

TRANSFER OF THE DEVELOPMENT OPERATIONS DIVISION OF THE ARMY BALLISTIC MISSILE AGENCY TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

WEDNESDAY, FEBRUARY 3, 1960

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND ASTRONAUTICS,
Washington, D.C.

The committee met at 2:05 p.m., Hon. Overton Brooks (chairman) presiding.

The CHAIRMAN. Gentlemen, the committee will come to order.

Mr. FULTON. May I make a motion before we start?

The CHAIRMAN. Well, let me say this: One of the reporters suggested that they will be here at 2:30 and they would like to make a picture at that time of all of the committee with the Secretary and his staff here, and if it is agreeable with the Secretary and his staff, I would like to suspend the committee session at that time for that purpose.

Mr. FULTON. May I make a motion?

The CHAIRMAN. Surely.

Mr. FULTON. As we have three high-level witnesses here today, I would suggest that we dispense with the 5-minute rule and institute the rule that each member of the committee be afforded one question and go down through the committee once that way before we start under the 5-minute rule.

The CHAIRMAN. Is there any objection to that suggestion?

Mr. CHENOWETH. I didn't get that.

Mr. FULTON. That each member of the committee in order have one question since there are three witnesses at a very high level, and then we have the 5-minute rule afterward, but to begin with the first time around each member be permitted one question.

Mr. CHENOWETH. Why not do it all at once?

Mr. FULTON. I am making the motion, and I would hope we could agree on it.

The CHAIRMAN. We do have several very important witnesses here. It seems to me we ought to hear them all.

Mr. CHENOWETH. Why don't you wait until we get through and see how much time we have?

The CHAIRMAN. Unless there is any objection, we will see how that works out.

Mr. FULTON. I would like to try it once.

The CHAIRMAN. If there is no objection, it is so ordered. Now, Mr. Secretary, I suggest that we proceed with your statement and

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then the statement of General Lemnitzer, and then the Under Secretary of the Army. Does he have a statement, too, today?

Secretary BRUCKER. No; Secretary Milton will not have a statement, but he says in advance he is going to corroborate everything I say.

The CHAIRMAN. That gives us two statements, and my suggestion is that we proceed to hear the Secretary and General Lemnitzer and then we will proceed with the questions.

Mr. Secretary, we have adopted you on this committee, as you know. You see the flags up here that you sent us and we are not forgetting that. We are happy to have you on this and any other occasion that you want to come before this committee.

Secretary BRUCKER. Thank you very much.

The CHAIRMAN. At this point in the record we will insert a copy of House Joint Resolution 567 by Mr. Sisk.

(The joint resolution follows:)

[H.J. Res. 567, 86th Cong., 2d sess.]

JOINT RESOLUTION To effect immediately the transfer of the Development Operations Division of the Army Ballistic Missile Agency to the National Aeronautics and Space Administration

Whereas the President has transmitted to the Congress a plan proposing to transfer the Development Operations Division, directed by Doctor Werner von Braun and known as the Von Braun team, of the Army Ballistic Missile Agency, Department of the Army, to the National Aeronautics and Space Administration pursuant to section 302 of Public Law 85-568, the National Aeronautics and Space Act of 1958 (72 Stat. 433); and

Whereas clause 2 of subsection (c) of said section authorizing the transfer provides that the transfer cannot be effected until a report lies before the Congress for sixty days without the adoption of a concurrent resolution opposing the transfer; and

Whereas the Congress is seriously concerned about the lag in national programs for space science and exploration; and

Whereas the responsibility for overcoming this lag and for promoting vigorously such programs is vested by law in the President and the Administrator of the National Aeronautics and Space Administration; and

Whereas the Congress desires to remove any unnecessary obstacles or factors in the prosecution of such programs; and

Whereas the Congress believes that a waiver of the sixty-day period during which the transfer plan must lie before the Congress before taking effect may contribute to the speeding up of such programs; and

Whereas the Congress believes further that such programs will be materially expedited and advanced by maintaining the Von Braun team essentially intact: Now, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the President's transfer plan transmitted with a report of January 14, 1960, shall take effect immediately upon the enactment of this resolution, notwithstanding the provisions of section 302(c) of the National Aeronautics and Space Act of 1958.

STATEMENT OF HON. WILBER M. BRUCKER, SECRETARY OF THE ARMY

Secretary BRUCKER. Mr. Chairman and members of the committee, I have a short statement here I would like to read and after that General Lemnitzer has a statement and we will be ready to answer any questions that you may have.

The CHAIRMAN. Do you have copies of your statement, Mr. Secretary?

to provide NASA with a substantially independent operating research and development organization and capability.

The plan recognizes and provides for the continued performance by the Army of its mission. Two basic methods are used to achieve this result. First by providing for the continuance of service to the Army of the transferred group and second, by providing for retention by the Army of capability for continuing weapons system management.

Fundamental to the plan is a concept of phasing operations and responsibility in a manner calculated to prevent dislocation or disruption of ongoing programs.

Generally, all personnel of the Development Operations Division will be transferred to NASA. However, in order to enable the Army to maintain a weapons system management capability up to 350 personnel of the Division will be offered an opportunity to remain with the Army. This group includes personnel currently in the weapons system project manager offices and a complement of representative skills from each laboratory area. The completion of current weapons systems assignment will be accomplished using the capabilities of the transferred group with a phasing out of NASA and assumption by the Army as may be agreed upon.

In general, the new NASA organization at Redstone Arsenal will be locally self-sufficient. To accomplish this and to avoid unnecessary duplication of facilities or central service type organizations, the plan provides for the transfer of 815 personnel in the areas of support services provided the Development Operations Division from AOMC organization at Redstone Arsenal. This number represents about two-thirds of the supporting staff which NASA will ultimately require and recognizes the Army's personnel requirements to continue to carry out its continuing mission.

The determination of numbers of personnel to be transferred from the service support areas was based upon the following general alignment of functions. Functions involving the management control functions such as fiscal, budget, personnel, and planning, and functions involving immediate service to the technical groups, such as supply, facility and equipment maintenance, and physical security, will be operated by the NASA organization. Functions relating to station-wide services such as foundry, perimeter security, electric, steam and water service, will be provided the new NASA organization by the Army on a reimbursable basis.

The approximately 250 enlisted military personnel now within the Development Operations Division will be phased out over a period of time. In general, the unskilled group will be phased out almost immediately and the more skilled specialties over a somewhat longer but specifically agreed upon time span. No officer personnel would remain with the transferred organization.

The plan provides for making available to NASA a contiguous area at Redstone Arsenal encompassing virtually all the facilities now used by the Development Operations Division. It has been possible to achieve this with a minimum of displacement of either Development Operations Division or Army personnel. A few minor structures now used by DOD outside the NASA area are to be retained by the Army and a few structures within the NASA area now used by the Army will be released to NASA.

Upon this assumption I, as Secretary of the Army, express no objection to adoption of the resolution.

Now, I would like for you to hear General Lemnitzer's statement and then we are going to subject ourselves to any questions you may have.

The CHAIRMAN. Thank you very much, Mr. Secretary, for your short, brief, terse but definite statement which will be of great help to the committee.

General, we have copies of your statement and we will be very happy to hear you at this time.

STATEMENT OF GEN. LYMAN L. LEMNITZER, CHIEF OF STAFF,
U.S. ARMY

General LEMNITZER. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, I am pleased to appear before your committee and hope that I can assist in your consideration of House Joint Resolution 567 concerning the transfer of Dr. von Braun's group from the Army to the National Aeronautics and Space Administration.

As Secretary Brucker has stated, the Department of Defense, the Army, and NASA have worked out a detailed agreement to effect this transfer expeditiously, smoothly, and efficiently; and with an absolute minimum of interference to important programs. The selection of July 1 as the date to effect the physical transfer of the majority of personnel, facilities, and equipment was the result of extensive discussions among the Department of Defense, the Army, and NASA as to the scope of the problem and the extent of administrative work involved.

I will now summarize the detailed agreement developed by the Army and NASA—which the President's plan would bring into effect—and the manner in which this plan would be implemented.

The Development Operations Division of the Army Ballistic Missile Agency—the von Braun team—presently includes approximately 4,200 civilian personnel. By mutual agreement with NASA, up to 350 personnel of the Division will be offered an opportunity to remain with the Army in order to continue the Army's important missile systems management capability.

In addition, it is planned to transfer to NASA approximately 815 supporting personnel from other Army organizations at Redstone Arsenal which have been providing services to the Development Operations Division. Although this number represents only about two-thirds of the supporting personnel which NASA will ultimately require at this location, this action is in recognition of the Army's personnel requirements to carry out its continuing mission.

The determination of personnel to be transferred to NASA in the service-support areas will be based upon the types of functions involved. The NASA organizations will assume responsibility for—

(a) Management control functions such as fiscal, budget, personnel, and planning.

(b) Functions involving immediate service to the technical groups, such as supply, facility and equipment maintenance, and physical security.

Stationwide functions such as foundry, perimeter security, and utility services will be performed for the new NASA organization by the Army on a reimbursable basis.

The transfer to NASA of the personnel of the Development Operations Division is now planned to occur on July 1, 1960. Transfer of supporting personnel in administrative and management areas from organizations outside the Development Operations Division will commence prior to that date, in order that NASA will be able to provide administrative support for the Development Operations Division immediately upon its transfer.

The approximately 250 enlisted military personnel now within the Development Operations Division will be phased out over a period of 6 months after July 1.

NASA will be granted the use of approximately 1,200 acres at Redstone Arsenal encompassing all the land and facilities, with minor exceptions, now used by the Development Operations Division. It is planned that—

(a) The Army Ballistic Missile Agency headquarters office building will remain with the Army but will be shared by NASA until permanent arrangements can be made.

(b) Facilities of the Atlantic Missile Range at Cape Canaveral which are utilized by the Development Operations Division will be shared by the Army and NASA to assure that the requirements of each are met. The facilities now under construction for the Pershing and Saturn projects will be assigned to the Army and to NASA, respectively.

(c) The equipment and supplies required to maintain the research and development capabilities of the Development Operations Division will be transferred to NASA. The Army will retain equipment related primarily to missile systems and a share of common use equipment and supplies required for Army programs.

(d) All unobligated funds allocated for the Saturn project and all funds obligated for major contracts on the Saturn project, but unexpended, will be transferred to NASA.

3. Commencing on July 1, 1960, NASA will reimburse the Department of the Army for utilities and other services provided to NASA. Work performed by the transferred activity for the Army will also be on a reimbursable basis.

In summary, the Army and NASA have developed detailed agreements to effect the transfer to NASA smoothly, efficiently, and with an absolute minimum of interference to assigned projects. Assuming that the joint resolution is not intended to alter this plan, I perceive no objection to its adoption.

That concludes my statement, Mr. Chairman.

The CHAIRMAN. Thank you very much, General. We appreciate your fine, straightforward, forthright statement.

Mr. Secretary—and I say for the benefit of the members of the committee who came in late, the committee adopted for this particular meeting a rule so as to give every member an early chance to ask a question, that each member would be given one question until we make the round and then we will go back to the 5-minute rule.

So, Mr. Secretary, in making the inquiry that I have in mind, I would like to ask you whether or not House Joint Resolution 567, if adopted, will speed up the program of the transfer which you have referred to in your statement.

Secretary BRUCKER. In my opinion it would resolve the issue so it would set at rest the minds and the doubts that occurred with reference to individuals. As to the agreement itself, postulated upon the action by Congress, that is set for July 1 and you will not lose a day or gain a day other than as I say, the psychological effect of settling and putting to rest once and for all the attitude of the Congress on it.

We have agreed, based upon the Presidential arrangement and upon the basis of the disposition of Saturn—in the meantime it has been transferred to NASA—and other efforts which could be done administratively by the Department of Defense and by NASA—we have agreed to do everything we can to go forward with this project and to not preclude a day's delay to occur. I mean by that, anything of a financial nature, utilities, or the division itself.

Answering directly your question it would set at rest in everybody's mind the attitude of the Congress on it and that would be conclusive because when Congress expresses it, that is final.

But in the meantime we are going right ahead each of us upon the premise that July 1 will be the date of the actual physical transfer but in the meantime the functional affair has been arranged so that it is phasing in and the other is phasing out as orderly as we can do it and do it to the best interests of all concerned.

The CHAIRMAN. Mr. McCormack?

Mr. McCORMACK. No questions now.

The CHAIRMAN. Mr. Fulton?

Mr. FULTON. No questions now.

The CHAIRMAN. Mr. Teague.

Mr. TEAGUE. Well, General, I will ask you a question: What is going on in the scientific end of a so-called limited war? What is happening in your drone TV reconnaissance? What is happening in digging a foxhole for a man? What is happening in a uniform that bullets won't penetrate and that kind of thing? What is happening in the Army in that field?

General LEMNITZER. There is a great deal happening in all fields pertaining to limited war, as there is in a good many other fields related to general war, and also in the cold war activities of the Army.

For limited war types of equipment, we have extensive research and development programs. We have a great deal of new equipment which our research and development programs have developed and tested—equipment which is either in production, being placed into the hands of troops, or soon will be in production and placed in the hands of troops. We place great emphasis on this, Mr. Teague.

Mr. TEAGUE. What about food?

General LEMNITZER. Food is included. Practically every aspect of sustained fighting on land is under review or under study.

Mr. TEAGUE. I was just trying to give you a chance, General, to give a sales talk for the Army and I thought you would go into a little more detail.

Secretary BRUCKER. He wants you to talk about modernization, I can see that.

Mr. McCORMACK. Where does the money go?

General LEMNITZER. You asked a general question. I have a general answer. If you want specifics, I will be glad to go into it.

It involves practically every type of equipment the Army uses and a lot of new types which are not now in production.

Mr. TEAGUE. I realize it does and very truthfully and frankly, I was giving you a chance to tell us how much you are doing and how important it is that you do it in this field, because I think you will certainly have more limited wars and I think the work you are doing is very important.

General LEMNITZER. We think so, too.

Mr. TEAGUE. There is a lot more excitement in talking about space and hitting the moon than it is developing uniforms to protect a man and that kind of thing.

General LEMNITZER. If you will give me the opportunity, I would like to preface my remarks by saying this: In the Army's efforts to focus attention on limited war, the mistaken opinion has unfortunately been formed in a good many places that the Army's only role is in the field of limited war.

I consider, very strongly contend that the Army's role in general, or world-type war, is undiminished. As a matter of fact, a good case can be made for an increasing role in general war. Skipping limited war for a moment, the Army also plays a vital role in cold war. Our deployed forces overseas—40 percent of the Army's total strength right now is overseas. Those forces in my opinion, play a very vital role in the cold war.

Now, limited war obviously involves primarily the Army, but it also involves our sister services. This is, we consider, the most likely type of war. History has proven it since World War II, and we feel that the capabilities in the big missile field or the nuclear field are such that, as they become more and more equal—and I have referred to this many times in my statements before the congressional committees—we could well reach a state of nuclear deterrence.

I don't for a minute believe that the objectives—the frequently announced objectives—of the Communists have been changed in the slightest; they will resort to smaller type military aggressions in order to attain those objectives.

The Army is working hard on a modernization program. This is one of our key programs. We need to get equipped with the new types of equipment that are being developed by our research and development program, as I have indicated previously. For example, there is the new M-14 rifle which has but recently gone into production and with which we expect to equip the Army at the fastest possible rate.

We have a new machinegun, the M-60, that will replace our present automatic weapons. Both of these weapons, the M-14 rifle and the M-60 machinegun, use the 7.62-mm., or the caliber .30, ammunition. It is referred to as a NATO round: it is the new NATO round. It is still the same caliber as previous U.S. rifles and machineguns but it is somewhat shorter in length.

We also include the field artillery in our modernization program. We are now moving into the field of self-propelled artillery, rather

than the types of towed artillery that we used during World War II and the Korean war.

The most dramatic change in the Army's firepower weapons is, of course, in the new missiles which we have. And incidentally, in the development of these new missiles, the Von Braun team has played a very important role.

The Army as far back as 1945 foresaw the developments which were occurring in the field of missiles, and it was with this in mind that the Army opened the way for the Von Braun group to come to the United States to work for the Army and to develop these new missiles.

Mr. TEAGUE. Could you have put a satellite into orbit before the Russians if you had authority to do so?

General LEMNITZER. Well, this opens up an entirely new field of questions here, Mr. Teague.

If I could go ahead with my other one.

Mr. TEAGUE. I was out of order, so pass it.

The CHAIRMAN. Mr. Chenoweth.

Mr. CHENOWETH. Mr. Secretary, I am personally very happy as always, to see you and the general here.

You can't make your transition until July 1. In the meantime what will the so-called Von Braun team be doing, will it be continuing its present activity—there will be no cessation of effort in this field? I just wanted to make sure what their role was going to be during this interim.

Secretary BRUCKER. Congressman Chenoweth, I am glad to clear that up if I can. That team has been working right along, day by day and night by night, exactly the same, under Army auspices all during the period since the time this direction was given.

In other words, on the Saturn and all these other projects, it has been working on, there has been no change. It has been working right along under the auspices of the Army.

NASA in the meantime has been increasingly interested. They have had nucleus teams down there and we are closely working with them. We have seen the work that has been done and are prepared to get into it.

The Von Braun team has been moving ahead on the Saturn. As a matter of fact, I was down there last Friday and Saturday myself, and have seen the progress. I have, of course, kept in touch with it right along, being very much interested in it. So that there will not be a day or an hour lost as far as the team is concerned, and the work.

Over the door will be a change of management. It will say "National Aeronautics and Space Administration," instead of "ABMA, of the U.S. Army." But other than that, as far as the team players and the team members and the supervision of the work and all the rest is concerned, it is moving right along and the only thing that will physically occur on July 1 is that some people will move into some offices and some others will move out and there will be a physical change on that staff level.

But as to the work level, the men who are right at it now, they will be right at the same place they were. There will be no change in factory or laboratory or anything else, insofar as the place where they work is concerned. The missile is right there. The Jupiters

that will be a part of the cluster are being moved in and will continue to be moved in, so the difference that I describe here is more a difference in the naming of the agency and the takeover of the new agency, rather than any startling change of any kind.

The CHAIRMAN. I promised the press that we would suspend operations for some pictures at this time.

So if there is no objection, we will recess.

Is the press ready to take the pictures?

We will recess for 5 minutes.

(Whereupon, at 2:35 p.m., a short recess was taken.)

The CHAIRMAN. I will recognize Mr. McDonough.

Mr. McDONOUGH. Mr. Secretary, we are glad to have you here and we are glad to know this coordination of the two departments is coming along in good fashion.

The pertinent thing I am concerned about is, in your opinion with this consolidation, do you think we can speed up our activity in the missile production and in space exploration?

Secretary BRUCKER. In answer to your question, sir, I can say this: It has been my experience over several years with the Von Braun team, with General Medaris in charge, and knowing as I do many members of that team and having seen it over several years, that they will give to you and the country as much acceleration as any team in the free world could do, or in the world for that matter. They are anxious, ready, willing, able, and, as you know, experienced, and you can trust them and I am sure they are dedicated.

Further than that, I can't go, except to say that I have great confidence in whatever they get by way of money that they will use it properly and speedily and put it right to the best use.

Mr. McDONOUGH. In this present-day discussion about our lag in the production of missiles for defense against the Soviet Union, do you think it is possible with the handicaps we operate under, that we can match their production and come up to them or are we behind them at the present time, in your opinion?

Secretary BRUCKER. I certainly feel that there are no handicaps that a democracy can't overcome and succeed. I am positive, speaking concretely and directly to the point of this organization and their part in it. They have demonstrated from the time they developed the first Redstone missile, all through the gamut of all the other missiles that the Army has had—ground to ground, surface to surface—including, of course, the Jupiter, the Jupiter-C that put the first satellite up just 2 years and 3 days ago, that this team is able to do it and is able to press forward as rapidly as any group could.

I don't know what more I could say except to say that they will, if given the opportunity and the backing—and by that I mean the money—and encouragement and the supervision—and, of course, that is a very important part of it, because General Medaris and the Army group contributed quite a little of what you might call the yeast, or the cement that did a lot for that organization, that with all that, there is no doubt about the fact that, with the energy that they have and the knowledge, they are the match and I think the superior to their counterparts in the Soviet Union, in the long run.

Mr. ANFUSO. First of all, Mr. Secretary, I wish to congratulate you for giving to the country the Von Braun team and for your

great democratic statement that there is no handicap a democracy can't meet. And certainly freedom of the press is no handicap. Because, as a matter of fact, if this country had been fully alerted and had made an all-out effort as most of the newspapers had urged right after the first sputnik, we would today have more ICBM's in production, isn't that the fact?

Secretary BRUCKER. There is no doubting the fact that if you energetically get busy with a good team and have things so coordinated and supervised, that you can produce more rapidly than you can if you don't.

At Redstone Arsenal, I want to say to you, you will remember it was about November 12, 1957, when Secretary McElroy gave me the green light and said, "All right, you fellows have been talking about it, go ahead and see what you can do."

And 84 days from that day, Jupiter-C was launched from the pad at Cape Canaveral, and the first free world satellite was placed in orbit. That is all I can say in reply to that.

The CHAIRMAN. Mr. Bass.

Mr. BASS. Mr. Secretary, in your prepared statement you stated that you have no objection to this proposed transfer of the Von Braun team to NASA?

Secretary BRUCKER. That is right.

Mr. BASS. Stating it a little more positively, do I understand you are appearing here in favor of the proposed transfer?

Secretary BRUCKER. The reason that the Army has used this language is this: We have never been a special pleader that the ABMA be taken and turned over to any agency of any kind. However, when the decision was made, we not only issued a statement of complete cooperation, but we said we would go to work to implement it.

As a matter of fact, the chairman was so interested in the space angle on this that he called me long distance, as he will remember.

The CHAIRMAN. That is right.

Secretary BRUCKER. And asked me the question promptly, and I replied to him just as I have today here, that while the Army didn't see eye to eye with that and we were urging that the Army continue it and go on doing it, but when the facts had all been heard and we had our opportunity to speak on it and everybody had considered it we were told that the consensus of the Government and the highest authority in the Government that had heard it finally had spoken. We said we would go to work on this and give it every bit of cooperation, so we won't lose a man—and I give you my word that we did that, and that not one, from Dr. von Braun on down, has been made to understand that they would slip out, or that they were not encouraged to stay.

We have not only done that, but we have gone the limit to turn over all the information and do every other thing—I won't identify them—so that we would completely assist in this.

The only reason the Army uses this, so that nobody will misunderstand us, we are not trying to preempt the function of this committee, but as I have said here, it would set at rest, if this resolution were adopted, it would set minds at rest. We feel that we shouldn't come in at this date and say, "Well, this is our solution to the problem" because it wasn't originally, and we don't want to take any of the

credit that doesn't belong to us. We do say that we have cooperated and if it is your pleasure to do it, we certainly interpose no objection to it; as a matter of fact, we will cooperate and continue to cooperate with it.

The CHAIRMAN. Mr. Sisk.

Mr. SISK. Mr. Secretary, either you or General Lemnitzer may want to answer this. The question is this: Do you feel that the proposed transfer will in any way reduce the capability of the Army to fulfill its total mission?

Secretary BRUCKER. I would like to answer that myself and then if General Lemnitzer would like to add something, he is perfectly free to do it anyway, of course.

We have taken that into consideration throughout the period of the time leading up to the decision in October 1959, and also since that time. We have been back and forth over it.

The Von Braun team, being very knowledgeable about our work—I mean our missile work, for instance—is going to be right there, right where our own Army Rocket and Guided Missile Agency, Redstone, is located. They are very familiar with it, and in the agreement that we have made we have very carefully set it out that they will be able to devote to the Army business—I mean by that the missile business—such time and effort and talent as is necessary right there at that location where we need it. If this was going to be moved to some other place, or that team was going to be truncated vertically or horizontally or something of that kind, then certainly I would have felt differently about it. However, to have the whole team there and altogether working primarily on space and the big Saturn which we all need very badly—and I just underscore that because it is a great project for space; it is the basic one in my opinion—but at the same time, have this knowledge and can devote attention and the counsel that are necessary to our people, who will be right at the same location. They will be right handy by there where they can step over and see our mockups and where they can step over to the test stand and see how that operates and all the rest. I don't think that Dr. von Braun and the rest of these men on that team will lose their interest in the missiles.

So from that standpoint, I can answer with a clear conscience that I think we will be able to go forward with our missiles under this arrangement.

The CHAIRMAN. Mr. Riehlman.

Mr. SISK. Would General Lemnitzer comment?

The CHAIRMAN. The same question though.

Mr. SISK. No, no new question, but I would like to have the general answer it because he is responsible for the total mission of the Army and he knows what that mission is and I would like to hear any comments that he has.

The CHAIRMAN. All right, General.

General LEMNITZER. I would like to say that the Secretary is responsible for the total mission of the Army. I am merely the Chief of Staff.

I agree with what the Secretary has said. Our concern initially was primarily in retaining the Von Braun group as a national asset and insuring that nothing be done that would break up this important team, because it has been put together over a period of nearly 15 years.

This is the period of time that the Army has been working with Dr. von Braun and his group in putting this great team together.

We, of course, are particularly interested in having access to this team to assist us in any way that we feel we may need assistance from them in going on into our future missile programs. This we think is very important. We see nothing in the agreement that we have worked out with NASA that will preclude our doing so. As a matter of fact, I feel that the other services may also have access to the Von Braun team for such assistance as the team may be able to give without interfering with their primary NASA responsibilities.

Mr. SISK. Mr. Chairman, I don't want to indicate that I was downgrading the Secretary. I wanted the comment of a man in uniform. I differentiate between the civilian approach and the military approach.

The CHAIRMAN. Mr. Riehlman.

Mr. RIEHLMAN. Mr. Secretary, you have given a great deal of credit to General Medaris and Dr. von Braun and their team for what they have done in this missile field.

Do you feel that the suggestion of the transfer from the Army to NASA of that team had any effect upon General Medaris' decision to retire from the Army?

Secretary BRUCKER. Well, of course, General Medaris is the best authority on General Medaris, but I would like to say to you that I immediately asked him that question.

As a matter of fact I was very much interested in the attitude of both Dr. von Braun and General Medaris because anything that would in the slightest degree break up this team—and either one of those men, if they felt edgewise about it, would be of that nature—that it would be tragic, so I took it up with them individually.

Answering your question precisely with regard to General Medaris, I do not believe, from what General Medaris has said or anything that I have seen about him since, that that was the cause of his retirement. While he has reservations or had reservations about the way in which the overall program in the long range should be conducted, he concurred in the action of General Lemnitzer and myself in cooperating with the NASA, in bringing about this relationship that I speak about today. And as for Dr. von Braun, I observed him over a period of more than a month in connection with the negotiations and the discussion that preceded this matter going to the top levels. I talked with him alone. I wanted to make sure that I talked to him with nobody else present. I also brought him to Washington another time for the purpose of discussing the matter with Dr. York who sits here and who was interested in talking with him personally and alone. I made him available to Dr. York to go down to his office. I think he was there for 2 or 3 hours alone.

I also made him available to Dr. Keith Glennan so it could not at any time be said that the Army was in any way keeping Dr. von Braun from having the information, or giving the information to others, or anybody that he wanted to talk to alone.

I talked to him after all of these things and Dr. von Braun expressed to me at the time not only a willingness, but finally a desire, because of his great interest in the Saturn project, to see that the transfer occurred. He was very strong in his assurances that his

entire team could stay together if it could work on the Saturn and inasmuch as Saturn was not to be canceled, but was to be transferred to NASA, it became his strong interest to see that his team worked under those circumstances under an arrangement of this kind.

The CHAIRMAN. Mr. Karth.

Mr. KARTH. I pass at this time, Mr. Chairman.

The CHAIRMAN. Mr. Hechler.

Mr. HECHLER. I was attracted, Mr. Secretary, to this resolution and supported it immediately because of its first sentence which reads—

To effect immediately the transfer of the Development Operations Division of the Army Ballistic Missile Agency. * * *

In other words, it is written in the crystal clarity characteristic of its author, our colleague, Mr. Sisk, and I thought the third word there was one that really expressed the urgency of the committee, which I am sure that you and your associates share in our desire to move forward.

Now, after your testimony, I note the reasons that you gave on page 2 of your statement for selecting the 1st of July 1960 as the effective date of transition. You refer to budget transition, and General Lemnitzer, on the first page of his statement, refers to this date because of the scope of the problem and the extent of administrative work involved.

It just occurred to me that perhaps if you had said something about national security I would have felt a little better but when you mention budget and administrative work we wonder whether this is really the kind of thing that deserves delay until the 1st of July, which appears to be taking place.

Secretary BRUCKER. Let me state to you this: First of all, with reference to our statement here, we said in here—

If it is not intended to interfere by forced acceleration with the orderly transition planned for July 1.

I can say to you that the purpose that we had was to fix a date where an orderly, phased transition could occur. We could see that the problems are insurmountable down there, almost. They won't all be surmounted by July 1 by any manner of means. It is a huge job, and it is a great work that they are doing.

To endeavor to press too fast in the transfer would in my opinion—and we will do whatever you say—it would delay some of the efforts that might occur there. In other words, people who are expected to work right along on their work as such—Dr. von Braun and a host of others—that if it all occurs quickly and in a sort of spontaneous or quick manner, it would not be the orderly way in which people have to think through each problem, day by day.

Now, you will ask, well in the meantime what is happening?

In the meantime they are anticipating the date of July 1 for the physical turnover. But to all intents and purposes, as far as the mental attitude toward it is concerned, the only thing that is left is the approval by Congress or the permission to let it go as it is beyond March 1 without anything which makes it automatic, and they are all geared up for July 1 I think at the present time. Everybody there is, and I don't think that any forced acceleration would help the

national security, or the program. On the contrary it might do it a great disservice.

General LEHNITZER. I might add something to that. We have some recent experiences in this regard in working closely with NASA. A little over a year ago, we entered into a cooperative agreement with NASA to turn over the Jet Propulsion Laboratory at Pasadena, Calif. It was an Army installation very much along the same line as ABMA—there are, of course, quite a few differences—but the transfer of that facility was handled in precisely this same way as we are arranging to transfer ABMA. We think this is the smoothest, most effective, and most efficient way of handling this kind of transfer. Our transfer of the Jet Propulsion Laboratory in California worked out very satisfactorily with NASA. It was done very effectively, and the pattern which is being followed in the transfer of ABMA closely follows that experience that we had about a year ago.

The CHAIRMAN. Mr. Daddario?

Mr. DADDARIO. It was your great concern in this transfer that the personalities involved not be affected, that there be no differences even as to degree. You stress the importance of the location of the Von Braun team and its being able to be near you at Huntsville; that these people can just walk over and see your mockups; that there be cooperation continued in the future insofar as your rockets and missiles are concerned.

And as you have set it out, I wonder if we are not making—if there is not the possibility of making the mistake in separating these at all, that maybe this whole business ought to be put together. There seems to be in the background of what you say that there is such a cohesion necessary between the developments of rockets and missiles and space, that it ought to be all in one package.

Now, should it be?

Mr. BRUCKER. The degree of effort that is put back of it is just as I have said before, it is all a part of the same package. But in October the die was cast, to be plain about it. Many events have occurred in the meantime: Administrative acts which were in the power of the administrative branch of the Government to do; the making of the budgets; the transfer of Saturn to NASA; so many, many things of that nature have occurred that to unscramble them and go back again would be almost destructive. I say that, not because, in any sense, the Army doesn't and didn't want to retain the Von Braun team, but because we think that now that the transfer has gone this far that it would be like unscrambling something to start back again. The arguments we made originally in support of retaining the team are no different from what they were in October 1959, but all of these things have occurred since that time, in anticipation, of course, of the transfer taking place. To say nothing, of course, of the Presidential directive.

The CHAIRMAN. Mr. Moeller?

Mr. MOELLER. I pass, Mr. Chairman.

The CHAIRMAN. Mr. Quigley?

Mr. QUIGLEY. Mr. Secretary, I have one question. No reflection intended upon my colleague from California, or the purpose or objective behind his resolution, which I favor, I think, if I understand the objective. It is to indicate that Congress, or this committee approves

this idea and we would like to see it done as quickly as it is feasible and practical to do it. But being practical about it, will the action of Congress, the favorable action of this committee and the Congress on Mr. Sisk's resolution, as a practical matter, will it make any difference with the implementation and the transfer?

Secretary BRUCKER. As a practical matter, the transfer would take place on July 1, 1960, with all arrangements made and phased to do it. Also as a practical matter—and this is not just an intangible—Congress' action on this matter would settle it in the minds of Dr. von Braun, to go back to work without a thought as to whether or not there would be a changeback. All of his organization feels the same. Hundreds of people down there are concerned, all the workmen and the rest—you know how it is with people who here rumors and speculation—maybe the Congress will do this or maybe they will do that. That would settle that once and for all, and everybody would settle down and go to work.

Mr. QUIGLEY. In other words, you would stop waiting for the other shoe to fall.

Secretary BRUCKER. That is a good way to put it.

Mr. QUIGLEY. The minute you stop it will drop.

The CHAIRMAN. We have here this afternoon, too, the Under Secretary of the Army, Mr. Milton.

Do you have a statement concerning the resolution?

Mr. MILTON. I do not, Mr. Chairman.

Mr. ANFUSO. Mr. Secretary, Mr. Khrushchev said that he built 250 ICBM's in 1959. Assuming that statement is true he would have by the end of 1962, at least a thousand ICBM's, isn't that correct?

Secretary BRUCKER. Arithmetically, that is.

The CHAIRMAN. Now, may I ask you one more question, too, Mr. Secretary.

Could you tell the committee now under this new operation, what part of space, of the space program, if any, does the Army retain, and what is the future of the Army in space? We are very much interested in that. I think the Army has a place in space as well as the other agencies.

Secretary BRUCKER. General Lemnitzer would like to answer that for you, Mr. Chairman.

General LEMNITZER. We feel that there are great military possibilities in space; that we have only scratched the surface in space to date. I don't think it is clear to anyone just what the future military interests in space are. However, I don't think there can be any question whatsoever but that there are tremendous military possibilities in space, even though we don't comprehend them in their entirety, at this time.

In accordance with the decision made by the Secretary of Defense, the assigned roles and missions in space have been broken down into certain definite categories. The Department of the Air Force has been given the responsibility for the development of large type boosters to be used for military projects in space.

The responsibility for developing reconnaissance satellites has also been given to the Air Force. The development of satellites to be used for navigation has been given to the Department of the

Navy. The Army's assigned function in this regard is in the field of communications satellites.

The CHAIRMAN. Well, we certainly thank you, General, and we thank you, Mr. Secretary.

Mr. McCormack?

Mr. McCORMACK. I passed on one question. Are we going to have some more?

The CHAIRMAN. Surely.

Mr. McCORMACK. I have a list of questions here, Mr. Secretary. I will give them to you and I would like to get the answers to them.

There are quite a few questions there. You may put the answers in the record.

Secretary BRUCKER. Very well, we will.

(The information requested is classified.)

Mr. McCORMACK. Do you recall H.R. 9675, a bill to amend the organic act establishing NASA?

Secretary BRUCKER. I know about it generally, but I am not acquainted with the particular bill itself here.

Mr. McCORMACK. When was the Army first acquainted with the fact that these changes were proposed?

Secretary BRUCKER. The changes with respect to the transfer of—

Mr. McCORMACK. No, not the transfer. I know you are unhappy about it but you are accepting it. I got that all right. I think you take something as an accomplished fact, which is pretty much commonsense and we all hope they will go ahead and work in close cooperation with the military because we can't forget the fact that the very preservation of the world might be involved. We had better put more emphasis on the military—we had better not deemphasize the military in importance in the world today.

But these are amendments to the organic act.

Secretary BRUCKER. Mr. McCormack, I regret to say that we know about this generally but it has never been referred to us for comment and so I am unable to comment upon this H.R. 9675.

Mr. McCORMACK. You were not consulted before these changes were drafted?

Secretary BRUCKER. No, I am quite sure that is the fact about it. The Army has not had the opportunity to staff it. I would answer if I had the opportunity myself, in addition, but I have not had it.

Mr. McCORMACK. I call your attention to section 309, page 9. I asked Dr. Dryden and Mr. Horner some questions the other day and they were perfectly frank in saying that if any amendments were necessary to clarify the position of the military, to protect the jurisdiction of the military in research and so forth, that would be agreeable to them.

But I call your attention to that language. I am not going to ask you to answer it now because you haven't had a chance to look into it but I suggest the Department of the Army look into this, into these proposed changes and be prepared to submit to the committee the views of the Army.

I would also like the same of the Navy.

The Air Force apparently was consulted, to some extent, and they are in pretty much agreement with the language although they

have some suggestions to make, which would be very interesting to me, and I am sure the other members of the committee.

You don't believe, of course, that research could be confined to one agency—that is the space agency—where it involves the military, do you?

Secretary BRUCKER. We have always felt that the research and development in the military field should be in the military research and development field.

Mr. McCORMACK. You know of course we tried to protect you last year in the original act and we found by interpretation of the executive branch that they brought about a somewhat different interpretation than the committee intended on the word "except."

You are aware of that, aren't you?

Secretary BRUCKER. I remember that.

Mr. McCORMACK. I often wondered who agreed in the Defense Department to that interpretation but I won't press it; but there was a somewhat different interpretation placed on that word, that I know, than I intended. I was chairman of the committee and I am sure that the full committee didn't intend that. Never did we fail to recognize the importance of the military in the world of today and in the foreseeable future.

Now, I would like to have you, without asking you questions, I would like to have you and your associates look these amendments over. Look them over from the angle of seeing that the Defense Department, what their position may be in connection with preserving jurisdiction, that in the field of not only development and appliances and research that may be important to the very preservation of our country.

Secretary BRUCKER. Thank you very much. We will do that.

Mr. McCormack, Dr. York has just indicated to me here that the Army Research and Development Director and the Chief of Research Development did confer on this.

Mr. McCORMACK. I would even look into that a little further and see when they were consulted—whether it was after the bill was introduced or somewhere around the time, and so forth. You better look into that a little. I know Dr. York was probably consulted and the Air Force was consulted but I am talking about the Army and the Navy.

Secretary BRUCKER. Yes, sir.

Mr. McCORMACK. I want to get their views, also.

Secretary BRUCKER. I am just relaying what Dr. York said to me.

The CHAIRMAN. We would like to have the official Army views on that bill.

Mr. McCORMACK. A lot of us still realize that there is an Army and a Navy.

Mr. ANFUSO. I do.

Mr. McCORMACK. Yes. I said a lot of us do.

Mr. FULTON. And the Air Force, too.

Mr. McCORMACK. I said there is still an Army and Navy.

The CHAIRMAN. And a great Army and Navy.

Secretary BRUCKER. If I make any comment, somebody will talk about interservice rivalry.

Thank you very much.

Mr. FULTON. The question comes up on the development of the Army of its equipment on the ground cushion principle. That is dispensing with wheels, tank treads, and moving into vertical takeoff vehicles; tanks that move on air and go over fences and rivers without getting mired.

Could you comment about some of those developments that the Army is now moving ahead with in that field? I think it is a tremendously important field, and it is space.

General LEMNITZER. I would be glad to comment on it, Mr. Fulton.

We regard mobility as one of our key requirements and it will be more so as the techniques of war develop in the future.

In the case of air mobility you can avoid such obstacles on land as rivers, rugged areas of terrain, mountains—and you don't have to give them the same degree of attention that we have always had to give them in the past.

In this field we have a new family of fixed wing aircraft and helicopters coming along and we are presently working on an aircraft that will give us true vertical takeoff and landing. I think the advantage of these developments is pretty obvious. You don't need air strips—improved air strips—and you can avoid the requirement of building roads in order to maintain the support of the combat forces.

Most important of all, you can move troops quickly and put them in position where they can do the job that you are attempting to have them do. So, air mobility is one of the key features of our modernization program. We have a good many interesting developments coming along in this field. We are devoting a considerable amount of our procurement budget to getting this equipment into the hands of troops as fast as possible.

In the case of land mobility, we have the same interest because there are heavy weights to be transported; for example, ammunition. We have to have vehicles that afford protection against bullets, shell fragments, and radiation. So, we have now under production one of our newest personnel carriers that we are particularly proud of, that can move rapidly off roads. It is the M-113. This personnel carrier employs aluminum armor for the first time.

We are also interested in making all of these vehicles amphibious so that we don't have to stop and build bridges across a stream in the face of enemy fire. We want to be able to move right on without any delay when we reach rivers. This is extremely important. In summary, a considerable amount of our research and development program and a great deal of our procurement program are now devoted to procuring the latest types of vehicles, air and ground, that will give us this mobility which we need.

Mr. FULTON. Do you have a target date for the tanks that will use the ground cushion effect and ride on air rather than treads?

General LEMNITZER. I think that would be pretty far in the future because of the very heavy weights we are talking about. We do, however, have study projects that are looking into zero ground pressure vehicles using that principle.

The CHAIRMAN. Thank you, General and Mr. Secretary.

Now, it is 3:15. We have several witnesses standing by to follow up here, on the Sisk resolution.

It is my thought if we are going to reach them in this afternoon and take any action on the resolution that we will have to confine our questions to the resolution itself.

Mr. Secretary, we are certainly grateful to you and to the General and Under Secretary Milton for coming here and assisting the committee.

As Mr. McCormack has previously said, we will be very much interested in the official position of the Army with reference to these changes in the basic NASA law.

Mr. McCORMACK. Mr. Chairman, might I make the observation: Two of our colleagues on the committee paid their respects to Secretary Brucker—and not to flatter him—but before I met the Secretary and after he was appointed I was in Boston. Mrs. McCormack and I were talking and watching television and we heard you the first time you were on the air after you were nominated, and at that time we sat and chatted and evaluated you, and we both agreed that you are a very substantial-looking gentleman.

Mr. SISK. Mr. Secretary, with reference to the resolution, the intent was to do exactly what you have indicated here is your desire, and I simply have one question with reference to the resolution itself, on page 2, is that the President's transfer-plan transmitted with a report of January 14, 1960, shall take effect immediately. In other words, the plan?

Secretary BRUCKER. That is right.

Mr. SISK. And therefore I agree completely with you, for in no sense did I intend for this to interfere with the orderly procedure of taking over. And with the language here, do you recommend any amendment to that language or do you feel that that is clear?

Secretary BRUCKER. I think that makes it clear.

Mr. SISK. Thank you Mr. Chairman.

The CHAIRMAN. Thank you, gentlemen, for coming here.

Mr. FULTON. Before they leave, a matter of technical procedure.

The CHAIRMAN. A point of order. Mr. Fulton is recognized.

Mr. FULTON. There has been filed House Concurrent Resolution 559 by Mr. Stratton, that Congress not favor the transfer plan making certain transfers from the Department of Defense to NASA. I believe that is a matter of procedure, and I would ask the advice of the majority leader. Should we not likewise have that before us as well as the Sisk resolution?

The CHAIRMAN. It is before every member. I think every member here has been given a copy.

Mr. McCORMACK. When you come to vote on the Sisk resolution, we don't have to take any action on that if we don't want to.

The CHAIRMAN. That disposes of it.

Thank you very much, gentlemen. Now, we have Dr. York, and then we have Mr. Albert Siepert. Dr. York, the committee has had the pleasure of having you with us before this year. We want to address ourselves this afternoon especially to House Joint Resolution 567 by Mr. Sisk, which will speed up the transfer of the Development Operations Division of the Army Ballistic Missile Agency from the Army to NASA.

Do you have a prepared statement?

STATEMENT OF DR. HERBERT F. YORK, DIRECTOR, DEFENSE
RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE

Dr. YORK. I have no prepared statement, Mr. Chairman.

The CHAIRMAN. Give us your ideas regarding it.

Dr. YORK. I can give them very briefly. I support this resolution and, as the Secretary of the Army has said, it would be very helpful to clear the air.

Likewise, as he said for administrative, budgetary, and other purposes, the formal transfer probably is best deferred until the end of the fiscal year. From all practical purposes from the point of view of the program, the transfer has been in effect for 3 or 4 months.

The CHAIRMAN. Is that your statement, sir?

Dr. YORK. Yes.

The CHAIRMAN. Now, Mr. Siepert has a prepared statement. Is it with respect to this resolution or is it just a general statement?

Dr. YORK. He is from NASA and I cannot speak for him.

The CHAIRMAN. At any rate you support the resolution as is?

Dr. YORK. I support it in the same way Mr. Brucker supported it; namely, it is a fine idea to clear the air and get rid of the 60-day waiting period, but that waiting until July 1 is probably necessary from an administrative and fiscal point of view. That is all.

That is what I understood Mr. Sisk to say his bill was for—excuse me.

Mr. McCORMACK. There will be close coordination to prevent duplication and any unnecessary expenditures of the taxpayers' money, in the military field where it is involved.

Dr. YORK. There will be every attempt, yes, to achieve that.

The CHAIRMAN. As a matter of practical arrangement unless this committee does take action, the committee is partially bypassed because you proceed to the Appropriations Committee with the idea of getting appropriations for the transfer. I think for several reasons it is important to take action timely on this resolution.

Now, Mr. McCormack, do you have any questions?

Mr. McCORMACK. No questions.

The CHAIRMAN. Mr. Fulton.

Mr. FULTON. No questions.

The CHAIRMAN. Mr. Miller.

Mr. MILLER. I would just like to say something off the record.
(Discussion off the record.)

The CHAIRMAN. Mr. McDonough.

Mr. McDONOUGH. No questions.

The CHAIRMAN. Mr. Anfuso.

Mr. ANFUSO. No questions.

The CHAIRMAN. Mr. Chenoweth.

Mr. CHENOWETH. No questions.

The CHAIRMAN. Mr. Sisk.

Mr. SISK. No questions.

The CHAIRMAN. Mr. Bass.

Mr. BASS. No questions.

The CHAIRMAN. Are there any further questions here?

If not, Dr. York, we certainly appreciate your fine statement. At this time we will hear Mr. Richard Horner, Associate Director of NASA. Will you direct yourself, Mr. Horner, to this resolution at this time?

STATEMENT OF RICHARD HORNER, ASSOCIATE DIRECTOR,
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Mr. HORNER. Mr. Chairman, I would like to say also Mr. Siepert is with me. He is the Director of Business Administration of the NASA.

As a practical matter, it might be said that the transfer of the Von Braun team from ABMA to NASA has been in process ever since the 21st of October. Immediately after that date we commenced a study of the administrative arrangements that would be necessary to complete the transfer and Mr. Siepert was placed in charge of that study from the NASA side.

He has a prepared statement which is comprehensive and in detail.

With the chairman's permission, I would suggest that the statement be placed in the record, and Mr. Siepert is prepared to summarize it in 5 or 10 minutes with the help of some charts that he has here.

The CHAIRMAN. Mr. Siepert has been standing by for several days and we appreciate your patience, Mr. Siepert, for doing that.

We will proceed upon the suggestion of the Associate Administrator; that is, to place your statement as it is in the record and if then you will elaborate on it, or brief it—however you desire to proceed—we will be glad to hear from you.

STATEMENT OF ALBERT F. SIEPERT, DIRECTOR, BUSINESS ADMINISTRATION, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Mr. SIEPERT. I appreciate this opportunity to discuss the plan transmitted to Congress by the President on January 14 relating to the transfer to the National Aeronautics and Space Administration of the Development Operations Division of the Army Ballistic Missile Agency and certain other Department of Defense functions.

Immediately after the President's decision was announced on October 21, 1959, our Administrator, Dr. Glennan, designated me as NASA's principal negotiator to arrange with the Army the details of the transfer. Since that time this has been essentially a full-time assignment in order to assure that the transfer of the Von Braun group to the NASA is effected without disrupting the essential space and weapons projects now underway. NASA at this point is confident that the plans are realistic and that, with the support of this committee and the Congress, the proposed transfer can be accomplished in a manner which will greatly strengthen this Nation's space efforts, both civilian and military. There are several aspects of the proposed plan which, I believe, will be of special significance to this committee.

1. RELATIONSHIP OF TRANSFER TO THE NATIONAL SPACE EFFORT

Under the National Aeronautics and Space Act of 1958, NASA was established as a civilian agency to plan and conduct space exploration for peaceful purposes. This mandate is accompanied by an "except" clause which reserves to the Department of Defense:

* * * activities peculiar to or primarily associated with the development of weapons systems, military operations, or the defense of the United States. * * *

This "except" clause has caused apparent misunderstanding among the public as to who is responsible for what in the space field. The intent of the law has been to give NASA, on the one hand, sole responsibility for developing and carrying out the national space exploration program, in all its aspects. On the other hand, the Defense Department is responsible for defending the Nation in every medium or environment at its disposal—on land, on sea, in the air and in space. If the armed services fire a missile into space, it is for the development of a defense mission; it is not firing the shot as part of the national space exploration program. Such activities by Defense are governed strictly by their advancement of military objectives. Understandably, of course, these Defense missions may advance the state of the space art.

It was in this context that the President reviewed the requirements and current activities of the Department of Defense and NASA, and decided on October 21, 1959, to assign NASA sole responsibility for development of very high thrust vehicles required for space exploration. This decision was based on the consideration, concurred in by the Secretary of Defense, that presently there is no current clear-cut military requirement for these vehicles. On the other hand, future exploration of space, manned and unmanned, for scientific and peaceful purposes, can only be achieved through use of vehicles of very high thrust.

In line with this assignment of responsibility, NASA and DOD worked out an agreement that NASA assume technical direction of the Saturn vehicle systems. As you have heard from Dr. von Braun, this is an interim management arrangement until the Development Operations Division can be transferred to NASA in accordance with the plan now before you. As you know, this project was initiated and funded by the Advanced Research Projects Agency of DOD: it was being carried forward by ABMA.

The Saturn vehicle now constitutes a substantial and growing part of the Development Operations Division's workload; the military or weapons systems assignments of this group are rapidly decreasing. Accordingly, the President has proposed that the unique capabilities and interests of this division in space flight development should be transferred and made available to NASA.

Needs may well develop in the future for the use of large launch vehicles for defense purposes. To prepare for this possibility, the President has instructed NASA to be responsive fully to specific DOD requests in this area. Furthermore, NASA and DOD will continue with a coordinated program for development of space vehicles based on current IRBM and ICBM missiles and growth versions of those missiles.

The background for these arrangements is covered in more detail in the memorandum to the President which Dr. Glennan and Secretary Gates jointly submitted on October 31, 1959.

In summary then, the decision of the President to assign to NASA sole responsibility for the development of space launch vehicles, and the corollary action to transfer the Development Operations Division to NASA serves to clarify the responsibility of NASA and to allocate to it certain available resources in a manner to facilitate NASA's discharge of these responsibilities.

2. DEVELOPMENT AND GROWTH OF NASA'S SPACE CAPABILITIES

The transfer of the Von Braun group will give NASA a unique and demonstrated competence in space vehicle development. Where this capability fits into the NASA space picture can best be explained by reviewing quickly the brief organizational history of NASA.

NASA became officially operative on October 1, 1958. As you know, the new agency absorbed the 43-year-old National Advisory Committee for Aeronautics, together with its aeronautical and space research missions. However, NASA's overall mission is far broader than that of NACA, since it is empowered to direct all U.S. aeronautical and space research and development, apart from military projects.

In aeronautics, NASA limits itself to research and it cooperates closely with DOD in aerospace problems.

Thus, NASA was provided an immediate competence in various fields of aeronautical and space research.

While NACA's laboratories initially had been developed to perform work in the field of aeronautics, much basic research in the new fields of space was already underway. Research projects included studies relating to reentry, development and testing of sounding rockets, studies relating to aerodynamic characteristics of missiles, propulsion research, and similar fundamental work of importance in the space field. What was lacking, however, was adequate competence in the design, construction, and operation of space vehicles and in the related fields of advanced guidance and control, communications, tracking, and data reduction.

The need for expansion of the NASA capability in the space field was recognized by the Congress in the enactment of the Space Act of 1958. Under section 302 of this act, the President was empowered to—

* * * transfer to the Administration any functions (including powers, duties, activities, facilities, and parts of functions) of any other department or agency of the United States, or of any officer or organizational entity thereof, which relate primarily to the functions, powers, and duties of the Administration as prescribed by section 203 of this Act.

Acting under this authority, the President, on November 28, 1958, transferred to NASA personnel, equipment, and functions formerly assigned to the Navy's Project Vanguard. In addition, certain personnel from the upper atmosphere group of the Naval Research Laboratory were also transferred to NASA. From this group, NASA was fortunate in acquiring some 400 highly trained and experienced

personnel in the field of space sciences and satellite applications, as well as tracking, communications, and data reduction.

On December 3, 1958, the Jet Propulsion Laboratory, operated under contract by the California Institute of Technology, was transferred from the Department of the Army to NASA. JPL personnel, therefore, contribute to NASA a demonstrated ability in virtually all aspects of space science and technology with particular capacity in development of upper stages and guidance systems, and tracking for deep space probes.

Neither the Vanguard or JPL groups, however, provided NASA with the necessary capability to develop big space vehicle systems. The Huntsville group clearly gives NASA a team of outstanding experts who are capable not only of "inhouse" research and development of large launch vehicles, but also of providing, as needed, the responsible technical monitoring and direction of the various industrial contractors who assist in the engineering and production of such launch vehicles.

3. IMPACT OF TRANSFER ON THE NASA ORGANIZATIONAL STRUCTURE

The transfer of the Huntsville facility and its integration into NASA organizational structure has been helped considerably by some adjustments and redefinition of the previous mission assignments within NASA. Our headquarters organizational structure has already been modified to permit improvement of NASA's program development and execution. The headquarters organization of NASA now provides for four, rather than three, major operational elements.

Instead of a single Office of Space Flight Development, in its place we have established two groups:

(1) The Office of Space Flight Programs, under the leadership of Dr. Abe Silverstein, will be primarily responsible for the conduct of space exploration including manned space flight represented today by Project Mercury; the conduct of scientific investigations of space; the development of practical applications of space technology including communications and meteorological satellite systems; and the development of necessary tracking, communications, and data reduction systems. The Goddard Space Flight Center, the Jet Propulsion Laboratory and the Wallops (Va.) Station will report to this office.

(2) The Office of Launch Vehicle Programs, under the leadership of Gen. Don R. Ostrander, will develop necessary launch vehicles including the conduct of their testing, modification, launching and initial guidance. The Huntsville facility, and the NASA launch activities at the cape and the Pacific Missile Range will report to this office.

Besides these two new offices, our primary operating groups at the headquarters level include the Office of Advanced Research (formerly the Office of Aeronautical and Space Research which supervises the research centers) and the Office of Business Administration. The functions of these two groups remain unchanged.

When the Huntsville facility is acquired, some gradual realignment of missions assigned to our field installations will begin. Basically, these missions assignments are as follows:

NASA Huntsville facility.—Research and development of large launch vehicle systems. This includes guidance development and necessary testing and modifications to assure reliable operation of such vehicles. This group will also be responsible for the launch of NASA space vehicles including performance evaluations of such launches. It will conduct, as assigned, research and development in such areas as advanced propulsion and guidance systems.

Goddard Space Flight Center.—The conduct of earth satellite programs including scientific investigations, practical applications and manned flight. This center will be primarily responsible for all communications, tracking, and data reduction relating to satellite programs. In addition, the sounding rocket programs will be assigned to this center.

Jet Propulsion Laboratory under Cal Tech contract.—The development of lunar and deep space exploration programs. This responsibility will include development or necessary modification of terminal propulsion, midcourse and terminal guidance for such missions and operation of the deep space probe tracking network.

The missions of Langley, Ames, Lewis, and Flight Research Centers remain basically unchanged, as does Wallops Station. Emphasis at all of our research centers will, however, be directed increasingly toward the conduct of research.

NASA does not believe that it is either desirable or feasible to place our field centers in any "intellectual straightjacket" which would foreclose the possibilities for their making research and development contributions in other areas than those within their primary field of assignment.

On the other hand, the delineation of primary areas of emphasis helps to assure the necessary concentration and economy of effort we must achieve for our program as quickly as possible.

4. BRIEF OUTLINE OF THE NASA-ARMY TRANSFER PLAN

I have outlined the adjustments which we have already made in our organizational structure in order to take the fullest advantage of the competence of the transferred Huntsville group. The conditions of the transfer have been worked out in considerable detail and we will be glad to discuss these in whatever degree the committee wishes. The main principles are outlined in two agreements signed by Dr. Glennan and Secretary Brucker. Copies of the initial agreements of November 16, 1959, and the summary of the more detailed plan of December 11 which NASA and Defense approved on December 16 are here for the committee's study and for insertion in these hearings if the committee so desires.

I would like, however, to mention a few major points relating to the proposed transfer so that this committee may understand our basic thinking in this regard.

(1) NASA has received full cooperation from the principal Army negotiator, General Schomburg, and all other AOMC and ABMA representatives in working out a number of potentially difficult problems. Dr. von Braun, his deputy, Mr. Rees, and key members of his staff have worked closely with us in all phases of the negotiations.

I believe the committee will find these men are generally satisfied with the results thus far reached in our agreements with the Army.

(2) This transfer must be effected without disrupting ongoing programs of either NASA or the Army. Rather than make an abrupt shift from Army to NASA control, both parties are prepared to take more time to work out details thoroughly before making the official shift of personnel.

(3) The formal transfer of the Von Braun team will take place on July 1, 1960, when the start of a new fiscal year makes it easiest to effect a changeover in the accounting and personnel systems. NASA, however, is assuming immediate technical control of the Saturn and will take over from ARPA all unobligated Saturn balances as soon as the President's plan can take effect. A direct planning and technical relationship now exists between NASA and the Von Braun group to assure proper integration of program development and operation in the NASA space area.

(4) The President's plan will transfer to NASA any supergrade or Public Law 313 positions now allotted to key members of the Von Braun group who transfer to NASA. Some 18 positions ranging from \$15,375 to \$19,000 are involved. NASA will be able to allocate to Huntsville an additional 21 NASA "excepted" positions under the authority of section 203b(2) of the National Aeronautics and Space Act.

(5) NASA is arranging for Dr. von Braun's group to complete, on a reimbursable basis, such work on weapons systems (Pershing, Jupiter, etc.) as the Army may request.

(6) To assure that Army is able to continue to carry out its responsibilities, we have agreed that up to 350 civil service personnel from the Development Operations Division will be given an opportunity to remain with the Army to assist in developing, managing or evaluating Army weapons projects.

Dr. von Braun has agreed to this proposal and has indicated that this number can be made available in a manner which will not adversely affect the capability of his team to carry out the new space assignments with NASA. Replacements, by conversion of certain military specialists upon expiration of their enlistments and by hiring into civil service some outside personnel, will restore the team to its full present strength of 4,300 civilian employees.

(7) The Army has indicated that there will be a continuing need for much of the present administrative support personnel at the Redstone Arsenal to carry out military programs assigned to that base. As the committee knows, the Development Operations Division is but one of several major operating units at the Arsenal.

As a result, it would not be possible, without seriously curtailing other Army programs, to transfer all the administrative support personnel which have contributed to the support of the Division in the past. The available personnel must be shared on an equitable basis.

Between now and July 1, 1960, NASA will be building its own administrative organization, utilizing certain key Army personnel who will agree to transfer to us to assist in the planning and staffing. We are fully aware of certain problems posed in creating a separate support organization within a relatively few months. The complete staffing will require approximately 1,200 administrative and technical

personnel to continue to meet the needs of the transferred Von Braun group of 4,300. The Army has agreed that NASA may recruit by transfer up to 815 Army personnel in order to provide a firm base for the provision of these services. We are working closely with Army representatives to assure that by July 1, 1960, we will have recruited much of our required staff and be operational in most of the administrative areas. By agreement with the Army, a few services may not be assumed by NASA until a later date, but in no case beyond December 31, 1960. In the interim, the Army will continue to support the Von Braun group as it has done in the past.

(8) Adequate arrangements have been made to obtain the laboratory facilities and equipment now used by the Von Braun group. The Army is making available to NASA approximately 1,200 acres of land at Huntsville, and total facilities and equipment valued at about \$100 million, including \$14 million at Cape Canaveral.

(9) You may well ask what provisions have been made to avoid unnecessary duplication of facilities at the arsenal. I can assure you that neither NASA nor the Army is duplicating base facilities unnecessarily. NASA will enter agreements with the Army for it to furnish NASA on a reimbursable basis all necessary steam, sewage disposal, water, fire protection, and other common services.

(10) It seems clear that, in at least two areas, additional facilities must be constructed in order to accommodate both the Army and NASA organizations. Deficits in office space and in computation facilities have resulted in NASA's agreeing to seek construction funds in the fiscal year 1961 budget for its own headquarters office structure and Army's agreeing to provide its own separate computation laboratory.

In conclusion, NASA strongly believes that the addition of the Huntsville group to NASA is essential to the national civilian space program. This group will provide NASA with an essential capability not now available to it. The absorption of the Huntsville group by NASA has required reorganization of our headquarters office and a realignment of mission assignments to field centers. These tasks have already been accomplished. The transfer plan, developed in cooperation with the Army, should result in a transfer of these functions to NASA with no disruption to on-going programs.

The transfer plan, under ordinary circumstances, would not become effective until 60 days after its submission to the Congress on January 14 and then only if no adverse resolution has been passed by the Congress. The NASA has noted with appreciation Representative Sisk's resolution, House Joint Resolution 567, to expedite favorable action on the transfer plan. Its adoption at an early date would be of great help in removing employment uncertainties for those now connected with the Development Operations Divisions or those whom NASA seeks to recruit among the administrative and plant support groups now attached to other elements in the Redstone Arsenal organizations.

Thank you for your interest. I will be happy to answer any questions the committee may have concerning NASA's interests in this proposed transfer.

Mr. STEPERT. We thought it would be best if we used several charts to explain what is involved in the transfer of the functions, personnel and facilities that are necessary for Dr. von Braun to continue his work in space.

(The chart entitled "Steps Involved in Transfer of DOD to NASA" follows:)

STEPS INVOLVED IN TRANSFER OF DOD TO NASA

- PRESIDENT'S DECISION - OCT. 21, 1959
- ARMY-NASA AGREEMENT - NOV. 16, 1959
- DEVELOPMENT OF PROPOSED TRANSFER PLAN BY ARMY-NASA TEAM - OCT. THRU DEC, 1959
- SUBMISSION OF PRESIDENT'S TRANSFER PLAN TO CONGRESS - JAN. 14, 1960
- DEVELOPMENT OF NASA ADMINISTRATIVE STAFF AT HUNTSVILLE - FEB. TO JULY 1, 1960
- TRANSFER OF DOD PERSONNEL TO NASA - JULY 1, 1960

Mr. SIEBERT. This chart indicates the planning steps which have followed the President's decision of October 21, 1959. I would like to put in the record two supporting documents, one of which led up to the President's decision. This was a joint memorandum from Secretary Gates and Dr. Glennan, on October 21, both of them concurring and proposing that the Saturn project be transferred to NASA and that NASA assume as a civilian responsibility, the development of future large launch vehicle systems.

Also, the Army-NASA agreement, which the chart shows as November 16, and Mr. Brucker actually signed on the 18th, is also a document which will interest the committee. It sets forth the basic philosophy we followed as we negotiated out the various problems involved in the transfer.

We developed a detailed transfer plan which has been turned over to your committee staff. This was completed December 11, and agreed to by Secretary Brucker, Dr. Glennan and the Secretary of Defense, on December 16.

You then got the President's actual plan January 14. Under the present arrangement, as you know, this will await the action of the Congress for 60 days unless either an adverse or a favorable resolution shall have been passed in the meantime.

(The two documents referred to above follow:)

OCTOBER 21, 1959.

Memorandum for the President

Subject: Responsibility and organization for certain space activities.

The Secretary of Defense and the Administrator of NASA have agreed upon, and recommend to the President, certain actions designed to clarify responsibilities, improve coordination, and enhance the national space effort. The

actions recommended below are consistent with the steps taken by the Secretary of Defense to clarify responsibilities and assignments in the field of military space applications within the Department of Defense.

The Secretary of Defense and the Administrator have agreed upon, and recommend to the President the following actions:

(a) The assignment to NASA of sole responsibility for the development of new space booster vehicle systems of very high thrust. Both the DOD and NASA will continue with a coordinated program for the development of space vehicles based on the current ICBM and IRBM missiles and growth versions of these missiles.

(b) The transfer from the Department of the Army to NASA of the Development Operations Division of the Army Ballistic Missile Agency, including its personnel and such facilities and equipment which are presently assigned and required for the future use of NASA at the transferred activity, and such other personnel, facilities, and equipment for administrative and technical support of the transferred activity as may be agreed upon.

(c) The provision by the Army to NASA of such administrative services as may be agreed upon to effect a smooth transition of management and funding responsibility of the transferred activity.

The Secretary of Defense and the Administrator of NASA are in agreement on the following:

1. The Nation requires and must build at least one super booster and responsibility for this activity should be vested in one agency. There is, at present, no clear military requirement for super boosters, although there is a real possibility that the future will bring military weapons systems requirements. However, there is a definite need for super boosters for civilian space exploration purposes, both manned and unmanned. Accordingly, it is agreed that the responsibility for the super booster program should be vested in NASA. It is agreed that the recommendations to center this function in NASA and to transfer the Development Operations Division of ABMA to NASA are independent of any decisions on whether either or both of the super booster systems currently under development are continued in their presently conceived form.

2. The transfer of the Development Operations Division of ABMA shall include transfer of responsibility for Saturn, together with 1960 funds allocated for the project, and transfer to the NASA 1961 budget of such amounts as may be approved for this project in the 1961 Department of Defense budget.

3. In carrying out its responsibilities, NASA will keep the Department of Defense thoroughly and completely informed on its booster program and will be fully responsive to specific requirements of the Department of Defense for the development of superboosters for future military missions as requested by the Secretary of Defense.

4. It is NASA's intent to center at the transferred activity the bulk of its space booster vehicle systems work, including an appropriate research and development effort, and ultimately, substantial responsibility for NASA launch operations.

5. It is agreed that NASA will provide support to the Department of Defense and military services at the transferred activity in the same manner as it now does at all other field centers.

6. The management and employment of the transferred activity will be the responsibility of NASA, and no commitment is possible with respect to levels of staffing or funding for the operation. NASA, however, will make every possible effort within its responsibilities and resources to utilize the capabilities of the Development Operations Division of ABMA.

7. The transfer of personnel, facilities, and equipment will be on a nonreimbursable basis.

8. The Department of the Army will provide and maintain on a reimbursable basis stationwide services as required by NASA within the Redstone Arsenal complex.

9. NASA will provide for continuation, transfer, or phasing out of military projects underway at the transferred activity as may be requested and to the extent funded by the Department of Defense, and will undertake at the transferred activity such additional military projects as may be agreed upon by NASA and the Department of Defense.

10. The Department of Defense, the Department of the Army, and NASA, recognizing the value to the Nation's space program of maintaining at a high

level the present competence of ABMA, will cooperate to preserve the continuity of the technical and administrative leadership of the group.

11. The detailed implementation of the actions proposed will be accomplished through the subsequent negotiation of cooperative agreements between the Department of Defense and NASA.

The Secretary of Defense and the Administrator of NASA have reached agreement and recommend approval of the above actions in the firm belief that the national space effort requires a strong military space effort by the Department of Defense, and clear lines of responsibility and authority if the United States is to employ its best efforts in the exploration of outer space and to assure the defense of the Nation.

If the President approves the recommended actions set forth in (a), (b), and (c) above, the Secretary of Defense and the Administrator of NASA will proceed immediately to form the necessary staff teams to develop the required implementing documents.

(Signed) THOMAS S. GATES,
Acting Secretary of Defense.

(Signed) T. KEITH GLENNAN,
Administrator, NASA.

OCTOBER 30, 1959.

Approved, Dwight D. Eisenhower, November 2, 1959.

NOVEMBER 16, 1959.

AGREEMENT BETWEEN THE DEPARTMENT OF THE ARMY AND NASA ON THE OBJECTIVES AND GUIDELINES FOR THE IMPLEMENTATION OF THE PRESIDENTIAL DECISION TO TRANSFER A PORTION OF ABMA TO NASA

A. AUTHORITY

National Aeronautics and Space Act of 1958 (Public Law 85-568, 72 Stat. 426)

B. REFERENCES

1. Memorandum for the President, subject: Responsibility and Organization for Certain Space Activities, dated October 21, 1959, in behalf of the Secretary of Defense by the Deputy Secretary of Defense, and Dr. T. Keith Glennan, Administrator of the National Aeronautics and Space Administration.

2. Cooperative agreement on the Army Ordnance Missile Command between the National Aeronautics and Space Administration and the Department of the Army dated December 3, 1958.

C. PURPOSE

The purpose of this agreement is to supplement the agreement between the Secretary of Defense and the Administrator of NASA with respect to the transfer of a portion of ABMA to NASA and the assignment to NASA of certain responsibilities in the space booster vehicle field to the extent these actions involve the Department of the Army. The areas covered by this agreement are—

1. Generalized agreement on the objectives to be sought;
2. Method and procedure for conducting negotiations and arriving at detailed agreements; and
3. Timing of the required actions.

D. POLICY

The Army and NASA agree and recognize that abrupt changes or other disrupting actions which adversely affect either the ongoing military or space programs must be avoided. The Army and NASA therefore agree to establish as the dominant consideration, with respect to timing, funding, and pace of agreed-upon actions, that there be no adverse effect on current programs. To this end, each party will cooperate in the rendering of service to the other, to the degree necessary to achieve this objective. Until such time as the transfer is approved by the Congress, reference B-2 will continue in effect.

E. GENERAL OBJECTIVES

The objectives of the negotiations are to arrive at a mutually agreeable detailed plan for implementation of the President's decision to transfer a portion of ABMA, primarily the Development Operations Division (DOD), to NASA. The plan is to provide for—

1. The transfer to NASA of the personnel, facilities, and equipment presently assigned to the Development Operations Division of the Army Ballistic Missile Agency. However, NASA recognizes that certain employees of this Division are primarily engaged in the technical supervision of contractors and monitoring or management of military weapons systems and components. NASA further recognizes that the Army regards the accomplishment of such functions by the Army as essential. NASA and the Army will reach mutual agreement as to those personnel who desire to and will remain with the Army for accomplishment of Army programs, with full recognition that the balanced capability of DOD will not be impaired.

2. The transfer to NASA of such other personnel, facilities, and equipment of the ABMA and Redstone Arsenal as agreed upon for administrative and technical support of the transferred activity. Insofar as practicable, NASA and the Army will give full consideration to the desires of individuals to remain with the Army or to transfer to NASA.

3. Identification and agreement concerning stationwide services which can be operated more effectively and economically on a centralized basis serving both NASA and the Army in order to avoid unnecessary duplicate organizations. This shall include the appropriate means of assessing reimbursable costs on the users.

4. Provision for the continued detail of enlisted technical personnel presently assigned to DOD to the extent mutually agreed upon.

5. Identification and use or transfer of land required for DOD operations as may be agreed upon. It is recognized that NASA, with respect to its possible future needs for land, will participate as a member of the Master Planning Board in the long-range land utilization planning of Redstone Arsenal.

6. Identification and agreement on joint use of certain Redstone Arsenal test facilities and ranges which might be needed for use in future Army and/or NASA programs. The objective here is to avoid building duplicate facilities wherever joint-use agreements could meet the needs.

7. Identification and transfer to NASA of stocks and inventories assigned to or purchased for DOD which would be used primarily in the performance of NASA missions. Items which would be used primarily in the performance of Army missions will remain the property of the Army. General purpose items and supplies will be shared as agreed upon.

8. Provision for continued funding by the Army and NASA through fiscal year 1960 of their respective programs at ABMA which had been approved prior to the Presidential decision to transfer a portion of ABMA to NASA. NASA recognizes that Army funding in 1961 will be related only to those specific projects, including supporting research, it desires to place in the transferred unit.

F. METHODS AND PROCEDURES

1. The Army and NASA will each select and appoint a principal negotiator. For the NASA, the principal negotiator is the Director of Business Administration, and, for the Army the Deputy Chief of Ordnance.

2. The principal negotiators for the Army and NASA will agree upon and establish such subordinate study or negotiation teams as may be required. These teams will recommend to the principal negotiators an appropriate agreement for the area assigned.

3. These agreements, as approved by the principal negotiators, will be consolidated into an overall agreement and approved through channels in both agencies, with final concurrence from the Secretary of the Army and the Administrator of NASA respectively.

4. Subsequent to the submission by the President to the Congress, the principal negotiators will continue to function as long as may be necessary to assist in the completion of planning for these transfer arrangements.

G. TIMING

1. The principal negotiators will schedule the staff studies and negotiation so as to permit submission of the necessary documents to the Executive Office of the President by December 15, 1959. It is recognized that detailed agreements in every area of Army-NASA relations may not be possible in the time available; however, agreement in meaningful principle must be reached in every major area and work will be expended to complete the detailed agreements at the earliest possible date.

2. It is recognized that it may be desirable to stagger the effective dates for the transfer actions of certain personnel or supporting service functions, in order that both organizations can make the necessary adjustments without disruption of programs.

WASHINGTON, D.C., November 18, 1959.

(Signature) WILBER M. BRUCKER,
Secretary of the Army.

(Signature) T. KEITH GLENNAN,
Administrator, NASA.

Mr. SIEBERT. I would like to state here again for myself and my agency, a strong endorsement of the Sisk resolution. This will reduce the period of time in which there can be any possible uncertainty by any of the key members of the staff concerning where their future lies in the Government and in space research.

We are now at the next to last phase of this plan. We are beginning to develop the administrative and technical support staff which is essential if the Von Braun team is to continue its work under NASA without a major disruption in their work. This will take us several months to do properly. On July 1 we plan the formal take-over of the personnel from the Army.

Perhaps I can clarify the point that Mr. Hechler raised on this as to why a resolution to have the transfer become effective "immediately" would be important to us, even though the personnel and the fund administration would not transfer until July 1.

Immediately after this decision was taken by the President, steps were worked out at the national level, so that the technical responsibility for the Saturn booster was transferred from the Department of Defense to NASA. This means our scientists are now working directly and daily with the Von Braun team. The question whether Army or NASA is paying the personnel can in no way influence how fast we accelerate the Saturn project.

Secondly the plan proposes that when the President's plan takes effect, immediately on that date, all unobligated funds for the Saturn project are transferred from ARPA, which actually has the money, to NASA.

However, they will still be spent through the Army. These funds are incorporated in an Army industrial fund, and those of you familiar with such accounting systems, will appreciate that it is a lot easier to put money into a working capital or industrial fund than to take it out in the middle of a fiscal year.

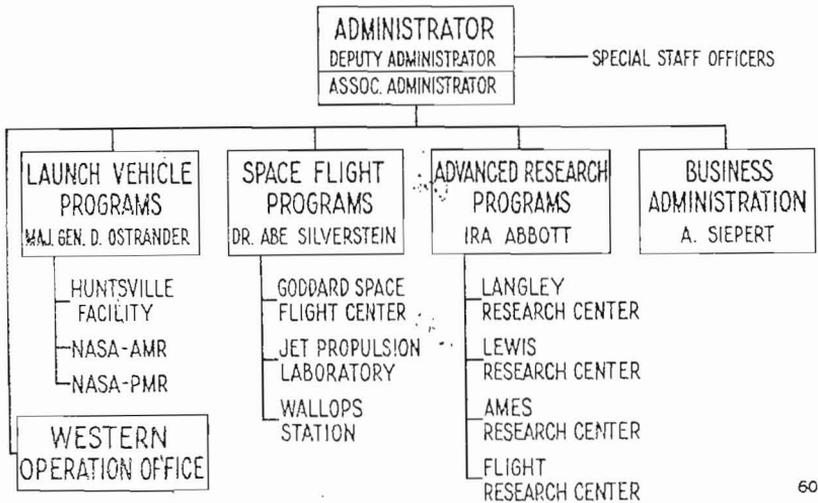
NASA has the responsibility and the real problem of devising a complete accounting system from the ground up developing the procedures, hiring the people, and working the system on a trial basis.

We feel we will need every day between now and June 30 in order to be sure that system operates properly.

Meanwhile, this will not hurt the Saturn project because the bills are just being paid through an Army fund rather than through a NASA fund. I do not believe the language used in the resolution would in any way impede our present plans; in fact, I think it would help greatly if the resolution went through on those terms.

(The chart entitled "National Aeronautics and Space Administration Operating Organization" follows:)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OPERATING ORGANIZATION



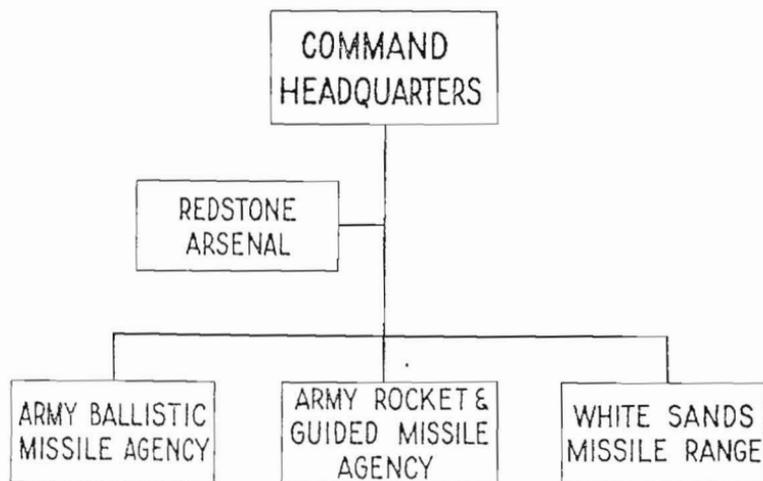
60-27

Mr. SIEPERT. Meanwhile, we have also reexamined our headquarters-field relationships and changed the organization to accommodate the Huntsville transfer. You have seen this chart in an earlier session. I merely want to point out to you that over on your left, the Huntsville facility—Dr. von Braun's group—would report to the headquarters of NASA through a new Office of Launch Vehicle Programs.

This part of the program was set up specially after the President's decision in order to make clear that Dr. von Braun's group had a direct channel to the top in NASA through which it could get resolutions of any major problems.

(The chart entitled "U.S. Army Ordnance Missile Command" follows:)

U.S. ARMY ORDNANCE MISSILE COMMAND



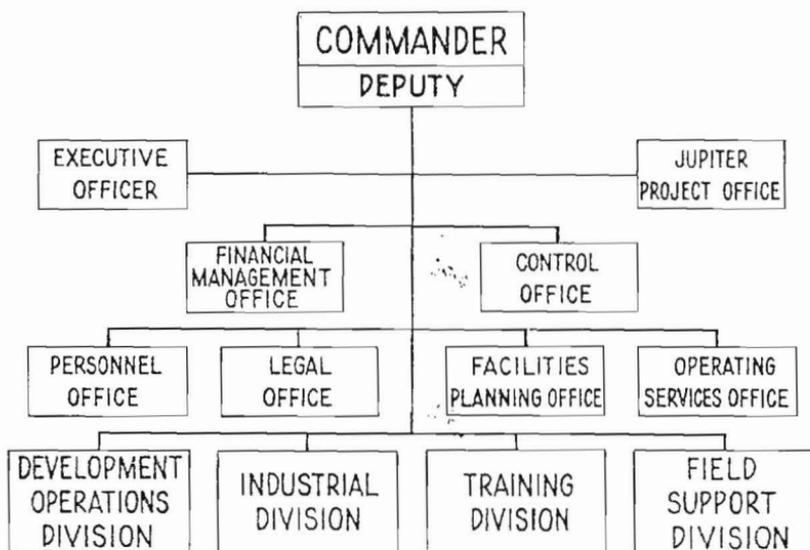
Mr. SIEPERT. An arrangement to transfer this group from the Army also presents some organizational difficulties at Huntsville.

Most of you, I believe, have been down at Redstone Arsenal. You will notice that group we are talking about is primarily included in the ABMA organization. It is only a part of the whole Army Ordnance Missile Command.

The Redstone Arsenal organization itself is a housekeeping operation. It has many, many people who provide plant services, shop maintenance, and the like, for the Von Braun group but they are not under his supervision at the present time.

(The chart entitled "Army Ballistic Missile Agency" follows:)

ARMY BALLISTIC MISSILE AGENCY



Mr. SLEPERT: On this chart, we can locate the actual technical group known as the Development Operations Division. This is the Von Braun team consisting of some 4,200 civilian employees.

The Army Ballistic Missile Agency has other divisions. ABMA has the management resources which Von Braun used to get his work done. Budgeting, personnel, contracting with industry, safety, security, et cetera, all of these functions were staffed independently of Dr. von Braun. So our problem, when we move his team over to NASA, is to provide the same high quality of services that previously come from other parts of the Army.

(The chart entitled "Proposed Staffing—Huntsville Facility" follows:)

PROPOSED STAFFING - HUNTSVILLE FACILITY

	PRESENT	TO BE TRANSFERRED TO NASA	NASA REQUIREMENTS
<i>DEVELOPMENT OPERATIONS DIV.</i>	4,213	3,863	4,300
<i>ADMINISTRATIVE & TECHNICAL SUPP'T.</i> ¹⁾		815	1,200
TOTAL	4,213	4,678	5,500

¹⁾ NOW SUPPLIED BY ARMY ORNANCE MISSILE COMMAND, PRIMARILY FROM ABMA AND REDSTONE ARSENAL.

Mr. SIEPERT. The Development Operations Division has about 4,200 people. Our budget before you provides for 4,300 civilian civil service personnel.

The number to be transferred is shown here as an estimated 3,863. The difference between these two figures is the 350 individuals Secretary Brucker mentioned to you. We have agreed that the Army, in order to carry on its work and retain in the Army the capability to develop, to monitor, and to evaluate industrial contracts in the missile field, must have some of the technical talent of the sort that has been built up with Dr. von Braun.

We believe that a satisfactory arrangement can be worked out with the cooperation of individuals concerned. Each individual sought by the Army will on his own option choose whether to remain with the Army or come to NASA. This can be done, in Dr. von Braun's judgment, without destroying the basic capability of the Von Braun team.

We will replace then these 350 in two ways: by some outside recruitment but also by conversion of certain military specialist personnel. Actually, quite a number of the experienced people in the Von Braun team initially came to them through serving a period of enlistment or obligated service. They were assigned as specialists and professionals in the military; they have learned the rocket business; they have developed a permanent interest in it; they have to stay. We will provide them an opportunity after their enlistment to convert to civil service.

The support picture we studied very carefully to determine what functions are needed. It appears that about 1,200 positions will be required in order to be sure there is no breakup of the logistics, the technical support, and management services behind the Von Braun team.

Now, actually, the Army must keep many of these services at or near their present staffing levels to maintain their operations. The agreement is that NASA will be able actively to recruit 815 of the 1,200 shown there—that is 815 from the existing Huntsville organizations.

(The chart entitled "Provision of Administrative Services" follows:)

PROVISION OF ADMINISTRATIVE SERVICES

<u>PERFORMED BY NASA</u>	<u>PERFORMED FOR NASA BY ARMY</u>
MANAGEMENT CONTROL	UTILITY SERVICES
* ACCOUNTING	* WATER
* BUDGETING	* SEWAGE
* PERSONNEL	* ELECTRIC POWER
PROCUREMENT AND SUPPLY	* BOILER PLANT OPERATION
MAINTENANCE OF BUILDINGS & GROUNDS	PERIMETER SECURITY
OFFICE SERVICES	ACCESS ROADS
* MAIL AND MESSENGER SERVICES	TECHNICAL LIBRARY
* TRANSPORTATION	RAILROAD MAINTENANCE AND
SECURITY AND GUARD SERVICES	SWITCHING SERVICES
SAFETY	FIRE PROTECTION
FACILITIES ENGINEERING	

Mr. STEPERT. When you are creating a new organization out of what is a part of a larger Army setup, there are difficult decisions as to who is going to do what. The services shown on the left represent the services which NASA will build up as its own capability. This is at the request of the Army since it wishes to use its available staff in support of Army military missions only.

The services on the right are the services which the Army has agreed it will continue to supply us, on a reimbursable basis. You will notice that these on the right primarily represent the kinds of services for which a large capital investment has already been made. It would be costly and impracticable for the Government to try to duplicate two steamplants, for instance.

The point has been raised with Secretary Brucker as to what will be the degree of cooperation between the two groups once that they are separated. I think it is significant to note that the technical library shown over here on the right will not be set up as two separate

libraries. Now, this is indicative of the kind of cooperation we are arranging. We want to be sure that the Von Braun team remains fully aware of everything that is going on in the missile business so they will have the access to the same classified documents as do the Army personnel through one library.

(The map referred to entitled "Facilities Location Map—Headquarters, Test, and Laboratories Area" is not printed.)

Mr. SIEPERT. The whole arsenal area is that shown by the cross-hatched outline. At the bottom you see the Tennessee River curling around the southern border.

The problem here has been to identify the physical facilities which the Von Braun team needs for spacework. The agreements with the Army call for NASA's getting complete availability on an irrevocable permit of all of the area shown in the center in the dotted enclosure. The circled areas that are shown in black represent certain facilities which each uses occasionally and there is no reason to reproduce them.

For instance, there is a dock, a river dock down here on the river which NASA will need to transport the Saturn down the Tennessee, to the Mississippi, and to the cape. However, the same dock, of course, will be used by the Army for its purposes. So these yellow areas then represent test or other facilities we will share in common.

(The map referred to entitled "Facilities Location Map—Headquarters, Test, and Laboratories Area" is not printed.)

Mr. SIEPERT. A closer view of the actual area which will come under NASA's control will show two concentrations of facilities. To the north, are all of the laboratory and assembly areas where the research work is done. Down to the south you see a test area where the big liquid propellant test stands are concentrated. We will use this area primarily for NASA work but again agreements have been worked out with the Army that, if they run into trouble with Jupiters at some later date, they can be put back on test stands and we will do the testing for them.

I should point out one other area. In the upper right sector, an area is called "ABMA Headquarters." This is an office structure. This building and one other area I will refer to, do represent problems for both Army and NASA.

In looking at the total picture there is simply not enough office space to handle technical and management personnel for the two organizations. We have reached an agreement that for the present we will jointly share the ABMA Headquarters building. However, NASA will assume responsibility for requesting funds of the Congress to create its own headquarters building. This item is included in the budget which is before you today.

The CHAIRMAN. Is that the building the committee met in for a briefing?

Mr. SIEPERT. I believe so, yes, sir.

Secondly—there is a reciprocity on this—a give and take. The Army recognizes there is not enough room in the existing computation laboratory—which is just to the south of the ABMA office building—to house expanding Army needs and in addition take care of

the increasing scientific computation and data processing for NASA as the Saturn program builds up.

The Army then has agreed that they will seek to develop and build their own computation laboratory but for the moment we will share those facilities together.

There are also facilities involved in Cape Canaveral.

(The map referred to entitled "Cape Canaveral" is not printed.)

Mr. STEPHEN. All of the shaded areas shown are facilities which the Army has operated. In the transfer agreements, all of the darker areas will be taken over completely by NASA. The crosshatched lighter areas will continue to be needed for the Army for Army weapons development missions. The new Pershing launching pad is one instance. The Jupiter launching pad will be needed for some of their combat training launches in the future. And one hanger that is up in the industrial area.

I should call to your attention that at the extreme north of the cape you see the two dark boxes there. This is the location of the Saturn dock and the launching pad now under construction. A second launching pad will be needed and this will be just to the north of the one that you see here.

Mr. HECHLER. When will those Saturn launching pads be completed?

Mr. HORNER. There is a 2-year leadtime on building those structures. The first one will be completed early in 1961. The second one, we are requesting funds for in fiscal year 1961, it will be available early in 1963.

(The chart entitled "Army-NASA Transfer of Development Operations Division (ABMA) at Huntsville, Ala., Facilities" follows:)

**ARMY-N.A.S.A. TRANSFER
OF
DEVELOPMENT OPERATIONS DIVISION (ABMA)
AT
HUNTSVILLE, ALABAMA**

<u>LAND</u>	<u>APPROX AMTS</u> 1,200 ACRES
<u>STRUCTURES & EQUIPMENT</u> \$ 100 MILLION*	
ENGINEERING & ADMINISTRATION	460,000 SQ FT
LABORATORIES	320,000 SQ FT
SHOPS	620,000 SQ FT
STORAGE	240,000 SQ FT
TOTAL GROSS SPACE	1,640,000 SQ FT
NO. OF BUILDINGS	98
NO. OF TEST STANDS, PITS, ETC.	69

JOINT USE WITH ARMY

SATURN RIVER DOCK
ARMY TEST FACILITIES
ARMY AIRFIELD
HQ ADMIN. (Temporary Use)
ANTENNA TEST AREA

ARMY TEST TRACK
VARIOUS STORAGE FACILITIES
QUICK-LOOK ANTENNA SITE
LAUNCH EMPLACEMENT
SPECIFIED CAPE CANAVERAL
FACILITIES

*INCLUDES \$14 MILLION AT CAPE CANAVERAL, FLA.

Mr. SIEPERT. As this summary chart shows, the Army will turn over 1,200 acres of land in the middle of the Arsenal for Dr. von Braun's programs. This aggregates some \$100 million in value, of which \$14 million is at the cape. Incidentally at the cape, the ground rules are that these facilities all belong to the Air Force, if they are fixed to the ground. The Air Force holds title, but these facilities would be assigned to our use.

Well, then at Huntsville, NASA ends up with approximately 98 buildings that will be turned over to us and the facilities shown at the bottom of the summary chart are ones for which there will be joint use agreements between Army and us.

Let me conclude by saying that this has been a difficult negotiation in terms of there being dozens of problems to be considered. Each of these problems has to be weighed against whether we might be destroying on the one hand Dr. von Braun's capability to work for NASA, or destroying on the other hand the Army's capability to continue its weapons missions. We have tried to reach a balance of these interests and the cooperation between the two parties, I think, has been remarkable. We believe the plan is realistic and would urge your acceptance and support of it.

The CHAIRMAN. I personally want to commend you for having handled a difficult operation with as little friction as there appears to have been.

Mr. SIEPERT. It has been a real opportunity.

The CHAIRMAN. Mr. McCormack?

Mr. McCORMACK. I have no questions.

The CHAIRMAN. Mr. Fulton?

Mr. FULTON. There is good cooperation between ABMA and NASA at all levels?

Mr. SIEPERT. Excellent cooperation. I would not want you to infer there are no disagreements. The essence of our cooperation depends upon frank talk and we have lots of that.

Mr. FULTON. And the program is progressing satisfactorily according to plan so that the transfer will be made on a planned program?

Mr. SIEPERT. Yes.

We are just now approaching a critical part of the negotiation. We both agreed that we would not do any recruiting of each other's people until every detail of these transfer plans had been settled, and then we would set about an orderly recruitment. We are just now beginning that part of it.

The CHAIRMAN. Mr. Miller.

Mr. MILLER. When we were down there you had a program where young enlisted men who had shown an interest in this were being brought in and assigned and then as they got out of the service were being offered jobs. Will that be continued now or is there any program for continuing that sort of recruitment?

Mr. SIEPERT. We agreed that the long-term question on this, Mr. Miller, should be looked at later. The Army agreed that they would not change the duty station of any of those technical people who are currently working with Dr. von Braun. They will be able to finish out their term with us and we will have a chance to interest them in a permanent career.

Mr. MILLER. It will ultimately dry up a source.

Mr. SIERERT. It will ultimately dry up a source, but there will be an opportunity later for us to take up with the Army whether there would not continue to be a training opportunity of very real value to the Army because they too can develop skilled people this way.

The CHAIRMAN. Mr. McDonough?

Mr. McDONOUGH. No questions.

The CHAIRMAN. Mr. Anfuso?

Mr. ANFUSO. No questions.

The CHAIRMAN. Mr. Chenoweth?

Mr. CHENOWETH. No questions.

The CHAIRMAN. Mr. Sisk?

Mr. SISK. I have no questions.

The CHAIRMAN. Mr. Bass?

Mr. BASS. No questions.

The CHAIRMAN. Mr. Quigley?

Mr. QUIGLEY. No questions.

The CHAIRMAN. Are there any questions at all of anybody?

Well, then the chairman will ask you a question: Now, with this arrangement for a joint use of facilities at different times; will that work satisfactorily or will you ultimately have to have your own separate facilities?

Mr. SIERERT. We anticipate no difficulty on this in any other area except the office space or computation laboratory facilities. We can't in this situation continue a joint use when there is not enough of either to satisfy the essential requirements of both organizations. But with respect to test stands or Cape Canaveral facilities and so forth, I can assure you on this point. No trouble.

The CHAIRMAN. You are in favor of House Resolution 567?

Mr. SIERERT. Yes.

The CHAIRMAN. By the same token you are against House Concurrent Resolution 559, by Mr. Stratton?

Mr. SIERERT. Yes. I most certainly would find that course of action an impossible problem to deal with at this point.

The CHAIRMAN. There are no further questions? If not, gentlemen, we want to thank you very kindly.

There are no suggestions about any changes in the verbiage in the resolutions or anything of that kind?

Mr. SIERERT. No, it is quite clear to us.

The CHAIRMAN. Thank you very much, sir.

We will go into executive session.

(Whereupon, at 4 p.m., the committee proceeded in executive session.)