hearings that this problem simply be finessed by "just saying it is non-nuclear." We do, after all, have a responsibility to be truthful to the American people. Incanting the mantra that "SDI is non-nuclear" is not enough.

The truth is that Star Wars has a significant nuclear component. Indeed, there are people in the Pentagon, the Department of Energy, and the National Weapons Laboratories who see a nuclear SDI as the way to go.

Although the President and Defense Secretary Weinberger have on many occasions stated that Star Wars is designed to provide us with a non-nuclear defense against strategic ballistic missiles, the Department of Energy is planning to spend a total of $536 million next year on nuclear-driven directed energy programs such as the X-ray laser. Indeed, the Nuclear Star Wars budget for 1987 includes $231 million for the underground detonation of nuclear weapons.

In a hearing in the Energy Conservation and Power Subcommittee, which I chair, Energy Secretary Herrington told me that "a lot of the increased spending in nuclear activities is as a threat analysis or as a threat assessment of what the Soviets are capable of doing in this particular area at this time."

He further explained that, "We are doing nuclear research, but that is not with a goal to deploy, as the President has said, nuclear
weapons in space. We are doing a threat assessment of what can be done with nuclear weapons in space . . . ”

SDI Program Director Lt. General James Abrahamson has offered the same explanation for U.S. X-ray laser research efforts, stating that “we do know that the Soviets are working in many of these same areas and we must understand how far that particular technology can go and whether it can be used against us.”

But if the purpose of X-ray laser research is to find out what the Russians are doing in this field and prevent them from developing and deploying nuclear SDI technologies, we should negotiate a Comprehensive Test Ban Treaty. Such a treaty would effectively prevent either side from testing X-ray lasers or any other defensive system which incorporated a nuclear explosive device. If we had a test ban to stop the Soviets from testing their X-ray lasers, there would be no Soviet X-ray laser threat for us to assess.

The administration tries to discount the possibility of a negotiated solution to this problem by trying to scare people with a lot of unsupported paranoia about the Soviet X-ray laser threat. In response to a series of questions I asked on this subject, DOE has claimed that the Soviets may be ahead of us in X-ray lasers and that they “might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing.”

I find it interesting that when they testify against a CTB, Energy Department witnesses complain that a test ban would “virtually halt” all X-ray laser research efforts, but when they argue for a bigger X-ray laser budget, DOE speculates that the Russians might deploy an X-ray laser without further testing. They can’t have it both ways.

Back in the 1950’s, there were some people in the Air Force and the Atomic Energy Commission who wanted to put nuclear reactors onboard our strategic bombers. To get funding from Congress, they put out all kinds of scare stories that the Soviets were on the verge of deploying a nuclear-powered bomber. It later turned out that the only flight a Soviet nuclear-powered bomber even took was a quick trip across the screen of a Pentagon viewgraph.

I strongly suspect that the same thing is happening right now with this hyping of the Soviet X-ray laser threat. Pointing to the sudden dearth of Soviet journal articles on X-ray laser research and declaring that we have no evidence that the Russians aren’t ahead of us does not establish the existence of a X-ray laser “gap.”

After having lived through fictitious missile gaps, and bomber gaps, and windows of vulnerability, I am reluctant to expend our nation’s treasure and talent on a program whose primary justification is based on unsubstantiated claims about Soviet activities. I would hope that this panel would share a similar skepticism.

While the people at the top are busily trying to scare us about what the Russians might be doing and convince us that the X-ray laser is just a harmless little program we are pursuing as a technology hedge, the people in the weapons labs and the Pentagon are gung ho to develop and possibly deploy Nuclear Star Wars weapons of our own. If we don’t take action now, we may well end up committed to development and deployment of an X-ray laser that makes about as much technical and political sense as a nuclear reactor-powered bomber.
In fact, the X-ray laser's enthusiasts are already beginning to rewrite the President's goal in their explanations of what the President "really means" when he says Star Wars is non-nuclear.

Last year, Assistant Secretary of Defense for Atomic Energy Dr. Richard L. Wagner, Jr., told the Procurement Subcommittee that "what the Department of Defense means by not wanting nuclear weapons in the near term is the old kind of nuclear weapons. But as a very thoroughly adopted part of SDI, we see immediate research requirements for nuclear—driven directed energy concepts."

Dr. Wagner explained that "DOD is eager to accept the research in these new types of nuclear-driven defensive systems even though they are nuclear."

Lawrence Livermore Lab Director Dr. Rodger Batzel has expressed similar enthusiasm for these "new" types of nuclear weapons, declaring that "what the potential of these systems will turn out to be in terms of offense or defense is not clear at this juncture—these areas are new. They are idea rich, and we have no reason to believe that we have more than scratched the surface with respect to the potential of these technologies."

Mr. STRATTON. Does the gentleman have a text that we can follow with these various assertions that he is lightheartedly putting out?

Mr. MARKEY. They have been distributed to the subcommittee.

Mr. STRATTON. My understanding is they have not. What page is the gentleman reading from at the moment?

Mr. MARKEY. I am on page 3 of my X-ray laser testimony.

Mr. STRATTON. Where is the X-ray laser section?

Mr. MARKEY. It is section 1, part 1, page 1.

Mr. STRATTON. There is no pagination so I don't know how we can find where page 1 is.

Mr. MARKEY. My staff will come up and point out to you where I am testifying from and I will continue with my testimony.

Dr. Lowell Wood, who directs the key research team at the Livermore Lab that is responsible for the X-ray laser program is even more blunt in his rewriting of the President's goal.

According to Dr. Wood, "for the near term, through the end of the century at least . . . the nature of the available technological options will be such that nuclear energy will play a very central role in strategic defense."

Wood speculates that, "It may be the case that for a substantial period of time, that the most effective means of defending oneself from a strategic attack which is after all a nuclear attack, will involve very substantial elements, indeed maybe central elements which are nuclear energized in their nature."

That is Lowell Wood.

The question we must ask is this: Is Star Wars really non-nuclear as the President and Secretary Weinberger claim, or are their statements just a public relations facade for a program that has a very substantial and growing nuclear component?

If Star Wars basically is non-nuclear and we are just researching the X-ray laser because we are worried the Soviets might develop one, why aren't we willing to conclude a treaty that would eliminate this and many other potential threats to U.S. security?
If Star Wars is nuclear, we need to have a more honest national debate on this topic. When we debate SDI, we must decide whether the American people really want Star Wars systems that might require stationing hydrogen bombs in outer space.

We need to decide whether our security is enhanced by deploying pop-up X-ray laser systems that would have to be fired out of submarines minutes after initial warning of a Soviet missile launch, probably without an explicit presidential authorization.

We must decide whether we want to abrogate the Limited Test Ban Treaty by testing X-ray lasers in outer space, whether we want to break out of the Outer Space Treaty by deploying X-ray lasers in space, or whether we want to violate the ABM Treaty by testing or deploying X-ray lasers on submarines. We must ask if we really want to embark on a race to deploy X-ray lasers as ASATs.

Most importantly, we must weigh the benefits of turning towards technological solutions to our problems against the risks the new technologies create, and the possibilities offered by political solutions—by negotiations.

Madam Chairman, I had an opportunity to sit in on the committee's hearings on the X-ray laser program earlier this year chaired by the gentleman from New York, and I have been out to the Livermore Lab to talk to the people that manage this program. I have not yet heard a convincing justification for an acceleration of funding for nuclear tests to support the X-ray laser program.

In addition, I would suggest that the results of the research and testing efforts conducted to date indicates that we are light years from having an X-ray laser device that could go into engineering development, let alone production. There are simply too many uncertainties that remain to be resolved.

I would suggest that this panel and the full Procurement Subcommittee carefully weigh the advisability of adding the X-ray laser and other Nuclear Star Wars weapons to the long list of nuclear weapons it has supported over the years. If the main reason we are funding Nuclear Star Wars programs is as a threat assessment, I would strongly recommend that the committee consider the benefits of the U.S. signing a Comprehensive Test Ban Treaty to eliminate the threat.

If we are, on the other hand, embarking on a program to test, develop, and someday deploy Nuclear Star Wars weapons, then we must consider the risks—vast expenditures on programs of unproven technical merit that may well end up undercutting our security and further fueling the arms race.

Now, Madam Chairman, with your permission, I would like to turn to the nuclear freeze legislation as well and to give my summary statement of my views on this issue as well as you requested.

Mr. STRATTON. Madam Chairman, wouldn't it be better if we took these points one by one? The gentleman reads very rapidly and—

Mrs. BYRON. I think we will let him finish his testimony and go back.

Mr. STRATTON. We will have forgotten what has been contained—
Mr. Markey. The gentleman from New York is unfortunately understating his remarkable ability to retain voluminous amounts of information.

Mr. Stratton. The fact of the matter is that there are two very different problems involved, one in this highly technical discussion that was just made and the other is our long-time friend of the Comprehensive Test Ban Treaty of which the distinguished chairman of the panel is well aware, and I think to try to get the two mixed up—

Mrs. Byron. How much testimony do you have—

Mr. Markey. I have 5 or 6 minutes more of testimony. I would appreciate if I could get to my second statement as well.

Mrs. Byron. The second statement that I have I find 20 pages.

Mr. Markey. It is considerably edited in the form which will be presented to the subcommittee. You have the unexpurgated version of it.

Mrs. Byron. Go ahead. If you can put it—

Mr. Markey. It will be done much more concisely.

Madam Chairman, thank you for your understanding.

Consistent with the purpose of the special panel, my testimony today will be directed toward the major policy issues posed by H.R. 3100 rather than the implications of particular wording in the bill. Such a detailed discussion is more appropriately conducted in forums which are empowered to amend H.R. 3100.

In a path-breaking legislative undertaking of this magnitude, there are doubtless many refinements and improvements which could be made, but a debate over technical details should not be allowed to make the real views of those who oppose the main thrust of this legislation because they attach a positive value to continuation of the nuclear arms competition with the Soviet Union.

The relatively complex, interlocking provisions of H.R. 3100 may be summarized as follows:

The bill expresses the sense of Congress that the President should begin negotiations on a comprehensive freeze treaty and communicate to the Soviet Union our intention to engage in a bilateral halt in the testing, deployment, and production of nuclear weapons systems.

It expresses the sense of Congress that the President should pursue steady percentage annual reductions in nuclear arsenals, and that a comprehensive freeze contributes to the goal of mutual stabilizing reductions.

Thirty days after enactment, no funds may be spent for the purpose of testing and deploying nuclear delivery systems with ranges exceeding 600 kilometers; testing and deploying nuclear warheads and bombs; and testing ASAT and ABM weapons against targets in space.

This moratorium is conditioned on receipt within 30 days of an explicit Soviet indication of willingness to undertake reciprocal action.

Beginning 1 year after the date of enactment of the bill, no funds may be spent to operate facilities for production of plutonium and highly-enriched uranium for use in nuclear weapons; production of fission and fusion components for nuclear weapons; final assembly
of nuclear weapons; final assembly of strategic bombers and nuclear missiles; manufacture of individual stages for nuclear missiles; and production of other components dedicated for nuclear weapon systems.

Continuation of this moratorium is conditioned on Soviet reciprocal action.

The Select Committees on Intelligence are directed to hold oversight hearings on verification of a comprehensive freeze and report their findings within 6 months regarding the adequacy of U.S. monitoring systems and agreed procedures for verification of the comprehensive freeze.

Within 9 months after enactment, the Director of the Arms Control and Disarmament Agency is directed to report to Congress on the preparation of an operational plan for implementation of the comprehensive freeze by the United States, including procedures for closure or conversion of facilities affected by the freeze, and retraining and re-employment of directly affected personnel.

At 6-month intervals following enactment of the initial testing and deployment moratorium, the President is directed to report to Congress on the extent of Soviet reciprocal restraint, verification uncertainties, and the status of comprehensive freeze negotiations.

If at any time the President finds that the Soviet Union has failed to fully reciprocate the restraint shown by the United States in conducting nuclear weapons activities under the moratoria initiated by this Act, or if he finds that continuation of the funding restrictions would cause significant and irreparable harm to the security of the United States, he may request removal of the funding restrictions in whole or in part. The Congress must act on a joint resolution granting the request within 30 days.

Finally, the bill permits modernization of launchers—including ballistic missile submarines—for existing missile types, improved hardening of fixed missile launchers, and safety-related modifications of bombers.

Some questions and answers about the implications of this bill are contained in an attachment to my prepared testimony, which also contains a plain language summary of the bill’s provisions.

Madam Chairman, I am not a specialist on the details of the verification process or the specific weapons that would fall inside or outside the categories of weapons activities constrained by the provisions of the bill.

It is for this reason that the bill calls for the executive branch to engage the Soviets in detailed freeze negotiations, and for detailed reports to be prepared by the cognizant House and Senate Intelligence Committees regarding the adequacy of current and potentially negotiated means of verification.

I would like to comment on the basic conceptual approach upon which H.R. 3100 is based.

Some of these insights are summarized in section 2 of the bill, "Findings."

Since becoming involved in the nuclear freeze issue some 5 years ago, it has been my experience that opponents of far-reaching efforts to end the arms race often commit the error of subtly transforming questions of political possibility and strategic desirability into questions of technical feasibility.
In fact, this is a common practice of Administration and National Laboratory witnesses who have appeared in recent months before this panel. Highly subjective personal and institutional proclivities are disguised and presented as ostensibly neutral technical judgments. Much of the so-called "expert" commentary on the freeze has suffered from this deficiency.

Consider the question of comprehensive freeze verification. Despite seemingly authoritative judgments, from such officials as Defense Secretary Weinberger and Assistant Secretary Richard Perle, that a comprehensive freeze would be "unverifiable," it is well understood among seasoned intelligence professionals that one simply cannot make meaningful judgments about the "verifiability" of a freeze without first specifying: the Soviet activity being monitored; the particular freeze constraint being applied; the combination of monitoring systems, cooperative measures, and on-site inspections which can be brought to bear on the problem; the time period over which monitoring will occur; and the level of monitoring confidence required to support a determination that verification is "adequate" to provide timely warning of violations which could potentially damage our national security.

What has been accomplished so far in the ABM, SALT, test ban and nuclear safeguards negotiations supports the presumption that from the technical perspective, more far-reaching arms control is indeed achievable.

Hence, I do not believe that these technical issues—which appear quite manageable given a political willingness to develop the necessary data and analyses—are really what is at the root of the present administration's hostile attitude toward the freeze, an attitude that apparently is shared by some members of this special panel.

H.R. 3100 is based on the presumption that the American people and their elected representatives have demonstrated their desire in recent years to get off the treadmill of the traditional arms control process. I believe this process can be fairly characterized as one which seeks partial limitations on certain categories of nuclear weaponry at the price of legitimizing an interactive, self-propelled contest in all aspects of nuclear weapons-related technology.

H.R. 3100, on the other hand, seeks to forge an arms control dynamic that would permit new or additional nuclear weapons systems to be built only if determined good-faith negotiating efforts failed to preclude them by agreement.

In my view—

Mr. STRATTON. Would the gentleman tell me what happens after he finished the bottom of page 2? I am lost in his detailed argument.

Mr. MARKEY. I am now on page 4. I am again going through an abbreviated version of the more detailed testimony.

Mr. STRATTON. That means that we can't follow what the gentleman is saying.

Mr. MARKEY. I would beg the indulgence of the gentleman to adjust his cerebral mechanism to an auditory mode for a brief period of time at which time I will have concluded my testimony.

Mr. STRATTON. I don't think there is an auditory requirement in the House committee negotiations. The witnesses are supposed to
have written papers before the subcommittee before we get an opportunity to question the witnesses and to have you reading one page and skipping three or four is certainly not in accordance with the regulations, Madam Chairman.

Mr. Markey. If I might interject, this is not a formal subcommittee.

Mr. Mavroules. Madam Chairman, may I respond before the witness continues here.

It is absolutely a course of action that we have taken at every hearing that witnesses come before us, they capsulize, they monitor and then we accept their entire testimony in total before the committee.

Mrs. Byron. Mr. Markey's entire statement has been submitted for the record. The one question that I have, your summary is on page 4 of the 20 pages segment; is that correct?

Mr. Markey. I would like to, if you could indulge me just an additional minute and a half, I will summarize.

Over the last 25 years, we have tried and failed, in Paul Warnke's memorable image, to get the giant Soviet and American apes to eat the same balanced diet and run at the same speed on their nuclear treadmills.

Moreover, President Reagan's strategy of heating up the technological arms race has failed to impress Soviet leaders with the need for especially deep reductions on their side.

The Russians obviously refuse to be whipsawed into making unilateral concessions, and we are no closer to a major arms reduction agreement today than we were in the spring of 1979, when President Carter and Chairman Brezhnev signed the Joint Statement of Principles and Basic Guidelines for Subsequent Negotiations calling for "significant and substantial reductions in the numbers of strategic offensive arms."

I would point out, incidentally, that this document was signed 4 years before President Reagan supposedly stimulated Soviet appreciation for deep reductions by announcing the SDI. Reagan's arms control strategy has been an expensive flop, as many freeze advocates predicted at the outset it would be.

In fact, the only substantive achievement in arms control in the last 6 years has come not from the administration, but from the Congress, which has effected a de facto mutual moratorium on ASAT weapon testing against a target in space.

I would like to conclude my testimony today by offering this special panel some observations regarding the caliber of the testimony it has received during its review of arms control and disarmament activities in the 99th Congress.

Among the more unfortunate aspects of these hearings was the purely ad hominem attack launched against me and certain other Members of Congress who support meaningful arms control by Assistant Secretary of Defense Richard Perle.

Aside from the vituperative personal tone and ugly insinuations that members of Congress are doing the work of the KGB, Mr. Perle's testimony consisted entirely of unsupported assertions concerning the alleged inadequacy of U.S. verification capabilities and the propensity of the Soviet Union to cheat.
It reflects poorly on the credibility of this special panel's efforts that this ill-informed testimony was received by the panel without any serious questioning or critical comment.

In examining the record, I find that this is the general pattern for all the administration and national laboratory witnesses who come before this panel. Their assertions are uncritically accepted without any attempt to correct for the obvious element of career, ideological, and institutional bias involved in their testimony.

An outside witness, however—Dr. Lynn Sykes of Columbia University—who supports a comprehensive test ban, was subjected to a detailed technical line of questioning by a professional staff member.

I am not suggesting that Dr. Sykes should not have been questioned in this fashion. I do suggest that the testimony of witnesses from the nuclear weapons establishment should receive the same careful scrutiny.

Let me give you some examples of what the panel missed.

While Mr. Perle denounced H.R. 3100 as "silly," he did not document a single substantive objection to it.

The pressing "national security" requirement for continuing to run the nuclear arms race may be self-evident to Mr. Perle, but it clearly is not to a majority of the American people who support a comprehensive nuclear freeze.

To my knowledge, the administration has yet to demonstrate that there is anything seriously wrong with this bill. So far, the objections have been long on rhetoric—mostly vague mumbo-jumbo about the "requirements of deterrence" and short on facts and analysis.

Satiated with red-baiting, Mr. Perle then proceeded to misrepresent the facts on a number of arms control questions. For example, Mr. Perle testified there is "substantial evidence that the Soviets are violating" the unratified Threshold Test Ban Treaty without also informing the panel that the entire matter of yield estimation was at that very moment under interagency review with an emerging consensus that U.S. estimates of Soviet test yields should be substantially revised—downwards. This change has now been implemented.

Mr. Perle then went on to misrepresent the nature—

Mrs. Byron. Mr. Markey, I believe you were requested by this panel to come to discuss your two bills, not another individual's testimony, so in the light of a time constraint, we have another witness waiting to testify.

Mr. Markey. I will suspend at this point except to point out that Mr. Perle's testimony was—

Mrs. Byron. I think you made your point on Mr. Perle, Mr. Markey.

Mr. Markey. He was precisely incorrect on almost every major point with regard to the details of the nuclear freeze legislation and the intentions of those who are supporters of it.

Mrs. Byron. Thank you, Mr. Markey.

[The statement of Mr. Markey follows:]
SUMMARY STATEMENT OF REP. EDWARD J. MARKEY
IN SUPPORT OF H.R. 3100

Madam Chairman, thank you for the invitation to testify before you today in support of H.R. 3100, the "Comprehensive Nuclear Weapons Freeze and Arms Reduction Act of 1985." I would like to state for the record that this Bill was introduced in the House of Representatives on July 30, 1985, and that it now has 105 cosponsors.

I would also like the record to reflect my understanding that this Special Panel on Arms Control and Disarmament of the Procurement and Military Nuclear Systems Subcommittee is a policy oversight panel. Legislative authority to mark-up H.R. 3100 resides with the full Procurement Subcommittee, the Committee on Armed Services, and the Committee on Foreign Affairs.

Consistent with the purpose of this Special Panel, my testimony today will be directed toward the major policy issues posed by H.R. 3100 rather than the implications of particular wording in the Bill. Such a detailed discussion is more appropriately conducted in forums which are empowered to amend H.R. 3100.

In a pathbreaking legislative undertaking of this magnitude, there are doubtless many refinements and improvements which could be made. But a debate over technical details should not be allowed to mask the real views of those who oppose the main thrust of this legislation because they attach a positive value to continuation of the nuclear arms competition with the Soviet Union.

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- production of plutonium and highly-enriched uranium for use in nuclear weapons;
- production of fission and fusion components for nuclear weapons;
- final assembly of nuclear weapons;
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- and production of other components dedicated for nuclear weapon systems.

Continuation of this moratorium is conditioned on Soviet reciprocal action.

The Select Committees on Intelligence are directed to hold oversight hearings on verification of a comprehensive freeze and report their findings within six months regarding the adequacy of U.S. monitoring systems and agreed procedures for verification of the comprehensive freeze.

Within nine months after enactment, the Director of the Arms Control and Disarmament Agency is directed to report to Congress on the preparation of an operational plan for implementation of the comprehensive freeze by the United States including procedures for closure or conversion of facilities affected by the freeze, and retraining and re-employment of directly affected personnel.

At six month intervals following enactment of the initial testing and deployment moratorium, the President is directed to report to Congress on the extent of Soviet reciprocal restraint, verification uncertainties, and the status of comprehensive freeze negotiations.

If at any time the President finds that the Soviet Union has failed to fully reciprocate the restraint shown by the United States in conducting nuclear weapons activities under the moratoria initiated by this Act, or if he finds that continuation of the funding restrictions would cause significant and irreparable harm to the security of the United States, he may request removal of the funding restrictions, in whole or in part. The Congress must act on a joint resolution granting the request within 30 days.

Finally, the Bill permits modernization of launchers -- including ballistic missile submarines -- for existing missile types, improved hardening of fixed missile launchers, and safety-related modifications of bombers.
Some "Questions and Answers" about the implications of this Bill are contained in an attachment to my prepared testimony, which also contains a plain language summary of the bill’s provisions.

Madam Chairman, I am not a specialist on the details of the verification process or the specific weapons that would fall inside or outside the categories of weapons activities constrained by the provisions of the Bill. It is for this reason that the Bill calls for the Executive Branch to engage the Soviets in detailed freeze negotiations, and for detailed reports to be prepared by the cognizant House and Senate Intelligence Committees regarding the adequacy of current and potentially negotiated means of verification.

I would like to comment on the basic conceptual approach upon which H.R. 3100 is based. Some of these insights are summarized in Section 2 of the Bill -- "Findings."

Since becoming involved in the nuclear freeze issue some five years ago, it has been my experience that opponents of far-reaching efforts to end the arms race often commit the error of subtly transforming questions of political possibility and strategic desirability into questions of technical feasibility. In fact, this a common practice of Administration and National Laboratory witnesses who have appeared in recent months before this panel. Highly subjective personal and institutional proclivities are disguised and presented as ostensibly neutral technical judgements. Much of the so-called "expert" commentary on the Freeze has suffered from this deficiency.

Consider the question of comprehensive freeze verification. Despite seemingly authoritative judgements, from such officials as Defense Secretary Weinberger and Assistant Secretary Richard Perle, that a comprehensive freeze would be "unverifiable," it is well understood among seasoned intelligence professionals that one simply can not make meaningful judgements about the "verifiability" of a freeze without first specifying:

-- the Soviet activity being monitored;
-- the particular freeze constraint being applied;
-- the combination of monitoring systems, cooperative measures, and on-site inspections which can be brought to bear on the problem;
-- the time period over which monitoring will occur;
-- and the level of monitoring confidence required to support a determination that verification is "adequate" to provide timely warning of violations which could potentially damage our national security.
What has been accomplished so far in the ABM, SALT, test ban and nuclear safeguards negotiations supports the presumption that from the technical perspective, more far-reaching arms control is indeed achievable.

Hence I do not believe that these technical issues -- which appear quite manageable given a political willingness to develop the necessary data and analyses -- are really what is at the root of the present Administration's hostile attitude toward the freeze, an attitude that apparently is shared by some members of this Special Panel.

H.R. 3100 is based on the presumption that the American people and their elected Representatives have demonstrated their desire in recent years to get off the treadmill of the traditional arms control process. I believe this process can be fairly characterized as one which seeks partial limitations on certain categories of nuclear weaponry at the price of legitimizing an interactive, self-propelled contest in all aspects of nuclear weapons-related technology.

H.R. 3100, on the other hand, seeks to forge an arms control dynamic that would permit new or additional nuclear weapons systems to be built only if determined good-faith negotiating efforts failed to preclude them by agreement.

In my view, the appropriate question to ask is not, "Why do the sponsors of H.R. 3100 think they can accomplish so much," but rather, "Why have the President and the Congress been willing to settle for so little?"

I have some thoughts on the latter question which I would like to share with you. Increasingly, in my view, the dominant conventional wisdom in arms control is becoming the tangled product of a highly politicized live-and-let-live arrangement with the institutional forces of our vast national security apparatus.

I would characterize this bargain as follows: Those who support orthodox approaches to arms control have sought "stability" in the strategic military relationship between the superpowers by establishing limitations on strategic offensive and defensive weapons, both as a means of restraining future demand for such weapons -- what we call "arms race stability" -- and as a means of diminishing pressures and nominal "incentives" for swift use of these weapons in a crisis -- so called "crisis stability."

However, the price paid to induce the nuclear weapons establishment to entertain such reasonable notions has been Congressional acquiescence in the very nuclear doctrines and military "requirements" which are driving the arms race forward, thereby guaranteeing that arms control has become an exercise in "managing" rather than ending the nuclear arms race.
The demands of a military establishment built around the strategy of nuclear "escalation dominance" across the "full spectrum of conflict" cannot easily be reconciled with an arms control process which presumes a willingness to concede "essential equivalence" at the bargaining table.

In other words, how can the United States credibly threaten to dominate the USSR on the nuclear battlefield while publically codifying our acceptance of a superpower nuclear stalemate in balanced nuclear arms agreements. We need to ask ourselves how many promising voyages in arms control have run aground on this fundamental contradiction in our policy.

Sustaining the credibility of a national security policy that seeks to persuade our adversaries that we would start a nuclear war to defend our national interests is no cheap or easy task. It requires continuing modernization of U.S. nuclear capability, particularly -- as the national lab directors never fail to emphasize -- improvements in accuracy, hardening against nuclear effects, and reduction of "collateral damage."

Its proponents believe that such "modernization" increases the range of options for employing these weapons and hence, their nominal military utility as a "warfighting" deterrent threat. This the logic of the national security policy which the Procurement and Military Nuclear Systems Subcommittee has unswervingly endorsed.

It is a strategy for deterrence based on generating -- through the commitment of vast financial resources and technical expertise -- a convincing impression of having willfully and systematically deceived ourselves into believing that nuclear weapons can be flexibly employed to attain limited military and political goals.

Given the existence of a nuclear-armed Soviet adversary willing to counter our every move up the ladder of nuclear escalation, the main vehicle for expression of this policy has become a perpetual contest between vast military establishments -- massive bureaucracies whose assessments of the threat each poses to the other have become permeated with self-interest. Over the years a vicious circle has been established in which successful "threat inflation" convincingly translates to "institutional self-preservation."

It is hard to escape the conclusion that the whole enterprise of seeking a "stable" balance between the two superpowers in the context of an ongoing technological arms race is conceptually bankrupt. Sometimes it seems we no longer know what we mean when we talk amongst ourselves, much less when we try to address the American people, our allies, or the Russians.
For example, what are we trying to accomplish when we say an arms control agreement should increase "stability." What kind of stability are we talking about, and for whose benefit?

For years, DOD and DOE officials have trooped before this and other Committees and tirelessly intoned that it is "destabilizing" for the Soviet Union to possess the capability for a "successful" paper attack on our ICBM force, but somehow "stabilizing" for us to deploy the capability to attack their silos, because it "encourages" them to move to a more "survivable" basing posture.

But isn't this the same survivable basing posture we've been searching for over the last decade and still can't find ourselves? And didn't the Soviets just finish building what they thought was a survivable basing mode for their ICBMs, only to find Secretary Weinberger and Richard Perle complaining that Soviet hardened silos and command centers are "destabilizing" because they provide a "sanctuary" for their ICBM force and reveal a pernicious Soviet intent to survive and win a nuclear war.

Moreover, the easiest and cheapest response to vulnerability on either side -- our current de facto policy of Launch-Under-Attack -- is considered "destabilizing" by some because it places a hair trigger on nuclear war, and "stabilizing" by others because it convincingly reduces whatever "incentives" might exist for launching a surprise attack.

"Well," say the strategic gurus, "if the Russians feel threatened by our MX and Trident II, they should move the bulk of their nuclear warheads to a survivable undersea basing mode, as we have." But why should a nation with a huge land area, inferior submarine reactor technology, and relatively restricted access to the open ocean choose to rely on missile-carrying submarines, especially when we are spending billions of dollars annually on strategic anti-submarine warfare to make these submarines vulnerable.

To make matters worse, the Chief of Naval Operations has recently announced that he is prepared to begin destroying these submarines during the conventional stages of a conflict with the Soviet Union -- hardly a prescription for nuclear crisis stability!

Who's on first in this contorted debate? Granted, it is possible -- but by no means certain -- that deterrence of the resort to nuclear weapons will continue to be maintained under the status quo conditions of a technologically dynamic and economically burdensome superpower arms race.

My contention is that a nuclear freeze will provide, at far less cost, the same measure of deterrence as our present posture affords against cold-blooded, deliberate initiation of nuclear conflict.
At the same time it will reduce the tensions and control the technologies which could spark a nuclear war by accident or crisis miscalculation.

Within the strategic context of H.R. 3100, deterrence of conventional war would be accomplished primarily through conventional means. I say primarily conventional means because the very existence of nuclear weapons in the arsenals of the superpowers will always provide some damper on the ignition of direct conventional combat between them -- the so-called "existential deterrent" effect.

Unfortunately, by seeking to extract maximum benefit from the deterrent value of nuclear weapons at every level of confrontation, our present national security posture is not "fail-safe" but rather "fail-deadly." In fact, the entire global security system of rival East-West nuclear alliances is subject to catastrophic failure originating at any point in their vast global military infrastructures.

Regrettably, current nuclear forces and doctrines tend to maximize rather than minimize the probability that any major break-down in East-West deterrence will escalate to a major catastrophe. In my view, this represents the polar opposite of what should constitute proper defense planning -- namely, assuring the preservation of the lives, property and democratic values of the American people and their allies by maintaining a truly effective defensive capability without reliance on the first-use of nuclear weapons.

To those who say that such a strategy is impossible given the scale of opposing Soviet conventional forces, I say bunk. If we can afford to waste $26 billion exploring strategically worthless anti-missile defenses, and $50 billion on two vulnerable and superfluous carrier battle groups, we can surely spend the comparatively modest sums required to develop and deploy credible anti-tank missile forces to defend the NATO Alliance. In fact, I suggest we simply take the funds from the misguided Reagan initiatives I've just mentioned.

I would pose this question to my colleagues on this Special Panel -- don't you find it at least a little bit ironic that, year-after-year, the Pentagon never quite manages to rectify the one conventional force deficiency most often cited as the primary justification for maintaining integrated conventional-nuclear forces with a first-use, nuclear escalation doctrine?

And isn't this so-called "requirement" for a "credible" nuclear war-fighting capability the one most often cited to justify the tens of billions of dollars we are spending over the course of this decade for "nuclear modernization?"
In view of the fiscal and conceptual morass into which the present Administration has dragged our national security planning, I believe that there is a compelling need for the Congress to help redefine the nature of the problem.

Fortunately, the nationwide Freeze movement of recent years has brought about a significant change in the political context for negotiated solutions to the problem of the nuclear arms race. People are ready for a change.

Conceptually, the freeze approach to arms control has a number of inherent advantages over the present orthodoxy.

-- The Freeze takes direct account of the very large component of military-industrial-bureaucratic self-perpetuation involved in the nuclear weapons programs on both sides.

-- It does not rely on the national security establishment to resolve the paralyzing contradiction alluded to earlier between "escalation dominance" and "essential equivalence."

-- And finally, in place of the intellectual quagmire surrounding competing concepts of "stability," the freeze advances a number of precepts more in accord with current realities:

  o First, that the nuclear arms race itself is a prime source of instability and tension in the relations between the two superpowers;
  o Second, that new or improved nuclear weapons are more likely to be the source of new threat projections and fears of instability than the source of improvements to strategic stability.
  o Third, that the military advantage to be gained from the clandestine development or improvement of nuclear weapons under a freeze is small in comparison to the destructive potential likely to survive a surprise attack on both sides, suggesting that undetected violations of the freeze will not alter the perception or the reality of nuclear deterrence itself.

I might add that certain modernization improvements, such as De-MIRVing of the land-based missile forces with single-warhead missiles, are conceptually appealing, but would require an arms control context radically improved over the one we have today in order to produce a "stabilizing" outcome.

We should never forget that we shall have to continue monitoring the Soviet arsenal with or without the conditional freeze which would be implemented following passage of H.R. 3100.

The real questions regarding verification of such an agreement are the following:
(1) Is the range of potentially threatening Soviet force developments greater or smaller with a comprehensive freeze or without it; and

(2) Can the United States detect -- with sufficient warning to undertake a response -- those Soviet actions which have the potential, if left uncountered, to undermine perceptions of mutual nuclear deterrence.

I believe the range of potentially threatening Soviet force developments under the freeze in H.R. 3100 would be drastically limited.

Given current and foreseeable improvements in verification capabilities, I can think of no credible cheating scenario, resulting in a significant change in the nuclear balance, for which we would fail to obtain adequate advance warning from our National Technical Means of verification, augmented by IAEA safeguards and bilateral on-site monitoring arrangements.

In summary, while certain individual provisions of a freeze agreement might be monitored in the short term with only a moderate degree of confidence, the vastly increased scope of the freeze generates increased opportunities for monitoring Soviet compliance, poses multiple obstacles to successful Soviet cheating that could increase deployed military capability, and generate multiple chances for detecting Soviet violations.

Thus the overall chance of detecting Soviet cheating on the agreement could be as high or higher for the freeze than for more limited agreements.

And under the verification provisions of a freeze agreement, we could seek clarification -- including on-site inspection -- of a far wider range of Soviet military activities than we can at present, or than we could under the President's START proposal.

These observations add up to the conclusion that the main task of arms control negotiations at the present time should not be to rework the strategic balance through a combination of selective nuclear reductions, broad-based modernization, and the addition of marginally effective strategic defenses, -- the Reagan program -- but rather to coordinate a halt in the offensive nuclear weapons programs of the two sides.

Over the last twenty-five years we have tried and failed, in Paul Warnke's memorable image, to get the giant Soviet and American apes to eat the same balanced diet and run at the same speed on their nuclear treadmills.

Moreover, President Reagan's strategy of heating up the technological arms race has failed to impress Soviet leaders with the need for especially deep reductions on their side.
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I would like to conclude my testimony today by offering this Special Panel some observations regarding the caliber of the testimony it has received during its review of arms control and disarmament activities in the the 99th Congress.

Among the more unfortunate aspects of these hearings was the purely ad hominem attack launched against me and certain other members of Congress who support meaningful arms control by Assistant Secretary of Defense Richard Perle. Aside from the vituperative personal tone and ugly insinuations that members of Congress are doing the work of the KGB, Mr. Perle's testimony consisted entirely of unsupported assertions concerning the alleged inadequacy of U.S. verification capabilities and the propensity of the Soviet Union to cheat.

It reflects poorly on the credibility of this Special Panel's efforts that this ill-informed testimony was received by the Panel without any serious questioning or critical comment. In examining the record, I find that this is the general pattern for all the Administration and national laboratory witnesses who come before this Panel. Their assertions are uncritically accepted without any attempt to correct for the obvious element of career, ideological, and institutional bias involved in their testimony.

An outside witness, however -- Dr. Lynn Sykes of Columbia University -- who supports a comprehensive test ban, was subjected to a detailed technical line of questioning by a professional staff member. I am not suggesting that Dr. Sykes should not have been questioned in this fashion. I do suggest that the testimony of witnesses from the nuclear weapons establishment should receive the same careful scrutiny.

Let me give you some examples of what the Panel missed. While Mr. Perle denounced H.R. 3100 as "silly," he did not document a single substantive objection to it.
The pressing "national security" requirement for continuing to run the nuclear arms race may be self-evident to Mr. Perle, but it clearly is not to a majority of the American people, who support a comprehensive nuclear freeze. To my knowledge, the Administration has yet to demonstrate that there is anything seriously wrong with this Bill. So far, the objections have been long on rhetoric -- mostly vague mumbo-jumbo about the "requirements of deterrence" -- and short on facts and analysis.

Satiated with red-baiting, Mr. Perle then proceeded to misrepresent the facts on a number of arms control questions. For example, Mr. Perle testified there is "substantial evidence that the Soviets are violating" the unratified Threshold Test Ban Treaty without also informing the Panel that the entire matter of yield estimation was at that very moment under interagency review with an emerging consensus that U.S. estimates of Soviet test yields should be substantially revised -- downwards. This change has now been implemented.

Mr. Perle then went on to misrepresent the nature of Soviet and American disagreement over development of strategic defenses. He suggested that while the ABM Treaty prohibits "the deployment of strategic defenses beyond very limited defenses at a single location, .... we simply don't know how to verify limitations on research and development of the kind that we believe the Soviets have in mind....so I would strongly counsel against the risks involved in limitations on research and development."

Mr. Perle failed to clarify for the Panel that the ABM Treaty includes extensive prohibitions on "development" of ABM systems -- a prohibition which has always been understood by both parties to take effect at the field-testing stage of space-, air-, sea-, and mobile land-based components of ABM systems.

Mr. Perle knows perfectly well that this has been the mutually agreed understanding of the Treaty's constraints since the day it was signed in 1972, and that the Soviet Union is seeking to cap the U.S. SDI effort along these same lines. It is the Reagan Administration which has suddenly discovered a novel interpretation of the ABM Treaty which would have the effect of gutting the Treaty's constraints on ABM "development," and it is officials like Mr. Perle who are doing everything they can to foster an arms control deadlock over SDI in Geneva.

A more balanced hearing process would have probed Mr. Perle more deeply on these matters, and perhaps revealed the superficial and often misleading character of many of his supposedly authoritative observations.

Another point which the Panel could have explored more thoroughly was the supposed "lessons" to be learned from the experience of the 1958-61 nuclear test moratorium.
We are told that mutually agreed moratoria will inevitably result in a massive Soviet "breakout" down the road that will leave the U.S. nuclear weapons program scrambling to catch up.

First of all, neither the Soviet Union nor the United States "violated" or "broke-out" of a mutual moratorium on nuclear tests, because no moratorium was ever agreed to by either side. The analogy with the mutual moratorium on testing included in H.R. 3100 is therefore inexact, and there are additional factors which make it largely irrelevant to the current debate. What actually happened?

On August 22, 1958, Eisenhower announced that as a sign of good faith, the United States would cease testing for one year beginning October 31, 1958, the date for the opening of test-ban negotiations in Geneva, if the Soviet Union exercised comparable restraint.

While agreeing to the negotiations, Krushchev never made a reciprocal pledge to suspend testing on the suggested date. The United States began Hardtack II, a hurried series of 37 atmospheric and underground explosions at Yucca Flat, four of which were conducted on October 30, one day before the proposed U.S. moratorium was to go into effect.

The Soviets responded with their own last minute series of 17 tests which lasted until November 3, three days beyond Eisenhower's specified deadline. He announced on November 7 that the Soviet action "relieves the United States from any obligation under its offer to suspend nuclear weapons tests."

However, with both sides feeling the pressure of a mounting world outcry against atmospheric tests, and with negotiations underway in Geneva, the United States and the Soviet Union each refrained from further testing. But neither side had made any explicit mutual commitment to do so.

As the Geneva talks bogged down, pressures mounted on Eisenhower to resume testing. On December 31, 1959, he announced that the United States would no longer be bound by its previous moratorium, be he nevertheless refrained from nuclear testing for the rest of his term.

During his first year in office Kennedy continued the moratorium but committed the United States to a vast nuclear buildup of 1000 land-based Minuteman missiles within seven years. This buildup was launched despite the disappearance of the election-year missile gap which justified it. Also, relations soon became very tense in the summer of 1961 over Berlin.

On August 31, following the nominal provocation of continued French nuclear testing, the Soviet Union announced its intention to resume testing in the atmosphere, and a massive test series began the very next day. The United States resumed testing two weeks later.
The historical record clearly shows that a mutually agreed moratorium was never arrived at during the period 1958-61, and that neither side broke any "commitment" made to the other.

The U.S. suspension of tests was unilateral and purely voluntary, and the Soviet Union likewise voluntarily suspended its own tests until its own shifting assessment of military and political realities dictated a resumption of testing.

Today we have the National Technical Means to monitor possible Soviet preparations for breakout, such as the drilling of so-called "inventory" test holes and excavation of underground tunnels and chambers for nuclear effects testing. Both the likelihood and the possible consequences of our being "surprised" by a sudden massive Soviet test program are much reduced from what they were in 1961, when photo-reconnaissance satellites were just beginning to orbit over the Soviet Union and ICBMs were just beginning to enter the arsenals on both sides.

Finally, we are told that there is a significant lesson to be learned about the wisdom of a CTB from the fact that inadequately tested weapons entering the stockpile during the 1958-61 moratorium experienced reliability problems. This experience says more about the technical arrogance of the weapons designers at the time than it does about the present merits of a CTB. No one that I'm aware of is suggesting that insufficiently proven weapon designs be added to the stockpile during a CTB.

Moreover, the laboratories have had the intervening quarter century -- in which pursuit of a CTB was declared national policy -- to produce dependable, predictable warhead designs with long shelf-lives that could be remanufactured with assurance of their continued reliability.

The fact that laboratory officials now claim that they have chosen not to design such weapons -- but instead to increase the susceptibility of modern warhead designs to the allegedly unpredictable consequences of aging -- should rightly be the object of a national scandal.

If we are to believe this testimony, then we are faced with the most massive case of technical insubordination and bureaucratic subversion of established national policy in the history of the Republic. The exact nature of the trade-off which laboratory officials claim they have been forced to make between "military requirements" and "warhead endurance" merits a detailed investigation by the cognizant bodies of the Congress.

Why would any military commander knowingly request weapons which are said to be inherently less reliable over time than comparable Soviet designs?. And why would this commander want weapons whose suspect reliability can not in any case be demonstrated, in the statistical sense, by occasional explosive testing?
These contradictions in the Laboratory's ever modernizing arsenal of excuses for resisting a test ban led to submission of the following statement "to further clarify" the testimony of Dr. Roger E. Batzel, Director of the Lawrence Livermore National Laboratory:

"While these weapons were designed under the assumption that nuclear testing would continue, so that if any problem ever arose in the stockpile, a nuclear test could be performed to help certify that the weapon would continue to work as it was designed to, they were designed to be as conservative as possible within the constraints of meeting the military requirements to hedge against the possibility of a Comprehensive Test Ban Treaty (CTBT)."

This statement is convoluted, bureaucratic nonsense. If our existing nuclear weapons really were designed under the assumption that nuclear testing would continue, how could these same weapons designs also represent a meaningful hedge against the possibility of a comprehensive test ban?

Moreover, in a letter to me dated January 21, 1986, Deputy Assistant Secretary of Defense Frank J. Gaffney claims that it was not until 1982 that "the DOD added warhead endurance to the military characteristics, stating the desirability of warheads with an inherent endurance obtained as a result of design considerations."

There are many more contradictions and inconsistencies which I could cite in the statements of government and laboratory officials on the CTB and U.S. nuclear weapons programs. I have attached some of this information in the form of Appendices to my prepared testimony, and I hope that this Panel will attempt to clarify some of the issues raised so that at long last we might have a more coherent and informed debate on the national security implications of H.R. 3100 and the Comprehensive Test Ban.
PREPARED STATEMENT

of

REPRESENTATIVE EDWARD J. MARKEY

before the

SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT

of the

PROCUREMENT AND MILITARY NUCLEAR SYSTEMS SUBCOMMITTEE

of the

COMMITTEE ON ARMED SERVICES

HOUSE OF REPRESENTATIVES

MAY 15, 1986
Madam Chairman. In addition to inviting me to speak on the nuclear freeze, you have also asked me to testify on behalf of H.R. 4542, a bill I have introduced to prohibit the development, explosive testing, or production of strategic defense systems or components incorporating nuclear explosive devices.

Since development and production of such systems is at least a decade away, the operational restriction of the bill is the prohibition on explosive testing of Nuclear Star Wars systems such as the X-ray laser. The bill is intended to permit the DOE National Weapons Laboratories to continue research and even non-explosive laboratory testing of SDI systems and components that incorporate nuclear devices.

The bill was drafted in this manner to make it consistent with existing limitations on Nuclear Star Wars weaponry, such as the Outer Space Treaty of 1967, which bans deployment of nuclear weapons in outer space, and the ABM Treaty of 1972, which bans the field testing or deployment of space-based, sea-based, air-based, or mobile land-based ABM systems or their components. It is also designed to be compatible with a Comprehensive Test Ban (CTB) Treaty, which would ban any test explosions of nuclear weapons.

Indeed, this bill complements a very important part of the overall nuclear freeze concept -- the effort to halt the explosive testing of all nuclear warheads.

As you know, the Administration opposes negotiating a test ban, and has been desperately seeking some public justification for its failure to halt nuclear weapons testing. It has become increasingly clear that neither verification nor the new argument against a CTB -- "reliability" testing -- present insurmountable obstacles to negotiation of a CTB. The real reason the Administration opposes a Comprehensive Test Ban Treaty is that it wants to keep on testing and deploying new nuclear weapons.

Chief among the new nuclear warhead technologies being pushed by the National Weapons Laboratories is the hydrogen-bomb pumped X-ray laser. This program essentially seeks to harness the X-rays emitted from the detonation of a hydrogen bomb, and direct this energy through space to destroy Soviet ballistic missiles in their boost or midcourse phase. More recently, there has been increasing talk of using X-ray lasers as an anti-satellite (ASAT) weapon to destroy Soviet Star Wars defenses.

Setting aside for the moment the questionable technical and military merits of this program, I believe that the American public has a right to get some answers to the following questions: why are we accelerating the Nuclear Star Wars budget, conducting a vigorous series of X-ray laser test explosions, and refusing to even negotiate for a Comprehensive Test Ban when the President is telling the American people that the SDI will be non-nuclear and that his goal is to eliminate nuclear weapons from the face of the earth? I do not agree with members of this panel who suggested in last year's hearings that this problem simply be finessed by "just saying its non-nuclear." We do, after all, have a responsibility to be truthful to the American people. Incanting the mantra that "SDI is non-nuclear" is not enough.

The truth is that Star Wars has a significant nuclear component. Indeed, there are people...
in the Pentagon, the Department of Energy, and the National Weapons Laboratories who see a nuclear SDI as the way to go.

Although the President and Defense Secretary Weinberger have on many occasions stated that Star Wars is designed to provide us with a non-nuclear defense against strategic ballistic missiles, the Department of Energy is planning to spend a total of $336 million dollars next year on nuclear driven directed energy programs such as the X-ray laser. Indeed, the Nuclear Star Wars budget for 1987 includes $231 million for the underground detonation of nuclear weapons. According to Energy Department figures, funding for Nuclear Star Wars is projected to increase by 124% over the $269.9 million provided in the 1986 budget. In contrast, the overall FY87 SDI budget request calls for a 74% increase over this year's funding level.

Between now and 1991, the Administration has indicated its desire to spend at least $4.5 billion on research, testing, and development of nuclear bomb-pumped X-ray lasers, a variety of other classified nuclear driven directed energy programs, and orbiting nuclear reactors. These are budget busting numbers that will increasingly turn the Department of Energy into an annex of the Pentagon.

According to the Department of Energy, this dramatic expansion in U.S. research on nuclear-driven directed energy weapons is not taking place because the U.S. wants to develop Star Wars weaponry. It is taking place because we want to provide ourselves with a "hedge" or "threat assessment" of possible Soviet efforts to develop an X-ray laser or other nuclear Star Wars weapons.

In a hearing in the Energy Conservation and Power Subcommittee, which I chair, Energy Secretary Herrington told me that (quote) "a lot of the increased spending in nuclear activities is as a threat analysis or as a threat assessment of what the Soviets are capable of doing in this particular area at this time." (unquote) He further explained that "we are doing nuclear research, but that is not with a goal to deploy, as the President has said, nuclear weapons in space. We are doing a threat assessment of what can be done with nuclear weapons in space..."

SDI program director Lt. General James Abrahamson has offered the same explanation for U.S. X-ray laser research efforts, stating that "we do know that the Soviets are working in many of these same areas and we must understand how far that particular technology can go and whether it can be used against us."

But if the purpose of X-ray laser research is to find out what the Russians are doing in this field and prevent them from developing and deploying nuclear SDI technologies, we should negotiate a Comprehensive Test Ban Treaty. Such a treaty would effectively prevent either side from testing X-ray lasers or any other defensive system which incorporated a nuclear explosive device. If we had a test ban to stop the Soviets from testing their X-ray lasers, there would be no Soviet X-ray laser threat for us to assess.

The Administration tries to discount the possibility of a negotiated solution to this problem by trying to scare people with a lot of unsupported paranoia about the Soviet X-ray laser threat. In response to a series of questions I asked on this subject, DOE has claimed that the Soviets may be ahead of us in X-Ray Lasers and that they "might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing."

I find it interesting that when they testify against a CTB, Energy Department witnesses complain that a test ban would "virtually halt" all X-ray laser research efforts, but when
they argue for a bigger X-ray laser budget, DOE speculates that the Russians might deploy an X-ray laser without further testing. They can't have it both ways.

Back in the 1950's there were some people in the Air Force and the Atomic Energy Commission who wanted to put nuclear reactors onboard our strategic bombers. To get funding from Congress, they put out all kinds of scare stories that the Soviets were on the verge of deploying a nuclear-powered bomber. It later turned out that the only flight a Soviet nuclear-powered bomber ever took was a quick trip across the screen of a Pentagon viewgraph.

I strongly suspect that the same thing is happening right now with this hyping of the Soviet X-ray laser threat. Pointing to the sudden dearth of Soviet journal articles on X-ray laser research and declaring that we have no evidence that the Russians aren't ahead of us does not establish the existence of a X-ray laser "gap." After having lived through fictitious missile gaps, and bomber gaps, and windows of vulnerability, I am reluctant to expend our nation's treasure and talent on a program whose primary justification is based on unsubstantiated claims about Soviet activities. I would hope that this Panel would share a similar skepticism.

While the people at the top are busily trying to scare us about what the Russians might be doing and convince us that the X-ray laser is just a harmless little program we are pursuing as a a technology hedge, the people in the weapons labs and the Pentagon are gung ho to develop and possible deploy Nuclear Star Wars weapons of our own. If we don't take action now, we may well end up committed to development and deployment of an X-ray laser that makes about as much technical and political sense as a nuclear-reactor powered bomber.

In fact, the X-ray laser's enthusiasts are already beginning to rewrite the President's goal in their explanations of what the President "really means" when he says Star Wars is non-nuclear. Last year, Assistant Secretary of Defense for Atomic Energy Dr. Richard L. Wagner, Jr. told the Procurement Subcommittee that (quote) "what the Department of Defense means by not wanting nuclear weapons in the near term is the old kind of nuclear weapons. But as a very thoroughly adopted part of SDI, we see immediate research requirements for nuclear-driven directed energy concepts." (unquote) Dr. Wagner explained that "DOD is eager to accept the research in these new types of nuclear-driven defensive systems even though they are nuclear."

Lawrence Livermore Lab Director Dr. Roger Batzel has expressed similar enthusiasm for these "new" types of nuclear weapons, declaring that "what the potential of these systems will turn out to be in terms of offense or defense is not clear at this juncture -- these areas are new. They are idea rich. And we have no reason to believe that we have more than scratched the surface with respect to the potential of these technologies."

Dr. Lowell Wood, who directs the key research team at the Livermore Lab that is responsible for the X-ray laser program is even more blunt in his rewriting of the President's goal. According to Dr. Wood, "for the near term, through the end of the century at least...the nature of the available technological options will be such that nuclear energy will play a very central role in strategic defense." Wood speculates that "It may be the case that for a substantial period of time, that the most effective means of defending oneself from a strategic attack, which is after all a nuclear attack, will involve very substantial elements, indeed maybe central elements which are nuclear energized in their nature."

The question we must ask is this: is Star Wars really non-nuclear as the President and
Secretary Weinberger claim, or are their statements just a public relations facade for a program that has a very substantial and growing nuclear component?

If Star Wars basically is non-nuclear, and we just researching the X-ray laser because we're worried the Soviets might develop one, why aren't we willing to conclude a treaty that would eliminate this and many other potential threats to U.S. security?

If Star Wars is nuclear, we need to have a more honest national debate on this topic. When we debate SDI, we must decide whether the American people really want Star Wars systems that might require stationing hydrogen bombs in outer space. We need to decide whether our security is enhanced by deploying pop-up X-ray laser systems that would have to be fired out of submarines minutes after initial warning of a Soviet missile launch, probably without an explicit Presidential authorization. We must decide whether we want to abrogate the Limited Test Ban Treaty by testing X-ray lasers in outer space, whether we want to break out of the Outer Space Treaty by deploying X-ray lasers in space, or whether we want to violate the ABM Treaty by testing or deploying X-ray lasers on submarines. We must ask if we really want to embark on a race to deploy X-ray lasers as ASATs.

Most importantly, we must weigh the benefits of turning towards technological solutions to our problems against the risks the new technologies create, and the possibilities offered by political solutions -- by negotiations.

Madame Chairman. I had an opportunity to sit in on the Committee's hearings on the X-ray laser program earlier this year, and I have been out to the Livermore Lab to talk to the people that manage this program. I have not yet heard a convincing justification for an acceleration of funding for nuclear tests to support the X-ray laser program. In addition, I would suggest that the results of the research and testing efforts conducted to date indicates that we are light years from having an X-ray laser device that could go into engineering development, let alone production. There are simply too many uncertainties that remain to be resolved.

I would suggest that this Panel and the full Procurement Subcommittee carefully weigh the advisability of adding the X-ray laser and other Nuclear Star Wars weapons to the long list of nuclear weapons it has supported over the years. If the main reason we are funding Nuclear Star Wars programs is as a threat assessment, I would strongly recommend that the Committee consider the benefits of the U.S. signing a Comprehensive Test Ban Treaty to eliminate the threat. If we are, on the other hand, embarking on a program to test, develop, and someday deploy Nuclear Star Wars weapons, then we must consider the risks -- vast expenditures on programs of unproven technical merit that may well end up undercutting our security and further fueling the arms race.
PREPARED STATEMENT
of
REPRESENTATIVE EDWARD J. MARKEY
in support of
H.R. 3100
before the
SPECIAL PANEL ON ARMS CONTROL AND DISARMAMENT
of the
PROCUREMENT AND MILITARY NUCLEAR SYSTEMS SUBCOMMITTEE
of the
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
MAY 15, 1986
Madam Chairman, thank you for the invitation to testify before you today in support of H.R. 3100, the "Comprehensive Nuclear Weapons Freeze and Arms Reduction Act of 1985." I would like to state for the record that this Bill was introduced in the House of Representatives on July 30, 1985, and that it now has 105 cosponsors.

I would also like the record to reflect my understanding that this Special Panel on Arms Control and Disarmament of the Procurement and Military Nuclear Systems Subcommittee is a policy oversight panel. Legislative authority to mark-up H.R. 3100 resides with the full Procurement Subcommittee, the Committee on Armed Services, and the Committee on Foreign Affairs. Consistent with the purpose of this Special Panel, my testimony today will be directed toward the major policy issues posed by H.R. 3100 rather than the possible implications of specific wording in the Bill. Such a detailed discussion is more appropriately conducted in forums which are empowered to approve the merits and amend the shortcomings of H.R. 3100.

In a pathbreaking legislative undertaking of this magnitude, there are innumerable refinements and improvements which could be made. But a debate over technical details should not be allowed to mask the real views of those who fundamentally oppose the thrust of this legislation because they attach a positive value to continuation of the nuclear arms competition with the Soviet Union.

Thus before summarizing the operative provisions of this Bill, I would like to comment on the basic conceptual approach upon which it is based. Some of these insights are summarized in Section 2 - "Findings."

I. CONCEPTUAL FOUNDATIONS OF H.R. 3100

It has been my experience, since becoming involved in the nuclear freeze issue some five years ago, that opponents of far-reaching efforts to end the arms race often commit the error of subtly transforming questions of political possibility and strategic desirability into questions of technical feasibility.

In fact, this a common practice of Administration and National Laboratory witnesses who have appeared in recent months before this panel. Highly subjective personal and institutional proclivities are disguised and presented as ostensibly neutral technical judgements. Much of the so-called "expert" commentary on the Freeze has suffered from this deficiency.

Consider the question of comprehensive freeze verification. Despite seemingly authoritative judgements, from such officials as Defense Secretary Weinberger and Assistant Secretary Richard Perle, that a comprehensive freeze would be "unverifiable," it is well understood among seasoned intelligence professionals that one simply can not make meaningful judgements about the "verifiability" of a freeze without first specifying:
-- the Soviet activity being monitored;

-- the particular freeze constraint being applied;

-- the combination of monitoring systems, cooperative measures, and on-site inspections which can be brought to bear on the problem;

-- the time period over which monitoring will occur;

-- and the level of monitoring confidence required to support a determination that verification is "adequate" to provide timely warning of violations which could potentially damage our national security.

Likewise, a freeze is opposed by some on the allegedly "technical" basis that many of our weapons are aging and therefore in need of "modernization," which the freeze would prohibit. But "modernization" is not the same as "replacement," which could be permitted over the long term for delivery vehicles of the same type, and this requirement must in turn be distinguished from "maintenance" of existing weapons until they are retired or removed by a deliberate process of reductions.

In point of fact, for the purpose of sustaining a purely retaliatory nuclear deterrent, a sufficiently high percentage of the current arsenal can be "maintained without "modernization or "production for replacement" until at least the year 2000. A few years ago, for example, the Air Force testified that the Minuteman missile "is fully capable now and should continue to be an effective weapons system through the year 2000, if not indefinitely." The Air Force stated that this could be accomplished through a periodic depot maintenance program to correct normal aging problems at a cost of about $150 million for each three-year maintenance cycle.

While there are several technical issues regarding the design, implementation, and verification of a comprehensive freeze which await further investigation, the current lack of such detailed analysis in certain areas -- which the present Administration refuses to rectify -- should not be taken as prima facie evidence of technical infeasibility.

On the contrary, what has been accomplished so far in the ABM, SALT, test ban and nuclear safeguards negotiations supports the opposite presumption -- that from the technical perspective, more far-reaching arms control is indeed achievable.

Hence I do not believe that these technical issues -- which appear quite manageable given a political willingness to develop the necessary data and analyses -- are really what is at the root of the present Administration's hostile attitude toward the
freeze, an attitude that the record shows is shared by some
members of this Special Panel.

While there is some overlap in the goals of the freeze and
more traditional arms control agendas, the underlying concept of
H.R. 3100 differs significantly from the cautious, piecemeal
approach which has characterized substantive arms control efforts
over the last quarter century. In a most fundamental and
important sense, this Bill seeks a shift in the operative as well
as rhetorical goals of arms control.

H.R. 3100 is based on the presumption that the American
people and their elected Representatives have demonstrated their
desire in recent years to get off the treadmill of the
traditional arms control process. I believe this process can be
fairly characterized as one which seeks partial limitations on
certain categories of nuclear weaponry at the price of
legitimizing an interactive, self-propelled contest in all
aspects of nuclear weapons-related technology.

We are told that the declared goal of this mutually-imposed
competition is to assure future strategic "equivalence" and
"stability" between the superpowers under conditions in which
their reciprocal nuclear threats are only loosely bounded by arms
limitations.

H.R. 3100, on the other hand, seeks to forge an arms
control dynamic that would permit new or additional nuclear
weapons systems to be built only if determined good-faith
negotiating efforts failed to preclude them by agreement.

In my view, the appropriate question to ask is not, "Why do
the sponsors of H.R. 3100 think they can accomplish so much," but
rather, "Why have the President and the Congress been willing to
settle for so little?"

I have some thoughts on the latter question which I would
like to share with you. Increasingly, in my view, the dominant
conventional wisdom in arms control is becoming the tangled
product of a highly politicized live-and-let-live arrangement
with the institutional forces of our vast national security
apparatus.

I would characterize this bargain as follows: Those who
support orthodox approaches to arms control have sought
"stability" in the strategic military relationship between the
superpowers by establishing limitations on strategic offensive
and defensive weapons, both as a means of restraining future
demand for such weapons -- what we call "arms race stability" --
and as a means of diminishing pressures and nominal "incentives"
for swift use of these weapons in a crisis -- so called "crisis
stability."
However, the price paid to induce the nuclear weapons establishment to entertain such reasonable notions has been Congressional acquiescence in the very nuclear doctrines and military "requirements" which are driving the arms race forward, thereby guaranteeing that arms control has become an exercise in "managing" rather than ending the nuclear arms race.

II. CONTRADICTIONS IN OUR PRESENT DEFENSE/ARMS CONTROL POSTURE

The military doctrine of "first-use" of nuclear weapons -- designed to back-up U.S. global security commitments wherever U.S. conventional forces are thinly deployed or seriously challenged -- places serious obstacles in the path of any process aimed at halting the nuclear arms race. The demands of a military establishment built around the strategy of nuclear "escalation dominance" across the "full spectrum of conflict" cannot easily be reconciled with an arms control process which presumes a willingness to concede "essential equivalence" at the bargaining table.

In other words, how can the United States credibly threaten to dominate the USSR on the nuclear battlefield while publically codifying our acceptance of a superpower nuclear stalemate in balanced nuclear arms agreements. We need to ask ourselves how many promising voyages in arms control have run aground on this fundamental contradiction in our policy.

Sustaining the credibility of a national security policy that seeks to persuade our adversaries that we would start a nuclear war to defend our national interests is no cheap or easy task. It requires continuing modernization of U.S. nuclear capability, particularly -- as the national lab directors never fail to emphasize -- improvements in accuracy, hardening against nuclear effects, and reduction of "collateral damage." Its proponents believe that such "modernization" increases the range of options for employing these weapons and hence, their nominal military utility as a "warfighting" deterrent threat.

A continuing nuclear arms race, embracing primarily nuclear warhead and delivery vehicle characteristics but also numbers and sheer explosive power, is seen by our military establishment as indispensable to the task of "extending" nuclear deterrence over our allies and our foreign interests. This is the logic of the national security policy which the Procurement and Military Nuclear Systems Subcommittee has unswervingly endorsed.

It is a strategy for deterrence based on generating -- through the commitment of vast financial resources and technical expertise -- a convincing impression of having willfully and systematically deceived ourselves into believing that nuclear weapons can be flexibly employed to attain limited military and political goals.
Given the existence of a nuclear-armed Soviet adversary willing to counter our every move up the ladder of nuclear escalation, the main vehicle for expression of this policy has become a massive, perpetual contest between nuclear weapons establishments whose assessments of the threat each poses to the other have become permeated with self-interest. Over the years a vicious circle has been established in which successful "threat inflation" convincingly translates to "institutional self-preservation."

It is hard to escape the conclusion that the whole enterprise of seeking a "stable" balance between the two superpowers in the context of an ongoing technological arms race is conceptually bankrupt. Sometimes it seems we no longer know what we mean when we talk amongst ourselves, much less when we try to address the American people, our allies, or the Russians.

For example, what are we trying to accomplish when we say an arms control agreement should increase "stability." What kind of stability are we talking about, and for whose benefit?

For years, DOD and DOE officials have trooped before this and other Committees and tirelessly intoned that it is "destabilizing" for the Soviet Union to possess the capability for a "successful" paper attack on our ICBM force, but somehow "stabilizing" for us to deploy the capability to attack their silos, because it "encourages" them to move to a more "survivable" basing posture.

But isn't this the same survivable basing posture we've been searching for over the last decade and still can't find ourselves? And didn't the Soviets just finish building what they thought was a survivable basing mode for their ICBMs, only to find Secretary Weinberger and Richard Perle complaining that Soviet hardened silos and command centers are "destabilizing" because they provide a "sanctuary" for their ICBM force and reveal a pernicious Soviet intent to survive and win a nuclear war?

Moreover, the easiest and cheapest response to vulnerability on either side -- our current de facto policy of Launch-Under-Attack -- is considered "destabilizing" by some because it places a hair trigger on nuclear war, and "stabilizing" by others because it convincingly reduces whatever "incentives" might exist for launching a surprise attack.

"Well," say the strategic gurus, "if the Russians feel threatened, they should move move the bulk of their nuclear warheads to a survivable undersea basing mode, as we have." But why should a nation with a huge land area but relatively restricted access to the open ocean choose to increase its reliance on missile-carrying submarines, especially when we are spending billions of dollars annually on strategic anti-submarine warfare to make these submarines vulnerable?
To make matters worse, the Chief of Naval Operations has recently announced that he is prepared to begin destroying these submarines during the conventional stages of a conflict with the Soviet Union -- hardly a prescription for nuclear crisis stability!

III. REDEFINING THE ARMS CONTROL PROBLEM

Who's on first in this contorted debate? An integrated defense-arms control policy based on the paradox of a technologically dynamic -- but strategically "stable"-- nuclear balance has reached the condition once encountered by the old earth centered system of ancient astronomy. There are now to many "epicycles" in our conceptual orbits -- too many intellectual pirouettes -- for the resulting vision to be at all compelling. Such convoluted and contradictory thinking has produced a six-year deadlock in arms control negotiations, which if it persists, may destroy arms control altogether.

Certainly it is possible -- but by no means certain -- that deterrence of the resort to nuclear weapons will continue to be maintained under the status quo conditions of a technologically dynamic and economically burdensome superpower arms race.

My contention is that a nuclear freeze will provide, at far less cost, the same measure of deterrence as our present posture affords against cold-blooded, deliberate initiation of nuclear conflict. At the same time it will reduce the tensions and control the technologies which could spark a nuclear war by accident or crisis miscalculation.

Within the strategic context of H.R. 3100, deterrence of conventional war would be accomplished primarily through conventional means. I say primarily conventional means because the very existence of nuclear weapons in the arsenals of the superpowers will always provide some damper on the ignition of direct conventional combat between them -- the so-called "existential deterrent" effect.

Unfortunately, by seeking to extract maximum benefit from the deterrent value of nuclear weapons at every level of confrontation, our present national security posture is not "fail-safe" but rather "fail-deadly." In fact, the entire global security system of rival East-West nuclear alliances is subject to catastrophic failure originating at any point in their vast global military infrastructures.

Regrettably, current nuclear forces and doctrines tend to maximize rather than minimize the probability that any major break-down in East-West deterrence will escalate to a major catastrophe. In my view, this represents the polar opposite of what should constitute proper defense planning --
namely, assuring the preservation of the lives, property and
democratic values of the American people and their allies by
maintaining a truly effective defensive capability without
reliance on the first-use of nuclear weapons.

To those who say that such a strategy is impossible given
the scale of opposing Soviet conventional forces, I say bunk. If
we can afford to waste $26 billion exploring strategically
superfluous anti-missile defenses, and $50 billion on two utterly
vulnerable and useless 13th and 14th carrier battle groups, we
can surely spend the comparatively modest sums required to
develop and deploy credible anti-tank missile forces to defend
the NATO Alliance. In fact, I suggest we simply take the funds
from the aforementioned misguided Reagan initiatives.

Moreover, the economic burden of improving our conventional
force posture might be diminished significantly by linking the
liquidation of our tactical nuclear forces in Western Europe to a
conventional force reduction package which simultaneously reduces
the excess of Soviet armored strength in Eastern Europe.

I would pose the question to my colleagues on this Special
Panel -- don't you find it at least a little bit ironic that,
year-after-year, the Pentagon never quite manages to rectify the
one conventional force deficiency most often cited as the primary
justification for maintaining highly integrated conventional-
nuclear forces with a first-use, nuclear escalation doctrine?

And isn't this requirement for a "credible" nuclear war-
fighting capability the one most often cited to justify the
tens of billions of dollars we are spending over the course of
this decade for "nuclear modernization?"

In view of the fiscal and conceptual morass into which the
present administration has dragged our national security
planning, I believe that there is a compelling need for the
Congress to help redefine the nature of the problem.

Fortunately, the nationwide Freeze movement of recent years
has brought about a significant change in the political context
in which negotiated solutions to the problem of nuclear war must
necessarily be carried out. Twenty five years ago, for example,
SAC could adopt the motto "Peace is Our Profession" with scarcely
a murmur against the idea that deterrence of conventional war was
then being ensured by the threat to incinerate 100 million
Russians in twenty-four hours.

Today, President Reagan tries to rename the unpopular MX
missile as the "Peacekeeper," and the public, the media, and
Congress are openly scornful of this clumsy attempt at
"perception management." People are ready for a change.
IV. ADVANTAGES OF COMPREHENSIVE FREEZE APPROACH

Conceptually, the freeze approach to arms control has a number of inherent advantages over the present orthodoxy.

-- The Freeze takes direct account of the very large component of military-industrial-bureaucratic self-perpetuation involved in the nuclear weapons programs on both sides.

-- It does not rely on the national security establishment to resolve the paralyzing contradiction alluded to earlier between "escalation dominance" and "essential equivalence."

-- And finally, in place of the intellectual quagmire surrounding competing concepts of "stability," the freeze advances a number of precepts more in accord with current realities:

  o First, that the nuclear arms race itself is a prime source of instability and tension in the relations between the two superpowers;

  o Second, that new or improved nuclear weapons are more likely to be the source of new threat projections and fears of instability than the source of improvements to strategic stability. (Such modernization improvements as De-MIRVing of the land-based missile forces with single-warhead missiles are conceptually appealing, but would require an arms control context radically improved over the one we have today to produce a "stabilizing" outcome).

  o Third, that the military advantage to be gained from the clandestine development or improvement of nuclear weapons under a freeze is small in comparison to the destructive potential likely to survive a surprise attack on both sides, suggesting that undetected violations of the freeze will not alter the perception or the reality of nuclear deterrence itself.

This approach to the problem of arms control has the fortunate added effect of considerably reducing the military pressures for uniformly high monitoring confidence for each and every aspect of a treaty. Such a shift would ease the political as well as the technical task of defining an "adequately verifiable" agreement.

In other words, since the government under the freeze approach would no longer be preoccupied with comparing marginal advantages in strategic arsenals to assess the credibility of our nuclear escalation strategy, we would no longer be preoccupied with promptly detecting marginal changes in the Soviet arsenal.

I am told by verification experts that, over the longer term, the probability of disclosure for even a modest cheating program is quite high.
Thus I am confident that a comprehensive nuclear agreement along the lines laid down in H.R. 3100 could be implemented with adequate monitoring protection against "break-out" by the Soviet Union.

V. SUBJECTIVE ELEMENTS OF "EFFECTIVE" VERIFICATION

While traditional thinking about verification cases encased in a veneer of supposedly technical constraints, close examination reveals these are never purely technical constraints, but rather limits based on highly subjective views of what constitutes "the national interest" and so-called "requirements of deterrence."

On the one hand, if you believe that the balance in specific measures of nuclear capability can strongly influence the geopolitical destinies of the superpowers, you will probably insist on high levels of on-site inspection to monitor each and every incremental improvement in the Soviet arsenal, on the grounds that the United States must be able to respond promptly to Soviet efforts to "change the balance." No matter how small these changes may be in relation to the total arsenals.

On the other hand, if you believe, as I do, that the destiny of world affairs depends far less on the intricacies of the balance in nuclear capabilities, and a lot more on the dangers arising from the overall race to improve these capabilities, then you are likely to have a far different set of preferences. If one reaches the conclusion that the nuclear balance is, within a broad range of disparities, inherently stable with respect to the deliberate initiation of nuclear conflict by either side, then one is willing to accept a comprehensive agreement involving lower levels of monitoring confidence for certain marginal changes in the Soviet arsenal, in return for a halt in the overall process.

We should never forget that we shall have to continue monitoring the Soviet arsenal with or without the conditional freeze which would be implemented following passage of H.R. 3100. The real questions regarding verification of such an agreement are the following:

1. Is the range of potentially threatening Soviet force developments greater or smaller under a comprehensive freeze than without it; and

2. Can the United States detect -- with sufficient warning to undertake a response -- those Soviet actions which have the potential, if left uncountered, to undermine perceptions of mutual nuclear deterrence.

The range of potentially threatening Soviet force developments under the freeze in H.R. 3100 would be drastically limited.
Absent the negotiation of additional collateral agreements, our concerns under a freeze would be focused on possible dramatic improvements to Soviet air defenses, and upgrading of their currently inferior ASW capabilities.

Given current and forseeable improvements in verification capabilities, there is simply no credible cheating scenario I can think that would result in a definitive change in the nuclear balance for which we would not obtain adequate advance warning from our National Technical Means of verification, augmented by IAEA safeguards and bilateral on-site monitoring arrangements.

VI. THE LOGIC OF FREEZE VERIFICATION

I submit that there are sound technical and political grounds for believing in the validity of the comprehensive freeze approach, and I would like to take a moment to spell out the logic involved. From a national security point of view, what we are really trying to do in arms control -- what we really care about -- is limiting the number and characteristics of Soviet nuclear warheads and delivery vehicles deployed against us, thereby diminishing the Soviet nuclear threat to us and our allies and lessening the economic burden of the effort we have to mount to counter these Soviet deployments.

We are very concerned about these Soviet deployments and qualitative improvements with or without a treaty. An agreement limiting numbers alone, as the current Administration is proposing, is certainly feasible, but in no way addresses the perceived dangers arising from Soviet improvements in the performance characteristics of their weapons, which we would continue to monitor with a great deal of interest. At a minimum, a deployment freeze which also prohibited modernization would allow us to probe the Soviets concerning these characteristics, thereby improving our intelligence concerning the Soviet nuclear threat.

However, if we are really serious about limiting Soviet improvements, we would obviously pursue test restrictions. These could greatly impede the flow of improvements filtering into deployed Soviet nuclear forces, increasing our confidence in the deployment freeze and increasing our knowledge of Soviet missile capabilities through: an effective NTM non-interference clause; non-encryption of telemetry; provisions for advance notification of any permitted reliability tests and space launches; and data exchange and inspections under the agreement.

However, a testing and deployment freeze would leave an unconstrained Soviet production potential for rapid "breakout" from the treaty constraints, a frequently recurring nightmare among those who are most inclined toward intense distrust of the Soviets. So the question arises, "why not freeze the production of dedicated nuclear delivery vehicles, nuclear warheads, and weapons useable fissionable materials?"
As long as the agreed verification arrangements establish a threshold for Soviet clandestine production potential which in any given year was an insignificant fraction of current arsenals, and as long as the cumulative probability of detection over several years would reveal the Soviet cheating program well before it reached a level that could upset the nuclear balance, then a nuclear weapons production ban would seem to offer nothing but advantages.

It would increase our confidence that the deployment freeze was limiting future as well as present deployments, and it would increase our confidence that the Soviets were not running a secret test program, on the grounds that they are not likely to produce something that they have not tested.

While the freeze contemplated in H.R. 3100 would not directly ban research and development work on new warheads and delivery systems, the testing and fissile material production bans would severely limit the design parameters of such systems as well as the incentives for pursuing them.

In summary, while certain individual provisions of a freeze agreement might be monitored in the short term with only a moderate degree of confidence, the vastly increased scope of the freeze generates increased opportunities for monitoring Soviet compliance, poses multiple obstacles to successful Soviet cheating that could increase deployed military capability, and generate multiple chances for detecting Soviet violations.

Thus the overall chance of detecting Soviet cheating on the agreement could be as high or higher for the freeze than for more limited agreements. And under the verification provisions of a freeze agreement, we could seek clarification -- including on-site inspection -- of a far wider range of Soviet military activities than we can at present, or than we could under the President's START proposal.

These observations add up to the conclusion that the main task of arms control negotiations at the present time should not be to rework the strategic balance through a combination of selective nuclear reductions, broad-based modernization, and the addition of marginally effective strategic defenses, but rather to coordinate a halt in the offensive nuclear weapons programs of the two sides. The Freeze instigated by passage of H.R. 3100 would complement the ABM deployment freeze we already have in place and close loopholes in the SALT II and ABM Treaty regimes. Reductions could be negotiated and implemented simultaneously with a freeze, thereby resolving "stability" problems by throwing away vulnerable counterforce weapons rather than by building more of them.
VII. CONGRESSIONAL ACTION NEEDED TO BREAK STALEMATE

Over the last twenty-five years we have tried and failed, in Paul Warnke's memorable image, to get the giant Soviet and American apes to eat the same balanced diet and run at the same speed on their nuclear treadmills.

President Reagan, moreover, has had more than five years to implement his strategy of heating up the technological arms race in order to impress the Russians with the need for especially deep reductions on their side. The Russians obviously refuse to be whipsawed into making unilateral concessions, and we are no closer to a major arms reduction agreement today than we were in the spring of 1979, when President Carter and Chairman Brezhnev signed the "Joint Statement of Principles and Basic Guidelines for Subsequent Negotiations" calling for "significant and substantial reductions in the numbers of strategic offensive arms."

I would point out, incidentally, that this document was signed four years before President Reagan supposedly stimulated Soviet appreciation for deep reductions by announcing the SDI.

In fact, the only substantive achievement in arms control in the last six years has come not from the Administration, but from the Congress, which has effected a de facto mutual moratorium on ASAT weapon testing against a target in space. The concept of Congressionally initiated moratoria conditioned on reciprocal Soviet restraint was pioneered in the 98th Congress by H.R. 5571, the "Arms Race Moratorium Act," which I introduced along with over one hundred co-sponsors on May 2, 1984. In addition to ASAT weapons, this bill also established conditions under which the Congress could fence funding for flight-testing and deployment of new ballistic missiles and the explosive testing of nuclear warheads, and release the funds if the Soviet Union failed to demonstrate comparable restraint.

In introducing the companion measure in the Senate, Senator David Durenberger stated, "As a member of the Senate Intelligence Committee, I am confident that we can adequately monitor and verify compliance with these provisions, for the focus of the quick freeze is on readily observable phenomena like flight testing and deployment, not on research and development."

So, in discussing the broader scope of the Bill which is before the Panel today, I hope we can agree with Senator Durenberger that the potential for adequate verification of ballistic missile-, ASAT-, and underground nuclear-testing is not at issue.

Other aspects of H.R. 3100 have generated considerably greater controversy, and I will try to clarify those issues as to the best of my ability.
However, I am not a specialist on the details of the verification process or the specific weapons that would fall inside or outside the categories of weapons activities constrained by the provisions of the Bill. It is for this reason that the Bill calls for the Executive Branch to engage the Soviets in detailed freeze negotiations, and for detailed reports to be prepared by the cognizant House and Senate Intelligence Committees regarding the adequacy of current and potentially negotiated means of verification.

The relatively complex, interlocking provisions of H.R. 3100 may be summarized as follows:

1. NEGOTIATIONS FOR A COMPREHENSIVE NUCLEAR FREEZE: The Bill expresses the sense of Congress that the President should begin negotiations on a comprehensive freeze treaty [Sec. 3(a)] and communicate to the Soviet Union our intention to engage in a bilateral halt -- as set forth in the Act -- in the testing, deployment, and production of nuclear weapons systems [Sec. 3(b)].

2. NEGOTIATIONS FOR NUCLEAR WEAPONS REDUCTION: The Bill expresses the sense of Congress that the President should pursue steady percentage annual reductions in nuclear arsenals, and that a comprehensive freeze contributes to the goal of mutual stabilizing reductions.

3. MORATORIUM ON TESTING AND DEPLOYMENT OF LONG- AND MEDIUM-RANGE NUCLEAR WEAPONS SYSTEMS: Thirty days after enactment, no funds may be spent for the purpose of testing and deploying strategic and theater nuclear delivery systems with ranges exceeding 600 kilometers; testing and deploying nuclear warheads and bombs; and testing ASAT and ARM weapons against targets in space [Sec. 8]. This moratorium is conditioned on receipt within thirty days of an explicit Soviet indication of willingness to undertake reciprocal action.

4. MORATORIUM ON PRODUCTION AND EXTENSION OF TESTING AND DEPLOYMENT MORATORIA TO ALL NUCLEAR WEAPONS SYSTEMS: Beginning one year after the date of enactment of the Bill, no funds may be spent to operate facilities for: production of plutonium and highly-enriched uranium for use in nuclear weapons; production of fissile and fusion components for nuclear weapons; final assembly of nuclear weapons; final assembly of strategic bombers; final assembly of missile stages for nuclear missiles; manufacture of individual stages for nuclear missiles; and production of other components dedicated for nuclear weapon systems. [Sec. 8(c); Sec. 11(b)]. Continuation of this moratorium is conditioned on Soviet reciprocal action [Sec. 9].
5. **CONGRESSIONAL OVERSIGHT OF FREEZE VERIFICATION:** The Select Committees on Intelligence are directed to hold oversight hearings on verification of a comprehensive freeze and report their findings within six months regarding the adequacy of U.S. monitoring systems and agreed procedures for verification of the comprehensive freeze.

6. **OPERATIONAL PLAN FOR IMPLEMENTATION OF THE FREEZE:** Within nine months after enactment, the Director of the Arms Control and Disarmament Agency is directed to prepare and report to Congress on an operational plan for implementation of the comprehensive freeze by the United States (including procedures for closure or conversion of facilities affected by the freeze, and retraining and re-employment of directly affected personnel) [Sec. 6]

7. **REGULAR REPORTS ON SOVIET COMPLIANCE WITH THE FREEZE:** At six month intervals following enactment of the initial testing and deployment moratorium, the President is directed to report to Congress on the nature and extent of Soviet reciprocal restraint in its activities relating to the testing, production, and deployment of nuclear weapons systems, verification uncertainties, and the status of comprehensive freeze negotiations [Sec. 7].

8. **RESUMPTION OF FUNDING FOR NUCLEAR WEAPONS SYSTEMS:** If at any time the President finds that the Soviet Union has failed to fully reciprocate the restraint shown by United States in conducting nuclear weapons activities under the moratoria initiated by this Act, or that continuation of the funding restrictions would cause significant and irreparable harm to the security of the United States, he may request removal of the funding restrictions, in whole or in part. The Congress must act on a joint resolution granting the request within 30 days [Sec. 9; Sec. 10]

9. **ALLOWANCE FOR SURVIVABILITY AND SAFETY IMPROVEMENTS:** The Bill permits modernization of launchers -- including ballistic missile submarines -- for existing missile types, improved hardening of fixed missile launchers, and safety-related modifications of bombers.

Some "Questions and Answers" about the implications of this Bill are contained in an attachment to this testimony.

**VIII. CONCLUDING OBSERVATIONS**

I would like to conclude my testimony today by offering this Special Panel some observations regarding the caliber of the testimony it received during its review of arms control and disarmament activities in the 1st session of the 99th Congress.

Among the more unfortunate aspects of these hearings was the purely *ad hominem* attack launched against me and certain other members of Congress who support meaningful arms control by
Assistant Secretary Richard Perle. Aside from the vituperative personal tone and ugly insinuations that members of Congress are doing the work of the KGB, Mr. Perle's testimony consisted entirely of rash and wholly undocumented assertions concerning the alleged inadequacy of U.S. verification capabilities and the propensity of the Soviet Union to cheat.

It reflects poorly on the credibility of this Special Panel's efforts that this ill-informed testimony was received by the Panel without any serious questioning or critical comment. In examining the record, I find that this is the general pattern for all the Administration and national laboratory witnesses who came before this Panel. Their assertions are uncritically accepted without any attempt to correct for the obvious element of career and institutional bias involved in their testimony.

An outside witness, however -- Dr. Lynn Sykes of Columbia University -- who supports a comprehensive test ban, was subjected to a detailed technical line of questioning by a professional staff member. I am not suggesting that Dr. Sykes should not have been questioned in this fashion. I do suggest that the testimony of witnesses from the nuclear weapons establishment should receive the same careful scrutiny.

Let me give you some examples of what the Panel missed. While Mr. Perle denounced H.R. 3100 as "silly," he did not document a single substantive objection to it. The pressing "national security" requirement for continuing to run the nuclear arms race may be self evident to Mr. Perle, but it clearly is not to a majority of the American people, who support a comprehensive nuclear freeze. To my knowledge, the Administration has yet to demonstrate that there is anything seriously wrong with this Bill. So far, the objections have been long on rhetoric -- mostly vague mumbo-jumbo about the "requirements of deterrence" -- and short on facts and analysis.

Satiated with red-baiting, Mr. Perle then proceeded to misrepresent the facts on a number of arms control questions. For example, Mr. Perle testified there is "substantial evidence that the Soviets are violating" the unratiﬁed Threshold Test Ban Treaty without also informing the Panel that the entire matter of yield estimation was at that very moment under interagency review with an emerging consensus that U.S. estimates of Soviet test yields should be substantially revised -- downwards. This change has now been implemented.

Mr. Perle then went on to misrepresent the nature of Soviet and American disagreement over development of strategic defenses. He suggested that while the ABM Treaty prohibits "the deployment of strategic defenses beyond very limited defenses at a single location, .... we simply don't know how to verify limitations on research and development of the kind that we believe the Soviets have in mind....so I would strongly counsel against the risks involved in limitations on research and development."
Mr. Perle failed to clarify for the Panel that the ABM Treaty includes extensive prohibitions on "development" of ABM systems -- a prohibition which has always been understood by both parties to take effect at the field-testing stage of space-, air-, sea-, and mobile land-based components of ABM systems.

Mr. Perle knows perfectly well that this has been the mutually agreed understanding of the Treaty's constraints since the day it was signed in 1972, and that the Soviet Union is seeking to cap the U.S. SDI effort along these same lines. It is the Reagan Administration which has suddenly discovered a novel interpretation of the ABM Treaty which would have the effect of gutting the Treaty's constraints on ABM "development," and it is officials like Mr. Perle who are doing everything they can to foster an arms control deadlock over SDI in Geneva.

A more balanced hearing process would have probed Mr. Perle more deeply on these matters, and perhaps revealed the superficial and often misleading character of many of his supposedly authoritative observations.

Another point which the Panel could have explored more thoroughly was the supposed 'lessons' to be learned from the experience of the 1958-61 nuclear test moratorium. We are told that mutually agreed moratoria will inevitably result in a massive Soviet "breakout" down the road that will leave the U.S. nuclear weapons program scrambling to catch up.

First of all, neither the Soviet Union nor the United States "violated" or "broke-out" of a mutual moratorium on nuclear tests, because no moratorium was ever agreed to by either side. The analogy with the mutual moratorium on testing included in H.R. 3100 is therefore inexact, and there are additional factors which make it largely irrelevant to the current debate. What actually happened?

In March 1958 the Eisenhower Administration learned that the Soviet Union was planning a public offer to cease testing at the end of a test series it was conducting at the time if the United States agreed to similar restraint. Under pressure from the Department of Defense and the Atomic Energy Commission to proceed with the scheduled Hardtack I test series in the Pacific, Eisenhower rejected the Soviet initiative when it was announced on March 31.

However, he did decide to send a U.S. delegation to an International Conference of Experts in Geneva which subsequently reported technical agreement on the characteristics of an international control system capable of distinguishing between earthquakes and underground nuclear explosions greater than five kilotons. Against the advice of the AEC and the military, Eisenhower decided to begin negotiations on a test ban which could be verified using the proposed control system.
On August 22, 1958, Eisenhower announced that as a sign of good faith, the United States would cease testing for one year beginning October 31, 1958, the date for the opening of negotiations in Geneva, if the Soviet Union exercised comparable restraint. Eisenhower further stated his willingness to extend the moratorium if agreement could be reached on an inspection system and the negotiations showed "satisfactory progress" toward nuclear disarmament.

While agreeing to the negotiations, Krushchev never made a reciprocal pledge to suspend testing on the suggested date. On September 12, the United States began Hardtack II, a hurried series of 37 atmospheric and underground explosions at Yucca Flat, four of which were conducted on October 30, one day before the proposed U.S. moratorium was to go into effect.

The Soviets responded with a last minute series of 17 tests which lasted until November 3, three days beyond Eisenhower's specified deadline. He announced on November 7 that the Soviet action "relieves the United States from any obligation under its offer to suspend nuclear weapons tests." However, with both sides feeling the pressure of a mounting world outcry against atmospheric tests, and with negotiations underway in Geneva, the United States and the Soviet Union each refrained from further testing for the next 12 months. But neither side had made any explicit mutual commitment to do so.

As the Geneva talks bogged down over Soviet resistance to on-site inspection and U.S. concerns over new "cavity-decoupled" evasion scenarios fortuitously "discovered" by the National laboratories, pressures mounted on Eisenhower to resume testing. On December 31, 1959, he announced that the United States would no longer be bound by its previous moratorium, but that it would not renew testing without a prior announcement. Eisenhower nevertheless refrained from nuclear testing for the rest of his term, even though the U-2 incident and the collapse of the Paris summit had doomed political prospects for an agreement.

During his first year in office Kennedy continued the moratorium but committed the United States to a vast nuclear buildup of 1000 land-based Minuteman missiles within seven years, despite sudden evaporation of the election-year missile gap. Also, relations soon became very tense in the summer of 1961 over Berlin. On August 31, following the nominal provocation of a French nuclear test, the Soviet Union announced its intention to resume testing in the atmosphere, and a massive test series began the very next day. The United States resumed testing on September 15.

The historical record clearly shows that a mutually agreed moratorium was never arrived at during the period 1958-61, and that neither side broke any "commitment" made to the other.
The U.S. suspension of tests was unilateral and purely voluntary, and the Soviet Union likewise voluntarily suspended its own tests until its own shifting assessment of military and political realities dictated a resumption of testing.

There are other misleading aspects to the "moratorium example." Laboratory officials rightfully accuse the Soviets of secretly stockpiling nuclear test devices and making advance site preparations for the swift resumption of testing, but then complain that their own laboratories were not permitted to undertake the same degree of advance preparations for resuming nuclear tests. This can be explained by the fact that the normally leak-ridden U.S. government was more vulnerable and thus more sensitive than the secretive Soviet regime to possible charges that the United States was preparing to torpedo prospects for a test ban.

More important, however, is the fact that today we have the National Technical Means to monitor possible Soviet preparations for breakout, such as the drilling of so-called "inventory" test holes and excavation of underground tunnels and chambers for nuclear effects testing. The likelihood of our being "surprised" by a sudden massive Soviet test program is much reduced from what it was in 1961, when photo-reconnaissance satellites were just beginning to orbit over the Soviet Union.

Finally, we are told that there is a significant lesson to be learned regarding the wisdom of a CTB from the fact that inadequately tested weapons entering the stockpile during the 1968-69 moratorium experienced reliability problems. This experience says more about the technical arrogance of the weapons designers at the time than it does about the present merits of a CTB. No one that I'm aware of is suggesting that insufficiently proven weapon designs be added to the stockpile during a CTB.

Moreover, the laboratories have had the intervening quarter century -- in which pursuit of a CTB was declared national policy -- to produce dependable, predictable warhead designs with long shelf-lives that could be remanufactured with assurance of their continued reliability. The fact that laboratory officials now claim that they have chosen not to design such weapons -- but instead to increase the susceptibility of modern warhead designs to the allegedly unpredictable consequences of aging -- should rightly be the object of a national scandal.

If we are to believe this testimony, then we are faced with the most massive case of technical insubordination and bureaucratic subversion of established national policy in the history of the Republic. The exact nature of the trade-off which laboratory officials claim they have been forced to make between "military requirements" and "warhead endurance" merits a detailed investigation by the cognizant bodies of the Congress. Why would any military commander knowingly request weapons which are said to be inherently less reliable over time than
comparable Soviet designs?. And why would this commander want weapons whose suspect reliability can not in any case be "confirmed," in the statistical sense, by occasional explosive testing?

These contradictions in the Laboratory's ever modernizing arsenal of excuses for resisting a test ban led to submission of the following statement "to further clarify" the testimony of Dr. Roger E. Batzel, Director of the Lawrence Livermore National Laboratory:

"While these weapons were designed under the assumption that nuclear testing would continue, so that if any problem ever arose in the stockpile, a nuclear test could be performed to help certify that the weapon would continue to work as it was designed to, they were designed to be as conservative as possible within the constraints of meeting the military requirements to hedge against the possibility of a Comprehensive Test Ban Treaty (CTBT).

This statement is contradictory, bureaucratic nonsense. If our nuclear weapons really were designed under the assumption that nuclear testing would continue, how could these same weapons designs also represent a meaningful hedge against the possibility of a comprehensive test ban?

Moreover, in a letter to me dated January 21, 1986, Deputy Assistant Secretary of Defense Frank J. Gaffney stated that it was not until 1982 that "the DOD added warhead endurance to the military characteristics, stating the desirability of warheads with an inherent endurance obtained as a result of design considerations."

There are many more contradictions and inconsistencies which I could cite in the statements of government and laboratory officials on the CTB and U.S. nuclear weapons programs. I have attached some of this information in the form of Appendices to my prepared testimony, and I hope that this Panel will attempt to clarify some of the issues raised so that at long last we might have a more coherent and informed debate on the national security implications of H.R. 3100 and the Comprehensive Test Ban.
QUESTIONS AND ANSWERS CONCERNING H.R. 3100

(1) Why a moratorium now?

Why now? The burden of proof properly belongs with those who argue that the current nuclear arsenals numbering in the tens of thousands of weapons are somehow insufficient to deter a nuclear war. The burden of proof rests on those who maintain that a costly race to develop new nuclear war-fighting capabilities will improve rather than threaten our security.

The case for a moratorium rests on the wholly defensible proposition that it is better to seek agreement with the Soviet Union on what nuclear weapons systems we might jointly avoid building, instead of rushing ahead independently to counter the worst case threat each side projects the other will deploy.

Before agreeing to fund this dangerous and unwinnable race for “nuclear war-fighting capability” -- a race which the current Administration now wants to extend into space, the Congress should at least afford the American people the opportunity to test the Soviet Union’s willingness to avoid such a fruitless competition through arms control.

(2) Which current nuclear warhead programs would be affected?

Any nuclear warhead program involving the underground detonation of a nuclear device would be affected by the moratorium, which would suspend such testing. In particular, the current administration’s effort to gain the technological edge over the Soviets by developing and testing a so-called “third-generation” of “directed energy” nuclear devices -- such as Livermore Laboratory’s “Excalibur” nuclear bomb-pumped X-ray laser -- would be suspended by such a moratorium while U.S. and Soviet negotiators completed the pending draft treaty for a Comprehensive Test Ban.

Experts involved in such negotiations in prior administrations estimate that CTB negotiations could be wrapped-up six months to a year of additional effort, and that current national technical means of verification would be adequate to safeguard U.S. national security for at least this interim period while installation of a regional seismic monitoring network on Soviet territory is negotiated.

(3) Doesn’t Congressional action to facilitate a bilateral moratorium impinge on the Constitutional powers of the President?

Not at all. The President is exclusively empowered to negotiate treaties. The power to declare war, and the power to appropriate the funds necessary to prepare for war, are solely the province of the Congress, and the Congress may attach whatever conditions it deems necessary when it authorizes these preparations.
Surely, if the Congress is vested with the power to fund war preparations, it is also vested with the power to specify those conditions under which it is willing NOT to fund them. The President, of course, would retain his right to veto any act of Congress, thereby requiring passage by a two-thirds majority of both houses before the H.R. 3100 could become law.

(4) Could this moratorium be adequately verified? Yes. The United States intelligence community is already conducting extensive monitoring of the Soviet activities included in this moratorium. Provisions defining and limiting the deployment of new intercontinental ballistic missiles are part of the unratified SALT II agreement now being adhered to, and monitored intensively, by both sides.

Unlike SALT II, which permits modifications of existing missiles to vary by as much as 5% from their predecessors in length, diameter, launch-weight, and throw-weight before they are regarded as "new," under the proposed moratorium any observable missile modification would be considered inconsistent with the mutual suspension of nuclear weapon system activities required by the Bill's reciprocal two-stage moratorium. For example the Soviets could not have tested and deployed the SS-25 mobile ICBM, as they are now doing, by claiming that changes in its key parameters do not exceed permitted variances from the older SS-13.

Despite the irresponsible statements of certain administration officials regarding the impossibility of an ASAT ban that would be adequately verifiable, most technical experts agree that a ban on the testing of rocket-boosted ASAT interceptors against target objects in space can be verified by National Technical Means.

A moratorium on the testing of nuclear warheads can be monitored by currently deployed long-range seismic methods down to explosions in the 2 to 5 kiloton range without cavity decoupling, and to around ten kilotons if such elaborate evasion methods are attempted.

Ambiguity surrounding seismic events with magnitudes corresponding to tests below this threshold would be reduced by monitoring other signatures of Soviet activity, such as communications emanating from the test site area, and stepped-up overhead photo-reconnaissance of likely test areas for signs of test-hole drilling, cavity excavation, and subsidence craters. The remaining uncertainty would be tolerable for several years, but would need to be reduced, and would be reduced, by installation of the regional "remote on-site" seismic monitoring networks called for in the draft Comprehensive Test Ban Treaty.
In general, because the threat to American security from some undetected "residual" Soviet weapons capability accumulates slowly, requiring several or many years before it could pose a serious threat to our national security, the standard of adequacy for verification of a moratorium can be somewhat less demanding than the standard one would want to apply to a negotiated agreement intended to last a decade or more. The proposed moratorium is intended to facilitate -- not substitute for -- carefully negotiated arms control agreements.

Whether or not a freeze agreement is negotiated, and verification upgraded, is obviously up to the President. The Congress can not compel the President to negotiate. But it can create conditions which highlight the benefits from doing so.

(5) What happens to the funding for weapons systems covered by the proposed moratorium?

The authorization and appropriation of funds for the research, development, testing, evaluation, procurement, deployment, operations, and maintenance of any military system would not be constrained by the provisions of the U.S. bill. After enactment of this bill, and pending a new arms control agreement modulating the terms of the moratorium, Congress could elect to set aside funds for continuing weapons programs in the designated categories, but the contractual obligation or expenditure of funds by a government agency to test, produce, and deploy these weapons would be suspended for the duration of the moratorium.

Under the proposed moratorium, research and development activities which do not involve the observable field-testing of missiles or warheads would not be affected. For example, the United States could continue to obligate and expend funds for the engineering development of a small ICBM, such as MIDGETMAN, but could not proceed to flight-testing, production, or deployment of such a missile while the moratorium remained in force, or until it had been replaced by a detailed negotiated agreement sanctioning deployment of the Midgetman and the SS-25.

Similarly, the reliability of the current stockpile of nuclear weapons could continue to be checked by detonating the high explosive implosion device of the "primary" stage using instruments or inert material with similar physical properties to replace the fissile material -- thereby avoiding a nuclear explosion which would contravene the moratorium -- and by thorough inspection and testing of its non-nuclear component parts.

(6) What if the Soviets cheat on the terms of the moratorium? Would this bill tie the hands of the Congress or the President?

Not at all. If at any time during the moratorium the President certifies to Congress that the Soviet Union is conducting tests or producing and deploying weapons which are inconsistent with the moratorium, then Congress must consider a Joint Resolution lifting the "fence" on the obligation and
expenditure of previously appropriated funds for those designated activities. As part of any such certification, the President must substantiate his finding with a detailed report describing the activities of the Soviet Union that are the basis for the certification.

(7) What if the Soviets did not cheat in any major way that we could detect, but merely chiseled in a systematic way over a longer period while stringing out negotiations for enhanced verification procedures which would allow us to detect such "low-level cheating."?

This possibility is fully provided for in the bill. The President is required to report to Congress on the progress, or lack thereof, in arms control negotiations with the Soviet Union, and on whether continuation of the moratorium is in the best national security interests of the United States. If the President requests cancellation of the moratorium on the grounds that no progress has been made in resolving verification uncertainties, and the Congress indicates by enactment of a Joint Resolution that it concurs with the President's judgement that the risks to national security are too high, then the moratorium would be terminated.

(8) How would a cutoff in the production of nuclear explosive materials for weapons be verified?

One, unavoidable byproduct of plutonium production is the intense heat which must be dissipated into the surrounding environment. This "signature" would permit the shutdown of each nation's known military production reactors to be monitored by infrared satellite surveillance.

Similarly, the shutdown of already known and declared reprocessing facilities -- large installations with thick walls, special storage tanks for high level radioactive wastes and distinctive operating signatures -- could also be monitored by satellite surveillance.

Complementing verification by these National Technical Means (NTM) would be application of IAEA safeguards to civilian nuclear facilities to guard against diversion. The Soviet Union recently joined the U.K., France, and the U.S. in accepting IAEA safeguards at a number of its civilian nuclear installations. Under the proposed cutoff, periodic bilateral or IAEA inspections could verify that plutonium production and reprocessing facilities were not being used for military purposes, except for the operation of one safeguarded reactor to produce tritium for current weapons.

In a second phase, IAEA safeguards could be applied to the other stages of the nuclear fuel cycle -- uranium conversion, enrichment, fuel/target fabrication, and spent fuel storage. Continued production of HEU under safeguards could be permitted for naval reactor fuel, or prohibited entirely and the required amount of HEU obtained from nuclear warhead reductions.
APPENDIX I: TESTING IN DEEP SPACE

In testimony before the Special Panel on Arms Control and Disarmament of the Procurement and Military Nuclear Systems Subcommittee of the House Armed Services Committee last September, Lawrence Livermore Laboratory Director Roger Batzel and Livermore Associate Director Roy Woodruff argued that the Soviet Union might be able to evade a test ban treaty by conducting clandestine nuclear test explosions behind the sun or in deep space.

Dr. Batzel told this Panel that "We believe that it would be possible for the Soviets to launch a rocket, say under the guise of a deep space probe, that could carry a number of nuclear explosives and a diagnostic package.

"The tests could be carried out behind the sun or at a distance well beyond the detection range of our radiation monitoring satellites. The same diagnostic package could be used for each of the nuclear explosions and the data could be ultimately telemetered back.

"We estimate the cost for doing a 'series' of explosions to be in the range of $100 million," Batzel explained, arguing that, "this is not excessively expensive compared to the current costs of underground testing. Of course, it is cheaper to test underground and there is probably little incentive to perform such a test today. However, under a CTBT a determined evader might be tempted to try such an experiment, and he would not be forced to limit the yield of his test to the TTBT (Threshold Test Ban Treaty) limit of 150 kt (kilotons)."

Mr. Woodruff testified to Panel that "you could mount a program that would put a nuclear weapon and an appropriate diagnostic package on a deep space probe and that you could fly this package out to the back side of the Sun and detonate it. You could obtain data that was of sufficient value to tell you how that weapon functions, and that would not be verifiable. There would be no system today or planned for the future that would verify that took place."

Woodruff added "you have to give them (the Soviets) the technology to be able to conduct a weapon test in space, and do so at any yield, and with essentially no chance of verification."

These assessments are sharply disputed in two analyses prepared at my request.

This first analysis was prepared by Dr. Eugene Parker, one of the world's foremost experts on cosmic-magnetic fields and a professor of astrophysics at the University of Chicago's Laboratory for Astrophysics and Space Research.

According to Dr. Parker, "testing bombs on the far side of the sun is so expensive and so cheaply detectable that there is no serious problem. Indeed, I am surprised that anyone should propose such an idea."

Parker explained that while a nuclear explosion on the opposite side of the sun would probably not be detectable from earth, it would be "relatively cheap and easy" to detect using satellites. He said, "The basic point is simply that 'behind the sun' works only if you are allowed to view the situation from only one point in space. Otherwise there is no place 'behind.'"

Dr. Parker pointed out that the cost of conducting such tests would be far higher than the $100 million figure cited by the weapons labs. $100 million, he explained, "will buy
you a simple communications satellite, or an explorer class satellite, in orbit around the earth. Deep space missions with complex automated tasks start at a factor of 10 higher and go up from there."

"Judging from the costs estimated for the Galileo mission in the future and the Mars Viking mission in the past, we are talking about a project whose cost is in excess of 2 billion dollars," Parker suggested, adding that he suspected that 5 billion dollars for a modest test mission is "not far out of line."

Parker concluded that deep space covert testing programs are not plausible because "it is so expensive to develop the spacecraft to carry out the elaborate deployment of bombs and instruments, and much cheaper to detect the test than carry out the test."

A second letter from Harvard Astrophysicist Dr. Frederick D. Seward confirms this view. Dr. Seward served on the staff of the Lawrence Livermore Laboratory during the 1960's and worked on the preliminary design of the "Vela" intelligence satellites.

According to Dr. Seward, "the Vela satellites, as built, were capable of reliably detecting and identifying X-rays from a small nuclear detonation at a distance of one astronomical unit (the Earth-Sun distance) and could also identify neutrons and gamma-rays from detonations near the Earth."

Dr. Seward suggests that "Because of our experience with these satellites, the United States could easily build and deploy a system capable of detecting the tests Batzel and Woodruff were referring to. Two satellites space in Earth orbit would be capable of detecting and reliably identifying a one megaton explosion at a distance of several astronomical units and there would be no way to use the sun to shadow both satellites. Of particular relevance is the fact that it would be cheaper to deploy such a surveillance system, which would operate for years, than to conduct a single deep space test."

Dr. Seward writes that "I am surprised that Batzel and Woodruff were unaware of, or chose not to mention, the capabilities of the Vela satellites. A balanced technical presentation should have included a statement that detection of tests in space was possible and should have compared the costs of a detection system with the costs of the tests."

The text of the Parker and Seward letters is attached. I have written the Energy Department with a series of questions regarding the cost, feasibility, and detectability of covert nuclear testing in space. The classified responses to these questions are available in the Procurement Subcommittee's files.
March 10, 1986

Dear Congressman Markey:

I am writing to you, at the suggestion of Jeff Duncan, concerning the recent suggestion that it is possible to test nuclear bombs on the far side of the sun without fear of detection from Earth. The idea being that no international test ban agreement could then be enforced.

It seems to me that testing bombs on the far side of the sun is so expensive and so cheaply detected that there is no serious problem. Indeed, I am surprised that anyone should propose such an idea. Let me develop the situation one step at a time. First of all a one megaton explosion releases an energy somewhere in the vicinity of $10^{14}$ ergs = $10^{17}$ Joules, which, in space, would be carried away by electromagnetic radiation and fast particles. An energy release of this magnitude on the opposite side of the sun would not be detectable from Earth by any means that I can think of. The sun is itself a noisy object, with small outbursts, called subflares (at the limit of detectability), which release energies of $10^8$ ergs or more. So any modest radio signal that might be scattered around the fringes of the sun from the one megaton explosion on the far side would be lost in the general uproar of the sun itself. The bomb blast would inflate a cavity in the solar wind with a radius growing in ~ 10 hours to something of the order of $10^{11}$ cm as the debris is swept away by the solar wind. (The radius is estimated by equating the $10^{14}$ ergs of the explosion to the thermal energy density of the solar wind at 1 AU from the sun.) This $10^{11}$ cm is comparable to the radius of the sun, but I can think of no detectable signal from this cavity so long after the blast.

Maybe some clever individual can think of a trick way of detecting the explosion from planet Earth. But for the sake of the argument, let us suppose, as seems likely, that it cannot be detected from Earth.

The next point is the enormous cost of such a bomb test. It would be necessary to develop a fully automated spacecraft which would fall back (or push ahead) 180° in the orbit of Earth, eject one or more bombs and detonate them when they have drifted out to the desired distance, record the nature of the blast, and finally, after the spacecraft emerges from behind the sun, radio the information back to Earth. The system has to work perfectly, or the mission is wasted. So it is not a matter of lashing a bunch of gadgets together and sending them off on a rocket. The system has to be carefully engineered, developed, and tested. Judging from the costs estimated for the Galileo mission in the future and the Mars Viking mission in the past, we are talking about a project whose cost is in excess of 2 billion dollars ($2 	imes 10^9$). And this is for the crudest instrumentation to monitor the blasts from bombs that weigh no more than a few kilograms apiece. If one wanted to do the instrumentation properly with several spacecraft around the site, the cost goes up enormously. And if hydrogen bombs are really heavy, as I suspect they are, it would cost more—much more—for the principal spacecraft
and its launch. I suspect $5 \times 10^8$ dollars for a modest test mission is not far out of line.

I should add that the number of $10^8$ dollars, which Mr. Duncan tells me was quoted in some hearings, will buy you a simple communications satellite, or an explorer class satellite, in orbit around Earth. Deep space missions with complex automated tasks start a factor of 10 higher and go up from there.

The next point is that, if we are talking about launching things into space, then the detection of a bomb blast behind the sun is easy and cheap. Place a simple spacecraft in orbit around the sun 10° ahead or behind Earth with a simple detector directed at the black sky in the region behind the sun. A bomb blast would appear as a bright point with an intensity comparable to one of the nearby stars. I do not know enough about the detailed physics of a nuclear bomb blast to write the specifications for the detector. But I expect one would look for a burst of gamma rays. If $10^{15}$ ergs of electromagnetic radiation is released at a point in space, the energy passing through 1 cm$^2$ at a distance of 1 AU (1.5 x $10^{11}$ cm) is $3 \times 10^{11}$ ergs or $2 \times 10^{7}$ electron volts. The basic point is simply that 'behind the sun' works if you are allowed to view the situation from only one point in space. Otherwise there is no place 'behind.'

If someone tries to get close to the sun so that the signal from the blast becomes confused with the sun itself, then the costs go up enormously because of the problem of shielding the spacecraft, the bombs, and the instrument packages from the heat of the sun. JPL did an interesting study a couple of years ago on a scientific mission, called Star Probe at one time, to swoop within 4 solar radii of the surface of the sun. They proposed to develop graphite heat shields etc. The spacecraft was to carry some simple instruments to monitor the solar wind and a 4 inch telescope for a close look at the sun. So far as I am aware, they never did come up with a workable scheme to allow the telescope to peak around the heat shield for a look at the sun. The estimated cost of this simple mission was well above the billion dollar level when I last heard of it. Can you imagine deploying bombs and instrument packages in quick succession under these circumstances each with its proper heat shield oriented toward the sun by steering jets on each package? You have only a few hours to accomplish the mission. The orbital velocity is 300 km/sec, which is a good thing because the spacecraft shields do not last very long at those temperatures.

The simple Star Probe project was killed by the multi-billion dollar cost. Once again it would be possible to view the bomb blast from a vantage point 90° ahead or behind Earth using an ordinary cheap cool spacecraft in the orbit of Earth.

I fail to think of any scheme that would obtain useful data from a surreptitious bomb blast at a cost anyone could afford. Rather than testing near the sun, why not use Jupiter as the shield? It is cheaper to operate there and would be harder to monitor, requiring a modest spacecraft out near Jupiter somewhere to keep an eye on the region behind. Or why not behind Saturn or behind Uranus? Who would think to look there? Maybe one should go off several AU to some random point in space to detonate a bomb, counting on no one noticing the temporary 'star.' But it is so expensive to develop the spacecraft to carry out the
elaborate deployment of bombs and instruments, and much cheaper to detect the test than to carry out the test.

If there is any further information that I can supply, please let me know.

Sincerely yours,

Eugene N. Parker
Professor, Dept. of Physics
April 8, 1982

Congressman Edward J. Markey
2123 Rayburn House Office Building
Washington, D.C. 20515

Dear Congressman Markey,

David Spergel has shown me your correspondence concerning the September 1985 testimony of Roger Batten and Roy Woodruff before the Special Panel on Arms Control and Disarmament. During that testimony the statement was made that it would be possible for the Soviets to test nuclear weapons beneath the surface of the Earth with little chance of us detecting them.

The detection of underground nuclear detonations in space is something that we have been working on, largely because of the United States' need to detect nuclear explosions. The United States developed and deployed a series of satellites, the "Metal," satellites, designed to detect underground nuclear explosions. At this time I was a staff member of the Lawrence Livermore Laboratory and worked on the preliminary design of this system. The final design and instrumentation was done at Los Alamos and the project was an outstanding success.

The "Metal" satellites, as built, were capable of reliably detecting and identifying X-rays from a small nuclear detonation at a distance of one astronomical unit (the Earth-Sun distance) and could also identify neutrons and gamma-rays from detonations near the Earth. The satellites served as an operational detection system in the late 1960's and early 1970's and, although still in orbit, are presently no longer operating.

An unclassified description of the system was published in the December 1968 Proceedings of the Institute of Electrical and Electronic Engineers. The instrumentation, simple by today's standards, was sensitive enough to be used to study natural phenomena. Indeed, it is necessary to measure such signals to ensure that the signal from a bomb can be reliably identified above the background of natural events.

This project was an excellent example of how one instrument package could be used for both purposes of defense and scientific research. My colleagues at Los Alamos who worked on this system are of the highest caliber and I assure the scientific aspects of the project helped to maintain their interest over the 10-15 years these satellites were operating. The discovery of gamma-ray bursts from celestial sources of unknown nature captured, and still holds, the interest of astrophysicists all over the world.
Because of our experience with these satellites, the United States could easily build and deploy a system capable of detecting the tests, Batzel and Woodruff were referring to. Two satellites spaced in Earth orbit would be capable of detecting and reliably identifying a one-megaton explosion at a distance of several astronomical units and there would be no way to use the sun to shadow both satellites. Of particular relevance is the fact that it would be cheaper to deploy such a surveillance system, which would operate for years, than to conduct a single test in space test.

I am surprised that Batzel and Woodruff were unaware of, or chose not to mention, the capabilities of the Ilii satellites. A balanced technical presentation should have included a statement that detection of tests in space was possible and should have compared the costs of a detection system with the costs of the tests.

I am unaware of the current status of the U.S. satellites or in any plans for further testing. I cannot discuss the reasons for the halt in testing, however, since the United States is bound by the terms of the partial test ban treaty.

In any case, further assistance in this matter please call me, free to contact.

Sincerely,

[Signature]

Frederick C. Seward
Astrophysicist
APPENDIX 2: RELIABILITY TESTING

In testimony before the Special Panel on Arms Control and Disarmament of the Procurement and Military Nuclear Systems Subcommittee of the House Armed Services Committee last September, Dr. Roger Batzel testified that:

"I have the responsibility to certify that weapons that have been designed at my Laboratory will function when and if they are ever needed. These weapons were designed under the assumption that nuclear testing would continue, so that if any problem ever arose in the stockpile, a nuclear test could be performed to help certify that the weapon would continue to work as it was designed to. Under strict guidelines from the government, our scientists designed those weapons to minimize overall weapons system costs and to maximize military effectiveness, as well as being concerned with stockpile life. The designed would have been very different if the guidelines from the government had placed primary emphasis on stockpile longevity. This, in turn, would have led to very different military systems -- missiles or other platforms with different throw-weight, range, and accuracy."

In the printed version of the Panel's hearings, this statement was modified with the following "clarification for the record:

"While these weapons were designed under the assumption that nuclear testing would continue, so that if any problem ever arose in the stockpile, a nuclear test could be performed to help certify that the weapon would continue to work as it was designed to, they were designed to be as conservative as possible within the constraints of meeting the military requirements to hedge against the possibility of a comprehensive test ban treaty (CTBT)."

I would strongly recommend that the Panel and the Subcommittee of which it is a part examine these and other statements by Weapons Lab witnesses very closely, and inquire whether the "conservatism" of warhead designs makes it possible to have confidence in basic weapons reliability without resort to explosive proof testing. If it does not, one might ask just what purpose this conservatism of design is intended to serve.

In this regard, I would like to call to the attention of the panel a correspondence I have had with the Pentagon on the subject of nuclear warhead reliability.

After reviewing this letter, I can only conclude that the Pentagon and the weapons labs are now trying to torpedo prospects for negotiation of a test ban by trying to convince people that there are insurmountable technical obstacles to a Comprehensive Test Ban (CTB) agreement.

In the letter, Deputy Assistant Secretary of Defense for Nuclear Forces and Arms Control Policy Frank Gaffney stated that during the 1960s, the Pentagon "did not emphasize aspects of warhead design which would enhance weapon endurance in a no-test environment."

Mr. Gaffney went on to say "If we had placed, or were to place, primary emphasis on stockpile longevity, and today's security requirements were to continue, we almost certainly would need larger, heavier warheads in greater numbers and with larger yields to maintain today's level of deterrence. Hence, we would need larger delivery systems with greater throw-weights. That is, we would need a costly and completely new and
different nuclear deterrent force."

My own analysis of the issue suggests that the real obstacle to a test ban is not the design of our warheads, but this Administration's misguided nuclear policies. What is required is not a change in hardware, but a change in our perception of the role of nuclear weapons in our national security policy.

I would note that Mr. Gaffney's arguments assume that the current arms race environment is our only alternative.

I am not surprised that an Administration that wants nuclear weapons accurate enough to hit toilet seats in the Kremlin wants to continue testing so that it can develop new and more deadly nuclear warheads.

The Pentagon and the weapons labs have a vested interest in continuing the arms race business as usual, and they are not particularly well-suited to address the broader issue at stake here — whether a CTB is in our national security interest. I am convinced that a CTB will permit us to retain a nuclear force of sufficient reliability to deter Soviet aggression, and that's the bottom line.

Under a CTB both sides would retain arsenals that are reliable enough to deter war. Deterrence does not require the kind of counterforce arsenal that Mr. Gaffney and others in the Reagan Administration want.

The national weapons labs have known for years that negotiation of a CTB was national policy, and that there might one day be a halt to all nuclear weapons testing. I find it incredible that they have never taken account of the possibility of a test ban when they're designing warheads.

Indeed, last fall I wrote Glenn Seaborg, who headed the Atomic Energy Commission from 1961 to 1971, to ask whether the U.S. took its commitment to negotiate a test ban treaty into consideration during the 1960s, when many warheads currently in the stockpile were developed. Seaborg's reply stated that during his tenure as chairman "our national policy was to seek a verifiable Comprehensive Test Ban Treaty, and the development and building of nuclear weapons were conducted with this objective in mind." According to Seaborg, "I do not recall that the proof testing of stockpiled nuclear weapons was ever an issue in this connection. It is my impression that the same situation prevailed during most of the 1970s."

But the Gaffney letter declares that it was not until 1982 that "DOD added warhead endurance to the military characteristics (MCS), stating the desirability of warheads with an inherent endurance obtained as a result of design considerations." In the letter, Gaffney claimed that during the 1960s U.S. policy "did not emphasize aspects of warhead design which would enhance weapons endurance in a no-test environment."

I would point out to the Panel that we have never conducted any statistically significant number of explosive proof tests of the warheads in our arsenal. We already rely on non-nuclear testing to provide most of our information on the performance of our warheads. Proof tests are very, very rare. Despite Mr. Gaffney's arguments, the Pentagon itself already relies on an extensive program of monitoring and non-explosive testing to determine the status of the warheads in the stockpile.

Surely Mr. Gaffney is aware of this fact. Is he telling us that the Minuteman warheads are unreliable? We certainly haven't been subjecting them to extensive proof testing.
over the years. Even the lab directors, Batzol and Kerr, have admitted that they 'cannot statistically monitor the nuclear performance of the stockpile.'

Frankly, I find the Pentagon claims regarding reliability testing difficult to believe. Scientists outside the nuclear weapons production complex have long insisted that nuclear testing was not necessary in order to insure the reliability of the nuclear weapons in our stockpile. These scientists, who include Nobel Laureate Hans Bethe, former Los Alamos Lab Director Norris Bradbury, and Defense Department consultant Richard Garwin, argue that a combination of non-nuclear testing and remanufacture of weapons components to original specifications was sufficient to confirm reliability of proven designs.

When I wrote the Pentagon last December I was looking for some solid evidence that we really needed explosive testing in order to assure the reliability of our existing nuclear stockpile. What I have been given is the same old pablum about how we need to test, cloaked in the standard smoke and mirrors.

I agree that if we are going to continue the normal work of the weapons labs, in which new generations of warheads are made marginally more efficient, less costly, safer to handle, and are adapted to new and more accurate delivery systems, we are eventually going to have to test. That's not the issue here. The issue is, are we willing to consider an alternative to the arms race? Are we willing to stop where we are, and say enough is enough? That's the whole point of a CTB.

There are indications that if it was willing to accept some increased costs and some inconvenience, the U.S. could assure the fundamental reliability of existing warheads under a CTB through non-nuclear testing and by remanufacturing warheads using the original design specifications.

On this point, Mr. Gaffney's assertions are so ridiculous as to border on the absurd. He claims that we can't remanufacture old warheads because the original designer might no longer be around to supervise the production. Does he really expect me to believe that we don't bother to write nuclear warhead design specifications down in detail?

In the past, the Pentagon has taken 17 pages of detailed specifications to tell soldiers how to buy worcestershire sauce, and 14 pages to lay out the recipe for a fruitcake. Does Gaffney really expect me to believe that no one has ever bothered to lay down detailed product and design specifications for a nuclear warhead? Surely not.

I also question Gaffney's claims that remanufacture of old designs was sometimes not possible because "Materials, fabrication techniques, and equipment used for older weapons will not necessarily be available or permissible for health reasons." In this regard, I would call the Panel's attention to a 1978 letter that weapons physicists Norris Bradbury, J. Carson Mark, and Richard Garwin sent to President Jimmy Carter which, challenges this point of view. The letter explained that:

"...protective measures which might be an intolerable cost burden in the manufacture of cardboard or of lightbulbs or of aircraft brakes are easily affordable in connection with the nuclear stockpile. Thus if the worker's environment acceptable until now for the use of asbestos, spray adhesives, or beryllium should be forbidden by OSHA regulations, those few workers needed to continue operations with such material could wear plastic-film suits (supplied with external air) commonly used for isolation against germs and against certain pharmaceuticals. It would be wise also to stockpile in appropriate storage
facilities certain commercial materials used in weapons manufacture which might in the future disappear from the commercial scene."

As a leader of the Nuclear Freeze movement in the House, I would be the first to admit that reliability would gradually diminish over the years if you couldn't conduct non-nuclear tests and remanufacture warheads to the original designs.

In the long run, I think a world of unreliable nuclear weapons would be a more secure world. Neither side would have confidence that it could execute a first-strike. But we are not talking about a Freeze, we are talking about a CTB. And under a CTB, you can inspect the stockpile, conduct non-nuclear testing, and remanufacture new warheads using proven designs. So you can have pretty good confidence in reliability.

The need for reliability testing is a smokescreen the Pentagon and the weapons labs have developed to try to defuse the growing public clamour for a test ban. What the smokescreen masks is the Administration's real reason for opposing a test ban -- its desire to develop new counterforce weapons like the Trident II, and its fascination with nuclear Star Wars weapons such as the X-ray laser.

I have seen no convincing evidence in Mr. Gaffney's letter that there is an inherent obstacle to a test ban in the designs of our nuclear weapons. The real obstacle to a CTB is not our warhead technologies, but our arms control policies.

I have attached the text of the Gaffney letter, as well as an analysis of its contents prepared by IBM physicist and Pentagon consultant Dr. Richard Garwin. In addition, I would call the Panel's attention to the DOE responses to a series of nine questions I submitted to DOE Assistant Secretary for Defense Programs Foley earlier in the year. The classified responses to these questions are available in the Procurement Subcommittee files.
In reply refer to: I-85/18870

Honorable Edward J. Markey
House of Representatives
Washington, D.C. 20515

Dear Congressman Markey:

On behalf of Secretary of Defense Weinberger, I would like to thank you for your letter of 4 December 1985 requesting information regarding the military characteristics (MCs) of nuclear weapons, specifically a "requirement that weapons be designed so that they could be remanufactured in the future without explosive 'reliability' testing." Such a requirement, in your view, is in order given our long-term goal of a comprehensive test ban.

As you correctly point out, a comprehensive test ban, or CTB, that strengthens global stability and enhances security has been a long-term objective of the United States for some time. As you also indicate, for the foreseeable future, the United States will need to maintain a credible nuclear deterrent in order to ensure our national security and that of our allies and friends. In this context, the need for nuclear testing is as valid and recognized today as it was in the 1960s. Indeed, for as long as a nuclear deterrent is as essential to our security as it is today, a CTB would have quite the opposite effect to that intended. That is, a CTB in the foreseeable future would not strengthen stability but rather lead to a less secure and more dangerous world as the nuclear nations, unsure of the reliability of their nuclear weapons, increased their stockpiles to compensate for this uncertainty and as some non-nuclear nations, unsure of the reliability of the guarantees of the nuclear states, decided their security required them to build independent nuclear deterrent forces.

In 1963 President Kennedy forged a consensus for ratification of the Limited Test Ban Treaty (LTBT) around Safeguards which assured conduct of comprehensive, aggressive, and continuing underground nuclear test programs to add to our knowledge and to improve our weapons in all areas of significance to our military posture for the future. The Safeguards also required maintenance of modern nuclear laboratory facilities and programs in theoretical and exploratory nuclear technology to ensure continued progress in that technology. In part, the Safeguard concept resulted from our experience during and immediately after the 1958-61 moratorium on nuclear testing, which included serious stockpile problems with which Dr. Seaborg should be familiar. Those problems have been described in recent testimony before the HASC by representatives of the Department of Energy and the national weapons laboratories.
The consensus to maintain vigorous nuclear testing and weapons development programs and strong weapons laboratories provided the context for national decisions of the 1960s which determined the structure and characteristics of the nuclear forces we have today. Those decisions did not emphasize aspects of warhead design which would enhance weapon endurance in a no-test environment. In fact, long stockpile lifetimes were generally not envisioned in the mid-to-late 1960s because the changing Soviet threat and the rapid evolution of nuclear technology dictated constant weapon improvements.

The decisions of the 1960s, which included the choice of relatively small ballistic missiles of limited throwweight and MIRVing of those missiles with miniaturized warheads, emphasized enhanced military effectiveness, efficiency, and reliability, as well as safety, security and reduced costs in the design of our nuclear systems. Meeting these requirements has taken nuclear design in the direction of increasing technical sophistication and a stockpile ever more dependent on competent design judgments validated by continued nuclear testing. Despite improvements in calculations and in our general understanding of how nuclear explosives work, nuclear testing is still essential not only for continued development of new weapons, modification of existing designs, and confidence in the reliability of the existing stockpile, but also for confidence in the judgments made by the weapons designers in the performance of these tasks.

If we had placed, or were to place, primary emphasis on stockpile longevity, and today's security requirements were to continue, we almost certainly would need larger, heavier warheads in greater numbers and with larger yields to maintain today's level of deterrence. Hence, we would need larger delivery systems with greater throwweights. That is, we would need a costly and completely new and different nuclear deterrent force.

Today, as in the past, military requirements determine the characteristics of our nuclear weapons. In a typical case, their order of priority is: nuclear safety (always foremost), size and weight of the nuclear device to ensure compatibility with delivery vehicle requirements, minimum probability of plutonium dispersal in case of accident, operational reliability, yield, conservation of reactor products and enriched uranium, minimum maintenance, and operational simplicity.

In 1982, the DOD added warhead endurance to the military characteristics (MCs), stating the desirability of warheads with an inherent endurance obtained as a result of design considerations. These considerations address maximizing warhead lifetime, maximizing the ability to replicate the warhead at a future date, and maximizing the ability to incorporate the warhead into other delivery systems.
Therefore, the design, development, and production must be well documented and involve processes that to the extent possible allow replication at a future date. Beyond this, however, it would be futile for us to insist in the MCs on weapons whose reliability can be ensured indefinitely in the absence of nuclear tests. This is simply impossible, even if we were to relax all other requirements; without recourse to nuclear testing we would soon lose confidence in the design judgments applied to stockpile-aging and -rebuilding problems.

If the MCs result in design conflict, priorities are usually observed in the order listed, giving consideration to tradeoffs which allow high-priority MCs to be attained while minimizing the degradation of the competing lower-priority MCs. Technical feasibility and cost provide the basis against which desired competing characteristics are measured, with nuclear safety the overriding requirement. Lifetime is maximized to the extent possible, consistent with attaining the other MCs.

As a practical matter, we cannot always remanufacture nuclear warheads using original design specifications. First, they might not satisfy current military requirements or meet the evolving Soviet threat. When an existing well-tested design can be adapted for a new application (e.g., the Peacekeeper warhead), modifications are necessary to make the design compatible with the new weapons system and to meet other requirements. The modifications are generally extensive enough to require not only expert design judgment but also further testing. Second, older designs lack what are now considered essential features for safety and security. In addition, production requires monitoring by the weapon designer. For an older design, the original designer might no longer be in the weapons program, forcing reliance on people without first-hand experience in the weapon and competent only to the extent of their current testing experience. Materials, fabrication techniques, and equipment used for older weapons will not necessarily be available or permissible for health and safety reasons. Substitutions often affect the operation of the weapon; they require judgments regarding the need for testing to provide assurance that failure would not result, and such judgments would be increasingly prone to error as testing experience receded into the past. Moreover, as recent hard experience has shown us, not all design problems can be eliminated by extensive non-nuclear testing alone. To rely solely on non-nuclear tests, absent actual proof tests of the weapon, would entail serious risks to the safety and reliability of our nuclear deterrent forces, and would soon reduce our confidence in those forces.

The requirement to test nuclear weapons should not be surprising to anyone. Any sophisticated equipment -- airplanes, radar, tanks -- requires testing. As complex mechanisms age, they change in ways that cannot be predicted. In the real world of engineering, nothing complex can be remanufactured -- even to precise specifications -- and relied on without testing.
In sum, I believe there is historical consistency in our position that a CTB is a long-term objective to be achieved in the context of broad, deep, and verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, greater balance in conventional forces, and at a time when a nuclear deterrent is no longer as essential an element as currently for international security and stability. As President Kennedy wrote to Senate leaders in 1963 during the LTBT ratification hearings, "While we must all hope that at some future time a more comprehensive treaty may become possible by changes in the policies of other nations, until that time our underground testing program will continue."

Sincerely,

Frank J. Gaffney, Jr.
Deputy Assistant Secretary of Defense
Nuclear Forces & Arms Control Policy
February 20, 1986

Richard L. Garwin
IBM Thomas J. Watson Research Center
P.O. Box 218
Yorktown Heights, NY 10598
(914) 945-2555

Dear Congressman Markey:

This response to your request that I comment on the letter of 01/21/86 to you from Frank J. Gaffney, Jr., Deputy Assistant Secretary of Defense for Nuclear Forces and Arms Control Policy.

I welcome this opportunity, because there are many interesting points made by Secretary Gaffney, which I address in numbered order.

1. In the second paragraph, Gaffney says "...as the nuclear nations, unsure of the reliability of their nuclear weapons, increased their stockpiles to compensate for this uncertainty." I wish to point out that this argument has quite the opposite sign to the argument that Secretary Gaffney and his superiors have often made in regard to the SDI-- that the Soviet Union "...unsure of the reliability of their nuclear weapons, would decrease their stockpile..." Now I don't say that either version of this theorem is correct, but surely they cannot both be correct-- that uncertainty imposed by the existence of a defense would lead to reductions in the offense, while uncertainty imposed by lack of confidence (because of the Comprehensive Test Ban) would lead to increase in the offensive stockpile. Therefore, I believe that this argument should be given no weight.

2. In the fourth paragraph, Gaffney notes "In fact, long stockpile lifetimes were generally not envisioned in the mid-to-late 1960s because the changing Soviet threat and the rapid evolution of nuclear technology dictated constant weapons improvements." It seems to me, that although many weapons entered the stockpile, they were expected to remain there for a long time. I was never involved with the weapons laboratories in the development or the production of what might be called "junk bombs," by analogy to the financial scene these days.

Also Adjunct Professor of Physics at Columbia University
(Views not necessarily those of IBM or Columbia)
3. In the fifth paragraph, Gaffney implies that among other reasons, continued testing is essential to maintain confidence in the reliability of the existing stockpile, and that is the point which I want to address further. My response will appear in consideration of other quoted statements.

4. In his sixth paragraph, Gaffney argues, "If we had place., or were to place, primary emphasis on stockpile longevity, and today's security requirements were to continue, we almost certainly would need larger, heavier warheads in greater numbers and with larger yields to maintain today's level of deterrence." In the first place, if we had "larger, heavier warheads" to provide the same yield and accuracy, I fail to see the reason why we would need also "greater numbers and larger yields." But this same argument holds if we place "primary emphasis" on safety. The program to build nuclear weapons with insensitive high explosive (IHE) indeed requires 'larger, heavier warheads' than would otherwise be the case. Yet Secretary Gaffney apparently believes that this is a good idea, and perhaps that is the reason why we need "greater numbers and larger yields to maintain today's level of deterrence." I, personally, do not believe this.

It is fundamental to understand that the purpose of a CTBT is not to limit U.S. weapons. It is to improve the security of the United States by limiting Soviet weapons and weapons of other nations. The question for us is whether the limitations on U.S. weapon development are acceptable in view of the security gains.

5. In his seventh paragraph, Gaffney says "Today, as in the past, military requirements determine the characteristics of our nuclear weapons." That is exactly the point which I challenge. It should be that U.S. security requirements determine the characteristics of our nuclear weapons. Of course, a smaller, more accurate, higher yield weapon is more suitable for military use, but it may very well be (and I think it is likely) that the capping of Soviet weapon development and the firm base which a CTBT would give us to prevent nuclear weapon proliferation throughout the world, and the contribution it would make to limiting nuclear weapons among the major powers, far outweigh these "military requirements."

6. In paragraph 9, Gaffney maintains that "without recourse to nuclear testing we would soon lose confidence in the design judgment applied to stockpile-aging and rebuilding problem." I doubt this. People could well study existing test data and correlate these results with performance. One could continue to improve computer programs, but one could frankly spend money to avoid having to apply "design judgment," since one would stay far away from the vague boundary between acceptable and unacceptable changes.
7. To say that "lifetime is maximized to the extent possible, consistent with attaining the other MCs." simply means that this is given low priority. But the priority should be assigned from the outside, not set in the Department of Energy weapon program.

8. To say that "As a practical matter, we cannot always remanufacture nuclear warheads using original design specifications," ignores the vast resources available to the program. Furthermore, the arguments given do not support this assertion. It says "When an existing well-tested design can be adapted..., modifications are necessary to make the design compatible with the new weapon system and to meet other requirements." In actuality, if the requirement were imposed to use the MX warhead without modification, on the Midgetman missile, that could certainly be done. These "necessary modifications" are not in fact necessary--they are convenient.

To say that "Older designs lack what are now considered essential features for safety and security," is a judgment. These older designs are in the inventory, and they are adequately safe there (else we would take them out of service immediately), and it should be a national judgment whether fewer of these persisting into the future in a CTBT era is better for our security than new, supposedly safer and more secure weapons. To say that "Materials, fabrication techniques, and equipment used for older weapons will not necessarily be available or permissible for health and safety reasons" ignores the exemption in the OSHA law for national security purposes. It also ignores the fact that in the nuclear weapons program people are accustomed to working with plutonium in controlled atmospheres, and the like, and this can easily be done with spray adhesive or other semi-noxious materials like beryllium.

To say that "...not all design problems can be eliminated by extensive non-nuclear testing alone" begs the question. I am talking about weapons which have been placed into the stockpile after thorough testing. If there are design problems, then by definition they do not interfere with the initial reliable performance of the weapon, and degradation in the stockpile can be ascertained by non-nuclear testing and fixed by remanufacture.

9. In paragraph 12, Gaffney compares a nuclear weapon with the "airplanes, radar, tanks," which require testing as complex mechanisms, but I propose always to test the nuclear weapons by non-nuclear means. They are put through their paces, and only the fissile material is untested after the proof tests associated with the initial phase of weapon deployment.

In all, I think the analogy with President Kennedy's efforts are imperfect. The "changes in the policies of other nations" which President Kennedy called for are reflected in
the apparent willingness of the Soviet Union now to have an
indefinite moratorium and (one hopes) a thoroughly
verifiable Comprehensive Test Ban Treaty. Certainly there
has been progress since those days in the acceptance of
unmanned seismic monitoring stations on Soviet territory,
and the demonstration of a satisfactory prototype.

To put a CTBT as a "long-term objective" reminds one of the
reputed plea of St. Augustine, in which he asked the Lord
essentially to "Make me chaste, but not just yet."

I think that the arguments put forth in the letter of
01/21/86 from Secretary Gaffney, while interesting, do not
stand up to analysis.

Sincerely yours,

Richard L. Garwin

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APPENDIX 3: COMPREHENSIVE TEST BAN AND NUCLEAR PROLIFERATION

In a major departure from the policies of previous administrations, the Reagan Administration now argues that a Comprehensive Test Ban (CTB) Treaty might encourage the proliferation of nuclear weapons.

Since the signing of the Nuclear Non-Proliferation Treaty in 1968, U.S. policy has been that the negotiation of a test ban would serve U.S. security interests by strengthening efforts to prevent nuclear proliferation. The Reagan Administration has turned that policy on its head. Apparently, their visceral distaste for a CTB is so great that they feel compelled to argue that a test ban will actually encourage proliferation.

In testimony before the Senate Armed Services Committee on April 29, Assistant Secretary of Defense Richard Perle declared that:

"Given our reliance of the free world on nuclear weapons to deter aggression, a CTB at this time could encourage the retention and proliferation of nuclear weapons. Nuclear weapons states could be expected to hedge against possible reliability problems by increasing the number and yield of warheads in their respective stockpiles. Non-nuclear weapon states who did not have to address the question of an independent nuclear capability because of U.S. nuclear guarantees, would have to reassess their requirements for national security, should they lose confidence in the U.S. nuclear deterrent. Under these circumstances, the nuclear options cannot (sic) be excluded. Hence, a CTB could lead to a less safe and more dangerous world than we have today."

I have yet to see one shred of evidence that supports this patently ridiculous and Orwellian contention. A simple reading of the final declaration of the recent Non-Proliferation Treaty review conference suggests that the Reagan Administration stands alone and isolated in this view. (The text of this declaration reprinted in most recent published volume of the Panel's hearings) The rest of the world is convinced a CTB would help discourage proliferation.

For over thirty years, every American President until Reagan has sought to negotiate a ban on nuclear testing. President Eisenhower proposed such a halt in 1957, and later remarked that the failure to achieve a CTB was one of the greatest disappointments of his Presidency. In his 1963 American University speech, President Kennedy noted that a test ban "would check the spiralling 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, the further spread of nuclear weapons."

This judgment has been shared by Presidents Johnson, Nixon, Ford, and Carter.

Last September, the 127 signatories of the Nuclear Non-Proliferation Treaty of 1968 met in Geneva to review the operation of the treaty. In their final declaration they noted that CTB negotiations had not been resumed and reaffirmed their determination "to achieve the discontinuance of all test explosions of nuclear weapons for all time."

I first picked up signs of the impending shift in Reagan Administration policy in January of this year, when I received a letter from Deputy Assistant Secretary of Defense Frank Gaffney, which declared that a CTB "would not strengthen stability but rather lead to a less secure and more dangerous world as the nuclear nations, unsure of the reliability of their nuclear weapons, increased their stockpiles to compensate for this uncertainty and as some non-nuclear nations, unsure of the reliability of the guarantees of the nuclear
states, decided their security required them to build independent nuclear forces." (see Appendix 2)

Surprised by Mr. Gaffney's argument that a CTB would encourage both vertical and horizontal proliferation, I wrote Secretary of State Shultz to find out whether Mr. Gaffney's statements accurately represented official Administration policy. The State Department response was coordinated by an interagency team and signed by Acting Assistant Secretary of State for Legislative and Intergovernmental Affairs James W. Dyer. It confirms that the Administration position is now that a test ban would encourage nuclear proliferation because it would result in less "reliable" nuclear weapons.

In the letter, Mr. Dyer states "Our position is that...a CTB could encourage inter alia the proliferation of nuclear weapons --- 'vertical' proliferation -- if it lead to a serious questioning of the US nuclear deterrent. Further, a CTB might actually lead to an increase in the number of nuclear weapons in nuclear weapon states if such states become concerned about stockpile reliability.

"With regard to so-called 'horizontal' proliferation," Mr. Dyer stated, "a US-Soviet CTB under present conditions would not necessarily constitute a brake on the plans or intentions of potential nuclear states" which, he suggested, might choose to go nuclear for a variety of reasons. He added, "It seems clear, however, that any decrease in the credibility of the US nuclear deterrent would lead other countries to carefully reassess their national security calculations. In that context their adoption of nuclear options cannot be excluded."

I would point out to Members of the Panel that Mr. Dyer's responses to my follow-up questions fail to substantiate either of these claims. I had asked the State Department whether it had actually argued that a CTB would encourage proliferation by the nations that had signed the Non-proliferation Treaty. In his reply, Mr. Dyer said only that "administration officials have discussed issues related to non-proliferation in the context of briefings on our testing policy with allied governments, some of which are signatories of the NPT."

That's evasive and doesn't answer the question at all. I seriously doubt that our negotiators have even made this argument to signatories of the Non-Proliferation Treaty. If they had done so last September, they would have been laughed out of the Geneva review conference.

In my letter to the State Department, I also asked why we apparently have not been able to convince signatories of the Non-Proliferation Treaty that a test ban might encourage proliferation, and Dyer replied that "The question implies that no NPT (Non-Proliferation Treaty) signatories share this view. We know of no basis for such an assertion."

I know of no basis for believing that anybody agrees with this harebrained argument, and I challenge the Administration to come up with one other nation that will state that conclusion of a CTB between the U.S. and the Soviet Union would cause it to either go nuclear, or if it is already a weapons state, increase its nuclear stockpile.

In my letter, I asked the State Department to list which allies have indicated that signing of a test ban treaty might cause them to go nuclear, and in his reply, Mr. Dyer admitted they "are not aware that any US allies have indicated that the conclusion of a CTB Treaty between the US and the Soviet Union might lead them to build independent nuclear deterrent forces."
It is clear that neither our NATO or Asian allies support the Administration's argument on proliferation. For example, Dr. Lutz G. Stavenhagan, State Minister in the German Foreign Office, recently wrote Ms. Anne Borgmann of the anti-nuclear Green Party that "The positive attitude of this Administration to a CTB, which the Chancellor recently emphasized once again, is also an expression of the conviction that the goal of non-proliferation would be promoted by concluding a CTB." Dr. Stavenhagen emphasized that "the problem cannot even arise as to whether a CTB would lead to a loss of confidence in the reliability of American guarantees of security," and that "the Federal Republic has definitively renounced having its own nuclear weapons in the WEU (Western European Union) Treaty and by signing the Non-Proliferation Treaty."

I would suggest to the Panel that in a time when terrorism is on everyone's mind, we should be thinking about how best to prevent the Qaddafis of the future from ever getting their hands on a nuclear weapon. The world has made it clear if weapons states like the U.S. want to preserve the non-proliferation regime, we must take action to halt nuclear testing.

I have attached my correspondence with the State Department on this issue, and would strongly recommend that the Panel take up the question of the impact of a CTB on proliferation in future hearings.

# # #
Dear Mr. Markey:

Thank you for your letter of February 14, 1986 to Secretary Shultz concerning US policy regarding a comprehensive test ban (CTB) and non-proliferation. The following information is provided in response to your specific questions.

Question 1: Does the Administration believe that a CTB would encourage the proliferation of nuclear weapons?

Answer 1: While we believe that we must actively investigate technologies that could one day make us less dependent on offensive nuclear arms for our security, nuclear weapons will clearly remain the key element of deterrence for the foreseeable future. During such a period, where both the US and our friends and allies must rely upon nuclear weapons to deter aggression, some level of nuclear testing will continue to be required.

Nonetheless, a comprehensive test ban remains a long term objective of the United States. We believe such a ban must be viewed in the context of a time when we do not need to depend on nuclear deterrence to ensure international security and stability, and when we have achieved broad, deep and verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, and greater balance in conventional forces. For our part, the United States is energetically pursuing negotiations and discussions with the Soviet Union on concrete steps in all of these areas. We have made clear our strong and continuing view that Soviet calls for an immediate and unverifiable nuclear testing moratorium are not a basis for meaningful progress to this end. Our position on the unacceptability of such moratoria remains unchanged.

Our position is that in the absence of the above-noted context, a CTB could encourage inter alia the proliferation of nuclear weapons -- "vertical" proliferation -- if it led to serious questioning of the US nuclear deterrent. Further, a CTB might actually lead to an increase in the number of nuclear weapons in nuclear weapon states if such states become concerned

The Honorable
Edward J. Markey,
House of Representatives.
about stockpile reliability. In the case of the United States, we should not forget that, thanks in part to the lessons learned from a well-structured program of nuclear testing, the United States has been able to reduce considerably the number of nuclear weapons in our stockpile since the 1960's. Weapons states might seek to offset the erosion of confidence in the reliability of their nuclear weapons stockpile. Others might seriously consider expanding their stockpile to compensate for the risks of unreliability over time.

With regard to so-called "horizontal" proliferation, a US-Soviet CTB under present conditions would not necessarily constitute a brake on the plans or intentions of potential nuclear states. Whether to "go nuclear" is a decision of highest national security importance for various states, and ultimately depends on a variety of underlying circumstances -- regional tensions, desire for enhanced political influence or prestige, and concern about activities of neighbors -- that would not be significantly changed by a CTB. Nor would third party adherence to a CTB prevent such a nation from designing a reliable first-generation weapon; as you know, the device dropped on Hiroshima had not been tested. Whether, in such circumstances, individual states would feel that their security required them to develop national nuclear capabilities is a question which cannot be answered in the abstract. It seems clear, however, that any decrease in the credibility of the US nuclear deterrent would lead other countries to carefully reassess their national security calculations. In that context their adoption of nuclear options cannot be excluded.

Question 2: Has the Administration in fact made this argument to the signatories of the Non-Proliferation Treaty?

Answer 2: Administration officials have discussed issues related to nuclear non-proliferation in the context of briefings on our testing policy with allied governments, some of which are signatories of the NPT.

Question 3: If so, why has the US been unable to convince the signatories of the NPT that this is true?

Answer 3: The question implies that no NPT signatories share this view. We know of no basis for such an assertion.

Question 4: What, if any non-nuclear nations allied to the US have indicated that the conclusion of a CTB Treaty between the US and the Soviet Union might lead them to build independent nuclear deterrent forces?
Answer 4: We are not aware that any US allies have indicated that the conclusion of a CTB Treaty between the US and the Soviet Union might lead them to build independent nuclear deterrent forces. However, inasmuch as the US position vis-a-vis a CTB under present circumstances has been consistently clear, none of our allies has had to address the proposition suggested by your question. As a general rule, they -- like we -- do not publicly discuss responses to hypothetical situations.

Sincerely,

[Signature]

James W. Dyer
Acting Assistant Secretary
Legislative and Intergovernmental Affairs
APPENDIX 4: NUCLEAR-DRIVEN DIRECTED ENERGY WEAPONS AND THE CTB

As Members of the Panel are well aware, exaggerated claims about the Soviet threat are as perennial a part of a Washington spring as the cherry blossoms. Right around budget time we always hear that the Russians could be pulling ahead of us in some new military technology.

A few months ago, I asked the staff of the Energy Conservation and Power Subcommittee, which I chair, to prepare a study on the potential budget savings might result from negotiation of a Comprehensive Test Ban, particularly in the area of nuclear-driven directed energy weapons such as the X-ray laser.

Despite the President's repeated assertions that Star Wars is going to be non-nuclear the Administration has indicated its desire to spend at least $4.5 billion on research, testing, and development of nuclear bomb-pumped X-ray lasers and orbiting nuclear reactors between now and 1991.

To justify these expenditures, the Department of Energy appears to be hyping the threat posed by Soviet nuclear SPNI research efforts, and foreclosing alternate means of negating this threat -- such as negotiation of a comprehensive test ban.

The report takes issue with an official Department of Energy assessment that a Comprehensive Test Ban Agreement would be ineffective in blocking Soviet progress toward a nuclear directed energy weapon, and that the U.S. must therefore conduct its own nuclear "Star Wars" research program to provide a "threat assessment" of the potential Soviet capability.

The report finds the DOE argument "inconsistent with the present and planned scale" of the U.S. nuclear Star Wars program, and cites extensive testimony by high-ranking government officials and outside experts stating that a CTP would effectively prevent the development and testing of nuclear Star Wars devices.

The full text of the report is attached.

# # #
NUCLEAR DIRECTED ENERGY WEAPONS
AND
THE COMPREHENSIVE TEST BAN

A STAFF REPORT
TO REP. EDWARD J. MARKEY, CHAIRMAN
SUBCOMMITTEE ON ENERGY CONSERVATION AND POWER
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES

APRIL 15, 1986
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ATTACHMENTS

I. Administration Statements Regarding "NonNuclear" Character of SDI Research Program
II. Nuclear Star Wars Budget/Testing Data
III. DOE Responses to Questions from Chairman Markey
V. Revised Calculation of Actual NDEW Testing Costs
SUMMARY

In connection with the Subcommittee's February 26, 1986 DOE Budget hearing, you posed several questions regarding the effectiveness of a CTB in limiting the need for major expenditures on nuclear directed energy weapon (NDEW) development. The DOE has responded that a CTB would be ineffective in blocking Soviet progress toward an NDEW capability, and that its current NDEW research and testing program is designed as a "threat assessment" of the potential Soviet capability.

As set forth in detail below, we have found DOE's justification of its NDEW program to be inconsistent with the present and planned scale of the program, and with descriptions of its intent previously provided to Congress.

Likewise, DOE's assessment that a CTB would be ineffective in preventing Soviet development of a nuclear directed energy weapon is contradicted by the testimony of other senior government officials and a consensus of nongovernmental experts.

BACKGROUND

During the Subcommittee's February 26 hearing on the Department of Energy budget request for FY 1987, you asked Secretary John Herrington to reconcile his Department's request of $603 million for nuclear "Star Wars" research with the Reagan Administration's repeated characterization of the Strategic Defense Initiative as a "non-nuclear" research program [see Attachment One].

Secretary Herrington responded:

"A lot of the increased spending at the Department of Energy is to meet SDI milestones which are going on in the National Laboratories, and there is increased funding in those areas.

"And specifically directing your attention to nuclear versus non-nuclear, a lot of the increased spending in nuclear activities is as a threat analysis or as a threat assessment of what the Soviets are capable of doing in this particular area at this time. There is no question but that they have a substantial program underway, but our efforts are not all nuclear driven." [rev. unpub. transcript, p. 27]

"...I do not think that the country, as a policy goal, should avoid a threat assessment of what is capable of being done by the principal other country that is developing SDI technology, and that is the Soviets. So there is an effort to assess what can be
done with nuclear.

"Whether that is ever deployed in space or not is, I think, a question for the Congress and the President. [p. 28]

"In developing SDI,....there is no question that we are doing nuclear research, but that is not with a goal to deploy, as the President has said, nuclear weapons in space.

"We are doing a threat assessment of what can be done with nuclear weapons in space, and that research, I think, needs to take place." [transcript, p. 29]

You then pointed out to the Secretary that other Administration officials argue we should not reach agreement with the USSR on a Comprehensive Test Ban Treaty -- which Soviet leaders say they want -- because the United States should go forward with research on nuclear 'Star Wars' programs as a defense for our own country. You stated:

"The point is, if we sign a [test-ban] treaty with the Soviet Union, they cannot research the [nuclear Star Wars] programs either, and we stop both programs dead in their tracks before we've gone any further.

"If the United States is committed to not having a nuclear Star Wars program in either side's hands, then the President should negotiate [a CTB] with the Soviets. And he refuses to do so. He refuses to send negotiators to Geneva. And the proof is in the pudding of your budget that, in fact, WE are in a pell-mell race for the development of this program ourselves, without any interest in trying to initiate negotiations with the Soviets that will make it possible for us to curtail programs in both countries." [transcript, p.29-30]

At this point, Secretary Herrington demurred, and suggested that you discuss arms control negotiating strategy with other Administration officials.

After the hearing, you asked Subcommittee staff to probe the Department of Energy further regarding the extent of the nuclear SDI program, its relationship to a Comprehensive Test Ban, and the implications of both for the DOE budget. In light of the apparent Soviet desire for a Comprehensive Test Ban, you asked for an evaluation of the "Soviet threat assessment" justification for the current nuclear SDI program.
FINDINGS

DOE Budget Savings from a CTB

Over the past six years, the Department of Energy's spending on nuclear weapons has increased 122%.

In FY 1981, when the present Administration took office, the total budget for the Department of Energy was $12.2 billion, of which 30% ($3.7 billion) was for "Atomic Energy Defense Activities."

In FY 1987, the Administration wants to spend $8.2 billion on nuclear warheads and bombs. That amounts to 68% of DOE's budget authority for this year.

What fraction of this sum might be immediately saved by a CTB is an open question, but it would clearly include the $634 million allocated for underground testing and some significant fraction of the $1.1 billion to be spent next year for nuclear weapons research and development.

As currently tested weapons finish their production runs in the early 1990's, the current warhead assembly ($2.5 billion) and explosive nuclear materials production ($2.1 billion) budgets would shrink dramatically under a CTB, amounting to a savings of tens of billions of dollars over the next decade.

Nuclear Star Wars Spending

The Department of Energy's spending on nuclear Star Wars research is projected to grow from $283 million in the current fiscal year to $603 million in FY 1987, and then to around $840 million for each of the next four years [See Attachment Two].

That means that from now through 1991, the government is planning to spend at least $4.5 billion on research, advanced development, and testing of nuclear bomb-pumped X-Ray lasers and orbiting space reactors. This figure does not include Defense Department funds related to the development of Nuclear Directed Energy Weapons (NDEW).

The upcoming FY 1986 Supplemental Appropriation Bill includes a transfer of $62 million from Department of Defense SDI accounts to DOE's X-Ray laser program, which would increase DOE's FY 1986 nuclear Star Wars budget to $350 million. Rep. Mrazek (D-N.Y.) is planning to offer an amendment which would block this transfer of funds.
Nuclear Directed Energy Weapon (NDEW) Testing and the CTB

Following the February 26th DOE budget hearing, subcommittee staff asked DOE to respond to a number of questions for the record which were intended to clarify the impact of a CTB on NDEW development. The answers DOE provided are sharply at variance with other expert testimony provided to Congress on this subject, and virtually devoid of evidence or analysis supporting its assessment that the Soviets "might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing." [See Attachment 3]

In its responses, the DOE bridges the gap between the President's "SDI is non-nuclear" rhetoric and its own massive NDEW research program by stating:

"The primary reason that we are pursuing nuclear directed energy weapons research is to understand the Soviet capability to design and deploy similar weapons which would put the United States strategic deterrent force or a future defensive system at risk." (Response to Question #2)

This statement is fundamentally misleading and at odds with previous testimony. For example, Dr. Richard L. Wagner, Jr., the Chairman of the Military Liaison Committee to the Department of Energy, testified before the House Procurement and Military Nuclear Systems Subcommittee in February 1985, as follows:

"Let me go back to the thought that a new kind of a nuclear-driven defensive weapon is in fact very much in the DOD's thinking as one of the options we would like to develop for the SDI....the first stages of the SDI Program, which as you say may last decades, I believe, and the [Defense] Department believes, will have this nuclear component, this new kind of nuclear-driven directed energy weapon, as one of its very important options.

"....in the near term -- by that I mean a decade or two, not three or four or five -- the effectiveness that would come from these new kinds of nuclear driven long-range effective systems is something that we ought not to give up. The Department does not want to give up that possible option."

The other obvious flaw in the DOE's response to Question #2 is that the Soviet Union hardly needs to go to the trouble of developing and testing NDEW's to pose a threat to any future defensive system which we might develop. Current generation ICBMs and anti-ballistic missiles used as antisatellite weapons could wreak havoc on such a system.
When asked (Question #3) whether a CTB would obviate the need for its massive "threat-assessment" of the Soviet potential to deploy NDEWs, the DOE stated, "First, we suspect the Soviets may be well ahead of the U.S. in NDEW technologies, but we cannot know for sure."

DOE's "suspicion" amounts to unsupported speculation. The Department of Defense publishes an annual assessment of the "Relative US/USSR Standing in the Twenty Most Important Basic Technology Areas" which bear on the military balance (See Attachment Four), including nuclear SDI-relevant technologies such as "Computers and Software," "Directed Energy," "Electro-optical Sensors," "Propulsion," and "Telecommunications (includes Fiber Optics)". The USSR is "superior" in none of these areas.

Building on the false premise of a possible Soviet lead in NDEW technologies, the DOE then ascends to an even higher plane of speculation: "If the Soviets are substantially ahead, they might be able to achieve the capability to deploy nuclear directed-energy weapons with no additional testing."

One way to evaluate this claim is to ascertain the impact that U.S. nuclear weapons experts believe the CTB would have on the U.S. NDEW program.

Roy Woodruff, the Associate Director for Defense Systems at the Livermore National Laboratory, testified as follows before a special arms control panel of House Armed Services Committee last year:

"In the area of the strategic defense initiative, certainly the scientifically significant breakthroughs in new weapon concepts, such as the X-Ray laser or any nuclear directed energy weapon, would be stopped in the absence of testing."

Dr. C. Paul Robinson, Principal Associate Director for National Security Programs, Los Alamos National Laboratory, was even more categorical:

"A CTB would virtually halt all research on nuclear concepts for strategic defense. It would also remove our capability to evaluate the vulnerability of our nuclear stockpile to nuclear ABM systems currently deployed by the USSR."

In fact, even in the absence of a CTB, the Soviets might have difficulty developing effective NDEW weapons within the 150-kiloton threshold of the Threshold Test Ban Treaty (TTBT). Dr. Robinson testified:
"The TTBT does pose some formidable problems for evaluating certain nuclear concepts for the strategic defense mission -- for example, those that might require a large-yield nuclear weapon as a power source -- although such concepts are not the main focus of SDI."

After first asserting that the Soviets could develop NDEW weapons without "additional testing," the DOE then abruptly reverses field and claims that "Soviet NDEW tests" could not be detected until "more reliable means to verify test ban compliance become available."

As you know, such reliable means of verification are available today and the Soviet Union has expressed its willingness to accept the installation of regional seismic monitoring on its national territory adjacent to its nuclear test ranges.

Specifically, it is acknowledged by government and non-government experts alike that the "teleseismic" (long-range, detection threshold for the current external seismic network corresponds to a yield of about 10 kilotons for an explosion detonated in dry alluvium (i.e. clay, silt, sand, or gravel), a medium which partially absorbs the shock waves from the explosion.

For "well-coupled" explosions in hard rock, the external detection threshold corresponds to a yield of 1 kiloton. This in fact is the published consensus of the Group of Scientific Experts to the Conference on Disarmament.

The prospective capabilities of the internal network which would be installed in the Soviet Union under a CTB vary according to the number, characteristics, and placement of the stations. Most seismologists agree that such a network would have a high probability of detecting "cavity-decoupled" explosions with yields as low as 1 kiloton.

Below this level, seismic discrimination between earthquakes, nuclear and chemical explosions becomes difficult, but the military significance of subkiloton nuclear tests is marginal, and any sustained Soviet program of testing in this region would risk discovery by non-seismic means, including the far from negligible prospect of Soviet scientists who would publically dissent from such a cheating program.

It may be that the two sides could agree on a criterion that any "experiment" involving a nuclear yield would be permitted under a CTB if it could be fully contained in an above ground facility.
Moreover, the DOE's contention regarding Soviet secret NDEW explosive tests is flawed in light of what is known about the yield ranges of U.S. NDEW development tests. [See Attachment Two]

Four out of the five reported X-Ray laser tests conducted to date involved yields greater than 20 kilotons. Such tests, if conducted by the Soviets under a CTB, would be detected by the current external network, much less the regional on-site network that would be installed under a CTB.

In making the final point in its response, DOE turns its own argument regarding the obstacle of verification on its head, this time contending that "even under a verifiable comprehensive ban," Soviet NDEW research "could and almost certainly would continue."

Laboratory research, high-power laser X-ray experiments, computer simulations -- yes, probably, and we would be free to do the same; Explosive underground testing at the yields required to develop a working X-Ray laser weapon -- absolutely not, for all the reasons set forth above.

By deliberately blurring the line between laboratory research which would not be prohibited under a CTB, and explosive development testing of NDEWs, the DOE is attempting to sow fears that the "risk of a Soviet 'breakout' would continue to increase with time."

This contention is completely unsubstantiated and only further undermines DOE's credibility on the subject of the security implications of a Comprehensive Test Ban.

In general, staff is astounded by the shallow, repetitive nature and uniformly low quality of the answers provided the Subcommittee in response to your questions regarding the implications of a Comprehensive Test Ban for the DOE's nuclear SDI program. Obviously, so little attention is being paid to the prospect of obtaining a Comprehensive Test Ban within the Administration that DOE does not feel impelled to deliver a thoughtful, documented response.

ASSESSMENT

The many contradictions and inaccuracies contained in DOE's responses apparently stem from the tension between the public pretenses under which the SDI program is being conducted and the underlying military realities.
The President has pledged that the purpose of the SDI program is to make nuclear weapons "impotent and obsolete" through massive spending to develop effective non-nuclear anti-missile technology. DOE must continually square this public rhetorical commitment with its real agenda of developing a "flexible" and "enduring" nuclear war-fighting capability, which requires not only a continuation but an increase in underground nuclear effects and warhead development testing.

For example, on October 15, 1985, President Reagan told a Republican rally in Milwaukee:

"The idea of using American technological genius to develop a system to protect us against nuclear missiles is moral and in the fundamental interests of our allies, and the cause of peace. Our research into an anti-nuclear defense system is not only the moral way. How long, after all, can the American people hold to a strategy that threatens innocent lives? That's just not the American way."

Compare the President's simple, fanciful strategy for protecting innocent lives from nuclear missiles with the standard operating outlook of a high-ranking member of the permanent nuclear establishment which, inexplicably, continues to prosper under President Reagan.

Dr. C. Paul Robinson, Principal Associate Director for National Security Programs at Los Alamos National Laboratory, recently testified as follows:

"Even if we decide to alter the nature of our deterrent in the future, through development and deployment of effective strategic defenses, I believe that we will continue to rely for a long time on nuclear weapons. All of our experience at Los Alamos convinces me that continued research, development, and testing of nuclear weapons is essential if the United States is to continue to maintain and rely on the nuclear deterrent as we have know it, or any likely alternative."

Dr. Robinson went on to explain that continued nuclear testing is required, among other reasons, to:

"...allow us to understand and use those weapon effects that might best destroy Soviet targets....To ensure that we could destroy buried or hardened Soviet command, control and communications assets or missile silos, we need to know more about the cratering, ground shock, source region electromagnetic pulse, and other phenomena associated with nuclear explosions."
"To be able to hold at risk mobile Soviet weapons and support capabilities, we need to know more about the generation of microwave radiation by nuclear explosions. These are examples of how changing requirements placed on our military forces lead us to rethink and modify our nuclear weapons on the basis of understanding nuclear effects."

This obviously is not a program for making nuclear weapons "impotent and obsolete." In fact, according to Dr. Robinson, some of the tests would be devoted to developing new warheads for "maneuverable reentry vehicles which would be necessary to counter Soviet defenses" as well as "earth penetrating weapons to go after those deeply buried targets and other specialized weapons for the imprecisely located and mobile targets."

According to Assistant Secretary of Defense Richard Perle, a vocal and reportedly influential member of the administration's arms control policy-making team, SDI should be directed toward a search for a combination of offensive and defensive forces that take full advantage of our technological potential....and enables us to exploit our strengths and not compete in areas where we are weak."

Finally the DOE's evident distaste for the CTB is so acute that it recently led one senior official to misrepresent the extent of U.S. treaty commitments to seek a Comprehensive Test Ban. On September 16, 1985, then Assistant Secretary of Energy for Defense Programs, Maj. General William W. Hoover (Ret.), stated in a letter to House Armed Services Committee Chairman Les Aspin:

"Please be assured that U.S. testing policy is fully consistent with obligations under the Limited Test Ban Treaty and the Non-Proliferation Treaty....There is at present no obligation in any treaty operating clause to negotiate toward a test ban -- although it is worthy of note that the [unratified] TTBT, in Article I, Paragraph 3, would for the first time make such a commitment to CTB negotiations."

This statement is at the very least incomplete, and therefore misleading. There already exists such an "obligation" to negotiate toward a test ban in a ratified treaty operating clause -- Article I of the Limited Test Ban Treaty of 1963.

Whether this constitutes an unambiguous and binding legal obligation on the part of the U.S. government to engage in CTB negotiations is a matter for international legal experts to quibble about. The diplomatic commitment is clear.
Article I, Paragraph B, of the Limited Test Ban Treaty, expressly states that the implicit license granted underground nuclear tests which do not result in the presence of radioactive debris outside each signatory's national territory shall be:

"...without prejudice to the conclusion of a treaty resulting in the permanent banning of all nuclear test explosions, including all such explosions underground, the conclusion of which, as the Parties have stated in the Preamble to this treaty, they seek to achieve."

In this manner, the intentions of the treaty parties expressed in the Preamble are included, by reference, in the main operating clause of the Treaty. The Preamble states that the governments of the U.S., U.K., and the USSR are "seeking to achieve the discontinuance of all test explosions of nuclear weapons for all time," and are "determined to continue negotiations to this end."

Virtually all the other signatories of the LTBT believe that the LTBT binds the parties to continue negotiations toward a Comprehensive Test Ban.

Moreover, according to the Arms Control and Disarmament Agency's 1982 compilation of arms control agreements, non-weapons states party to the Nonproliferation Treaty interpret the commitment of the nuclear weapons states under Article XI -- "to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date..." -- as requiring the cessation of nuclear weapons tests.

This ACDA document states:

"A Comprehensive Test Ban Treaty prohibiting the testing of nuclear explosives is viewed by many non-nuclear-weapon states as a sine qua non for preventing the emergence of additional nuclear-weapon states and for preserving the NPT regime."
All of you know that we're researching nonnuclear technologies that may enable us to prevent nuclear ballistic missiles from reaching U.S. soil or that of our allies.

We're not discussing a concept just to enhance deterrence, but rather a new kind of deterrence; not just an addition to our offensive forces, but research to determine the feasibility of a comprehensive nonnuclear defensive system ...

The goal of SDI research is to find nonnuclear technologies which, if deployed, would strengthen stability and enhance our mutual security.

SDI is examining technologies which may make possible nonnuclear defenses against ballistic missiles.
--Ronald Reagan, Response to questions submitted by ABC of Spain, April 18, 1985.

A nonnuclear strategy defense makes good sense.

Who is threatened if Western research and Soviet research, that is itself well-advanced, should develop a nonnuclear system which would threaten not human beings but only ballistic missiles?

[I will] do everything within my power to move forward with research and testing of a high-tech nonnuclear defensive system, so that the world in which you raise your children in will be safe and secure and free.

The ideal method that we very much hope we can get and have reason to believe we may be able to get would be a method of destroying them [missiles] outside the atmosphere without using nuclear weapons or nuclear means to do so.
--Caspar Weinberger, Secretary of Defense, Interview with newsmen, August 8, 1985.
So the President believes that we have to ask the question, Isn't there an alternative?, and that might be non-nuclear defensive systems.

Robert C. McFarlane, Assistant to the President on National Security Affairs, Interview on This Week With David Brinkley, ABC, September 22, 1985.

What we saw last summer at Kwajalein was an experiment that proved one important thing: that we could intercept a ballistic missile without using a nuclear warhead by using super-high precision, modern homing electronics. It was important to show that we are no longer talking about nuclear systems.

George C. Keyworth, Jr., Science Adviser to the President, Interview in the San Diego Union, May 19, 1985.

The SDI puts primary emphasis on technologies that do not use nuclear weapons.

Kenneth W. Dam, Deputy Secretary of State, Remarks to the Foreign Policy Association, New York, January 14, 1985.
ATTACHMENT 2
NUCLEAR STAR WARS BUDGET
(In Millions)

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STAR WARS NUCLEAR WARHEAD TESTING BUDGET
(In Millions)

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X-RAY LASER TESTING PROGRAM*

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ATTACHMENT THREE

ADDITIONAL POST-HEARING QUESTIONS AND ANSWERS RELATING TO THE FEBRUARY 26, 1986 HEARING BEFORE THE HOUSE COMMITTEE ON ENERGY AND COMMERCE SUBCOMMITTEE ON ENERGY CONSERVATION AND POWER WITNESS: JOHN S. HERRINGTON SECRETARY OF ENERGY
QUESTIONS FROM REPRESENTATIVE MARKEY

Question 2: On April 10 of last year, President Reagan stated, as he has on many occasions, that "the goal of SDI research is to find NON-NUCLEAR TECHNOLOGIES which, if deployed, would strengthen stability and enhance our mutual security."

If the President is correct, and SDI actually is a non-nuclear research program, why are you requesting $603 million for FY 87 to develop space nuclear explosives and orbiting space nuclear reactors?

Answer: The President's policy for SDI is a truly effective nonnuclear defense and this Department unconditionally supports that policy. The primary reason that we are pursuing nuclear directed energy weapons research is to understand the Soviet capability to design and deploy similar weapons which would put the United States strategic deterrent force or a future defensive system at risk. These data are required as soon as possible because of the potential impact they could have on current nonnuclear SDI research and planning. The increased funding sought for FY 1987 accelerates the DCE program toward the technology-limited pace necessary to ensure that feasibility data will be available to meet DOD decision milestones.
QUESTIONS FROM REPRESENTATIVE MARKEY

Question 3: If, as you stated during your testimony, DOE is being driven to do this nuclear SDI research "not with a goal to deploy," but as "a threat assessment of what is being done by the principal other country that is developing SDI technology, that is the Soviets" -- then would it be accurate to conclude that the need for this research would be obviated by a comprehensive ban on nuclear explosions?

Answer: No, a comprehensive ban on nuclear testing would not obviate the need for nuclear directed energy weapons (NDEW) research for several reasons: First, we suspect the Soviets may be well ahead of the U.S. in NDEW technologies, but we cannot know for sure. If the Soviets are substantially ahead, they might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing. Second, unless more reliable means to verify test ban compliance become available, the U.S. would have no assurance that Soviet NDEW tests were not being conducted. Third, even under a verifiable comprehensive test ban, Soviet NDEW research could and almost certainly would continue. Without a U.S. NDEW research program, we believe the risk of a Soviet "breakout" would continue to increase with time.
While a comprehensive test ban would substantially affect the U.S. NDEW research program, continued underground testing is required primarily to evaluate and maintain confidence in the reliability of the Nation's current nuclear weapon stockpile and to develop and certify modern nuclear weapons to maintain a viable deterrent for the foreseeable future.
Question 4: If DOE's $536 million program for nuclear SDI weapons research is motivated solely by the need to assess the scope of a possible future Soviet threat in this area, why not save the money, and additional expenditures for this purpose in the out-years, by signing an agreement with the USSR banning all nuclear test explosions?

Answer: A primary DOE mission in nuclear weapons research is to avoid technological surprise by an adversary. We know the USSR has been involved in nuclear SDI research for at least 15 years but we have little information on their program successes. Soviet strategic defense and counter-defense capability could be a serious coercive and military threat to U.S. national security. In the overall scheme of the U.S. annual defense budget, a $500 million/year effort to assess such a potential threat to the freedom of the U.S. and our allies would seem to be significant but small.
QUESTIONS FROM REPRESENTATIVE MARKEY

Question 5: Is it your contention that we would need a threat assessment program comparable to the one you are proposing for FY 1987 even if the Soviet Union were to agree to a CTB?

Answer: Yes, even if the Soviet Union were to agree to a comprehensive test ban, we believe the U.S. should continue a program of nuclear directed energy weapon research for several reasons: First, we suspect the Soviets may be well ahead of the U.S. in NDEW technologies, but we cannot know for sure. If the Soviets are substantially ahead, they might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing. Second, unless more reliable means to verify test ban compliance become available, the U.S. would have no assurance that Soviet NDEW tests were not being conducted. Third, even under a verifiable comprehensive test ban, Soviet NDEW research could and almost certainly would continue. Without a U.S. NDEW research program, we believe the risk of a Soviet "breakout" would continue to increase with time.
QUESTIONS FROM REPRESENTATIVE MARKEY

Question 6: In what ways would a CTB prove to be ineffective in blocking Soviet development of nuclear bomb-pumped directed energy weapons?

Answer: A comprehensive test ban could be very ineffective in blocking development of Soviet nuclear directed energy weapons (NDEW), particularly if the Soviets are well ahead of the U.S. in NDEW technologies. We suspect this to be the case, but we cannot know for sure. If the Soviets are substantially ahead, they might be able to achieve the capability to deploy nuclear directed energy weapons with no additional testing. Also, unless more reliable means to verify test ban compliance become available, the U.S. would have no assurance that Soviet NDEW tests were not being conducted. Furthermore, even under a verifiable comprehensive test ban, Soviet NDEW research could and almost certainly would continue. Without a U.S. NDEW research program, we believe the risk of a Soviet "breakout" would continue to increase with time.
Table III.E.1
Relative U.S./USSR Standing in the Twenty Most Important Basic Technology Areas

<table>
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<th>Basic Technologies</th>
<th>U.S. Superior</th>
<th>U.S./USSR Equal</th>
<th>USSR Superior</th>
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<tbody>
<tr>
<td>1. Aerodynamics Fluid Dynamics</td>
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<tr>
<td>2. Computers and Software</td>
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<td></td>
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<tr>
<td>3 Conventional Warheads including all Chemical Explosives</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Directed Energy (Laser)</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>5 Electro-Optical Sensor (including infrared)</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>6 Guidance and Navigation</td>
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<tr>
<td>7 Life Sciences (Human Factors-Biotechnology)</td>
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<tr>
<td>8 Materials (Lightweight/High Strength, High Temperature)</td>
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<tr>
<td>9 Micro-Electronic Materials and Integrated Circuit Manufacturing</td>
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<td>10 Nuclear Warheads</td>
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<tr>
<td>11 Optics</td>
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<tr>
<td>12 Power Sources (Mobiles include Energy Storage)</td>
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<td>13 Production Manufacturing (includes Automated Control)</td>
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<td>14 Propulsion (Aerospace and Ground Vehicles)</td>
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<td>15 Radar Sensor</td>
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<tr>
<td>20 Telecommunications (includes Fiber Optics)</td>
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NOTES
- The list is limited to 20 technologies which were selected with the objective of providing a valid basis for comparing overall U.S. and USSR basic technology. The list is in alphabetical order. These technologies are "on the shelf" and available for application. (The technologies are not intended to compare technology level in currently DEPLOYED military systems.)
- The technologies selected have the potential for significantly changing the military capability in the next 10 to 20 years. The technologies are not static; they are improving or have the potential for significant improvements, new technologies may appear in future lists.
- The averages represent overall consensus for each basic technology area. The USSR may be superior in some of the subtechnologies making up each basic technology. The average assessment can incorporate a significant variance when individual components of a technology are considered.
ATTACHMENT FIVE

Revised Calculation of Actual NDEW Testing Costs

The DOE has supplied the Subcommittee as well as others with differing sets of figures for the Nuclear Directed Energy Weapon (NDEW) testing budget. The amounts given in this Attachment are significantly larger than those given above in Attachment II. The latter were provided earlier this year in a letter to Rep. Markey from Admiral Foley, DOE Assistant Secretary for Defense Programs.

The revised figures provided by DOE in this attachment include work performed at the laboratories in preparation for nuclear SDI tests. The figures supplied by Admiral Foley are essentially the direct costs of conducting the tests at the Nevada Test Site, and are equivalent to the SDI-related funding for the "Nevada Operations Office" which appears in other budget breakdowns.

The figures included in this attachment are a more accurate representation of the true costs associated with nuclear NDEW testing. Thus, for example, the true cost of NDEW testing for FY 1987, including applicable laboratory costs, amounts to $231,000,000, not the $174,500,000 cited earlier -- a difference of $56,500,000.
Question from Congressman Markey

Question 8: The Department has informed the Subcommittee that approximately $603 million of its FY 1987 budget request is "SDI-related". Please identify the missions and costs of the specific activities, projects, and facility construction, including shared overhead expenses and dual-use items, which make up this SDI-related portion of the total budget.

Answer: Both the Assistant Secretary for Defense Programs (ASDP) and the Assistant Secretary for Nuclear Energy (ASNE) have missions which involve them in Strategic Defense Initiative (SDI) research.

The major ASDP responsibility in SDI is research to determine the feasibility of Nuclear-Driven Directed Energy Weapons (NDEW) concepts as well as understanding and assessing adversary directed energy weapon (DEW) threats to offensive nuclear weapon systems and potential defensive architectures. These concepts include the x-ray laser, hypervelocity pellets (HVP), microwaves, optical lasers, and particle beams. A related and highly important DP responsibility is NDEW lethality, vulnerability, and countermeasures research. This activity consists of both computer modeling and experiments. System studies are also done to evaluate and provide assistance and recommendations to the Department of Defense's (DOD) SDI office on the technical, operational, and policy aspects of Department of Energy (DOE) SDI technologies.

The major ASNE responsibility in SDI is research in space power systems that would supply prime power for a number of SDI platforms and other systems. These applications include multimegawatt power for non-NDEW weapons; space-based radar systems; communications, command,
control, and intelligence (C³I); cryogenic cooling of nonreactor power sources; tracking systems; and sensing systems. The NE activities supporting nuclear space power include the SP-100 program, multimegawatt program, and dynamic isotopic power source programs extending from a few kilowatts to hundreds of megawatts.

The budget for these activities by Assistant Secretary are provided below.

**Strategic Defense Initiative (SDI) Crosscut**

(Dollars in Millions)

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**Assistant Secretary for Nuclear Energy**

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</tr>
<tr>
<td>Total Energy Supply R&amp;D</td>
<td>8.8</td>
<td>17.8</td>
<td>66.7*</td>
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<tr>
<td>Total Strategic Defense Initiative</td>
<td>$ 223.8</td>
<td>$ 287.7</td>
<td>$ 602.7</td>
</tr>
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* Includes $3 million for multimegawatt terrestrial power plant. DOE/SDIO recently expressed an interest in this power source for land based SDI facilities.
A description of the activities, projects, and facilities by Assistant Secretary is provided below.

Assistant Secretary for Defense Programs

Atomic Energy Defense Appropriation

- The weapons research, development, and testing activities are directed at assessing the feasibility of weapons applications of the x-ray laser, the hypervelocity pellets, microwaves, particle beams, and optical lasers driven by nuclear energy.

- The capital equipment for SDI includes devices to manufacture special materials for x-ray lasers, instrumentation to measure specific physical parameters of components, and high-speed recording equipment to record experimental data.

- The construction funds will be used to pay DOE's half of the construction of the Strategic Defense Facility at the Sandia National Laboratory. Congress directed DOD to pay the other half. The $70 million project will provide laboratory space needed to house the large equipment used in the SDI research, as well as additional office space. This project will also permit colocation of the nuclear and nonnuclear testing research which will provide synergistic benefits to both DOE and DOD programs.

Assistant Secretary for Nuclear Energy

Energy Supply R&D Appropriation

- SP-100 R&D focus is on a 300 kilowatt electric reactor to satisfy onboard space electrical power requirements.
o SP-100 ground engineering system (GES) test facility modification construction project involves modification of an existing facility at the Hanford Engineering Development Laboratory. It began in FY 1986 and will end in FY 1989 in preparation for the GES test which is scheduled to begin in FY 1990. The total estimated cost is $22.7 million.

o The Dynamic Isotope Power System (DIPS) R&D program focus is on a dynamic isotope power system in the 1 to 10 kilowatt range for a surveillance and tracking system.

o The multimegawatt power system R&D focus is on steady state and burst power requirements greater than 1 megawatt which could be used for space or secure ground power applications.

These SDI activities include a portion of DOE's contractor overhead. The only area where DOE and the Department of Defense (DOD) have agreed to split direct facility costs is the cost of constructing the Strategic Defense Facility at Sandia. The cost of this $70 million project will be split equally between DOE and DOD.
APPENDIX 5: NUCLEAR BACKPACK BOMBS

One of the reasons we are not closer to a freeze today is Executive and Congressional failure to exercise sufficient oversight and restraint over the Department of Energy (DOE) nuclear weapons budget. Under the Reagan Administration, the DOE nuclear weapons complex has an almost unchecked freedom to pursue whatever new weapons concept the national laboratories can dream up -- whether or not they are strategically or politically justified. The Administration then points to these new systems as a reason why it cannot negotiate a nuclear test ban, let alone a comprehensive nuclear weapons freeze.

The result is a self-perpetuating cycle, in which new weapons programs of often questionable military utility and a destabilizing nature become rationalizations for our failure to negotiate arms control agreements that might actually advance our security interests. As new weapons are deployed, the Soviets respond with deployments of their own, and the mindless cycle of action and reaction continues -- without any apparent end in sight.

Congress cannot escape blame for this sorry state of affairs. The Committees with direct legislative jurisdiction over Department of Energy defense programs have tended to be cheerleaders for the programs within their purview. What can happen when this occurs is illustrated by the recent history of the nuclear backpack bomb -- a small and obscure weapon I tried unsuccessfully to get cancelled last year.

According to the Nuclear Weapons Databook, nuclear backpack bombs or nuclear land mines have been stockpiled since the mid-1960's, when the U.S. deployed two different types of ADMs -- a 400 pound Medium Atomic Demolition (with a yield ranging between 1 and 14 kilotons) and a 53 pound Special Atomic Demolition Munition (with a yield of up to 1 kiloton).

An unclassified Army Staff Officer's Field Manual reports that:

"Typical employment of ADM includes: cratering in mountainous and unusual terrain to create a major obstacle to enemy motorized elements; cratering in forested areas, where production of fires and tree blowdown could create additional obstacles; destruction of critical elements of highspeed overpasses, and tunnels; and destruction of installations, facilities, and industrial complexes that could have military significance if in enemy hands. Other potential sites are structures and facilities where other methods of destruction are not practical, such as airfields; railroad marshaling yards; major dams; navigation locks; and large petroleum, oil, and lubrication installations."

The Field Manual adds that these weapons are normally used on "areas under friendly control," a fact which I am sure is little comfort to our West German allies, whose villages would apparently have been destroyed in order to save them.

It appears that as a result of the Montebello decision, these old weapons have been withdrawn from our European stockpile. Last year I offered an amendment to the Defense Authorization Bill to prohibit funding for a replacement -- a new Small Atomic Demolition Munition (SADM) or nuclear backpack bomb. At the time I offered the amendment, I argued that the Army's apparent lack of interest in obtaining a new ADM and Allied opposition to deployment of such a weapon offered compelling reasons for not proceeding with an R&D program for such a device.
The Chairman of the Armed Services Procurement Subcommittee strongly opposed my amendment, however, and offered a weakening substitute that was adopted by voice vote. In Conference, this weakening substitute was dropped altogether.

A year later, I have discovered that the SADM has been shelved, not as the result of legislative action, but because the Army has decided it doesn't want a new nuclear backpack bomb.

Sanitized transcripts of closed committee hearings on the DOE military budget reveal that at the same time the nuclear weapons bureaucracy and the House Armed Services Committee were fighting to maintain funding for this weapon, the Army was arguing that ADMs were obsolete.

Dr. Richard Wagner, Assistant Secretary of Defense for Atomic Energy told Congress last year that the requirement for ADMs "as with other nuclear weapons systems, is established by the operational commander, in this case General Rogers, the SACEUR/CINCEUR, Commander of U.S. and NATO forces during hostilities." When asked to justify the need for the new ADM, he explained in delphic bureaucratic doublespeak that the new ADM would "possess an inherent capability to effect a measured qualitative change in the level of escalation of a conflict and thus retain both deterrence and defensive characteristics."

At the same time Dr. Wagner was trying to defend the new ADM, General Rogers -- the man supposedly requesting the weapon -- was telling reporters that "ADMs may have had their place at one time but in my opinion that time has gone." In testimony before the Senate Armed Services Committee, Rogers further explained that "when you consider that if you fired an atomic demolition munition and you get the judgement rendered by experts that you can't use that tool for sooner than 1 year and maybe as long as 5, the thought has to cross your mind where are you going to use those weapons even if authority were given." When asked to justify the request for initiation of research on a new ADM, Rogers replied, "Your question must be directed to whomever requested such a warhead."

Now, a year later, the program appears to be dead. In a March 25 letter, DOE Assistant Secretary for Defense Programs Sylvester Foley informed me that while "the possibility of a concept definition study for SADI was, indeed, noted in the FY 1986 Congressional Budget request...no such study has been started and there are no plans to start such a study, absent a request from the Department of Defense." In response to questions raised in this year's appropriations hearings, Admiral Foley explained that "we did receive the request in FY 86 but shortly thereafter the Army cancelled their request and indicated no future interest in developing a new atomic demolition munition." Foley added, "Consequently, no research and development money was spent in FY 1986 and it will be excluded from future DOE requirements unless requested by DOD."

It seems to me that something is terribly wrong with the system when a weapon for which there is no bona fide military requirement cannot be deleted from the DOE budget during the Congressional Authorization and Appropriations process. The amendment I offered last year was a good one; it would have prevented any further waste of the taxpayer's money on an ill-conceived and unwanted weapons system. There should have been no reason for the Committee to have opposed my amendment, given the fact that the intended user did not want the proposed weapon.

Waiting around for the Executive Branch to cancel unnecessary or unjustified military programs is not my idea of Congressional oversight. Indeed, it is more like waiting for
Godot. The fact is several other weapons in the DOE budget have as little justification as the nuclear backpack bomb and also should be targeted for cuts. The nuclear ASW warhead and the nuclear variant of the Standard Missile 2 come immediately to mind. As a first step towards establishing more effective Congressional oversight over the nuclear weapons bureaucracy, I would strongly recommend that this Panel examine the justification for these and other weapons development programs to insure that the experience with the SADM is not repeated.
Mrs. BYRON. Let me get into a couple of questions.

One of the things that you touched on in your testimony, am I correct in understanding that your bill freezes the production of sea-launched ballistic missiles, but not production of the submarines and the launched vehicles?

Mr. MARKEY. That is correct.

Mrs. BYRON. Would it not seem rather a fallacy to create new submarines and modifications of the launchers without having the missiles capable of meeting the needs in the submarines?

Mr. MARKEY. Well, the submarines' survivability is the key objective.

Mrs. BYRON. The object of the submarine, is it not, is the missile capability?

Mr. MARKEY. That is correct, but in ensuring——

Mrs. BYRON. If you do not have the missiles, do you then need the submarines?

Mr. MARKEY. We will continue to have missiles. This is not a measure calling for reduction of the number of existing missiles. It just calls for cessation of development of new missiles.

Mrs. BYRON. It is my understanding from the language in your bill they could not be deployed?

Mr. MARKEY. Missiles of a similar type could continue to be deployed on a replacement basis. No new types of missiles could be developed and deployed, however.

Mrs. BYRON. According to our interpretation of it, there could be no more deployed. Assuming your bill is addressing the perception of cooperating in our current arms control efforts, what specific problems do you have with the proposals that have been tabled in Geneva with regard to the 50 percent reduction in strategic weapons and the removal of intermediate range weapons?

Mr. MARKEY. My general objection to them would be that although they would deal with the quantitative arms race, they would not get to the more important question of the qualitative arms race. If we had allowed for deployment of a new generation of more dangerous and accurate nuclear weapons, we might have enhanced the problem of crisis destabilization rather than have lessened it so the real question here is whether or not we can have a combination of arms reductions while reducing into the more stable single missile/single warhead type of deployments.

If we, however, deploy fewer missiles but they are of the MX and SS-24 and -25 type, then we have made the world a more dangerous place to live in my estimation. So it is not the numbers so much as the quality of the weapons that I am concerned with.

Mrs. BYRON. Let me ask you, you talked about your Energy Conservation Subcommittee extensively investigating the nuclear reactor incident at Chernobyl, and I am sure you are alarmed how it has been developing in the last week or so, the Soviets have not only failed to notify their neighbors about the accident, but also their own citizens as well, much after the fact, which concerns all of us.

Why do you think that a nation that shows such a disregard for the health of its own citizens and also violates the international law by failing to notify its neighbors would be then capable of agreeing to a freeze?
Mr. Markey. For the same reason that they have not violated the Limited Test Ban Treaty of 1963, because it is in their self-interest.

Mrs. Byron. Would it not be in their self-interest to notify their citizens about the situation at Chernobyl?

Mr. Markey. Not necessarily. I am not an expert on the internal political workings of the Soviet Union, but I know they would run a substantial risk if they decided they wanted to break out of the Limited Test Ban Treaty of 1963 because of reciprocal response from the United States.

Despite their unwillingness to notify their own citizens of the emission of radiation from those plants, they were not able to hide it from the international community because of radiological instrumentation in the Scandinavian countries and subsequent ability by American satellite capacity to monitor ongoing activities at Chernobyl.

The point is this, let us not in fact debate over whether the Soviets are an inherently trustworthy, secretive and pervasively paranoid society. We will stipulate to that. The question is whether or not on a technical basis we can put an on-site verification, the types of instrumentation that would allow us to be able to monitor Soviet violations of any significant nature.

There my basic contention is that we have—if Chernobyl shows anything, it is that we are no longer back in the 1959-1960 era of Francis Gary Powers—U.S. planes overflying the Soviet Union—but we now have a highly sophisticated Network of satellite, seismology, listening posts and where necessary on-site inspection as part of a verification scheme that could be used to verify.

So we don't need treaties. We don't need a treaty with the Canadians. They are our friends. You don't sign treaties with your friends. You need treaties with your enemies with tough, hard provisions in them that both sides abide by.

You have indemnification and damages in the event of a breach and you have a guarantee that you will be able to monitor the provisions of the contract. That is what contracts and treaties are about.

You have handshakes for people you trust, the Canadians. You have written agreements with those you don't trust. That is the Soviet Union. If they break out, we break out.

So whatever they have done internally to their people we have no control over, but the extent to which we are able to use the existing verification mechanism to monitor what they would do with regard to nuclear testing, that would be a precondition to any agreement.

Mrs. Byron. Let me just follow up with one quick question. I am a little bit confused as to whether your legislation—the freeze is negotiated by the President and then ratified by the Senate prior to going into effect or whether it circumvents this procedure.

Mr. Markey. Initially it would be a congressionally mandated restriction upon appropriations of funds for those purposes pending negotiation by the President of a treaty with the Soviet Union, but at any point in time which the President would certify to Congress that American security interests were being jeopardized, the Con-
gress would, within 30 days, have to cast another vote upon the continuation of those restrictions.

So, yes, the initial restriction is made by Congress and as I look here at the plaque in front of your podium, Madam Chairman, you have the United States Constitution, Article I, Section 8, "The Congress shall have power to raise and support armies, provide and maintain a navy and make rules and covenants and regulations of the laws of this country."

So we have that authority. That is what the Congress has been empowered to do by Article I, Section 8 and I think that is why that is there to remind us of that power.

To the extent that we want to put restrictions on expenditures of these moneys, we have the power to do so.

Mrs. Byron. Suppose a non-nuclear SDI ends up costing more than a system with a nuclear component. Would you support a higher level funding for SDI with no nuclear component or do you feel we need no component period?

Mr. Markey. I do not believe that we should——

Mrs. Byron. Just yes or no.

Mr. Markey. Just yes or no?

Mrs. Byron. Well, go ahead.

Mr. Markey. I believe that SDI is going to guarantee an offensive and defensive spiraling of the arms race so I am opposed to any manufactured deployment of the SDI system, although I do believe that research has to continue.

Mrs. Byron. Mrs. Holt.

Mrs. Holt. I have no questions at this time.

Mrs. Byron. Mr. Stratton.

Mr. Stratton. Thank you very much.

Mr. Markey, are you—you indicated that there was no particular problem in verification of a nuclear freeze.

Mr. Markey. No, I am not saying there is no particular problem. I know it is going to be a hard, tough matter to get the guaranteed verification regime on a permanent basis put in place.

Mr. Stratton. Are you aware of the size of the Soviet Union? Have you tracked it, bicycled in it?

Mr. Markey. I have been to the Soviet Union, yes. I am fully cognizant of the size of the Soviet Union.

Mr. Stratton. Obviously the Soviet Union is going to place the missiles that they believe they need in all kinds of places where you are not going to be able to find them, and the verification is therefore going to not only be almost impossible because of the size of the country, but in addition to that, you are not going to have them guide you around and show you where these particular spots are, and the Soviet Union has notoriously not been willing to provide on-site inspections.

So the idea of verifying—your groups that you represent send us these petitions, "We are in favor of a mutual and verifiable freeze," and they think that by putting in the word "verifiable" it means that you can actually verify it and you have fallen into the same trap by using the word "verification."

It sounds very scientific and the people from the laboratories use terms of that type, but we are not going to be allowed to get off of
the airplane in Moscow and start pacing out with a geiger counter to determine where the missiles may be.

So that is a—you have given the President, I think in your bill, some 6 months to determine whether he can find out how we can verify this, and I think you are going to find that that is going to be not nearly enough time.

Mr. Markey. My incantation of the word "verification" is not a shibboleth to be tossed about as a lucky charm to protect me against criticism. It is based more upon a personal knowledge of the tremendous advances which American science has made over the last 25 years in our ability to be able to monitor the Soviet Union.

As a matter of fact, in my own district—ITEC is the primary contractor for the production of all the optical imaging equipment on American satellites and we, in fact, can take license plates off the back of Soviet jeeps and cars driving up and down the streets of that country and I'm sure we will be quite impressed when we get the pictures that the CIA and the Pentagon have of the Chernobyl reactor from the beginning of the incident when they are made public to those with the proper security clearances.

I have with me for the gentleman's perusal and for the committee a number of analyses done by some of the best scientists in America on the capacity of the United States to be able to monitor a verifiable freeze on nuclear testing in the Soviet Union.

I would like to submit them for the subcommittee for its digestion because I sometimes get a little bit tired of hearing people bad-mouthing the United States intelligence community.

We have a very good intelligence community and they are highly capable of being able to detect Soviet activities and to the extent that I constantly hear people bad-mouthing American military intelligence capacity, you wind up, somehow they believe the Soviet Union is 10 feet tall and we are midgets. That is not the case.

We are superior to the Soviet Union technologically and if Chernobyl hasn't proven it, then I would hope that your perusal of our American technology would do it.

Mr. Stratton. You are a supporter of the CTB. You are a supporter, I believe, for ratification of the threshold treaty. Neither of those treaties are capable of verifications.

Mr. Markey. Well—

Mr. Stratton. We don't have the capability to determine whether the Soviets have really fired off a 15 kt weapon or whether they have fired off a 3 kt weapon. That is the basic position of the United States scientific community.

Mr. Markey. Well, to the gentleman from New York, and—

Mr. Stratton. That is another form of—

Mr. Markey. If you are—

Mr. Stratton. That is another form of—

Mr. Markey. I am aligning myself on the Threshold Test Band with Richard Nixon and Henry Kissinger. And if in any way you think they are mindless supporters of unilateral disarmament of the United States nuclear capacity, well, so be it. But every President right up to Ronald Reagan has supported it—

Mr. Stratton. We are not talking about the Presidents, we are talking about the scientists who are knowledgeable in this kind of
seismic situation. It is not a question of what Mr. Kissinger says or what Mr. Nixon says. It is a question that the people that are knowledgeable in that particular technology have appeared before this subcommittee and have indicated that it is impossible to determine whether the Soviets have exploded a 15 kt weapon or a 3 kt weapon because of the nature of the subsurface area, whether it is hard, whether it is soft, or what have you.

These things are not simple.

Mr. Markey. The fact of the matter is that since the Threshold Test Ban has been developed, there have been significant advances in American verification capacity. If it would be the desire of this administration to in fact add those additional verification schemes to the treaty, then I think that that ought to be initiated.

Unfortunately, we have an administration that is unwilling to negotiate with the Soviets in this area and as a result we don't get the opportunity of gaining the benefit of our breakthrough in these technologies.

So I would submit to the gentleman that there are scientific analyses that show a broad consensus of opinion that these treaties are verifiable. I would say that for the gentleman's purposes if he wants to analyze these documents, he will find an 80 percent consensus on that in the scientific community, but if he has as this administration has demonstrated, an allergy, is allergic to arms control, so be it.

If your general philosophy is the Soviet Union is too big to have any treaty with them just say it and you don't want any treaties with them. But to the extent that you then use that general argument—that you don't want a treaty at all—and extrapolate that out to bad mouth the rest of the American technological capacity to be able to monitor these agreements taking a step too far.

I will accept your ideological opposition to the Soviet-American treaty making process but more than that, I think you really overstep the bounds of an accurate assessment of the American ability to monitor.

Mrs. Byron. Mr. Mavroules.

Mr. Mavroules. Thank you very much, Madam Chairman.

Let me commend my colleague from Massachusetts for your excellent testimony here this afternoon.

To be quite honest with you, it is a breath of fresh air, Ed, because usually most of the people who testify before this committee testify for the Administration so we get a one-sided view.

I can appreciate where you are coming from.

Let me also say to you as you well know I support you in your quest—

Mr. Markey. If I might interject there, I had a Soviet come and testify before my committee 2 weeks ago, on Chernobyl, so I thin': it is probably appropriate that I be allowed into the Armed Services Committee at least occasionally to give opposing views.

Mrs. Byron. You have been invited in the past.

Mr. Mavroules. Just a couple questions, if we take the attitude that verification will be a very difficult problem we are never going to have any kind of agreement. As a matter of fact if that is the case, we ought to be calling our people back from Geneva now and just forget the arms control talks.
Somewhere along the line we have got to be very serious about the intention and initiatives of this administration and also the Congress as you well mentioned because they play an important role.

Let me briefly for the record ask, in any way does H.R. 3100 take away the powers of the President or for that matter, any flexibility that the President might have?

Mr. Markey. In his negotiating posture?

Mr. MAVROULES. Exactly.

Mr. Markey. The President can continue to negotiate but with the restrictions—with the knowledge that there are congressional restrictions that have been placed upon the authorization and the appropriations for these programs much in the same way that we put restrictions upon any further MX deployments.

He now has to operate within those restrictions.

Mr. MAVROULES. Do you take any unilateral action in your bill, Eddie?

Mr. Markey. We do not take any action that has not been in fact taken reciprocally by the Soviet Union.

Mr. MAVROULES. In other words, the action taken is bilateral.

Mr. Markey. That is correct.

Mr. MAVROULES. Thank you.

Verification is bilateral?

Mr. Markey. Verification is bilateral.

Mr. MAVROULES. Don’t you feel as I do that if indeed the Star Wars program that you referred to before is indeed going to be a nuclear Star Wars program, that the American people should know about that?

Mr. Markey. I think it is very important that the people understand that nuclear powerplants in orbit and hydrogen bombs exploding over our own atmosphere are an integral part of the SDI program.

Mr. MAVROULES. Do you recall it is being sold by the President to the American people that Star Wars would be handled with a conventional system; do you remember that?

Mr. Markey. And that is a misrepresentation of the research programs that are now being undertaken by the Lawrence Livermore Laboratory.

Mr. MAVROULES. Mr. Markey, you and I are in agreement and the reason I am asking the question is I just want to get you on the record. I am going to ask you another question which I feel you and I have an obligation and all members have an obligation to pay some attention to.

Although we are now negotiating an arms control agreement or attempting to with the Soviet Union in Geneva, we are talking about nuclear immediate and strategic. Unless we negotiate, in my judgment, a conventional weapons treaty with the Soviet Union, I think all other negotiations will fall apart because of the numerical superiority that the Soviet Union does have in the conventional area.

Would you agree with that?

Mr. Markey. I think that the MBFR talks which are continuing are an important component of a comprehensive reduction of weapons, nuclear and conventional, on both sides. But remembering
from an American perspective that even if we froze into place the 9,500 or so nuclear weapons that we have at their present stage of quality, that that would still offer a substantial deterrent to any Soviet use of conventional weapons if we continued to operate under this unstated doctrine of massive retaliation in the event of a conventional incursion into Eastern Europe.

Mr. MAVROULES. I think we both would agree that the negotiations on controls on conventional systems and numbers of people would be indeed an agreeable initiative on the part of both sides.

Mr. MARKEY. Within the context of H.R. 3100, deterrence of conventional war would be accomplished primarily through conventional means. I say primarily because the very existence of nuclear weapons in the arsenals of the superpowers will always provide some damper on the ignition of direct conventional conflict between them, the so-called existential deterrent effect.

So, yes, I think that we should work concomitant with the nuclear negotiations on conventional arms issues. However, I would say this, that this tension that is built into the superpower conflict as we both build stage after stage and round after round of first strike, deadly, knock-out punch weapons, with both sides in such a posture psychologically, that our ability to be able to gain any meaningful concessions in any of the regional conflicts that tend to be proxy battles between United States and Soviet forces or any real meaningful reductions in conventional forces becomes almost prohibitively difficult.

Unless we reduce this central tension that one side or the other is trying to gain this ultimate first punch total knock-out capacity, and we can put that issue to rest, will we ever really have the capacity to deal with some of those other issues that ultimately are derivative of that central tension and only when that level of confidence has been established in both sides I think will we ever have the chance to negotiate the other answers.

Mrs. BYRON. We have another witness who has been very patiently waiting and I would like to get on to the other witness.

Mr. Markey, could you limit your answers to a little bit shorter answers. We have one other panel member that has questions.

Mr. MARKEY. Yes, I will answer briefly. I have already imposed too much.

Mr. MAVROULES. I don’t have a question, you talk about verification, Eddie, you might be a little young but way back when Joe Lewis fought Billy Kahn, Billy Kahn was a very good champion and he was very fast and a very good boxer, but Joe Lewis made the statement, he may be fast and he may run, but he cannot hide. You know, you can use that analogy when you talk about verification if we truly want an arms control agreement.

Thank you very much.

Mr. MARKEY. Thank you, and I thank you for your support on this issue.

Mrs. BYRON. Mr. Ray.

Mr. RAY. Thank you, Madam Chairman.

Congressman Markey, I appreciate your coming. You obviously brought a lot of work on this particular view that you have. I don’t have any questions at this time, but your view is helpful for the balance of the panel and I appreciate it.
Mr. Markey. Thank you very, very much. I don't have any additional comments. I thank you, Madam Chairman, for the invitation.

Mrs. Byron. I appreciate your coming because as we have talked in the past—

Mr. Stratton. Madam Chairman, may I—

Mrs. Holt. May I ask one quick question and get one quick answer.

Mrs. Byron. Mrs. Holt.

Mrs. Holt. I cannot find where verification is spelled out after section 8 where you say conditioned on Soviet willingness to observe a bilateral halt in production, test and deployment. I don't see any mention of verification. It mentions it over in section 7 but not section 8, where the requirement is established for provision of reports.

Mr. Markey. We have on page 6 the section C, the requirements for reporting on verification to the Permanent Select Committees on Intelligence of the House and the Senate, including specifically the information to be included—

Mrs. Holt. That is just in the sense of Congress. When you get over into the restrictions, however, conditioned on Soviet willingness to observe a bilateral halt, from there on there is no mention at all of any kind of verification.

Mr. Markey. OK.

Again, turning to page 8 under section 7——

Mrs. Holt. All that is before you get into your actually the direction to the President.

Mr. Markey. That is correct. The President is given the opportunity of negotiating a verification regime.

Mrs. Holt. But it doesn't say it in the bill. That is my concern.

Mr. Markey. The President is given the responsibility for negotiating a verification scheme. If at any time the President finds that the Soviet Union has failed to fully reciprocate the restraints shown by the United States in conducting our nuclear weapons activities under the moratorium initiated under this act, then he will in fact certify that there has been significant and irreparable harm to the United States and no verification scheme will be put in place, and then will submit to Congress the resolution which we would have to act upon within 30 days and rescind the appropriations restrictions that were placed upon the appropriations.

Mrs. Holt. Thank you, Madam Chairman.

Mr. Markey. That is under sections 9 and 10 of the bill.

Mrs. Byron. Thank you very much.

Mr. Stratton. Could I ask a question in connection with the laser aspect of the gentleman's testimony, Madam Chairman.

Mrs. Byron. You may, Mr. Stratton. I—Mrs. Schroeder has been very patiently waiting, go ahead.

Mr. Stratton. The gentleman—I would like to know whether the gentleman's bill would prohibit the underground testing of nuclear explosions associated with x-ray lasers?

Mr. Markey. Yes, it would.

Mr. Stratton. If the gentleman finds out or any of us in this country that the Soviet Union has an x-ray laser, a kind of ultimate weapons, would the gentleman feel that we would be negli-
gent in not trying to develop something that might shoot down that ultimate weapon?

Mr. Markey. If the Soviets developed that technology, then my views will be irrelevant. We will be out after the Soviets in a race that will be unmatched in the history of this country.

My basic belief though is that the Soviets are behind us and far behind us in the development of this technology, and if we in fact signed a comprehensive freeze on testing right now, as the gentlelady from Colorado recommends, then we in fact won’t have to worry about it because we will never—

Mr. Stratton. If we are behind it is because the Congress has voted to keep us behind.

Mr. Markey. If we are behind. Yes.

Mr. Stratton. We are not allowed—

Mr. Markey. That is a big “if”.

Mr. Stratton. We are not allowed to fire an anti-satellite weapon because we might be ahead of the Soviet Union and we have done this in several other aspects as well.

It seems to me that your criticism of the attempt to try to achieve an x-ray laser is a very short-sighted position just so that you can continue to oppose nuclear weapons when in fact that might be a very important defensive device in the SDI, probably the ultimate technique in the SDI which is designed for defense and not for offense.

Mr. Markey. It does have offensive applicability but again, I think that at least we are equal with the Soviets at this point but both of us probably six to eight, maybe ten years away from actual manufacture and deployment, so we are at an optimal point to negotiate both sides into a position of stagnation and no further development.

Thank you very much.

Mrs. Byron. Thank you very much.

Mr. Markey. Thank you, and I apologize and I apologize to the gentlelady from Colorado.

Mrs. Byron. Mrs. Schroeder.

STATEMENT OF HON. PATRICIA SCHROEDER, A REPRESENTATIVE FROM COLORADO

Mrs. Schroeder. Thank you, Madam Chairman.

Mrs. Byron. You are not going to wait for her testimony?

Mr. Markey. I am going to hear echo in the room as she starts talking.

Mrs. Byron. She listened to all of yours.

Mrs. Schroeder. Thank you very much, Madam Chairman. I appreciate the invitation to be able to appear here in front of the panel and to set the record straight on the bill, H.R. 3442, the Simultaneous Nuclear Test Ban Act.

I would ask unanimous consent, because of the time, and I know you have even more witnesses scheduled in 15 minutes and I am sure we have to watch our votes coming because we are almost to the end of the budget date.

I would ask unanimous consent to put my statement in the record and to try and summarize it if that is all right.
Let me point out that what this bill is, is—it has had several lives and some people have misunderstood what it was all about. When it was first introduced there was no Soviet Union moratorium. It was first introduced in March 1985. At that point I was calling upon both sides to issue a moratorium at the same time, the Simultaneous Nuclear Test Ban Act was then introduced.

After that as you know on August 6, 1985, the Soviet Union did engage in a unilateral moratorium and so we had to reintroduce the bill, asking that we also joint that moratorium to make it once again simultaneous, but I notice that many opponents have incorrectly stated that the bill proposes a unilateral moratorium.

No, we are talking about a mutual moratorium. It is in effect only as long as each side demonstrates restraint and that there is progress on the comprehensive test ban negotiations. I recognize the President negotiates that and not the Congress, and so that is very important.

The bill allows, H.R. 3442 allows testing to resume immediately upon Presidential certification to the Congress of a Soviet test during the mutual test ban treaty. I believe that existing verification procedures are accurate to verify that and that no nuclear tests could be conducted in a clandestine manner that would lead to a Soviet military breakthrough. I think that is very important.

I think any treaty that comes forward must include at a minimum provisions for on-site inspection, for exchange of seismic data and also for establishment of a monitoring committee of experts.

Right now the bill has almost 100 co-sponsors and of course yesterday the bill becomes even more timely because Secretary Gorbachev announced that he would extend his moratorium so that it would go for one entire year and once again urged the United States to join.

So it has been reinstated and I think it is all the more important that we try to move on this.

Let me talk about some of the test ban myths that I saw floating around that I think are very important to deal with.

Number one, it says that we must continue testing to develop more nuclear warheads. Well, I don't know why we need particularly more nuclear warheads. The thing that we really keep working on is accuracy and as you know, accuracy in and of itself has no relationship to warhead testing. Accuracy is not nuclear, and you can test a device to do that to make it more accurate if the comprehensive test ban is in effect.

Furthermore, people will say it has something to do with Star Wars, if the President is telling us the truth and I assume he is, that Star Wars is not nuclear, then this again would have no effect on Star Wars testing because again, we are only talking about nuclear tests.

Others have said that a moratorium of any length would jeopardize the national security of our Nation.

Well, how? I mean that is a really good question. People say well, what will happen is the Soviets are going to re-orient their test program so they can sneak through all these tests while we are being good guys and we don't do it.

Now, I come from a part of the world where we know probably a lot more about seismographs than any other part. The gentleman
from Massachusetts may have all that high technology where they do photographs in his, I come out where there is lots of rocks and we do seismographs because we are worried about earth movements and so forth.

When you look at it, for the Soviets to do this they would have to develop a new test site, they would have to do it at night or in cloudy weather only so we couldn't see them from satellites, they would have to test only devices that have a terribly low yield, they would have to be sure that neither our technical nor human intelligence resources could detect that they were preparing a new test area, or that they were continuing on with the testing.

Now, the financial price of this would be very high. Let me say the one thing after Chernobyl they must understand that the political cost would be unbelievable if they got caught. If they said they were engaging in a moratorium and they got caught sneaking off doing this, it would make Chernobyl look like nothing. I think that would be the end of their credibility in the international arena and I think that is very important and I am sure they got the message now if they didn't have it before.

I am sure they understand there is a new day. So furthermore, of such a low yield it would have very, very little military value if they were testing in that area. So I really don’t see that they can use it to do that. I know we have scenario factories around here that can be coming up with scenarios for everything, but I don’t see how you manufacture that one.

Three, we no longer have the existing technical means to monitor Soviet compliance at this time. What we are talking about there obviously is the reconnaissance satellites, whether or not we will get the Titans and keep our satellites up in the air and so on.

I think you can take that one and turn it either way. You can say well, since we don’t have them up in the air we may not have them up and it is probably all the more possible we try and get the moratorium and keep that lid on during this period while we get our Titans back on line and get our satellite coverage back in the area.

So I don’t see that as really holding up. I think it goes the other way.

Four, we must test to maintain the safety and reliability of our weapons.

Well, safety and reliability circuits can be tested without conducting nuclear explosions. Only about 5 percent of our nuclear tests have been operated to safety and reliability and the other part is the part where they cannot maintain it without a nuclear explosion, the Soviet Union cannot, either.

That is the good part. If both sides begin to lose confidence in their warheads, then hopefully eventually they will start negotiating lowering the number of warheads in the stockpile because they won’t be nearly as interested in maintaining them if they don’t have the confidence.

So an awful lot of the confidence part is not affected and whatever is the Soviets would have to be under the same thing.

Five, we cannot verify a nuclear test ban. I don’t think that that is correct. It is a scientific issue and obviously I am not a scientist
but let us break it down into the three categories. High yield above 10 kt, that I think everybody agrees we have very good means of testing and understanding whether they are testing right now.

The medium yield and low yield, medium being 1 to 10 kt, low yield under 1 kt. First of all, virtually all strategic warheads in the arsenal of both countries are above 10 kt. That is the easiest to verify. So let's lay that out there. That our strategic warheads that we already have in our stockpile and the Soviet Union has in theirs are at the high end of the scale.

Second, let me just address the whole seismograph thing. The Soviets test in rock. We test in sand. The interesting thing is we have done all of our monitoring by calibrating our instruments based on our tests and in sand they tend to come out much different than they do in rock because the sand absorbs the smoke much easier. It is much harder to hide a test if you are doing it in rock and yet, that is what they are testing, they are testing in rock.

I have also had people say that they can test just when they have earthquakes. But the Soviet Union is not in a high earthquake band. There is a very low incidence of it. Even if you tested when they had earthquakes, you could sneak these through, you would have to have a very high probability of readiness because you have a window of seconds when you can do it to fold it into the earthquake.

But there is some question whether our own instruments which are based on our own test explosions are not such that we have overcompensated that when you are looking at the Soviet Union we probably have a greater ability to detect smaller Soviet tests than we know.

The low yield tests are the ones obviously that are of big concern, but militarily they don't have near the value. They are mainly conducted to assess the survivability of communications, sensor and other electronic equipment during a nuclear war.

Obviously if you have seismic ground sensors within the Soviet Union, you have increasing reliability. Maybe you cannot go down below 1 kt but you are getting down to where the tests probably don't make that much difference and I will really think you probably can test even at that point.

Of course everybody is hoping that the CTB will clearly have the seismographs on each other's soil being monitored. That is the way we want it to go.

So that is important. But let us move to the fact that the United States doesn't just rely on seismographs. We have an abundance of other intelligence collection methods. I know this committee knows what they are, so I am not going to, and we are in open session so there is no need to go through them.

But we all know there is a wide, wide range of things that can be done and that it would be very, very improbable that significant tests could be held in the Soviet Union with all the different assets we have looking at that and in fact, we know that we have been monitoring their self-imposed unilateral moratorium now the whole time and have no evidence that they have been testing.

So I think that that is very important.

Number 6, we hear people make the statement all the time again going to the Soviets not being trusted. This is pre-Chernobyl. They
say the Soviets broke the 1958 to 1961 moratorium on nuclear testing.

Let's set the record straight on that once and for all. On December 29, 1959, President Eisenhower got very discouraged by the lack of progress on a treaty and he unilaterally announced that the voluntary moratorium would expire on December 21, 1959. Twenty months after that the Soviets resumed testing.

The United States—to put it all in place again; first the United States announced it would no longer be bound by the moratorium. Second, the Soviets announced that they would not be bound either if any Western power tested, then the French conducted four tests, then the U-2 spying event and the Berlin crisis which really caused all sorts of tension to occur, and then their tests.

So I think that just to say that they had an agreement and they were not in good faith, that all leaves out these very critical sides that we must—or these very critical facts that we must make sure are on the record.

Seven, the Soviets are ahead and we must catch up—well, I don’t know how you can say the Soviets are ahead of us in testing. They have been in a moratorium for nine months and say they will extend it for a whole year. We have conducted a total of 819 nuclear tests and they have conducted a total of 604. I just don’t think we can allege that.

Then we hear people saying the Soviets are ahead of us in weapons technology and yet we know that when Secretary Weinberger has been asked if he would trade arsenals with the Soviets, he says no, because we have a technological superiority. Either Secretary Weinberger is right or he is wrong, but I assume he is right that we have a technological superiority and I think by almost every indicator that any of us have seen, especially the yield per weight, our warheads are a generation or so ahead of the Soviet warheads.

Eight, the Soviet weapons are not as complex as the U.S. weapons and their weapons are not as dependent on testing.

Now, I am always amazed at how contradictory these are because in the prior one we are saying they are ahead, now we are saying they are not, and it is more simple and it doesn’t mean as much to them. We know most of the complex parts of U.S. weapons are not the parts of the weapons that explode in the nuclear field.

So most of the high tech parts of our weapons are in the guidance and control systems. They are not nuclear and of course, they could continue to be tested.

So, I think that that is a very, very important area.

Number nine, we hear we need to reduce nuclear weapons first and then ban testing later.

Well, that is the horse and the cart question. I don’t know how you go through that. Everybody always says let’s start somewhere else. The question is do we start anywhere? We have now gone six years and we haven’t had any major arms control agreements. Our policy seems to be to test, to talk and to build simultaneously as fast as we can go.

I tend to think that the CTB is the way to move because we have had every President before this one backing the people and understanding it, it is a good beginning, somewhere starting to build
trust and I think it is much more verifiable than some other things we talk about.

Ten, we hear we need to improve the verification procedures of the Threshold Test Ban and the Peaceful Nuclear Test Ban before we do a comprehensive test ban. I think it is a whole lot easier to verify that there have been no tests than it is to start quibbling about the threshold, especially when we talk about the calibration of the instruments based on our tests in sand versus how they measure their tests in rocks, and on and on and on.

But, I think it is also very significant to point out that the Administration recently, and the CIA changed its procedures for estimating the yield of Soviet nuclear explosions because they decided their prior estimates were too high. That goes to my point and I think that really doesn’t count on this, that we should move to a CTB and this is all kind of quibbling.

I think there is another point that I didn’t mention, and that is the nuclear proliferation treaty. World incidents have been such that terrorism has shocked all of us. Let us not put ourselves in a position where we long for the day when we just had regular, old terrorists rather than nuclear terrorists. We know that the non-proliferation treaty is about to be looked at again. The countries that signed it have been pleading with us to back the CTB and they have been saying that if we don't make progress on that, that they are going to move into nuclear weapons and when they move into nuclear weapons, then we have more sources and more people selling them and you will have more people wanting to buy them, and on and on and on and on, and I think for anyone concerned about nuclear proliferation the CTB is a very important way of making sure that we can do something about that.

There are other people saying that the—the eleven—the American people don't want a ban on nuclear testing. The most recent polls show they do. The past has shown they do and so forth.

Of course, I think it is important to point out that the Five Contingent Peace Initiative has been pushing very hard on this and also the world, Women Parliamentarians for Peace and on and on.

I think we have an historic opportunity to make a substantial contribution to reducing the arms race and to reducing international tension.

I appreciate your allowing me to appear here today and I certainly hope that we can make some progress in this area, because I think it is everybody's dream to figure out how to lower the incidence of nuclear terror on the planet and we have not even come close. Each generation has only increased it. Let us hope that we can put a lot of the things behind us that I have talked about and move forward in that manner.

Thank you.
Prepared Statement of Hon. Patricia Schroeder

Madam Chairwoman, Thank you for the invitation to meet with your panel and set the record straight on H.R. 3442, The Simultaneous Nuclear Test Ban Act.

The Simultaneous Nuclear Test Ban Act was first introduced in March, 1985 as H.R. 1834, which called for the United States and the Soviet Union to join in a moratorium in commemoration of 40th anniversary of the bombing of Hiroshima. As August 6th approached the Soviet Union announced that they would begin a moratorium on testing nuclear warheads and asked the United States to join. I then reintroduced The Simultaneous Nuclear Test Ban Act to acknowledge that the Soviet Union had entered into a moratorium on testing and urged the President to join the cessation.

H.R. 3442 provides for a mutual, simultaneous, verifiable cessation of the testing of nuclear warheads. I would like to stress that opponents have incorrectly stated that H.R. 3442 proposes a unilateral moratorium. This is not so. The bill states that a mutual moratorium on testing should remain in effect as long as each side demonstrates equal restraint and there is progress in Comprehensive Test Ban negotiations. Although the bill states that Congress will cut funds January 1, 1985, at mark-up I plan to amend the language to begin the moratorium within 30 days of passage of the bill.

H.R. 3442 allows testing to resume immediately upon Presidential certification to Congress of a Soviet test during
the mutual test ban period. I believe that existing verification procedures are adequate to verify compliance and that no nuclear test which could be conducted clandestinely could lead to a Soviet military breakthrough. Any Comprehensive Test Ban Treaty must include, at a minimum, provisions for on-site inspection, the exchange of seismic data, and the establishment of a monitoring committee of experts. H.R. 3442 now has almost 100 cosponsors.

Yesterday General Secretary Gorbachev announced that the Soviet Union is extending its moratorium until August 6. In making that pledge, Secretary Gorbachev has provided for a unilateral moratorium on testing for exactly one year. We should join in this testing moratorium.

Let me examine the arguments put forward to show that the United States must keep testing nuclear weapons. I call them the THE TEST BAN MYTHS.

1. The United States needs to continue testing to develop new nuclear warheads. My question is why do we need new warheads? We have developed the hydrogen bomb. We have reduced the size of our weapons considerably while increasing their explosive yield. We have developed "clean" warheads (reducing radioactive fallout). We have developed neutron bombs, and many other increases in destructive capacity have been achieved. THE ACCURACY OF OUR WEAPONS WHICH IS FAR BETTER THAN THE SOVIETS
COULD BE IMPROVED. BUT ACCURACY HAS NO RELATIONSHIP TO WARHEAD TESTING. You need not test a nuclear device to make missiles more accurate. My bill would not affect the Star Wars program because President Reagan has assured us that this is a non-nuclear program. H.R. 3442 only affects tests of a nuclear explosive device.

2. A moratorium of any length would jeopardize the national security of our nation. H.R. 3442 calls for a six month moratorium. This cut off date is so short that the Soviets would not have much time to reorient their testing program so that they could test and have confidence that they could avoid detection. For the Soviets to have confidence that they could test and not be detected, they would have to use a new test site, prepare the site at night or in cloudy weather, test only devices which have a very low yield, and be sure that neither our technical nor our human intelligence resources could detect the preparation, testing, or results of the testing. The financial price of conducting such a test is extraordinarily high, the political cost if the Soviets tested and got caught are large, and the value to be gained from such a low yield test is small. Even if Soviet planners thought that the benefits of such a test were worth the risk, setting up such a test would take quite a bit of time, more time than is provided in H.R. 3442. The type of test for which detection could be most easily avoided is a test of low
yield. Such a test has the least potential military value.

3. We no longer have existing technical means to monitor Soviet compliance at this time. The problems with our rocket launching program has led some to argue that we cannot afford to rely on existing technical means to monitor Soviet compliance at this time. It appears that we have fewer than the optimum number of reconnaissance satellites in orbit now and that the useable life of some of them ends during this calendar year. Without any shuttles flying and with the additional grounding of Titan 34 rockets, we have no way of launching a new heavy satellite in the foreseeable future. I see the weakening of our satellite coverage as an argument for H.R. 3442. While we can tell whether the Soviets test a large device through external seismic sensors, we need satellite coverage to learn what the test is aimed at and how successful it was. If we let the Soviets end their moratorium on testing while we have no satellite coverage, we are opening the door for them to make a major breakthrough without knowing about it. Now, of all times, we should be trying to prevent Soviet testing.

4. We must test to maintain the safety and reliability of our weapons. Safety and reliability circuits in our weapons can be tested without conducting a nuclear explosion. Only about 5 percent of our nuclear explosive tests have been oriented toward safety and reliability. Once again, any reduction of our
confidence in the safety and reliability of our weapons would be matched by a similar reduction on the part of the Soviet Union. And, frankly, if loss of confidence in warheads, both our's and the Soviet's, reduces the risk of their use, I am all for it.

5. We cannot verify a nuclear test ban. The question of verification is a scientific issue. Our ability to detect a Soviet test is excellent if the test is of high yield. Our ability to detect a very low yield Soviet test is not as good, but such tests are of rather limited military value.

Verification of testing can be seen in three categories: high yield (above 10kt), medium yield (1kt to 10kt) and low yield (under 1 kt). Virtually all strategic warheads in the arsenal of both countries are substantially above the 10 kt level.

Realistic testing for reliability of the existing stockpile or for the development of most new warheads at their planned yield would require test of large yield. Indeed, the Threshold Test Ban Treaty forbids the testing of most strategic weapons at their planned yield. We have very high confidence that we can detect a large yield Soviet underground test of 10 kt or more from installations outside the Soviet Union. Most useful testing of new systems and of the reliability of existing warheads is above 10 kt. Seismic detection of medium yield tests is less certain from sites outside the Soviet Union. A viable arms control agreement would require the placement of seismic stations within
the Soviet Union to detect this class of tests. H.R. 3442 specifically provides for the placement of such seismic stations within the Soviet Union. The United States has recently tested a new unmanned seismic station which can provide accurate detection of medium yield tests without the need for American military personnel to be physically stationed within the Soviet Union. It should be noted that while the Nevada test site is on sand, resulting in quickly dissipated vibrations, Soviet test sites are on firm bedrock, producing strong vibrations. Because we validate our instruments based on our own test explosions in Nevada, it is possible that we have greater ability to detect smaller Soviet tests than we know. Low yield tests are conducted mainly to assess the survivability of communications, sensor, and other electronic equipment during a nuclear war. Obviously, seismic ground sensors, even ones within the Soviet Union, become increasingly unreliable as testing goes below 1 kt. That does not mean that the Soviet Union can conduct tests below 10 kt without fear of being detected. The United States has an abundance of other intelligence collection methods to determine whether testing has taken place. We overfly the Soviet Union in reconnaissance satellites. We can detect radiation which vents from the test site. The Soviets could attempt to test significantly below the U.S. detection level, conducting a clandestine test of say, 100 tons. A 100-ton test would be 1,000
times smaller than their smallest strategic nuclear weapon and 250,000 times smaller than their largest. They would not be likely to derive any useful information from such a low-level test, even if it were a test of a new type of weapon. It is improbable that a test significantly below the U.S. detection level of one kiloton could threaten U.S. security. Finally, it is likely the United States has human intelligence assets within the Soviet Union which can learn of and report on nuclear testing activity.

6. The Soviets broke the 1958-1961 moratorium on nuclear weapons testing. On December 29, 1959 President Eisenhower, discouraged by the lack of progress toward a negotiated treaty to prevent testing, unilaterally announced that "the voluntary moratorium would expire on December 31, 1959. It was 20 months after the U.S. action before the Soviets resumed testing. This took place only after the following had happened:

(a) the U.S. had announced that it would no longer be bound by the moratorium;
(b) the Soviets announced they would not be bound if any "western power" tested;
(c) the French had conducted four tests; and
(d) the U-2 spying incident and the Berlin crisis caused a serious deterioration in U.S. - Soviet relations.

7. The Soviets are ahead. We must catch up. This argument
takes two forms; 1) the Soviets are ahead in testing and we must catch up, or 2) the Soviets are ahead in weapons technology and we must catch up. Neither argument is valid. The United States has conducted a total of 819 nuclear weapons tests, and the Soviets a total of 604, since the dawn of the atomic age. Secretary Weinberger says that he would not trade arsenals with the Soviets because we have a technological superiority. By every indicator, especially yield per weight, our warheads are a generation or more ahead of Soviet warheads.

8. Because Soviet weapons are not as complex as U.S. weapons, their weapons are not as dependent on testing. The complex portions of U.S. weapons are not the parts of the weapons that explode with a nuclear yield. For the most part the high technology parts of our weapons are incorporated in their guidance and control systems. Those portions of the warhead that are high technology dependent can be tested without a nuclear yield. It is true that high technology components of new weapons must be tested, as part of a new weapons testing program, but the case for new technology nuclear warheads is unpersuasive.

9. We need to reduce nuclear weapons first and ban testing later. Stopping nuclear weapons testing is the essential first step to nuclear weapon reductions. Our current policy is to talk, test, build. This cycle would be broken if we stop testing. As long as we continue to test, we will be building new
nuclear weapons, even when we are talking about reducing the number of old nuclear weapons. Let's not put the cart before the horse. To stop the arms race we must first stop testing.

10. **We need to improve the verification procedures of the Threshold Test Ban Treaty and Peaceful Nuclear Explosions Treaty before we complete a Comprehensive Test Ban.** These two treaties were negotiated and signed in the mid-70's. Both countries have been following their provisions even though the United States has not ratified them. Verification technology has improved greatly since the 1970's and ratification of existing treaties would only improve verification procedures through the exchange of data. The Administration has charged the Soviets with exceeding the 150 KT threshold, but recently, the CIA changed its procedures for estimating the yield of Soviet nuclear explosions because it had decided its previous estimates were too high. The main point is that under a Comprehensive Test Ban Treaty there would be no nuclear tests and no need for the means to verify the 150 KT limit under the Threshold Test Ban Treaty. It is far easier to verify that no tests have occurred than to verify that no tests above a certain threshold have occurred.

11. The American people of the United States are not behind a ban on nuclear testing. I think the members of the panel will be interested in knowing the results of a national poll taken in April of 1986 by the Opinion Research Corporation. Its findings
were based on a telephone survey conducted among a national probability sample of 500 men and 503 women, living in private households in the continental U.S. Two questions were asked:

1. Are you in favor of stopping the U.S. from testing nuclear weapons as long as the Soviet Union also stops. **Yes - 60%**  
   **No - 33%**

2. Are you in favor of the U.S. and the Soviet Union refraining from any further nuclear weapons testing until the next Summit meeting? **Yes - 80%**  
   **No - 16%**

World opinion supports a U.S. moratorium on nuclear testing. The Five Continent Peace Initiative has called upon President Reagan and General Secretary Gorbachev to suspend testing until further discussion can be held at the next summit. The leaders issuing the call were Argentinian President Alfonsin; Mexican President de la Madrid; Indian Prime Minister Rajiv Gandhi; Greek Prime Minister Papandreou; the late Swedish Prime Minister Palme; and former Tanzanian President Nyerere.

By passing H.R. 3442 we have an historic opportunity to make a substantial contribution to reducing the arms race and to reducing international tension.
Mrs. BYRON. I appreciate your testimony and I have a couple questions that I would like to follow through on.

We have heard in a lot of the testimony that the test ban moratorium in the 1960's was a failure because the Soviets broke out of it. Since a moratorium really is basically a verbal agreement as opposed to a written, ratified agreement, what would once again keep the Soviets from breaking out of it?

Mrs. SCHROEDER. First of all, I pointed out that they didn't break out of it until after we announced that we were not going forward with the moratorium any more and they still waited 20 months after that until after the French tested, and they had said that it was contingent upon some other Western power testing. Other incidents, the U-2 spy plane and so forth. So they just didn't wake up one morning and decide to cheat. We announced the end of it first.

Now, it is beyond just a verbal agreement that we will stop. We certainly have not just accepted the Soviet Union's statement on August 6 that they have stopped testing. I think you know and I know we have watched that very closely and if we had one scintilla of evidence that we could rely on thinking that they had said they were doing a moratorium, that they really didn't in this period, we would have used it and they know we would use it.

So we constantly monitor. It is not based on trust. It is based on our watching it and if they say it and we figure we got the right to watch, and if we said it they would figure they had the right to watch and we will blow the whistle on each other no matter what.

Mrs. BYRON. Does your bill require any additional verification to enforce the moratorium other than—

Mrs. SCHROEDER. My bill puts 6 months on this moratorium. It says that it doesn't go on in perpetuity, and if the President has reason to believe there has been a violation after 6 months, it instantly ends. So that comes in as a retrigger so we are not left hung out to dry. It does not go into how we should verify because then I think we have stepped over and moved into the executive branch authority of negotiating the treaty. I think we couldn't do that under the Constitution.

That is to say, let's have a moratorium—

Mrs. BYRON. You also see the document there on the front of the podium.

Mrs. SCHROEDER. It is the same one, yes, but a little bigger than that phrase. There are other parts that would say we don't have the right to negotiate that treaty.

Mrs. BYRON. Do you have concern with the Soviets' disregard for international treaties after the Chernobyl incident such as regards notification?

Mrs. SCHROEDER. Absolutely, but I don't ever plan to sign a treaty with the Soviet Union based on trust. I mean, the gentleman from Massachusetts said it, I say it all the time, if I stood on the House floor and said why are we not negotiating arms control with the Canadians, people would laugh. Who needs it with the Canadians, you trust them.

If you look at your personal life the people that you sign agreements with are not your husband and your children and people you trust, it is with your employer, or the Federal Government and your pension or the people you don't—and you make sure it is en-
forceable. The reason we have agreements with the Soviet Union is because we don't trust them and so therefore you would never make an agreement based on trust because the whole premise as to why you write it down is because you don't trust them.

So you want to make sure it is verifiable and you get out the minute you verify they have not stayed in it.

So I just don't see that.

I see Chernobyl—people using that I think use it incorrectly because to say that technology's gone mad, we have to shrug our shoulders and let it keep going mad just because we don't trust the people that control it, I think it is all the more reason we try to get an agreement with the people that run it to see if we cannot control it.

Mrs. Byron. I think that has been used recently as a prime example of the Soviets' disregard for international treaties in these areas, and also above and beyond that, their disregard for their own population in that area.

Mrs. Schroeder. I don't think they signed a treaty on Chernobyl, did they? Were they in violation of a treaty there?

Mrs. Byron. I think there is a treaty that has been signed on international treaties, notification on the atomic energy issue.

Mrs. Schroeder. That is probably right, but they didn't get away with it anyway, the whole world can look in there.

Mrs. Byron. The sad thing is that for them to perceive or think it wasn't going to be absolutely common knowledge very quickly with a tragedy of that magnitude is ludicrous.

Mrs. Schroeder. I think that is true, but I come from part of the country where we had thousands of sheep die, too, and it took a long time to prove why the sheep died. No one knew why they died, you know. Credibility problems often come around.

Mrs. Byron. Mr. Mavroules.

Mr. Mavroules. I don't have any questions—I do have one question. Thank you for your excellent testimony here this afternoon. On page 8, you cite the numbers of nuclear weapons tests. You cite 819 for the United States versus 604 which is 25 percent more on the part of the United States. Where did you get those figures from, Pat?

Mrs. Schroeder. From the Department of Energy.

Mr. Mavroules. DOE gave you those?

Mrs. Schroeder. Yes.

Mr. Mavroules. I will just make an observation, Pat. I think you have a good bill. I think it needs some refinement which I would like to talk with you about at a later date, but at least you have the courage and nerve to get it before us so we can talk about it.

You know we keep hearing this argument about verification and the more I listen to the argument on verification, the more and more I believe it is a red herring. I really do. Because if we truly want to have an arms control agreement, we can settle the issue of verification which is absolutely necessary at least in my view to have before you reach any agreement with the Soviet Union.

I agree with you, it is not a matter of trust. I wouldn't trust the Soviet Union in no way and at no level, but verification I believe is being overly used as a term to get away from arms control agreements.
I just want to thank you for your testimony.

Mrs. Schroeder. Thank you very much.

As I say, we are constantly working on the bill, too. I think we have good language that is even tighter that we will share with you, but I think that the scientists at least in my part of the region, feel very strongly that it can be verified.

Mr. Mavroules. Thank you.

Mrs. Byron. Mr. Ray.

Mr. Ray. Thank you, Madam Chairman, and Mrs. Schroeder, thank you. I think you have done a good job in presenting your case. It is very interesting to me.

Your bill refers to the testing of nuclear warheads which is defined by section 7 of the bill to mean that it would be the detonation of a nuclear explosive device. The bill appears to define that any such explosion for any purpose would be a nuclear warhead test and does this mean that the bill would cut off funds for inertial confinement fusion research directed by energy research, weapons safety tests, satellite vulnerability tests, or other R&D programs?

Mrs. Schroeder. No testing is stopped except nuclear testing.

Mr. Ray. I see.

Mrs. Schroeder. As I tried to point out in my statement, any kind of testing on anything that is not nuclear, non-nuclear is left alone.

Mr. Ray. But it might knock out R&D research if any kind of minor nuclear testing was required?

Mrs. Schroeder. If you had R&D during nuclear testing yes, it would stop it. But we are told that there is so much you can do in R&D with the computer and all the different things that we have been able to do because of all the verification we have on that, over 800 tests we have had before. We kept phenomenal records on that. We are able to tell an awful lot and the Soviet Union cannot do it either.

I mean, remember that.

Mr. Ray. I have heard also that your bill is similar to President Kennedy's initiative of 22 years ago.

Mrs. Schroeder. That is correct.

Mr. Ray. But after the Soviets broke the Eisenhower moratorium in 1961, President Kennedy personally approves some 89 nuclear tests prior to his assassination.

I wonder how that might jibe with your view?

Mrs. Schroeder. Well, what happened was first of all, as I pointed out, Eisenhower first broke the moratorium and then 20 months later the Soviets broke it. Then Kennedy picked up and started trying to come—to negotiate the test ban. Finally he got frustrated too, so he went to American university, gave a speech and announced that the United States would begin not doing any open air tests and move.

They got a treaty and the Soviets have not broken that treaty. So they did not break that treaty. That is the open air testing. The Soviet Union and the United States have not done open air testing. The French have done some but we signed the treaty and we could certainly monitor that because we monitor that with all sorts of air samples and everything else.
They have done no testing above ground and we have not either. The treaty has held.

Mr. Ray. But we have done 89 tests after the moratorium was broken, is that underground tests?

Mrs. Schroeder. There were some under, some above I assume, I don't know the exact breakdown of that. But then once President Kennedy got the test ban signed, it was the one that—see, Eisenhower was trying to negotiate it, he got frustrated with how close it was and he said I am not going to stop testing any more. Then Kennedy picked up the new strategy and you had a new ruler in the Soviet Union who was more willing to negotiate I guess, and did it.

But obviously it is a gamble and it was a big gamble for him to do it, but he did it and there has been no open air testing since then. So above the ground, no, and you remember the fear of Strontium 90 in the milk and everything, that we are now seeing the concerns coming out of Chernobyl.

Mr. Ray. Thank you for your testimony.

Mrs. Schroeder. Thank you very much.

Mr. Ray. Thank you, Madam Chairman.

Mrs. Byron. Mr. Stratton.

Mr. Stratton. No questions, Madam Chairman.

Mrs. Byron. Since we have a budget vote on the floor, I want to thank you once again for coming in and giving us your testimony, Mrs. Schroeder.

Mrs. Schroeder. Thank you very much, Congresswoman, I appreciated very much being here.

Mrs. Byron. The committee will adjourn for 10 minutes to go vote, and then return for a closed session.

[Whereupon, at 3:40 p.m., the subcommittee was adjourned, and proceeded to further business in closed session.]