

Friday, Aug. 22, 1980
Pentagon News Conference
Secretary of Defense Harold Brown
Under Secretary of Defense William J. Perry
Lt. Gen. Kelly Burke, DCS for R&D

Mr. Thomas B. Ross, ASD/PA: Ladies and gentlemen, the ground rules are that everything written or spoken at this conference is on the record and not to be used until the press conference is over.

Dr. Brown: Good afternoon, ladies and gentlemen.

I am announcing today a major technological advance of great military significance. This so-called "stealth" technology enables the United States to build manned and unmanned aircraft that cannot be successfully intercepted with existing air defense systems. We have demonstrated to our satisfaction that the technology works.

This achievement will be a formidable instrument of peace. It promises to add a unique dimension to our tactical forces and the deterrent strength of our strategic forces. At the same time, it will provide us capabilities that are wholly consistent with our pursuit of verifiable arms control agreements, in particular, with the provisions of SALT II.

For three years, we have successfully maintained the security of this program. This is because of the conscientious efforts of the relatively few people in the Executive Branch and the Legislative Branch who were briefed on the activity and of the contractors working on it.

However, in the last few months, the circle of people knowledgeable about the program has widened, partly because of the increased size of the effort, and partly because of the debate under way in the Congress on new bomber proposals. Regrettably, there have been several leaks about the stealth program in the last few days in the press and television news coverage. In the face of these leaks, I believe that it is not appropriate or credible for us to deny the existence of this program. And it is now important to correct some of the leaked information that misrepresented the Administration's position on a new bomber program. The so-called stealth bomber was not a factor in our decision in 1977 to cancel the B-1; indeed, it was not yet in design.

I am gratified that, as yet, none of the most sensitive and significant classified information about the characteristics of this program has been disclosed. An important objective of the announcement today is to make clear the kinds of information that we intend scrupulously to protect at the highest security level. Dr. Perry, my Under Secretary of Defense for Research and Engineering and a chief architect of this program, will elaborate on this point further.

In sum, we have developed a new technology of extraordinary military significance. We are vigorously applying this technology to develop a number of military aircraft, and these programs are showing very great promise.

We can take tremendous pride in this latest achievement of American technology. It can play a

major role in strengthening our strategic and tactical forces without in any way endangering any of our arms control initiatives. And it can contribute to the maintenance of peace by posing a new and significant offset to the Soviet Union's attempt to gain military ascendancy by weight of numbers.

I would now like to ask Bill Perry to give you some additional details on our stealth program. Bill. Dr. Perry: World War II demonstrated the decisive role that airpower can play in military operations. It also demonstrated the potential of radar as a primary means of detecting aircraft and directing fire against them. On balance, though, the advantage clearly was with the aircraft.

Subsequent to World War II, both the ground-launched and air-launched defensive missiles were developed and most significantly they were "married" with radar fire control systems. This substantially increased the effectiveness of air defense systems indeed to shift the balance against the aircraft. For the last few decades we have been working on techniques to defeat radar controlled air defense systems. Presently, our military aircraft make substantial use of electronic countermeasures, popularly known as jamming, which tends to degrade the effectiveness of these radars. Additionally, whenever practical our aircraft fly low, they fly close to the ground, putting them in what radar designers call the "ground clutter" because that ground clutter also degrades the effectiveness of the radars. By these means, we have maintained the effectiveness of our military aircraft in the face of very formidable and very effective radar-directed defensive missiles.

However, the Soviets continue to place very heavy emphasis on the development and deployment of air defense missiles in an attempt to offset the advantage which we have in airpower. They have built thousands of surface-to-air missile launchers. They employ radars with very high power and with a tracking technique which is known as monopulse, both of which tend to make electronic countermeasures very difficult to employ. And in just the last few years, they have developed air-to-air missiles which are guided by what we call "look-down" radars, and these radars that have special tracking circuits which allow them to track an aircraft flying low to the ground. That is an aircraft which is flying in the so-called "ground clutter."

Because of these developments and because of the importance we attach to maintaining our air superiority, we have for years been developing what we call "penetration" technology: the technology that degrades the effectiveness of radars and other sensors that are used by air defense systems. A particular emphasis has been placed on developing that technology which makes an aircraft "invisible" to radar. In the early '60s, we applied a particular version of this technology to some of our reconnaissance aircraft. And again in the 70s we applied it to the cruise missiles then being developed both for the Tomahawk and the ALCM. By the summer of 1977, it became clear that this technology could be considerably extended in its effectiveness and could be applied to a wide class of aircraft including manned aircraft. We concluded that it was possible to build aircraft so difficult to detect that they could not be successfully engaged by any existing air defense systems. Recognizing the great significance of such a development we took three related actions: first of all, we made a ten-fold increase in the investment which we are making in this penetration technology, the underlying technology which allows us to defeat the radar systems. Secondly, we initiated a number of very high priority development programs with a purpose of applying this technology; and finally we gave the entire program extraordinary security protection, even to the point of classifying the very existence of the program.

Initially, we were able to limit knowledge of the program to a very few government officials in both the Executive and Legislative Branches and indeed succeeded in maintaining complete secrecy about the program. But, as the program increased in size....and its current annual

funding is perhaps 100-fold greater than it was at the initiation of the program, it did become necessary to include more people in the knowledge of the program. But today the existence of a stealth program has now become public knowledge. But even as we acknowledge the existence of a stealth program, we will be drawing a new security line to protect that information about the program which could facilitate Soviet countermeasures. We will continue to protect at the highest security level information of the following nature:

- a. First of all, the specific techniques which we employ to reduce detectability;
- b. Secondly, the specific degree of success we have achieved with each of these techniques;
- c. Third, the characteristics of specific vehicles being developed;
- d. Fourth, funds being applied to specific programs; and finally the schedules or the operational dates which go with these specific programs.

With these ground rules, I think you can see that I am extremely limited in what I can tell you about this program. I will volunteer this much. First of all, stealth technology does not involve a single technical approach, a single gimmick so to speak, but is rather a complex synthesis of many. Even if I were willing to describe to you how we do this, I could not do it in a sentence or even in a paragraph. Secondly, while we have made remarkable progress in this technology in the last three years, we have been building on the excellent work done in our defense technology program over the last two decades. Third, this technology—theoretically at least—could be applied to any military vehicle which can be attacked by radar-directed fire. In our studies, we are considering all such applications and are moving with some speed to develop those particular applications which on the one hand are the most practical and on the other hand which have the greatest military significance. Finally, I can tell you that we have achieved excellent overall success on the program and that that has included flight tests of a number of different vehicles.

Q: Can these technologies also defeat other means of detection, such as thermal, and infrared and so on?

Dr. Brown: The general description of stealth technology includes ideas, designs that are directed also at reducing detectability by other means. Radar is the means that is best able to detect and intercept aircraft now. It's no accident that the systems that exist are radar systems. But stealth technology extends beyond radar. Bill, do you want to add anything there?

Dr. Perry: That is correct.

Q: I ask because you mention other vehicles and I wonder if you're getting ready to have a complete turnover in the whole military inventory, tanks, and all the rest.

Dr. Brown: It's a little too early to say that. I think what Bill was saying was that stealth technology is applicable against anything that is detected and attacked through detection by radar. But how practical it is for various kinds of vehicles is another matter.

Q: Gentlemen, you refer here to its effectiveness against existing air defense systems. How about the kind of air defense systems which the Russians seem to be moving toward in the year 1990?

Dr. Brown: Those are the ones that we are talking about. The ones that are now in development and could be deployed during the rest of this decade are the kinds of detection systems that we believed that this will be able to render effective. It will always be the case that whenever there

is a major new development of military technology, a measure let's call it, there will be countermeasures and there will be counter countermeasures. We've been looking at both of those. Our judgment is that the balance is strongly tilted in the direction of penetration by this technology and that there will be later fluctuations around that new equilibrium point.

Q: Is there any sign that the Soviets might be able to catch up and match this technology for penetrating themselves?

Dr. Brown: It depends on how much they do and how fast they are able to do it. We are not aware of any comparable effort in the Soviet Union. But of course, the Soviets are the ones who have spent tens of billions, probably over \$100 billion, on air defense. And this favors penetration over air defense. A Soviet development of this kind would also make our air defense less capable, except to the extent that we would be ahead on countermeasures, but we haven't expended nearly as much on air defense. Bill, do you want to add to this?

Dr. Perry: That's correct.

Q: Is this applicable to existing vehicles, existing aircraft?

Dr. Brown: These are new designs.

Q: You'd have to build new things to take advantage....

Dr. Brown: These are new designs.

Q: I'm puzzled by your comments about how secret this is. If this was such a secret technology, why was the possibility of a bomber with lower radar cross-section alluded to in the arms control impact statements in 1980, in Carter's Georgia Tech speech and in your own posture statement?

Dr. Brown: Well, we have always tried to reduce radar cross-sections. That is hardly a revolutionary new idea and indeed successive generations of aircraft have had lower cross-sections.

Indeed, the air launch cruise missile has a lower radar cross-section than the B-1 bomber by about a factor of what....100. So that....that's not a new idea. The new idea is how to reduce it still further and how far you can reduce it.

Q: The stories written in March of 1979 about an invisible bomber based on the arms control impact statement. In other words, it seems like it wasn't a secret a year ago.

Dr. Brown: Then why are you all here? (Laughter)

Q: When are we likely to see this invisible bomber? How far down the pike is it?

Dr. Brown: Well, there have been flight tests, as Bill said. We also do not intend to make the details of the program including the appearance of the vehicles public.

Q: What kind of ball park are you talking about? Are we talking a decade or....?

Dr. Brown: It's hard to believe that you can have things operational for very long and not let

some things get out, but we're going to try to keep that kind of detail secret as long as we possibly can.

Q: On Sunday last week, you said the Administration does not have a plan to build a manned bomber.

Dr. Brown: That's not what I said. What I was asked was, and I was there so I know what I said. What I was asked was: Will there be a decision on building a new bomber before the election? My answer was, there will not be a decision on building a new bomber this year.

We have a number of advanced designs in the design stage based on various kinds of technologies, including this one. The authorization bill for the Fiscal '81 defense appropriation bill which is now in the final stages of adoption, and the report that accompanies it from the conference committee, calls on the Defense Department to evaluate for use as a multi-purpose follow-on bomber, B-1 modifications, FB-111 modifications, and advanced technology and to decide by March 31st. that's compatible with our design studies, the status of our design status.

Q: (inaudible).

Dr. Brown: Well, it in the design stage and I would judge that we would be able to evaluate it by roughly that time next year. Again, let me defer to Kelly and to bill on that.

Gen. Burke: Yes, that evaluation schedule is compatible with....I believe it is March 15th rather than March 31st.

Q: Could you tell us whether there have been operational flights in reconnaissance aircraft using stealth technology?

Dr. Brown: No, I will not comment on operational matters or on the stage of development.

Q: It's been the suggestion that the Administration is releasing news of the stealth bomber now in order to answer charges by Presidential candidate Reagan that the B-1 bomber is one example of how the Administration has been soft on defense. Now how would you answer that? How would you answer Reagan?

Dr. Brown: First, I would repeat what I said which is that the decision on the B-1 was not based on the possibility of a stealth bomber because that was not then even in the design stage. As to how good an answer this major breakthrough is to such charges, I will leave that to you to judge.

But as to its purpose, I want to be quite clear. That was not the purpose of our action at this time. We would much preferred to have kept this secret for a longer time, as long as we could. But given the expansion of the circle of people who knew which was inevitable because of the increase in the size of the program and the involvement of additional congressional people, Congress, after all does have a constitutional responsibility to appropriate funds.

I suppose that it was inevitable that leaks would occur. It was only after leaks that had occurred to at least one magazine, one newspaper, and at least one television network, that it became clear that the existence of the program could no longer be kept secret. It was only then that we decided that it was necessary to say as much as we said to draw a new line beyond which we

would not be prepared to go.

Q: You are saying this is not a political reaction to Ronald Reagan, coming out here today and....

Dr. Brown: No, not at all. This is a reaction to the fact that the public knows as a result of these leaks that there is such a program. And it is important that we clarify some things and draw a new line.

Q: What do you think of the way Reagan's been reacting to our defense structure? I mean, using the ships story the other day and the charges about being soft on defense. Do you think he is being irresponsible?

Dr. Brown: That is a separate question. I have and will continue to try to avoid partisan characterizations. I believe that the Administration's defense program has been sensible by moving to increase our military capabilities steadily and significantly and continuously, we are responding properly to the kinds of military threats we might face.

I think it is a serious matter when individuals claim that the United States is very weak. When it is claimed that the Soviets greatly surpass us in all categories. I think that is incorrect and I think it undermines our security by emboldening our potential adversaries, dispiriting our allies, and misleading the American people. But you know, I'm not the one who has connected that with this program.

Q: Back to the aircraft. With the progress that you have made in penetration technology, has that led you and other senior defense officials to decide that the conventional bomber systems, B-1 variance, stretched B-111 are no longer the right way to go? Any new bomber will probably (inaudible) this technology?

Dr. Brown: The relative capabilities of existing and new technologies are part of the study in the case of the bombers that we will be doing. This certainly is a big factor, but I have not prejudged the outcome. Bill, what would you say?

Dr. Perry: The negative judgment which we made about the B-1 in 1977 we made without the benefit of a design study under way for the stealth bomber. It was just based on the relative ineffectiveness of the B-1 in the penetrating Soviet air defenses, not in comparison with any other potential bomber.

Q: Does it make any sense to build a plane....

Dr. Brown: Let's come back to the Burt question. We haven't responded. What he is saying is in the 1990s will there be anything but stealth aircraft, and I think the answer is yes, there will. Because, you know, there are various features for aircraft. The ability to detect the aircraft is a very important one, but there are other features of aircraft that also determine how capable they are. Kelly, do you want to comment on that?

Gen. Burke: Well, that's right, and of course, you can only prioritize one design goal at a time, and obviously you don't get any desirable feature without giving up some other desirable features.

Q: Have there been any new scientific breakthrough brought to bear in this? Have there been

any new scientific principals, any breakthrough as you might say?

Dr. Brown: These are technological. There is no new fundamental law of science involved.

Q: General Kelly, I was wondering what your personal view was? There is a deadline in the Congressional mandate in the authorization bill, as you know, for a bomber to be flying in 1987. Would you be willing to gamble on stealth being ready by then, or would you like a stop gas airplane, or do you think maybe that deadline should be extended to see how stealth works out? What is your personal view on that?

Gen. Burke: That it's premature to try and answer that. Along with Rick's question, those are the explicit questions that we are seeking the answer in the recommendations we make to the Congress on the 15th of March and there is an enormous amount of work to be done between now and then, not just quantitative analysis but a lot of engineering evaluation.

Dr. Brown: It's too soon to say what the precise mix of our capabilities in the 1990s will be, but it is not too soon to say that by making existing air defense systems essentially ineffective, this alters the military balance significantly.

Q: Is Lockheed involved in this program, specifically, the Lockheed skunk works?

Dr. Brown: We have decided we are not going to reveal the names of any of the contractors because if we did, that would allow attempts to find out about this, to focus in on one or a few planes.

Q: You said that it was new technology. Does this mean that it is not retrofittable to existing aircraft? And if it requires a new generation of aircraft, how expensive a new generation of aircraft?

Dr. Brown: Bill, why don't you answer this? I think I answered the first part before.

Dr. Perry: I mentioned that this is a complex synthesis of many technologies. Some of them may be applicable to modifying existing airplanes. In their entirety, they are not. They require a design from the ground up.

The cost of airplanes built with this combination of technologies on a dollar per pound basis is probably not substantially different from the cost of building airplanes on a dollar per pound basis with conventional techniques.

Q: With its potential, what would you guess might be the percentage of craft that we have of this sort....?

Dr. Brown: I have a guess but I don't think I'll give it. I think it is so speculative it doesn't make sense to do that.

Q:unmanned vehicle are you referring to the cruise missile?

Dr. Brown: Well, any unmanned aerodynamic vehicle I guess you can describe as a cruise missile. But, you know....

Dr. Perry: Cruise missiles and drones.

Dr. Brown: Yes. But, you know, cruise missiles and drones share characteristics.

Q: Dr. Perry, you have said publicly that you will recommend to the gentleman on your left several hundred million dollars in the next budget for development of a penetrating bomber so that by 1985 you could decide whether it could go into production for 1998 and IOC. On the assumption that you will still make such recommendation, will it involve the technologies being discussed here today?

Dr. Perry: I'm not prepared to come to that conclusion yet.

Q: What conclusion, sir?

Dr. Brown: That it will.

Dr. Perry: I'm not prepared to come to any conclusion about what I will recommend until next spring. That is when the recommendation will be made. And I'm still studying it, as is General Burke, as he indicated.

Q: You are no longer saying you will recommend inclusion of a penetrating bomber development in the next budget?

Dr. Perry: No. I'm saying that I have not determined yet whether that recommendation would be for a stealth bomber or some other design. That is still being considered.

Dr. Brown: Well, the next budget is 1982, and that is being formulated now.

Q: That is exactly the one Dr. Perry has spoken about publicly. Do we infer from your answer that you may recommend a bomber that is not of a stealth type; that it could happen?

Dr. Perry: I think you could infer from it that I still have an open mind on the question.

Q: Why would you recommend any other kind of a bomber for the out years than a stealth type?

Q: (inaudible)

Dr. Brown: You know, we have said several times that ability to penetrate is only one, albeit a major characteristic, of a new generation of aircraft. I think you have to look at all the characteristics, you know, range, payload, and everything else. I hope that we have left the impression, the proper impression, the one that I believe, that this is a very important characteristic. But I don't think that we should now draw a conclusion that we don't have to draw until next spring.

Q: Dr. Brown, you just said, though, that any system like this that can wipe out existing air defense alters the military balance in a significant way.

Dr. Brown: It sure does.

Q: All right. But if you're not going to penetrate with it, what difference does it make?

Dr. Brown: The potential already has the effect, but you know, this is a major advantage to such

a system, but we're not going to make a decision now. We can just let you know what our impressions are, and I think we've made our impressions clear.

Q: No, but are you suggesting though, that despite the great advance you've made in this particular area, it might turn out that you can't apply it to a bomber system because it disturbs other necessary advantages of....

Dr. Brown: Yes. I'm sure you can apply it to a bomber system. I don't want to judge the overall characteristics of a design that's still in process. And you know, that, I think, is the proper attitude and it is the attitude I take. From what I've said and from your own reactions, it's fairly clear that a design with this technology and this capability to penetrate has a big advantage going for it.

Q: How about fighters, will it apply to fighter technology?

Dr. Brown: The same thing applies to fighters. I think you can apply this technology across the board. Bill? Do you want to be more specific?

Q: When you say all military vehicles, do you mean everything from ICBMS, to tanks, to ships, to everything?

Dr. Perry: In principle, it could be applied to any of them.

Dr. Brown: It doesn't help some as much as others.

Dr. Perry: It is our ability of applying it. The difference it would make in military effectiveness may be dramatically different from vehicle to vehicle.

Dr. Perry: The cost of applying it may be different.

Dr. Brown: Some vehicles aren't primarily detected with radar. They are detected by eyeball.

Q: Is the answer on whether a new bomber might be built that could not penetrate, and I do take that from the answer that that is conceivable....

Dr. Brown: No.

Q: Is it conceivable?

Dr. Brown: If we were sure it wouldn't penetrate....if we had real doubts about its penetration capability, we would cancel it just as we canceled the B-1.

Q: I didn't mean that. That would not have that technology. There would not be the stealth technology.

Dr. Brown: I think any new bomber; any new bomber will use some elements of this technology. There is just no doubt about that in my mind.

Q: One of the published reports said that three of these test vehicles crashed because of unorthodox configuration.

Dr. Brown: Bill, do you want to comment on that?

Dr. Perry: The report is incorrect.

Q: There were two crashes?

Dr. Brown: The report was incorrect, and the report was allegedly that they crashed, that there were crashes because of the unorthodox design.

Q: Let's rephrase it then. Have any of your invisible airplanes crashed?

Dr. Brown: We're not going to talk about the test program. I think all of you who have watched more visible test programs have seen what happens in a test program.

Q: Dr. Brown, do you personally believe that we need a new bomber of some kind for the '80s and '90s, or is that still an open question in your mind?

Dr. Brown: I continue to have an open mind on that. I am sure that we will continue to need to be able to have an air breathing component of our deterrent force. We have plans and we will have forces that do that using the cruise missile launched from B-52s, using penetration bombers, penetrating B-52s through the mid and probably through the late '80s. Beyond that, whether we need a purely penetrating component is an open question in my mind.

Q: How do you expect the Soviets to react to this and do you think it will have any effect on arms control talks?

Dr. Brown: I've spoken to the latter question in my statement. If you believe that a Soviet capability to shoot down all aerodynamic aircraft of the US is a good thing, then you should be very much against this development. If you believe that a US capability to penetrate Soviet air defenses contributes to deterrence as I do, then you will regard this as an advance in stabilizing the arms competition. There is no doubt that bombers which have a longer reaction time are not the destabilizing component. That's land-based fixed ICBM.

With respect to arms control, these like any other aircraft, if they are intercontinental aircraft, intercontinental bombers, heavy bombers would be included in that part of the agreement. If they are tactical aircraft, then they would be included in any, not SALT, but some other arms control agreement that covered those.

The Soviets, I am sure as a result, not of this revelation but as a result of the leaks over previous weeks, are already, I'm sure, looking very hard at this technology and scratching their heads hard and will go to work hard on countermeasures as you would expect. Because the Soviets have put so much more into air defense and have concentrated on large numbers much more than we....I think this benefits the United States and the military balance.

Q: Dr. Brown, it seems to me if you have an invisible bomber, then that could become a first strike weapon.

Dr. Brown: I don't understand. You mean ability to penetrate air defenses makes something....

Q: They can't see it.

Q: If they can't see or hear you coming....

Q: It would give you a little surprise. (Laughter)

Dr. Brown: The ability to penetrate air defenses is not a first strike capability. The ability to penetrate air defenses is a good retaliatory capability. Bombers are not the instrument of choice in a surprise attack. There is just not question about that.

Q: With this invisible bomber, you couldn't take off and bomb a target without anybody knowing you were coming?

Dr. Brown: They would know, but too late to intercept you. But not too late to retaliate.

Dr. Perry: Orr, I do want to emphasize the point, though, that the term invisible is strictly a figure of speech. It is not an invisible airplane. In the strict sense of the word it is not invisible. You can see it. And it is also not invisible to radar. It can be seen by radars if you get the airplane close enough to radars.

Dr. Brown: But too late to engage in air defense. But not too late to retaliate.

Q: Is this an evolving technology, are you going to be better at it in two years or five years?

Dr. Brown: Yes.

Dr. Brown: That's it. Thank you very much.