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No. 23

Senate

Mr. KENNEDY. Mr. President, I think that the country, and certainly the Senate, has benefited greatly from the discussion here this afternoon, most particularly by the comments of two of the most thoughtful spokesmen in this body; namely, the distinguished Senator from Kentucky (Mr. COOPER) and the distinguished Senator from Montana (Mr. MANSFIELD).

I know that each Member of this body will benefit in the course of his own considerations and deliberations by reviewing the comments and the questions raised about this Sentinel ABM program by these two very thoughtful, creative, and sensitive men.

There is a steadily rising tide of doubt in this country about the soundness, necessity and cost of some of our national defense programs. Many of those Americans who have expressed these doubts most articulately have done so here in the Senate Chamber. Their ranks are ever growing, and this reflects, I think, the growing feeling in the country at large.

The Senate, charged with advising the President on foreign policy matters, is an entirely appropriate forum for a thorough examination of the course our national defense planners have charted. And the Congress itself, charged with examining and appropriating funds for requests to carry out this course, must bear the burden of insisting that these national defense policies are rational and sound.

Let me be entirely candid in expressing my belief that we in the Congress—with the notable exception of a few of our colleagues—have been remiss in bearing our responsibilities. We have not insisted on full information, in many cases, where national defense is at stake. We have appropriated funds for programs which have not proved workable, and which, after the expenditure of tens of billions of dollars, have been canceled. National defense programs have somehow been above the battle—it has always been implicit in many of our debates that it is perhaps unpatriotic to question the recommendations of the Department of Defense.

We are fortunate, I think, that this is increasingly less so than in the immediate past. If we in the Congress—and particularly in the Senate—take an ever larger role in the deliberations and decisions regarding the course our national defense policies take, then it is my own conviction that our country will be better defended at less cost, than our common desire for world peace will be more rapidly advanced, and that our division of Federal budget expenditures will be considerably more rational.

The particular concern which brings me to make these remarks is the planned deployment of the Sentinel anti-ballistic missile system. Administration figures indicate a cost of \$5.5 billion for deployment of a "thin" system. Yet most experts readily acknowledge that the pressures for deployment of a full Sentinel ABM system will be severe—and that this full system will cost upwards of \$60 billion. When, we should ask, has there been a full and candid national debate over the wisdom and desirability of committing this vast sum to a system which may well not work? Let me say that I do not believe we have had such a debate, but that we should.

We all remember the national debate over medicare, a debate which raged for years. And we remember the long debate over the Elementary and Secondary Education Act. Each of these programs, programs which were, incidentally, long overdue, was enacted only after the most complete and microscopic examination of the pluses and the minuses. It is high time that programs for national defense no longer receive carte blanche treatment in the Congress. Instead, they should be subjected to the same scrutiny as other programs. I share this view with a large number of my colleagues, and it is highly appropriate that as the new Administration reviews the decisions made two, three, and more years ago relating to national defense and foreign policy, and examines the underlying assumptions and rationale, we in the Congress should, too, demand fuller and more candid discussion.

The Sentinel ABM system is a case in point.

It was put forward as a defense against an unsophisticated Chinese ICBM threat. Yet we have evidence that the Chinese are developing weapons systems which would make the Sentinel system obsolete.

It was put forward at a cost of \$3.5 billion. Yet present estimates have risen to \$5.5 billion, and perhaps to \$9.4 billion.

It was put forward when arms limitation discussions with the Soviets were in only preliminary stages. Yet we now have hard evidence that the Soviets wish to proceed immediately with disarmament talks.

It was put forward as a means of saving American lives in a nuclear exchange. Yet Defense Department figures indicate this assumption to be in error.

It was put forward on the argument that Sentinel deployment would strengthen our bargaining position vis-a-vis the Soviets. Yet analysis of this argument reveals its basic unsoundness.

These are only a few of the questions which raise grave doubts about the wisdom of carrying the decision to deploy Sentinel forward, and whether it creates not true security, but instead a false security.

I, for one, am against that decision. I was when it was made. And I will work with my colleagues here in the Senate to see it reversed.

As background for that work, it may be helpful to offer a review in some detail of the major issues, as I see them, which will be at stake in the Senate debates this year.

In September of 1967, our Government announced plans to deploy a limited antiballistic missile system at various sites across the United States. The Sentinel system relies upon coordinated use of a battery of different components for its effectiveness. It uses central computers, two types of radars, and two types of missiles to seek out and destroy incoming enemy intercontinental ballistic missiles before they reach the United States.

The first type of radar is the perimeter acquisition radar—PAR—used for long-range tracking of incoming missiles. The second is the missile site radar—MSR—used both for shorter range tracking of incoming missiles and for guiding our

own defending U.S. missiles to their targets. The first missile type is the Spartan, a three-stage solid propellant missile launched from an underground silo. It has a range of several hundred miles, carries a thermonuclear warhead, and is designed for long-range interception of incoming missiles. The second missile type is the Sprint, a two-stage, solid propellant missile, also nuclear tipped and launched from an underground silo. It is designed for short-range interception of the incoming missiles which have penetrated the long-range Spartan defense.

As presently planned, the "thin" Sentinel system would include six PAR radars, ranged along the northern border of the United States and in Hawaii and Alaska, facing the polar routes of incoming missiles. Each PAR site would be about 300 acres in size, and the PAR itself would be housed in a concrete building 140 feet long and 330 feet wide. Each PAR site would also be connected to a number of "farms" of Spartan missiles, and next to each Spartan farm would be a farm of Sprint missiles together with a MSR site. The MSR sites would be about 280 acres in size.

Site for Sentinel missile farms have been announced near Boston; Cheyenne, Wyo.; Chicago; Grand Forks, N. Dak.; Great Falls, Mont.; Los Angeles; New York City; Salt Lake City; Seattle; Albany, Ga.; San Francisco; Sedalia, Mo.; and Honolulu.

The scientists and engineers who developed the Sentinel system have quite literally accomplished technological miracles, devising equipment of immense sophistication. Construction of the Sentinel ABM system would be the single most complicated engineering feat ever undertaken in the world. There is, however, considerable and convincing evidence that despite these technological miracles, and despite our undoubted ability to complete this engineering feat, construction of the Sentinel ABM system would be a waste of money. Even worse, construction of the system may set the cause of world peace back immeasurably.

Last week, I wrote to Secretary of Defense Laird and asked him to place an immediate freeze on all Defense Department activity relating to the construction of the Sentinel ABM system sites. I did so because of increasing evidence that pushing forward with the Sentinel system would be a serious mistake. Many of our Nation's most eminent scientists some with experience at the highest policy levels of our Government, make what appears to be an irrefutable case against continuing deployment of the Sentinel system. This case is not grounded merely on technical, or on budgetary, or on larger foreign policy considerations. Rather, it encompasses all these considerations, and more, and for this reason is so compelling. It also raises serious questions about the influence of the military-industrial complex upon the Nation's policymaking procedures.

The first of the Sentinel system sites is planned for just outside Boston. A PAR site is presently under construction in North Andover, Mass.; and the notices of invitation to bid on the initial phases of

an MSR site in the Lynnfield-Reading area of Massachusetts, are scheduled to go out on February 20, 1969. The Department of the Army has conducted a series of meetings in Massachusetts, in an effort to explain to the residents of the Boston area what the Sentinel system facilities involve.

The most recent of these meetings was held at the Reading High School last Wednesday evening, and attended by some 1,500 persons. Among those present were a number of eminent scientists, and the information they presented and the arguments they made merit review, I think, in the Congress. In sum, the case they made questions the very soundness of the decision to deploy the Sentinel SBM system. Let me summarize the points made at the meeting:

First, technical questions. We simply do not have convincing evidence that the Sentinel system will function under combat conditions, against either a Chinese threat or, particularly, against a Soviet threat. The component missiles of the Sentinel system—the Spartan and the Sprint—have proven under test conditions that they can intercept an incoming ICBM, and that their warheads can neutralize an enemy missile. But we have learned that our radars are blacked out for some minutes after an atmospheric nuclear explosion, because of the cloud of ionized gas such an explosion creates. While this cloud is dissipating, which takes some minutes, the heart of the Sentinel system—the sophisticated radars—are useless. This gives rise to the prospect of an enemy deliberately holding back the bulk of a hypothetical salvo, until our radars are blacked out, perhaps from the explosion of our own defending missiles. Then this enemy would loose the bulk of his attacking missiles, which would be undetected by our Sentinel and hit their U.S. targets.

Then, too, there are other questions. In response to reports of limited Soviet deployment of an ABM system, the U.S. is developing counter-measures—including multiple independent re-entry vehicles (MIRVs), which will permit a single missile to carry up to ten warheads. All evidence indicates that the Soviets are developing similar offensive counter-measures to our Sentinel and other weapons systems, such as orbital delivery systems and low-flying missiles in fractional orbits (FOBS), which would not be detected by our radar defenses. There is another, somewhat different, technical question well worth repeating. By the very fact of including the short-range Sprint in the Sentinel system, our planners have indicated their belief that some number of enemy missiles will penetrate the long-range Spartan shield, and thus must be intercepted at lower altitudes by the Sprint. A determined enemy might set his incoming missiles to detonate at an altitude of 50,000 feet, or about where a Sprint intercept might take place. Yet the detonation of a large nuclear warhead at 50,000 feet would cause great devastation in a large area beneath it—fire and radiation devastation. An enemy might also direct a warhead with a high fallout yield into an unpopulated area, not protected by a point defense Sprint missile. The fallout

from this weapon could destroy the United States just as well as could a direct hit.

In sum, there are two threads to the unresolved technical questions. In the first place, as Dr. Jerome Wiesner, Science Advisor to Presidents Kennedy and Johnson, pointed out recently:

A few competent people expect the extremely complex ABM system to work the first time; yet it must to have any effect.

And in the second place, as former Defense Secretary McNamara pointed out recently in commenting on the reported Soviet ABM deployment:

I do not think there is a senior civilian or military official in the Defense Department that does not believe that . . . we have the technical capability to react in such a way as to assure our continued capability to penetrate that Soviet ABM defence.

Since the Soviets have shown that they have a technological capability which can match ours, I am sure that the senior Soviet officials believe they can penetrate the Sentinel ABM defense we are developing, just as we believe we can penetrate any system they develop.

Second, our relations with the Soviet Union. In his January 18, 1969, statement on national defense posture, former Defense Secretary Clifford said that we stand "on the eve of a new round in the armaments race with the Soviet Union, a race which will contribute nothing to the real security of either side, while increasing substantially the already great defense burdens of both." Secretary Clifford then urged pursuit of an agreement with the Soviets on a limitation of armaments. For at least three years, our Government has sought to persuade the Soviets to agree on such a limitation. A number of our colleagues in the Senate have recently visited with the Soviet leadership, and reported to the Senate that the Soviet are ready to begin discussions with the United States. One indication of this readiness may be the report of Secretary Clifford, also in his defense posture statement, that the Soviets have curtailed construction of a Moscow-area ABM system.

So much, of such large importance to the future of mankind, hangs in the balance of agreeing to limit armaments, that we must not follow any course—no matter when or by whom set—which leads to an intensification of the arms race. As Secretary Clifford pointed out, our best intelligence tells us that the Soviets are slowing construction of their limited ABM system. Should we provoke them into speeding up construction, by building our own, and thus exacerbate the tensions which lie between us? I think not. We should raise the prospects for world peace by seeking to phase the armaments race down, not be escalating it.

Third, site location. In Massachusetts, the two Sentinel system site locations are in the greater Boston metropolitan area. The sites near Seattle and Chicago are likewise situated in populated areas. This site placement raises three immediate and important questions, one relating to safety from accidental explosions, one to enemy targeting considerations, and the last to the rationale for constructing a "thin" Sentinel system. While the exact figures are classified, the best estimates

are that an accidental explosion in the silo of a Spartan warhead would cause total devastation in an area 5 miles in diameter, and serious destruction over a far greater area. Although the risk of accidental explosion is very low, it is not zero—and for this reason, it would seem reasonable to ask why at least the Spartan missiles are not placed in unpopulated areas, just as our ICBM's are. This is particularly so in the light of expert testimony that should the missiles be 50, or a 100 miles distant from the Boston area, the quality of protection accorded Boston would not differ. Since, with incoming ICBM's we are dealing in distances of many thousands of miles, it would hardly be different were the Sentinel missiles located more remotely from Boston and other populated areas, where safety would be much higher.

Another factor related to site location is enemy targeting. We must assume that our Sentinel ABM sites—certainly the PAR radars—would be prime enemy targets in the event of attack. On this basis also, they should be placed in remote areas, as the most rudimentary safeguard. And this is so whether or not we assume that a hypothetical enemy would consider population centers as the prime target.

Finally, one must draw the reluctant conclusion that the Sentinel sites are close to population centers because our planners envisage not a "thin" ABM system, but instead a full one. For if we planned only a "thin" system, there would be no need to place the sites close to the cities. Instead, they could be put in remote countryside areas.

Fourth, cost. When first discussed in early 1967, the costs of this "thin" Sentinel ABM system were estimated to be \$3.5 billion. By September, 1967, when the deployment decision was announced by the Government, the cost had risen to \$5 billion. The most recent estimates are \$5.5 billion. Previous experience with weapons systems of this type make it a near certainty that these estimates will be far too low—that we may eventually spend \$10 or \$15 billion on just this "thin" system before it is completed. We must not, either, ignore what will be strong pressures to expand the "thin" Sentinel system into a full-blown, extensive ABM system, at cost estimates which run upwards of \$60 billion.

Before we get too far along in committing ourselves to a project with this price tag, we should be certain we are buying a system which will work, and which will not be obsolete in 5 or 10 years. Obsolescence is an unfortunate hallmark of many of our military defense programs, largely because of long leadtimes and unexpected technological advances. Former Deputy Secretary of Defense Cyrus Vance testified 2 years ago that—

Because of the very rapid rate at which the technology changes, to maintain an effective (ABM) system one would essentially have to turn over the whole system every few years.

If, by 1975, the Sentinel system is obsolete, can we say that the funds spent to construct it were wisely spent? Our second-strike missile capability is now universally acknowledged to be sufficient to destroy Russia and China; would they be less willing to attack us because we have

a "thin" ABM system which we cannot even be sure will work under combat conditions? I do not think so, and consequently think whatever funds we do spend on Sentinel deployment will be spent unwisely.

Fifth, bargaining posture. Supporters of the Sentinel ABM system often make the argument that construction of the system will strengthen the bargaining position of the United States vis-a-vis the Soviets, in any disarmament talks.

This argument seems particularly fallacious to me, on a number of counts. In the first place, since even Sentinel proponents concede that the "thin" Sentinel system would be ineffective against a Soviet attack, and ineffective against whatever sophisticated missiles the Chinese possess, I can see no advantage at all, in talks with the Soviets, in having an ABM system which has virtually no impact on their offensive missile capability.

In the second place, by the middle of this year the Soviets will be on a parity with the United States in the number of deployed ICBMs. In any disarmament talks, it is inconceivable that they would agree to an arms moratorium requiring them to come out at a disadvantage vis-a-vis the United States, a disadvantage from which they did not suffer when the talks began. The same argument applies to an ABM system. It is inconceivable that the Soviets would agree to a moratorium permitting the United States to maintain an ABM system, while they—the Soviets—did not have an effective one. Consequently, construction of the Sentinel system will have no relevance whatever upon our bargaining posture.

And in the third place, assuming that we did complete the "thin" Sentinel system, and that the Soviets did correspondingly, and then we reached a disarmament agreement—we would then, presumably, dismantle the Sentinel system which would have gained us nothing in the negotiations and cost us billions of dollars. Only if we viewed the ABM system as important vis-a-vis a Chinese threat, would it make sense to maintain an ABM system. In this regard, it is interesting to note that the Soviets—who may have reason to fear Chinese intermediate range missiles—have curtailed their own ABM construction activity.

In sum, I see no validity to the argument that we need a Sentinel system to strengthen our hand with the Soviets—the "thin" Sentinel cannot make us any stronger than we now are.

Sixth, distortion of Federal funding priorities. The costs of the Vietnam war have seriously threatened the stability of our economy, and have forced a severe cutback in Federal expenditures for the nonmilitary programs in education, housing, health, employment, and conservation. This cutback is generally conceded to be at least partly responsible for the divisions and unrest with which we have had to deal here at home in the last 30 months.

One measure of how drastic the cutback has been is the difference between the authorization and the appropriation for any given program. Writing in Agenda for the Nation, former Budget Bureau Director Charles Schultze said that—

A sample count of fifteen programs, all dealing with relatively important social problems, indicated that actual program levels in fiscal 1969 were about \$5 billion below the authorized amount.

This underfunding of our domestic programs simply cannot be allowed to continue. Many of us in the Congress have long hoped that the "peace dividend," the funds which would be freed up for purposes other than Vietnam when the war there is phased down, could be applied to these underfunded domestic programs. This would be a major step forward, in my opinion, in redressing the present distortion in our budget priorities. If, on the other hand, we are to see the "peace dividend"—whatever may be its size—diverted to the Sentinel and similar projects, then we stand little chance of reuniting the Nation.

Seventh, limitation of U.S. casualties. The argument is generally made that deployment of even a "thin" Sentinel system will save American lives in the event of a nuclear exchange. But based on official, published Defense Department figures, this is simply not so. These figures appear in former Secretary McNamara's testimony last year before the Appropriations Committees. In sum, they indicate that a Soviet preemptive first strike against U.S. military and city targets would cause 120 million casualties. The figures then indicate that deployment of the "thin" Sentinel system would reduce this casualty figure by 20 million, to 100 million—so long as the Soviets did not respond to our ABM deployment by installing penetration aids on their offensive missile systems. If, on the other hand, the Soviets did respond by installing penetration aids, then the casualty figure would again be 120 million—precisely where we would be without the Sentinel ABM system. Can there be anyone who doubts the intention and capability to respond to our initiatives. I, for one, feel sure that Soviet scientists and engineers are working to develop and install penetration devices, just as we are.

There are many more arguments to be put forward against deploying the Sentinel ABM system, many of which were aired in Senate debates last year. In the main, they question using a missile threat from China as the justification for constructing a "thin" Sentinel ABM system, pointing out that we will force the Chinese to develop sophisticated ICBM and submarine-launched missiles by deploying an ABM system. This will in turn force us to take other steps to counter the Chinese steps, and so on, ad infinitum.

When the budget request for fiscal year 1970, for funds to continue deployment of the Sentinel, comes before the Senate, both on authorization and appropriation requests, I am sure that the debates of last year will be reopened. And there is much new evidence and information available now, which was not available then, throwing open to even more serious question the efficacy of the Sentinel ABM system. It is my intention, working in concert with other Senators, to ask the Senate to deny any request for additional funds to deploy the Sentinel system. I shall also ask that no further construction work on deployment using funds already appropriated be carried out, and that instead those funds be used for con-

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tinued research and development of an ABM system. For the sake of our national preparedness, we must continue our research and development effort; but for the sake of domestic tranquility and of world peace, I think we must stop work on deployment.

Pending resolution by the Congress of this question, I would like to restate my suggestion of last week to Secretary Laird: that he put a freeze on any Department of Defense activity actually related to deployment of the Sentinel ABM system, while not changing the status of research and development on ABM systems. Such a freeze would be strong evidence of good faith in our pledge to limit the arms race. It would permit time for a review of Sentinel site placement near populated areas. It would change the assumption regarding the Sentinel system, by forcing its proponents to convince the policymakers that it is a wise expenditure instead of forcing its opponents to convince them that it is unwise. It would be dramatic evidence to a troubled world that the first concern of the United States is world peace. And finally, it would be a dramatic initiative on the part of the United States toward arms limitation discussions with the Soviets.

It is my understanding that Secretary Laird and Undersecretary Packard are presently reviewing the decision to deploy the Sentinel ABM system—a decision made 2 years ago. It is my hope that they will present their review to the National Security Council, for this decision should not be made on military grounds alone. It is, instead, inextricably wound up with the most basic of our foreign policy considerations, our budgetary concerns, and our intelligence estimates.

President Nixon has asked that the National Security Council recommend a policy course to him on the nuclear non-proliferation treaty. It is entirely appropriate that the Sentinel ABM system, and its future, be treated similarly, and I would hope that the National Security Council be asked its view of the Defense Department's recommendations.

We have too much at stake, in the debate over the Sentinel ABM system, to let past decisions control our present and future course. Instead, we have the opportunity to think through the rationale for deploying Sentinel. It is a rare opportunity, and we must grasp it for the sake of our own children, and of theirs.

I must say, Mr. President, that I share the pleasure of the distinguished Senator from Missouri (Mr. SYMINGTON), the distinguished Senator from Montana (Mr. MANSFIELD), and the distinguished Senator from Kentucky (Mr. COOPER), in the fact that there will be open hearings on the Sentinel this year, and that in them we will have the benefit of the testimony of non-Government experts who have experience and background in this area. I know they can add to the knowledge and understanding of all of us in this body.

So I think the distinguished Senator from Kentucky has performed a very important service, as have my other colleagues as well, in addressing themselves to this matter in the early part of this session. We know the President is giving the matter serious thought. When he is aware of the very deep feeling of the

Members of this body, who cover a very wide spectrum of political experience and understanding, coming from different parts of the country, and when he understands the very serious reservations that have been expressed in this body for a whole host of reasons, I think it is entirely appropriate that a hold or freeze be put on this program and that further expenditures be halted until the Senate and the House and the President have a chance to review this program.

So I, too, want to congratulate the Senator from Kentucky. The hour is late. I think the fact that there were as many Senators here to speak on this, and the fact that other Senators have filed statements in the Record and have indicated that they will continue to speak about it, really demonstrates, as clearly as it is possible to demonstrate, the extraordinary importance that many of us place upon this problem. It demonstrates as well our very deep-seated belief that there needs to be a total review, and that we should take no further steps in this program without that total review.

United States Senate

WASHINGTON, D.C. 20510
March 5, 1969

Mr. Paul E. Healy
City Council
City of Cambridge, Massachusetts

Dear Mr. Healy:

I was very glad to hear from you regarding your thoughts on the Sentinel anti-ballistic missile system, and I appreciate your taking the time to get in touch with me.

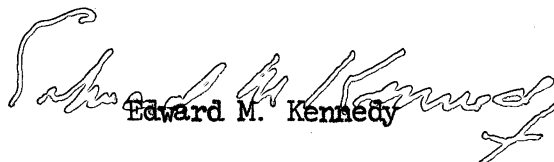
Since last year I have had serious doubts about the wisdom of committing billions of dollars at this time to deploying the Sentinel ABM system. Some of this country's most eminent scientists have indicated that our national security would not be increased by the Sentinel, instead, it may give us only false security. For this reason, I have urged that construction be halted on deployment of the Sentinel system, until thorough reviews and reevaluations have been completed.

It is my belief that the various committees of the Congress will, in the course of their hearings on the military budget requests, give us an opportunity to hear all sides of this important issue. These hearings, coupled with the Administration's recommendations and a report I have asked be submitted to me, will give us an unusual base of information. But we need such a base, I believe, as this is an issue of such critical moment to our future.

I recently made a statement in the Senate outlining my current views of the Sentinel system, and I have enclosed a copy of this statement for your information.

Thank you again for taking the time to get in touch with me.

Sincerely,


Edward M. Kennedy

Enclosure

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Communication from Senator Edward M. Kennedy acknowledging resolutions adopted by the City Council regarding the Sentinel Anti-ballistic missile system and a copy of a statement made by him in the Senate outlining his current views on same.

March 17, 1969

March 17, 1969

Paul E. Hooley

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