

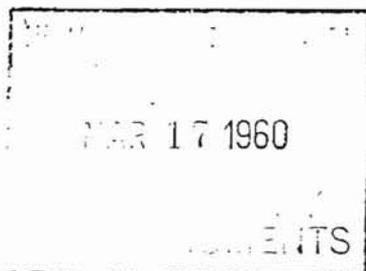
TRANSFER OF VON BRAUN TEAM TO NASA

HEARING
BEFORE THE
NASA AUTHORIZATION SUBCOMMITTEE
OF THE
COMMITTEE ON
AERONAUTICAL AND SPACE SCIENCES
UNITED STATES SENATE
EIGHTY-SIXTH CONGRESS
SECOND SESSION
ON
H.J. Res. 567

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

FEBRUARY 18, 1960

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III

TRANSFER OF VON BRAUN TEAM TO NASA

THURSDAY, FEBRUARY 18, 1960

U.S. SENATE,
SUBCOMMITTEE ON NASA AUTHORIZATION OF THE
COMMITTEE ON AERONAUTICAL AND SPACE SCIENCES,
Washington, D.C.

The subcommittee met, pursuant to call, at 2:06 p.m., in room 235, Old Senate Office Building, Senator John S. Stennis (chairman of the subcommittee) presiding.

Present: Senators Stennis, Young of Ohio, and Martin.

Also present: Kenneth E. Belieu, staff director; Max Lehrer, assistant staff director; Everard H. Smith, Jr., counsel; William J. Deachman, assistant counsel; Dr. Glen P. Wilson, chief clerk; Dr. Earl W. Lindveit, assistant chief clerk; and Elwyn Darden, assistant to Senator Stennis.

Senator STENNIS. All right ladies and gentlemen, the committee will come to order, please. I will ask our friend to close the door over there and keep it closed, please. This is an open hearing and will be open throughout. For the information of those who might be interested, the witnesses so far as known now will be the following gentlemen, in addition to Congressman Stratton, Senator Sparkman, and perhaps Senator Hill. Those from the governmental agencies will be: Dr. T. Keith Glennan, Administrator, NASA; Dr. Herbert York, Director of Defense Research and Engineering, Department of Defense; Maj. Gen. August Schomburg, who is the replacement of General Medaris; Mr. Albert F. Siepert, Director of Office of Business Administration, NASA; and Maj. Gen. John Medaris (retired), former commanding general of the Army Ordnance Missile Command.

I want to say to all the witnesses that we are very glad indeed to have you here and we will proceed with the hearings just as soon as the Chair can make a brief statement for the subcommittee. This afternoon the subcommittee is meeting to consider House Joint Resolution 567 to effect immediately the transfer of the Development Operations Division of the Army Ballistic Missile Agency to the National Aeronautics and Space Administration.

Without objection I will place in the record at this point a copy of the resolution, House Joint Resolution 567.

(H.J. Res. 567 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

The joint resolution before us this afternoon would, through affirmative action by the Congress, allow the proposal to take effect upon enacting into law the resolution, rather than to wait the full 60-day period, which would expire on March 14, 1960.

In listening to the testimony today by administration witnesses, the subcommittee seeks to determine whether there are any difficulties which would be encountered or that are anticipated in carrying out the mechanics of this transfer proposal. The subcommittee is aware that the Department of Defense has made known that it does not object to the adoption of this resolution.

Important witnesses will be heard and their comments will be of interest, not only to the subcommittee, but to the American people.

VIEW OF SECRETARY OF THE ARMY

Also we have the views that were furnished in the letter of February 4, 1960, to Congressman Brooks from Secretary of the Army Brucker, and without objection I will submit this letter for the record. (Letter referred to follows:)

DEPARTMENT OF THE ARMY,
Washington, D.C., February 4, 1960.

HON. OVERTON BROOKS,
Chairman, Committee on Science and Astronautics,
House of Representatives.

DEAR MR. CHAIRMAN: Reference is made to your request to the Secretary of Defense for the views of the Department of Defense with respect to House Joint Resolution 567, 86th Congress, a resolution to effect immediately the transfer of the Development Operations Division of the Army Ballistic Missile Agency to the National Aeronautics and Space Administration. The Secretary of Defense has delegated to the Department of the Army the responsibility for expressing the views of the Department of Defense thereon.

This resolution would give early congressional approval to the transfer plan submitted by the President to the Congress for the transfer of the Development Operations Division of the Army Ballistic Missile Agency to the National Aeronautics and Space Administration.

Since the apparent purpose of House Joint Resolution 567 is to give early congressional approval to the transfer plan submitted by the President and since it is not intended to interfere by forced acceleration with the orderly transition planned for July 1, 1960, the Department of the Army, on behalf of the Department of Defense, expresses no objection to the adoption of the resolution.

This report has been coordinated within the Department of Defense in accordance with procedures prescribed by the Secretary of Defense.

This report has not been coordinated with the Bureau of the Budget because of the committee request that submission of the report be not delayed pending such coordination.

Sincerely yours,

WILBER M. BRUCKER,
Secretary of the Army.

EXCERPTS FROM GENERAL LEMNITZER'S TESTIMONY

Senator STENNIS. On February 4, 1960, Gen. Lyman Lemnitzer, Chief of Staff of the Army, appeared before the Senate Preparedness Investigating Subcommittee and the Committee on Aeronautical and Space Sciences and answered certain questions relative to the position of the Army regarding this transfer. Without objection I will place in the record here the questions and answers on that point.

(Excerpts from February 4, 1960, hearing follow:)

Mr. WEISL. Yes. Now may I change the subject a bit? As you know the President on January 14 submitted to the Congress a plan providing for the transfer of the Development Operations Division of the Army Ballistic Missile

Agency to the National Aeronautics and Space Administration. What is the Army's position concerning this transfer?

General LEMNITZER. I think the answer to your question can best be summed up in the press release which Secretary Brucker and I made on the 21st of October at the time the decision was announced, and I would like to read it.

"The President's decision to ask Congress to approve the transfer of the Army Ballistic Missile Agency's Development Operations Division to the National Aeronautics and Space Administration is intended to preserve this team as a national asset for the national good, and as such the Army wholeheartedly supports the decision. We will make every effort to effect the transfer as smoothly, efficiently, and with as little disruption as we effected the transfer of the Jet Propulsion Laboratory at Pasadena, Calif., from the Army to the National Aeronautics and Space Administration early this year. The objective is to effect the transfer without losing a day in our important national space effort. At present there are very few details worked out, and we will collaborate closely with NASA and the Department of Defense to work them out as rapidly as possible."

We have made great progress along that line since. Going on with our announcement:

"It is with a great deal of pride in the Army contribution to the Nation's space effort that we turn over this portion of the Army Ordnance Missile Command to NASA. Under NASA we are sure this magnificent and loyal group of men, headed by Dr. Wernher von Braun, will turn in many more firsts in the missile and space age to the credit of the United States and the free world."

Mr. WEISL. Thank you. Will the Army be able to continue to discharge its responsibilities in the development of its missile systems if the Development Operations Division of the Army Ballistic Missile Agency is transferred to NASA?

General LEMNITZER. Yes, we feel that we will, and for this reason. In working out the cooperative agreement on which we made a great deal of progress, provisions are included which will make the Dr. von Braun team—the Development Operations Division—available to the Army for such assistance as they can provide.

They still will be responsive, not only to the Army's requirements, but also those of the Navy and Air Force, if they have any.

Mr. WEISL. Have any problems developed thus far in conjunction with this transfer to NASA? Has there been any disruption of Army programs?

General LEMNITZER. So far as I know, there hasn't been an hour's disruption.

Mr. WEISL. There is a resolution before the Congress proposing to make this transfer effective immediately. Is it feasible to make actual transfer to NASA of all facilities, personnel, and funds immediately?

General LEMNITZER. As we testified yesterday before the House Science and Astronautics Committee it is not feasible to make the transfer effective immediately. Such a transfer involving so many millions of dollars worth of equipment and facilities and so many people—there are some 4,200 involved—will require time and we have worked out a plan, which I am prepared to give this committee if they wish it, to bring about a smooth, effective, and efficient transfer, but the transfer will not be completed until about July 1, 1960. This is completely acceptable to the Department of the Army, the Department of Defense, and NASA. We feel that this is the logical way of doing it.

Now, insofar as this particular legislation is concerned, there is one facet which is important. You are dealing with 4,200 men and women at Huntsville, and as long as this legislation remains undecided—in the air, so to speak—and until Congress either goes along with the transfer in accordance with the President's recommendation or not, there is a degree of uncertainty in their minds as to where they stand.

In this respect, the earlier this matter is settled, the better.

From a practical viewpoint, the completion of the transfer, the phasing of all of this equipment, and the changeover in management are going to take until about July 1, anyway.

Mr. WEISL. Do you favor the resolution, that has been introduced in the House to transfer these services immediately?

General LEMNITZER. In answer, Secretary Brucker and I testified yesterday that we have no objection to it.

Senator CASE. Mr. Chairman, when would the transfer be effective in the ordinary course of events, if no action were taken by Congress?

General LEMNITZER. March 14; but it is not so much the actual transfer. What I am trying to explain here is that from the practical point of view the transfer cannot be made on any given date. It more or less will be in process over a period of days, weeks, and months.

Senator STENNIS. You refer to the physical transfer. What you would like to see though is to get the matter settled, so that the uncertainty will be removed.

General LEMNITZER. I would say that the settlement of this matter is important, from the viewpoint of the 4,200 individuals who are involved. This is a great national asset. There has been a great deal of uncertainty as to what is going to happen to it. I feel that the sooner the matter is settled as an issue, the better.

Senator STENNIS. On this matter of the transfer, I thought you spoke very eloquently, General, with reference to the wholehearted support of the Army. You also gave it your wholehearted support in future operations.

General LEMNITZER. Yes, sir.

Senator STENNIS. Now you are pledging not only yourself and your present associates, but you are pledging all the Army to just such a sentiment as that, is that correct?

General LEMNITZER. Yes; that is correct.

Senator STENNIS. I commend you very highly because I know that this is not a small matter.

It has been in the debating stage for years within your circles. I went there for the first time within the last 60 days, and I understand you now have 4,500 personnel, most of whom are located at Huntsville?

General LEMNITZER. At Cape Canaveral we have a few.

Senator STENNIS. The uncertainty to which you refer is not a dissatisfaction, not any backbiting, but it is just anxiety as to what the situation is going to be, where the personnel are going to actually do their day's work, and questions of that kind; is that correct?

General LEMNITZER. That's right.

It will settle what their futures are going to be.

Senator STENNIS. Yes, and many of these are career people. Some are scientists and engineers.

General, I had mentioned the transfer of the Development Operations Division of ABMA to NASA and the very fine wholehearted support by the Army in the transfer and to continued operations, and you said you had pledged not only yourself but the Army as a group, and I commended you very highly for that.

You do not anticipate any entangling trouble in this transfer, do you? The only thing you are concerned about now is to make certain that the personnel will understand where they are going and who they will be responsible to, and kindred matters?

General LEMNITZER. That is correct. We have a deep interest in their personal welfare and the future of the members of this organization, every one of them.

Senator STENNIS. If you will permit me I will go just a little further, because this project will be involved in the authorization bill recommended by the Space Committee. Of course, those funds now will have to be authorized and appropriated for the NASA program.

Are there going to be any complications involved concerning certain supporting services that the Army rendered heretofore? Is this a clear-cut dividing line established already for fiscal 1961 as to those funds?

General LEMNITZER. No; we don't think so. We are working out a cooperative agreement in detail. We have had experience in this regard since we transferred the Jet Propulsion Laboratory to NASA last year.

This cooperative agreement will provide for certain supporting services which the Army will furnish to NASA at Redstone Arsenal because there is no intention to move the facility or the people out of there.

Naturally the Army, since it runs the overall installation, will be called upon to provide certain services such as foundry, perimeter security, and utility services. We have worked out an arrangement whereby they will reimburse us for the cost of those services.

Senator STENNIS. So it won't involve crossing lines in the appropriations under that plan?

General LEMNITZER. I don't think so.

Senator STENNIS. There is some question about which service will occupy certain buildings down there. Have those matters been considered, and do you think they have been straightened out?

General LEMNITZER. I am sure they have. We are both going to occupy the main office building until NASA can make the arrangements which it desires.

Senator STENNIS. Now, if Senator Sparkman is in I will call on him as the first witness. Senator Sparkman? Senator Sparkman is not yet here. Congressman, are you ready to proceed? We have with us Congressman Stratton of the 32d District of the State of New York.

Mr. STRATTON. That is correct.

Senator STENNIS. We are very glad to have you. We will not place any limitation on your time.

**STATEMENT OF HON. SAMUEL S. STRATTON, A REPRESENTATIVE
IN CONGRESS FROM THE 32D DISTRICT OF THE STATE OF NEW
YORK**

Mr. STRATTON. Thank you very much, Mr. Chairman.

I will try to be as brief as I can, Mr. Chairman and members of the committee. I want to express my appreciation for the opportunity to appear here this afternoon briefly in opposition to House Joint Resolution 567.

The Founding Fathers, in creating the United States Senate, are reported to have visualized its function as serving as the saucer in which may be cooled the hot tea of the House of Representatives. In practice sometime it works the other way round. But it is in this sense that I am appearing here this afternoon. The resolution which I am opposing passed the House the other day by an overwhelming vote of 92-2. Yet I do not believe this lopsided majority represents the full story. In fact, more than one Member has claimed the distinction of standing up alongside me to oppose it, and I have been somewhat surprised at the number of my colleagues who congratulated me on my opposition to the resolution and assured me they agreed with my position, but somehow failed to support it with their votes. In fact, never did an action receive so many favorable commendations and so few hard votes on the line.

Yet actually, Mr. Chairman, some of the Members of the House who favored this resolution 10 days ago have already indicated publicly that they have changed their mind, and I believe that this committee can serve a very useful purpose in giving not merely this resolution, but the reorganizational move with regard to our Nation's space effort to which it refers a far more detailed and penetrating analysis than was given by the House of Representatives.

Mr. Chairman, this resolution would not only place the Congress on record in favor of President Eisenhower's action in transferring the Von Braun rocket development team from the Army Ballistic Missile Agency to the civilian National Aeronautics and Space Administration, but it also purports to waive the 2-month waiting period now provided for in the basic space legislation and permit this trans-

fer to take place immediately. Actually, Mr. Chairman, this apparent speedup is illusory. As the discussion in the House made clear, the transfer actually cannot go forward in any event until July 1, 1960, which means that this resolution, at least insofar as it represents any speedup in the President's proposed action, is more of an emotional and rhetorical action than anything else.

Mr. Chairman, I believe that emotion, however understandable, is a dangerous one, and since time is not so immediately involved, believe the situation warrants instead a deliberate and careful review.

In the present great debate now going on with regard to our national defense posture, there is one fact which has impressed me profoundly, and that is that very little which we do today or even in this session of Congress will have much effect on the result for another year or two. In other words, if we are in any peril today it is not because of what we do or fail to do in this session of Congress, but because of decisions that were made two or three or even more years ago. Mr. Chairman, I oppose this resolution not because of what it may accomplish in the immediate future, but rather because of the serious peril to our defenses that it may cause 5 or 10 years from now. Because this resolution can have such devastating long-range effects, because it is the first hesitant step down a road that could turn out to be disastrously wrong to follow, I believe this Congress has a profound responsibility not to legislate in haste or as a result of emotion, but to examine the situation most carefully.

There are, as I see it, two things fundamentally wrong with the President's decision to switch the Development Operations Division of the Army Ballistic Missile Agency—the so-called Von Braun team—from the Department of Defense to NASA. First is that this transfer is predicated upon an assumption which I believe to be dangerously false; namely, that it is possible to draw a meaningful line of separation between the military and civilian aspects of missile and rocket development. What this transfer does, and what this resolution would bestow the congressional stamp of approval upon, is the notion that it makes sense to create one machinery of technical development for rockets and missiles to fly, let us say 5,500 miles, and an entirely different team to develop those which will fly more than 5,500 miles. Gentlemen, this just can't be done.

This transfer is based on the idea that missiles are for military purposes, but space at the moment has only civilian urgency. Does anybody really believe that the exploration of space does not have the most profound military importance? Does anybody really believe that if the Soviets beat us to the establishing of a full-fledged reconnaissance satellite or a so-called space bomber or space platform mounting a death ray—things that can no longer be considered fantastic—that this will not have profoundly altered the shape of our national security? Of course, space has military implications, and only if we recognize its implications today, and make decisions today which will see that the potentialities of space are not turned against us 5 or 10 years from now, will we have fully exercised our constitutional responsibilities for the defense and security of this Nation. In my judgment any effort to freeze the military service out of full-scale participation in the Nation's space effort, or to leave it attached only by the inadequate device of coordinating committees and liaison

officers, will most certainly lead in the future to a massive space gap alongside of which the present missile gap will prove to be very small potatoes.

The second reason why I oppose this transfer, Mr. Chairman, is that I believe it will have the practical effect of disrupting a winning combination at a critical time in the space race, and turning over this important assignment from a group that has demonstrated it can do the job to one which in my humble judgment has yet to demonstrate its capabilities in this field. Let us not forget that it was the Army Ballistic Missile Agency under the command of General Medaris that put up the first American satellite in 84 days, 6 days less than General Medaris had predicted he could do the job. This morning I had the privilege of sitting in with the House Committee on Science and Astronautics when General Schomburg, who relieved General Medaris as commanding general of the Army Ordnance Missile Command, testified on the effect of this transfer. General Schomburg, although obviously hesitant to answer questions in this field, said that what worried him about the transfer action was that in switching von Braun from the Army to NASA it was impossible to switch along with him the intricate network of administrative and logistic procedures which had been developed in the Army to support the von Braun team, and without which the team could not function at full efficiency. This machinery, in other words, will have to be duplicated by NASA before we are even as well off as we were before the transfer.

Even the President in his January 14 message to Congress requesting our approval of the switch, promised he would make every effort to prevent "the dislocation or disruption of all going missile or space vehicle projects," a sentence which in itself is clear recognition of the fact that no such transfer can take place without some disruption.

Mr. Chairman, the thing that disturbed me most about this resolution in the House was that it was approved by the committee and by the House without the full story ever having been presented. Of course, I don't expect the members of this committee to be very much impressed with the comments of a very junior member of the Armed Services Committee of the body at the other end of the Capitol. What I am concerned about is that this distinguished deliberative organization should not act without having carefully heard the testimony of those who are best qualified to speak.

Only yesterday Lt. Gen. Arthur Trudeau, Chief of Research and Development for the Army, testified to the House Space Committee as follows:

Question. Can you see any good coming at this particular time of the transfer of Saturn to NASA?

Answer. Well my answer, frankly, is from a technical standpoint: no.

Question. Do you think the transfer of Saturn to NASA will speed up the development of the project?

Answer. No.

And just this morning General Medaris, who probably knows this subject more intimately than any other individual, had this to say:

We are trying to divide the indivisible . . . the military objectives and the civilian programs, with very limited exceptions, are and must continue to be, derived from the same physical and manpower resources. The Von Braun group has been supported extensively by a nationwide Army organization which must continue for the performance of Army missions, regardless of whether the

Von Braun group goes or stays. You cannot expect to create a new and separate system to support them in terms of finance, accounting, purchasing, inspection of purchased products, contracting for services, and the project of general logistic resources and facilities, without spending additional money . . . NASA must necessarily proceed to create its own system for all of these things, a system which already exists in triplicate, Army, Navy, and Air Force . . . If we are to compete successfully without bankrupting the country there must be a fundamental organization or unification of the entire missile and space program.

That is what General Medaris had to say this morning, and he said even stronger things in Missiles and Rockets magazine a couple of weeks ago. Yet the House of Representatives gave its stamp of approval to a move that would separate rather than unify our space program without ever hearing General Medaris on the record. I might say, Mr. Chairman, that at least one member of the House Space Committee admitted in public this morning that he would never have voted as he did if he had had the benefit of General Medaris' and General Trudeau's testimony beforehand.

Why is the change being made? Why did Dr. von Braun himself indicate that he was "satisfied" with the arrangement? The answer, Mr. Chairman, is that Dr. von Braun's team found that it was unable to get from the administration while under Army control the funds it believed it needed for outer space development work. Because these funds were to be made available through NASA, Dr. von Braun had no alternative unless he wanted to commit operational suicide. As General Medaris himself phrased it in testimony this morning:

With the Army's total inability to secure from the Department of Defense sufficient money or responsibility to do the space job properly, we found ourselves in the position of either agreeing with the transfer of the team or watching it be destroyed by starvation and frustration.

But this is a purely temporary and immediate situation. It may be well for Dr. von Braun to accept this immediate advantage rather than face the extinction of his all-important work, but it would be most unwise for this Congress to forget about the future implications of the program and go along with what amounts almost to a kind of financial blackmail.

Mr. Chairman, I believe there is an even more fundamental issue posed by this resolution, and that is whether the Congress of the United States is to exercise its constitutional responsibility in this important field or whether it is to abdicate it completely to the Executive. I don't think it is enough for us to say, as some Members of the House have said to me, that we have to go along with this switch even though we know it isn't a good arrangement, or else Dr. von Braun and the whole space program will be starved to death. I think we have a responsibility of our own to survey the space program and to come up with our legislative decision as to how it should be organized and carried out. On the basis of General Medaris' testimony and the testimony of other informed individuals, this program proposed by the President, and to which we would be giving the stamp of approval if this resolution were passed, is not only inadequate but disastrous.

I therefore recommend, Mr. Chairman, that the committee disapprove of House Joint Resolution 567, that it undertake its own inquiry and bring before it General Medaris and other witnesses in this field, as it will do this afternoon, and that it proceed to work out what I

believe to be the genuinely urgent requirement of the moment, that is, not a space program that is foolishly and irreparably separated between the civilian and the military, but a program that will be a joint, unified, civilian-military effort, and one which will have the same kind of dramatic and successful results as the Manhattan project which first developed the atomic bomb. Thank you very much, Mr. Chairman and members of the committee.

Senator STENNIS. Thank you, Congressman Stratton. You have made a very complete statement and have clearly brought out some strong points. Don't be discouraged because you stood almost alone. A few years ago a resolution passed the Senate and I was the only one that voted against it. Someone out West wired me congratulating me and said, "Now I don't know whether you gave your reason or not, but if you haven't don't give it." He said, "I might disagree with your reason, but I like your courage." So you have given us both.

Mr. STRATTON. Thank you very much.

Senator STENNIS. And you have some very good points.

Mr. STRATTON. Thank you, Mr. Chairman. I have had some experience in being on the short end and when I was the mayor of a city in which the city council was all on the other side.

Senator STENNIS. Well, that didn't deter you. Senator Young, do you have any questions?

Senator YOUNG. I have a few. Isn't it an accepted fact that this transfer will take place?

Mr. STRATTON. Well, actually Senator, I believe that the full transition has not yet taken place. The title will not pass or the keys will not be handed over until the 1st of July. As far as the President was concerned the decision was made in the executive department to go ahead with it, but I don't believe—and on that point General Schomberg can give you more details than I—I don't think the whole transfer has been made, and in any event, the question is whether we as the Congress want to approve this action as positively and affirmatively as this resolution would do.

Senator YOUNG. Had the resolution that we are considering not been passed in the House of Representatives, would it have been necessary for us to pass the resolution, in your judgment?

CONGRESSMAN STRATTON INTRODUCED THE RESOLUTION OPPOSING THE
TRANSFER

Mr. STRATTON. Well, sir, it would not have been necessary. I actually introduced House Concurrent Resolution 559 which would have put Congress on record as disfavoring the President's transfer plan.

Senator YOUNG. But it is a fact, is it not, that many thoughtful people in this country believe that President Eisenhower made a mistake in not making this transfer even before I was elected to the U.S. Senate?

Mr. STRATTON. Well, Senator, I think there is a good deal of emotion involved in this. I think that perhaps some people are not as familiar as are you gentlemen who have had more acquaintance with the details of this subject about just what is involved and I think that they think that this is something that will be good. It sounds good. They want to do anything they can to help Dr. von Braun

and they think that by passing this resolution we will be helping the whole effort along. Naturally we all want to see what we can do to push space along but I feel myself very sincerely for the reasons indicated that this move will in the long run actually be detrimental rather than helpful.

Senator YOUNG. I don't want to ask very many questions. You don't believe, Congressman, that the Army should be the sole judge of our space effort, do you?

Mr. STRATTON. I am not suggesting that we want to exclude the civilian aspect of it, Senator, but I feel that the reverse would be very dangerous, if we were to assume that you could operate a space program without the Army or the Navy or the Air Force as this proposal is doing. I think the military applications are tremendous. The Soviet are not separating them. They have got their boys in civilian clothes but they are all really generals in the Army at the same time and I think they recognize the military potential of this.

Senator YOUNG. You stated a short while ago that you feel there cannot really be a line of separation between the military and the civilian aspects of the missile and rocket development and space exploration.

Mr. STRATTON. That is correct, and the key word in there is development, Senator. In other words, you cannot develop on a separate basis rockets which would be used for civilian purposes and rockets which would be used for military purposes. Of course there is a difference in the application but the point is that there is the same "oomph" that goes into both. You cannot train 3-base hitters with one set of coaches and train home-run hitters with another set of coaches. Both use the same technique. I think it is a mistake to assume that there is a wholly different technique just because one result travels further than the other.

Senator YOUNG. Is it really your conclusion that the great civilian agency which is functioning so well—NASA—and that the Air Force and the Navy should be shut out from this development and all of it placed in the Army?

Mr. STRATTON. No, no. My suggestion is that we have a joint civilian military organization. I think that instead of going along with the President on what is a very dangerous move, that we ought to sit down in the time that remains between now and the 1st of July and come up with a joint civilian and military organization so that the military will have full participation in this rather than being tied in, as General Schomberg indicated this morning, simply by the very tenuous arrangement of liaison officers and coordinating committees which don't work out very satisfactorily.

Senator YOUNG. Well, since we have so much interservice rivalry—and I would like to put a halt to that—don't you think it is better to give the responsibility for space development to NASA, our civilian space agency?

Mr. STRATTON. I would like to see the program unified with both the civilian and military combined. I think the Army has done a good job. It is not a question in interservice rivalry. I don't think NASA has proved itself. I don't think we can afford the lag that will come from breaking up a winning combination, and to try to duplicate in NASA what the Army did and hope maybe they will do it as well.

Senator Young. This is not a matter of transferring it in its entirety to an inadequate organization, is it?

Mr. STRATTON. No; what I was trying to express—and I think that the military gentlemen will go into it in more detail—is that they are actually transferring the bodies of Dr. von Braun and his group and some of his launching pads and other equipment. But his group has been backed up by a very elaborate logistics system in the Army which is absolutely vital—equipped to buy the parts and inspect them and all the rest. This system will not be transferred. This stays in the Army. We have already got three of these systems in the three services. Why set up another one and put it all in quadruplicate?

SENATOR YOUNG FEELS TRANSFER SHOULD HAVE BEEN MADE IN 1958

Senator Young. May I say, finally, that I admire your intelligence and the force of your argument but I am afraid that I completely disagree with the views you have expressed and I personally believe that President Eisenhower is to be criticized for not having made this transfer in October of 1958 instead of at the present time.

Mr. STRATTON. Thank you for your kind comments, Senator. I am sorry that I cannot persuade you.

Senator STENNIS. Thank you, Senator Young. Thank you, Congressman Stratton, for coming in and giving us your very fine views. You don't need to rush away. You may sit up here with us if you wish.

Senator Sparkman, we are glad to have you with us. You represent the State of Alabama where almost all of this great agency is located. We will be very glad to hear from you, sir.

STATEMENT OF HON. JOHN J. SPARKMAN, U.S. SENATOR FROM THE STATE OF ALABAMA

Senator SPARKMAN. Thank you very much, Mr. Chairman and gentlemen of the committee. I do not have any detailed statement to make. Let me say I should like to have the privilege of sitting through the entire hearing, but unfortunately I have a meeting of the Foreign Relations Committee at 3 o'clock that I must attend.

SENATOR SPARKMAN FEELS UNCERTAINTY SHOULD BE DISPELLED

Mr. Chairman, my position is simply this, without going into any of the details or the technicalities of the arrangement that has been set up. As you have stated, I represent the State of Alabama, and I live in Huntsville where this installation is located. The decision has been made by the executive branch of the Government to the effect that it would be wise to make such a transfer. We people in that area were very happy with the Army and with the association that we had with them during the time that they were directing the installation. The people who comprise the so-called von Braun team are citizens of this country. They have all been naturalized and they are citizens and homeowners and many of them own homes in my hometown of Huntsville. Our association with them was very pleasant. We were getting along fine with the Army. The decision was made that there ought to be a change. The change was announced to

Congress by the President and had been announced to the country even prior to that time. I have seen some of the effects of uncertainty as to what was going to happen.

For instance, Senator Young mentioned that this transfer was under consideration earlier and perhaps should have been made then. I will not argue the merits of whether or not this should have been done then. But I do know that from that time on there was a tremendous amount of uncertainty as to what was going to happen and it was having a bad morale effect. I don't think there was any question about it on the personnel who worked down there at that installation and the effect it has had upon the members who make up this so-called team. I believe that whatever is going to be done ought to be done quickly. Since this has been decided upon, I think it would be wise if the transfer could be quickly made and not dragged out. I think it would be decidedly to the advantage of the operation of the agency and to the morale of the people connected with it to have it effected as soon as possible.

Senator STENNIS. Regardless of how long it may take to make the actual transfer, you think it should be known with certainty?

Senator SPARKMAN. Yes; I do.

Senator STENNIS. So that everyone will know that the transfer is definitely going to take place.

Senator SPARKMAN. Yes; I think it will mean a great deal to the personnel and I think it will mean a great deal to the program.

Senator STENNIS. Is there anything else you want to say?

Senator SPARKMAN. That is all I have to say.

Senator STENNIS. We like to have you here. Are there any questions, Senator Young?

Senator YOUNG. No questions.

Senator STENNIS. I understand that Senator Hill has been detained. Do you feel you can speak for him?

Senator SPARKMAN. Senator Hill and I were together earlier. He was not able to come along. While I cannot speak for Senator Hill, I feel, however, his sentiments in this matter are pretty much the same as my own.

Senator STENNIS. Thank you, Senator. We would be glad to have you stay with us. You need not stay, however, if it is necessary for you to leave.

Senator SPARKMAN. Thank you.

Senator STENNIS. Dr. Glennan, will you come up now? Dr. York, General Schomberg, General Medaris, and Mr. Siepert—will you gentlemen come and sit near the witness table.

Gentlemen, it is the intention of the subcommittee to conclude these hearings this afternoon unless something unusual develops. Everyone will have as much time as they need but we do want to finish as soon as we reasonably can.

Do you have anything to say, Senator Young?

Senator YOUNG. No.

Senator STENNIS. Dr. Glennan, we are delighted to have you here, sir. I understand that you have a prepared statement and you may proceed now in such way as you see fit.

STATEMENT OF DR. T. KEITH GLENNAN, ADMINISTRATOR,
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

DR. GLENNAN. I welcome this opportunity to discuss briefly the President's plan, transmitted January 14 to the Congress, relating to the transfer to the National Aeronautics and Space Administration of the Development Operations Division of the Army Ballistic Missile Agency (ABMA) at Huntsville, Ala., and certain other Department of Defense functions.

Authority for the President's action is contained in section 302 of the National Aeronautics and Space Act of 1958. Paragraph (c) of that section provides, however, that—

After December 31, 1958, no transfer shall be made under this section until (1) a full and complete report concerning the nature and effect of such proposed transfer has been transmitted by the President to the Congress, and (2) the first period of 60 calendar days of regular session of the Congress has expired without the adoption by the Congress of a concurrent resolution stating that the Congress does not favor such transfer.

Respecting the transfer of the Huntsville group from the Army to NASA, unless the Congress, by concurrent resolution adopted by March 14 or thereabouts, says that it opposes the transfer, it will take place.

It is my further understanding that the prime reason underlying the proposal contained in House Joint Resolution 567, titled "To effect immediately the transfer of the Development Operations Division of the ABMA to the NASA," was to provide for the means whereby the Congress would be taking affirmative action, rather than merely passive action, in this transfer matter.

Hardly less important is the boost in morale of the highly trained Huntsville personnel that will result from such action. These able people have, understandably, been uncertain about the future. Passage of the joint resolution will clear the air.

The following comments are in support of both the transfer plan itself and the above-mentioned joint resolution.

The Space Act established NASA as a civilian agency to plan and conduct space exploration for peaceful purposes, reserving to the Department of Defense in an "except" clause—

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

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 continues to be responsible for defending the United States in every medium or environment best suited for that defense—on land, on and beneath the oceans, in the air—and now in space. But, as vital as this kind of activity in space by the armed services certainly is, it should not be mistakenly considered as part of the national space exploration program. This latter—space exploration—is NASA's responsibility as a matter of law.

As we look to the future, NASA's responsibilities will call, most certainly, for very powerful launch vehicles. At present, there is no clear military requirement for rocket boosters of the 1 to 1.5 million pound class. These considerations led to the decision of the Presi-

dent, in October 1959, to give to NASA full responsibility for the development of high thrust rockets and the launch vehicle systems that would use these rockets. This decision, concurred in by the Secretary of Defense, meant that the responsibility for Saturn was moved to NASA, first through our taking over technical direction of this space launch vehicle system, and now, through the President's plan to transfer the von Braun team at Huntsville.

Parenthetically, I should note that needs may well develop in the future for the use of large launch vehicles of the Saturn class, or even larger, for defense purposes. To prepare for such a possibility, the President has instructed NASA to be fully responsive to specific Defense requests in this area. And, of course, Defense and NASA will continue with a coordinated program for development of space vehicles which use current IRBM and ICBM rocket engines and growth versions of those missile systems.

Many times, I have noted that there are three ingredients essential to NASA's accomplishment of its responsibilities as stated in the Space Act:

- (1) A program designed to achieve the end objective of manned flight into space whenever and wherever desired;
- (2) An organization of men and women of specialized talent who are highly motivated and dedicated to the concept of exploration into the unknown; and
- (3) The funds necessary to the urgent prosecution of the program.

It is the second of these three ingredients—the organization of specialized talents—that we are considering here today.

We at NASA were given a huge head start in this business of organizing the team to do the space job assigned us by the inheritance of nearly 8,000 scientists, engineers, and supporting personnel from the National Advisory Committee for Aeronautics. Thus, we were provided with first rate research facilities being used to carry out significant research programs on a broad front in both aeronautics and space. More important, we acquired experienced and talented people who believe, very earnestly, in what we are trying to do, and who feel the urgency with which we must do our work.

There were, however, research, development and operational areas in which the old NACA team was not working and in which NASA had to become deeply involved to accomplish its total mission. These included electronics, guidance, launch vehicle systems, etc.

There were two ways we could proceed. One would have been to start from scratch, selecting sites, building and equipping new facilities, and then undertaking the painful process of staffing new laboratories. This course would have been very expensive; it would have meant raiding the personnel of other organizations; most seriously, it would have meant long delays in getting ahead with our job.

The other avenue—the one we chose—was to integrate into a single hard-hitting organization, the facilities we already had with others doing outstanding work in the areas where we needed competence. In this manner, we secured the talents of the Jet Propulsion Laboratory at Pasadena, Calif., which is operated by the California Institute of Technology. Similarly, we gained the high order of competence

represented by the 300 or so people who had been working on the Vanguard and other projects under Navy direction.

But we continued to need a highly imaginative and competent engineering and design group, capable of serving as an integral part of the NASA organization in the planning and executing of both short and long-range programs in the development of launch vehicle systems. We wanted such a group also to monitor contracts with other governmental agencies and with industry, and to provide necessary ground testing and assembly capability, and finally, to supervise space vehicle launching operations for NASA.

The requirements we sought to satisfy are possessed by the von Braun group at Huntsville.

With the transfer to NASA of responsibility for development of the large-thrust launch vehicle systems—including Saturn which von Braun's group is working on—and with the completion of work on certain military projects, Defense and Army agreed last October on the desirability of the transfer to NASA of this group and the facilities it is using.

The transfer will be accomplished without interruption of the vital work on Saturn now in progress. As a matter of fact, the detail arrangements are being worked out between Army and NASA in a spirit of complete harmony and cooperation. Since the technical direction of the Saturn program was assigned to NASA, the project has been given the highest national priority, the upper stage configuration has been agreed upon, work is being accelerated with increased overtime wherever needed, and a substantially larger budget for fiscal year 1961 has been requested by the President.

At the end of the present fiscal year—again assuming congressional approval for this transfer—the National Aeronautics and Space Administration will have organized into one Government agency what I am confident will stand as an outstanding collection of scientific, technical, and supporting personnel. With the continued support of the administration and the Congress, NASA will carry out—purposefully, vigorously, and with a sense of dedication—the space exploration program of the United States.

With confidence we will meet any competitive challenge in the area of space that this Nation faces today, or that it may face in the future. Thank you, Mr. Chairman.

NASA ORIGINALLY REQUESTED ABMA TRANSFER IN 1958

Senator STENNIS. All right, Doctor. I have a few questions here which have been prepared by members of the staff. I believe your original agreement with the Army Ballistic Missile Agency and with the Department of Defense goes back to December of 1958; is that correct?

Dr. GLENNAN. We had an agreement in December of 1958 relating to the transfer of the Jet Propulsion Laboratory, which was accomplished by Executive order dated December 3 of that year, and in a separate piece of paper signed by the Secretary of the Army and myself, arrangements were made for the Army Ballistic Missile Agency to be, and I believe the words were, "completely responsive to the requirements of NASA."

Senator STENNIS. We took this up with you last year in our hearings with reference to your authorization request.

Dr. GLENNAN. Yes, I remember.

Senator STENNIS. And you testified at that time about having made an earlier request for the transfer of ABMA to NASA. Is the current transfer plan, that we have before us today, substantially what you originally asked for?

Dr. GLENNAN. Yes, Mr. Chairman. As a matter of fact, it is a little bit more than we had asked for earlier.

Senator STENNIS. Would you bring us up to date, Doctor, on the developments in connection with this transfer from the time of your original efforts in the latter part of 1958?

Dr. GLENNAN. We effectively withdrew from the argument in December of 1958, or late November of 1958, when the Secretary of the Army and the Secretary of Defense, as I recall it, made the statement that the defense of the Nation required the retention of the Development Operations Division by ABMA. I have always maintained that the defense of the Nation should take precedence over space exploration, and, accordingly, it was not proper, in my opinion, to continue seeking that transfer, so we withdrew and we did place at ABMA, I think it is something in the neighborhood of \$30 million worth of work during the course of the past year, some portion of which will now be completed in this current calendar year. We did not renew the request for this transfer, as a matter of record.

The discussions which led to our being involved again; and we wanted to be involved—and I don't mean by that statement that we did not have this continued interest; had to do with the future workload at Huntsville in the missile business—there was a lack of a clear military requirement for the Saturn booster, which was tending to become the major portion of the workload in the Development Operations Division, as I understand it.

Accordingly, when the Secretary of Defense, then Mr. McElroy, asked whether or not we continued to have an interest in the Development Operations Division, I said most certainly we did. I believe this is the background for the situation as of this time.

STRICTLY MILITARY WORK AT ABMA WAS DIMINISHING

Senator STENNIS. What really led to this change, and made the necessity for the transfer more urgent, was the demand for this big booster; is that right?

Dr. GLENNAN. What permitted the situation to be, I believe, was the fact that the work on the Jupiter and the Redstone was essentially phasing out, I believe, as of June of this year, the end of this fiscal year, it is effectively finished. The work on the Pershing, as General Medaris and General Schomburg can tell you more clearly than I, is substantially not an in-house contract with the Martin Co., but the Development Operations Division of ABMA is monitoring this program and providing a substantial part of the guidance control mechanisms themselves.

The workload was facing a very substantial dropoff. I saw the curve in General Medaris' office. The Saturn was to be funded at a rate in the Defense Department budget of about \$140 million. This

did not begin to take up the slack. The kinds of contracts that NASA could place at ABMA—assuming the Development Operations Division continued as a part of the ABMA—would not have been substantially larger than were assigned during the course of the past year.

So I think that the situation really was that the team was running out of work. Without the military requirement for this substantially higher thrust booster, the ability of the military to place larger sums of money at the disposal of Dr. von Braun and his group was, I think, limited.

Senator STENNIS. You have been basing your actions on the assumption that the transfer would be approved; have you not?

Dr. GLENNAN. We have no other alternative, Senator Stennis.

Senator STENNIS. Have you run into any special difficulty in connection with it?

Dr. GLENNAN. None whatsoever. I have had several luncheons with Secretary Brucker together with one or two of his associates, Major General Schomburg and Lt. Gen. J. H. Hinrichs, and their attitude throughout has been the utmost in cooperation.

I am sure that there have been some disagreements in negotiations, but agreements have been satisfactory—those disagreements have been satisfactorily ironed out—and it is my present conviction that we need not worry about disruption in either our program or the Army's program.

Senator STENNIS. What are you going to do about support personnel? Surely you are going to need some nontechnical people—management and housekeeping people and the like. How are you going to meet that requirement, that demand?

NASA WILL RECRUIT 815 MANAGEMENT AND SUPPORT PERSONNEL FROM THE ARMY

Dr. GLENNAN. We will meet it in a variety of ways. In the first place, we tend to use, where we can, the services of the military and the plants in which they have large and compelling contracts. We use their people to assist us in monitoring those contracts. We do not effectively duplicate the services in every line of endeavor. We are faced with the problem of providing for support to the 4,300 scientists and technicians, engineers of Dr. von Braun's group.

We estimate that there will be 1,200 people required; 815 of those will come from the Army at Huntsville. The balance we will recruit where we may. I see no problem.

Senator STENNIS. I don't want to break your chain of thought. Who will pay the 815 that come from the Army?

Dr. GLENNAN. We will.

Senator STENNIS. You will pay them, but they will continue to be in the Army?

Dr. GLENNAN. No, they will be on our payroll, but come from the Army.

Senator STENNIS. They will not be in the military service?

Dr. GLENNAN. No. They are 815 people presumably who have been working in these same areas for the Army.

Senator STENNIS. Are they largely technicians? Are they scientists?

Dr. GLENNAN. These are on the business management and plant support side, sir. The Development Operations Division is largely a division of technical people. It was supported in its business administration, plant, and housekeeping maintenance, and its contract negotiations and management by other elements of the Army.

Senator STENNIS. What about the facilities—a place for them to work?

Dr. GLENNAN. Those facilities are being transferred to NASA. The land on which they stand remains in the Army, with a long-term certificate of occupation or lease or what you will.

NASA IS GETTING WHAT IT NEEDS

Senator STENNIS. Are you getting what you need in this respect?

Dr. GLENNAN. We are getting what we need. We have had some concern over only one building, as I recall it, and two matters about which Mr. Siepert will probably speak more effectively later.

Senator STENNIS. All right.

Dr. GLENNAN. One was the office facilities, and the other was the computation facilities. I think we will find it necessary to provide a new office building, and the Army will find it necessary to create its own computation facilities.

In the meantime, each is helping the other in the provision of services and space.

Senator STENNIS. Well, on the Armed Services and the Appropriations Committees we have been authorizing and appropriating money for buildings because of this program at Huntsville; and if you are going to take over the operation, why, certainly, you have got to have facilities, administration buildings, and so forth.

Dr. GLENNAN. The only new building we are concerned about as a result of the transfer is the administration building. I believe we are providing in our fiscal year 1961 budget request for an additional two or three buildings in order to get on with the Saturn program. This requirement is connected with an accelerated Saturn program.

Senator STENNIS. You have this transfer agreement worked out, then, and it has been completely agreed to us to people and as to facilities; is that correct?

Dr. GLENNAN. I believe that is correct. As to the numbers of people, Mr. Chairman, the Army will obtain some recruitment of people in reverse, because up to 350 of the Development Operations Division people will be offered an opportunity to continue work in the Army on the Pershing program and other elements of their program, with complete agreement on our part.

We presently have the technical responsibility for the Saturn program. When this transfer becomes effective, if it becomes effective, the Saturn money that remains in the current fiscal year becomes ours to administer immediately. We, instead of ARPA, will transfer it to the Army and ask the Army to manage that installation until July 1. In the meantime we will be developing our own procedures and our own management staff to carry it out after July 1.

Senator STENNIS. I have had more questions about this matter of personnel than any other phase of the program. I remember last year—and I am looking at your testimony before this subcommittee on February 10 of last year—where you said, and I quote:

If, however, our experience demonstrates the necessity for us to develop from scratch the in-house capabilities we have hoped to acquire them from ABMA, then we will need to enlarge our personnel complement by as much as 2,500 employees, and, of course, will have to provide the new facilities needed for their use.

As I understood your figures a while ago, there are 4,300 people, and then you had 813 more?

Dr. GLENNAN. That is right.

Senator STENNIS. 813 in addition to the 4,300. Now, what is your explanation, Doctor, of the difference between that 2,500 and the 4,300 plus 813?

SATURN PROGRAM CREATED NEED FOR INCREASED PERSONNEL

Dr. GLENNAN. Mr. Chairman, the Saturn program was not a responsibility of ours at that time, and the bulk of the personnel, well over half the personnel, will be involved in the Saturn program. This in itself accounts for the difference.

We have, in the meantime, found our program developing at such a rate under the various pressures that have been on us, self-generated, if I may say, congressionally generated and otherwise, to the point where we are asking for almost the money that we had last year, sir.

Senator STENNIS. I know you have, but you are getting the so-called von Braun unit here almost intact, and, as I understand, that involves almost 4,300 people.

Dr. GLENNAN. That is right.

Senator STENNIS. And you have got 813 additional people for the support of this?

Dr. GLENNAN. They are presently employed at Huntsville, Mr. Chairman. These will be the transfers. Our total requirement for management support is 1,200 people.

Senator STENNIS. Yes, I know; but the difference between 2,500 and 5,113, there is quite a difference there.

Dr. GLENNAN. Yes, sir.

Senator STENNIS. And it is due to the Saturn program and the stepped-up program, is that right?

Dr. GLENNAN. It is that plus the fact that Saturn today is a very different beast than it was a year ago. Saturn a year ago was simply the base booster, a clustering of eight rockets. It now is a program which will involve, no doubt, the expenditure of something over \$800 million, and the provision of a substantial amount of new technique. This has all been put under the responsibility, under the direction of Dr. von Braun by our Administration.

In addition, they are taking responsibility for certain other elements in our launch vehicle program; and it is our intention ultimately, when they are able and when they can do it sensibly, to transfer to them full responsibility for the total program.

SENATOR STENNIS QUESTIONS ADEQUACY OF ADDITIONAL FUND REQUEST FOR SATURN

Senator STENNIS. My time is about up here, but you are the one we have to look to now. The President recently requested additional funds for Saturn, did he not?

Dr. GLENNAN. Yes.

Senator STENNIS. Is that enough? It is a recent program and I remember General Medaris said, when Sputnik I went up, that unless we had a 1.5 million pound thrust in 2 years, that we would lose the war.

Dr. GLENNAN. Well, we lost the war, then.

Senator STENNIS. And I emphasized that to show you how urgent it was then, and it is still urgent.

My question is. What about the additional funds that the President has requested? Do you not need more?

Dr. GLENNAN. This will be \$236 million, as I recall it, totally; and enters into the Dr. von Braun superthrust booster program, and this is an amount of money which he has agreed makes the most sense for this coming year. It is \$90 million higher.

Senator STENNIS. It is what?

Dr. GLENNAN. It is \$90 million higher than the rate at which the program was estimated to be funded. You see, in fiscal year 1960 the program was funded at \$70 million. It will be \$230 million in fiscal year 1961, provided the Congress approves our request.

Senator STENNIS. Well, I know you are not evading the question intentionally, but, in all deference to you, you have not answered the question yet, as to whether that is enough.

Dr. GLENNAN. From my standpoint, it is enough.

Senator STENNIS. All right, my time is up.

Senator Martin, do you have some questions?

SCOPE OF NASA'S DEVELOPMENTAL CAPABILITIES WILL BE INCREASED

Senator MARTIN. Dr. Glennan, when you take over the functions heretofore handled by the military at Huntsville this will give you practically complete coverage of all the developmental work in the space field?

Dr. GLENNAN. That is right, Senator Martin.

Senator MARTIN. Will you undertake the operational functioning also, in the testing of these missiles and satellites?

Dr. GLENNAN. Senator Martin, we will have a full range of activities, including the testing of the rockets and the launch-vehicle system, the launching of satellites and the acquisition of data from them, and the reduction of that data and its analysis. Were our studies to result only in the development of an operational satellite, but for weather forecasting or for navigation or for communications, I do not think that we would be the agency to operate those systems.

We would have provided the information on which operational systems could then be developed.

Senator MARTIN. Then the operational function would be taken up by some other appropriate agency, not NASA?

Dr. GLENNAN. I would think so. It is possible that if indeed a weather satellite system turns out to be both practical and economical, we might indeed be the launching agency for the Weather Bureau; but I would think it would be a Weather Bureau system operated by them, the stations manned by them, and that sort of thing. I doubt that they in turn would develop a launching capability, and either ourselves or the military could provide that as a service to them.

Senator MARTIN. You would necessarily do the pioneering, then, in the matter of developing operational procedures as a part of your work; would you not?

Dr. GLENNAN. Exactly. And if I may stay with the meteorological satellite for the moment, we are doing that with the Weather Bureau at this time, supporting a group of, I believe it is, 60 people in the Weather Bureau, to develop methods of rapidly dealing with the immense amount of data that we expect will ultimately come from meteorological satellites.

Further, this same program is being monitored constantly by the military services, so there is a complete interrelation on this.

Senator MARTIN. Will you have exclusive jurisdiction over developmental work, or will there be some part of that left with the other agency?

Dr. GLENNAN. The military has complete autonomy in the field of military satellites to be used to accomplish military purposes, including the development of the specialized booster system, which are built on presently existing rocket systems, such as the Atlas, the Thor, or the Jupiter, or such extensions of growth versions of this particular rocket.

Were there to be a necessity for a new rocket system, let us say a new launching-vehicle system which required the development of, say, a rocket of 900,000-pound thrust as the base booster, the President would decide which agency would undertake to develop that, regardless, I think, of the end use to be made of it.

Senator MARTIN. The proposal of the resolution before us will then have the effect of increasing your jurisdiction and, at the same time, increasing the potential for close teamwork between your agency and other agencies that have jurisdiction over the primary jurisdiction later on.

Dr. GLENNAN. It does not really, Senator Martin, increase our jurisdiction. It makes more complete our capabilities to carry out the tasks which are part of our responsibility as defined by the law and is further decided by the President in transferring to us the specific responsibility for developing superthrust boosters. Not only does it increase the potential, but it increases the need for a completely cooperative relationship with other agencies of Government, principally the Department of Defense.

Senator MARTIN. Yes. I perhaps misspoke when I said increasing your jurisdiction. I had in mind that this is a move in the direction of bringing your work closer in coordination with the other agencies.

Dr. GLENNAN. Yes, sir.

VON BRAUN TEAM'S SALARIES TO BE HIGHER

Senator MARTIN. On another subject, I have before me a newspaper article dated February 18, 1960, which appeared in the Washington

Evening Star, and quoting Mr. Richard E. Horner, of the National Aeronautics and Space Administration, in testimony before the House Space Committee, and this is what it says:

VON BRAUN'S MISSILE TEAM TO GET RAISES

Dr. Werner von Braun and a score of his top aids will get healthy salary increases when the transfer of Redstone Arsenal from the Army to the Space Agency goes through.

This was revealed yesterday by Associate Administrator Richard M. Horner, of the National Aeronautics and Space Administration, in testimony before the House Space Committee on NASA's 1961 budget authorization.

The space agency is asking for \$915 million obligational authority and expects to spend about \$650 million in the 12 months beginning July 1, Mr. Horner said.

The promised salary increases will elevate about 20 members of the predominantly German-born Redstone team into the "supergrade" category of civil service which embraces grades GS-16, 17, and 18. The pay rates range between \$14,000 and \$19,000.

Dr. von Braun, a German-born scientist who helped develop the dread V-2 rocket of World War II, already makes \$19,000 as the No. 1 civil servant in the Army's Huntsville complex. When he is officially transferred to NASA in about 3 weeks, he is expected to get a \$21,000 slot provided under a special clause in the 1958 Space Act.

Is that correct?

Dr. GLENNAN. That is correct.

Senator MARTIN. And there is nothing out of line in that in any way, is there?

Dr. GLENNAN. No; there is nothing out of line in that. Actually, we will probably be a little short of the number of positions we would like to have to bring Dr. von Braun's top staff into line with the top staff of our other research centers.

Senator MARTIN. I notice that the article mentions \$915 million obligational and \$650 million in the 12 months beginning July 1. Is that correct?

Dr. GLENNAN. Yes, sir.

Senator MARTIN. And it mentions this \$19,000 salary. Is that correct?

Dr. GLENNAN. That is correct, Senator Martin.

Senator MARTIN. That is putting them in proper comparison with the salaries paid in your organization for men of that capacity?

NASA MAY ASK FOR MORE "EXCEPTED POSITIONS"

Dr. GLENNAN. That is right, Senator Martin.

You may recall this, that in our basic law there is provided a total of 200 position which can be paid up to \$19,000, 10 of which can be paid up to \$21,000. In the Development Operations Division, there are, I believe, 18 positions now paid in the supergrades, so called, and we would add to those all that we have left of our excepted positions 20, so that there will be, I believe—and there again Mr. Siepert can correct me, if I don't have these figures just right—38 positions paid in this so-called excepted category.

We will undoubtedly need a little relief on this, and will very probably come back to the Congress for assistance in this matter.

Senator MARTIN. Your request for the 1961 budget authorization covers only those that you are prepared to ask for at this time, and you anticipate some further request later?

Dr. GLENNAN. Not for money, unless we run into some problems. It would be simply the opening up of that portion of our legislation, so that we might ask for perhaps another 50 positions, to be paid in the excepted category.

Senator MARTIN. All those come within the present amount?

Dr. GLENNAN. All come within the present dollars.

Senator MARTIN. Thank you.

Senator STENNIS. Thank you.

Senator Young, do you have any questions?

VON BRAUN TO BE GIVEN ADDED RESPONSIBILITIES

Senator Young. Dr. Glennan, it is a fact, is it not, and my understanding of your testimony is, that you propose to place added responsibility to Dr. von Braun and his group?

Dr. GLENNAN. Very definitely, Senator Young.

Senator Young. And you propose to do that without delay?

Dr. GLENNAN. We will do that; we have done some of it already, Senator Young, and we will continue to work as rapidly as they can assimilate these tasks. Their principal activity in the NASA organization is going to be in the launch vehicle field, the development of these launch vehicle systems, and you may recall that because we did not get this group a year ago, we have had to take some steps ourselves alternatively. Some of this program probably ought to be finished by their people, who started them.

They will not be transferred, unless it makes sense to transfer them, and until Dr. von Braun is willing and able to take them.

Senator Young. And it is a fact that you testified a year ago, in response to my question, that you wanted this group at that time?

Dr. GLENNAN. Very much so, sir.

Senator Young. Then in reality you can't say that transferring the Development Operations Division to NASA would be disrupting a winning combination, isn't that correct?

Dr. GLENNAN. That is quite correct, in my opinion.

Senator Young. You are taking over in its entirety?

Dr. GLENNAN. Exactly, sir.

NASA WILL HAVE INCREASED CAPABILITY

Senator Young. Dr. Glennan, do you feel that this transfer is a step toward, rather than away, toward unification of the entire space program?

Dr. GLENNAN. Senator Young, if I could state this just a little differently, I believe that it is a fundamentally important step in providing the capability in one agency of carrying out the requirements of this law which state that the policies of the Congress and this Nation are to explore space for peaceful purposes.

This move will give to NASA, the agency charged with this responsibility, the capability of carrying it out. I would be the first to say immediately that we don't do these things alone, that we have very effective support from the military services; that in our Mercury program, for instance, we would not be able to carry it out without the support of the military and the provision of the task force for

the recovery of the capsule and the use of the launching pads, and the other assistance that we are getting from the Air Force.

Had this transfer not been proposed, we would continue to have from Redstone Arsenal and the ABMA the support of that program through the launching of the capsules, hopefully manned capsules later this year from Redstone.

Senator Young. Of course, it is your intent that NASA continue to function in complete cooperation with the Armed Forces?

Dr. GLENNAN. Absolutely.

LOST TIME CAN NEVER ENTIRELY BE REGAINED

Senator Young. Now, Dr. Glennan, does the increase in 1961 funds for NASA make up for the time lost by cutting Saturn funds in 1960 from the \$140 million asked by Dr. von Braun, to the \$70 million allowed by the Bureau of the Budget?

Dr. GLENNAN. Senator Young, I think one never really makes up all the time that was lost. The funds which are now requested to underwrite the development of the Saturn system for fiscal year 1961 are, and perhaps Dr. von Braun will testify to that, but I think I could say on his behalf, are, in his opinion, adequate to carry that project forward under the priority it has now been given. This is the highest priority in the use of equivalent dollars, which is used in support of military missile systems. It is clear to me that, based upon my conversations with Dr. von Braun and his people, we will pick up about 1 year on the schedules previously planned.

Senator Young. How much time do you consider has been lost?

Dr. GLENNAN. Senator Young, I really don't know how to estimate that. I suppose some time has been lost, but in the initial stages of any of these difficult developments, there is a rate beyond which spending money is wasting money. One builds up gradually and then moves at a higher rate of progress; but, undoubtedly, if there had been more money available since Saturn was started, it would be further along than it is today.

Senator Young. Would you say it would be a year further along?

Dr. GLENNAN. No; I don't think so, because, as I recall it, Senator Young, Saturn was begun by ARPA in March of 1959.

Senator Young. Well, would it be fair to say that a substantial part of it—and I do not want to pin you down to a year—but would it be fair to say that a substantial part of a year had been lost?

Dr. GLENNAN. I think that is not quite fair. If I may, Senator Young, I would agree with you that time has been lost, time that we should not have lost.

Senator Young. A substantial amount of time was lost. Now, you will agree on that, Dr. Glennan?

Dr. GLENNAN. Yes.

SATURN FINDING FOR FISCAL 1961 IS SATISFACTORY

Senator Young. And you have stated, I believe, that you are satisfied with the amount requested for 1961; that it is going to be enough for your purposes?

Dr. GLENNAN. That is my present position. I think it will carry this program forward with the kind of urgency that that priority calls for.

Senator YOUNG. And if you determine later on, while we are still in session this year, that you should have more money, will you be the first one to come before us and tell us?

Dr. GLENNAN. I will, sir.

Senator YOUNG. That is all.

Senator STENNIS. All right. Thank you, Senator Young.

Dr. Glennan, I will not pursue any more questions about the amounts involved here, because we will actually have hearings on this, of course, in the authorization bill, which will be soon. You will be given a chance to make any point, and we can ask questions, in that connection at that time.

Dr. GLENNAN. Thank you, sir.

Senator STENNIS. If there are no other questions of Dr. Glennan, we want to thank you again, and I hope you can remain for the rest of the hearing; and if you cannot, it will be all right, and it will be understood.

Just a moment, Dr. Glennan. Colonel BeLieu has a couple of questions.

SATURN OBTAINED HIGHEST NATIONAL PRIORITY AFTER TECHNICAL TRANSFER TO NASA

Mr. BELIEU. Dr. Glennan, you say that the Saturn project has been transferred to the NASA now? Are you now actively administering it?

Dr. GLENNAN. We are technically managing that project. ARPA continues the actual business management. We give our instructions through ARPA.

Mr. BELIEU. Since what date?

Dr. GLENNAN. Since an agreement made between the Secretary of Defense and ourselves, and I guess it would have been in December of 1959, Colonel BeLieu. It is not an unusual procedure.

Mr. BELIEU. And in your statement you said:

Since the technical direction of the Saturn program was assigned to NASA, the project has been given the highest national priority.

Did it not have the highest national priority before?

Dr. GLENNAN. It did not.

Mr. BELIEU. It did not?

Dr. GLENNAN. No.

Mr. BELIEU. And, to continue with your statement, you said that "the upper stage configuration has been agreed upon."

Dr. GLENNAN. That is right.

Mr. BELIEU. When was that agreed upon?

Dr. GLENNAN. In January of this year.

Mr. BELIEU. There was no agreement on upper stage before?

Dr. GLENNAN. There had been a tentative agreement before, I believe, but it was never implemented. There was a tentative decision, I believe, at one point to use a Titan as a second stage. This was early in the game, when the instructions to ABMA were to do this as rapidly and as inexpensively as possible.

Mr. BELIEU. But now the upper stages are fixed as far as the program is concerned?

Dr. GLENNAN. They are, and bids have been called for on one of these stages.

Mr. BELIEU. On several occasions—and I do not want to bring up the schedule now—but has there been any slippage of those schedules since this transfer?

Dr. GLENNAN. I believe those schedules have been advanced since this transfer. The scheduled first static test is now 2 or 3 weeks more advanced than it was at the time of the transfer.

Mr. BELIEU. Thank you, sir.

Senator STENNIS. All right; thank you very much.

Dr. GLENNAN. Thank you, sir.

Senator STENNIS. The next witness we have here is Dr. York.

Dr. York, do you have a prepared statement?

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

Dr. YORK. No; I do not.

Senator STENNIS. You may make such points and observations as you may wish.

Dr. YORK. I do not have any major points to bring out, except such as you may wish to bring out in questioning.

Senator STENNIS. All right. To get your position here before the committee and into the record, I will ask you a few questions.

You testified before the House Committee on Science and Astronautics on January 26 that you favor the transfer of ABMA to NASA?

Dr. YORK. That is right.

Senator STENNIS. Dr. York, has that been your position since the fall of 1958, when this first request was made? I don't remember just what your status was at that time.

Dr. YORK. In the fall of 1958 I was not in the same position I am in today. I was aware of the problem then, and I think I probably did favor it, but I did not have either the information or the responsibility that I now have.

Senator STENNIS. Well, anyway, since you have special responsibility in connection with these matters, you have favored this idea, have you not?

Dr. YORK. Since I managed to dig into the problems, yes.

Senator STENNIS. Just briefly summarize your reasons, then, for being in favor of this.

TRANSFER FAVORED BY YORK

Dr. YORK. The basic reason was feeling on my part, which was shared in many other places, that the organization of the space program that we had in the early part of 1959—and before that, too—was more complicated than necessary. There had been quite a number of statements relevant to this from many sources. With respect to this particular problem, and this is just one phase of it, there were in the large booster field three organizations involved, and I am talking

about the situation as it was in early 1959, and, in fact, up until the President made this transfer.

There was the Army, which was the executive agency which controlled or owned, however you want to put it, the Army Ballistic Missile Agency, the von Braun group.

Then there was the Advance Research Project Agency, which was responsible for the Saturn program. It was the management agency of the Saturn program.

Third was the Nova, which had the program of development of a single barrel 1.5 million pound rocket which could develop into a multiple booster of larger size.

There were these three active administrative and executive areas.

I came to this conclusion, after looking at the problem—along with some other problems—that the most important thing to do was to get these management groups turned into one, somehow; that is, to put the organization in charge of the program, the technical organization in charge of the program, the von Braun group, and the two programs together under a single executive agency.

There obviously were several possibilities. The one which is consistent with the Space Act of 1958 is the transfer of the agency from the Army to NASA, or a program from ARPA to NASA, or the Saturn program from ARPA to NASA, or the retention of the Nova program within NASA.

Senator STENNIS. Just looking at it as a layman, the thing that impressed me was that you were dividing up your talent within these different programs, and you ought to be in a mood to consolidate some.

Dr. YORK. There was a consolidation of the large booster program.

Senator STENNIS. What I could not understand was why it was not done earlier, say a year before or a year and a half before. What was the trouble? What happened there—it is purported to be a wise decision now; what has happened since a year ago to make it wise, when it was not then?

MUCH HAS BEEN LEARNED IN A YEAR

Dr. YORK. One thing has happened, and that is that a lot of people have learned what the programs are, and what the important programs are, and certain military programs, which had a large in-house effort at ABMA, have been reduced in scope, and have been phased out.

Senator STENNIS. Before this program, you knew a year ago that they were going out, and the demand has been for this large booster all the time, as I understood it, at least since Sputnik I. That was when it came out in the open. I really cannot see—although I favor the transfer now—why it was not done 2 years ago or 18 months ago.

Has anything happened in the last 18 months to make this a stronger case for the transfer?

Dr. YORK. Just the things I mentioned earlier.

Senator STENNIS. I mean additional facts that you have in mind.

Dr. YORK. Just personally, I changed jobs; and therefore, my relationship with this program during this period.

Senator STENNIS. Well, we will have a hearing here soon on the authorization bill.

CURRENT SCHEDULED FUNDING FOR SATURN IS CLOSE TO MAXIMUM

But I will ask you this question now, with reference to the funds for this program in Saturn: Do you think additional funds would stop your program up further?

Dr. YORK. You are speaking now particularly of the Saturn program?

Senator STENNIS. Yes.

Dr. YORK. The funding that NASA now plans is so close to the maximum funding that was requested for the program, the maximum to my knowledge, that it certainly cannot be very far from the optimum amount.

I suppose it is always true that a little more will make it go a little faster, but it would be my personal belief that we are certainly very close, if not already at or past the point of diminishing returns on this program.

Senator STENNIS. Well, my time is up.

Senator Martin?

DEVELOPMENTS HAVE BEEN RAPID

Senator MARTIN. In my opinion you have been moving along rather rapidly in this matter of development in this new field. I feel that it would have been impossible for me to imagine the final form of organization as much as a year ago, and I think, myself, that you have done a remarkable job in getting it organized as far as you have by this time. I am a little surprised that you are not asking for a larger increase in allowance for next year.

Dr. YORK. Senator, I am in the Department of Defense, and of course this program is in the civilian Space Agency.

Senator MARTIN. I am glad that you approve the transfer of the organization, and I will ask the others about the amount of funds they think are needed.

I have no other questions.

Senator STENNIS. Thank you, Senator.

Senator Young, do you have any questions?

ARPA NO LONGER EXISTS AS AN INDEPENDENT AGENCY

Senator Young. Doctor, I would like to begin with this question: Isn't it a fact that the Advance Research Project Agency, ARPA, is an altogether useless fifth wheel in our defense effort, and hasn't it been?

Dr. YORK. The Advance Research Project Agency was transferred to my office, and a couple of months ago it ceased to exist as an independent agency reporting to the Secretary of Defense. It no longer does play a role in the space program. And it does at the moment play a role in those which were still working out the procedures under which we will manage them in the future. But it is phasing out of our space program. It is a very convenient and worthwhile way or means whereby the Secretary of Defense—and myself, acting for the Secretary—can accomplish certain special programs that we want to have special attention on.

We are using it right now in connection with some advanced research associated with the antimissile problem, some advanced research in chemistry associated with solid rocket propulsion problems, and we are planning on instituting a program in basic research on material in ARPA; but it no longer exists as an independent agency within the Defense Department.

Senator YOUNG. I understand about the so-called transfer, but the organization has been left practically intact, has it not, from the top down—particularly at the top?

Dr. YORK. I beg your pardon, I did not hear the last part of that.

Senator YOUNG. Particularly at the top.

Dr. YORK. No; it has a new director and a new deputy director; so the two top people are both new.

Senator YOUNG. But the director and the deputy director are still there, as they were before?

Dr. YORK. They have the same titles as they had before.

Senator YOUNG. So it is still in existence as an agency, is it not?

Dr. YORK. Yes; it is now that part of my office which directly handles this as opposed to supervising contracts within the services.

Senator YOUNG. Do you really believe you cannot simplify matters by doing away with that agency?

Dr. YORK. I don't think it would simplify things. As authorized by the Defense Reorganization Act of 1958, my office is authorized to carry out such programs under centralized control as the Secretary of Defense deems ought to be.

ARPA is the name given for the particular group of people that are used to accomplish that.

Senator YOUNG. You don't go along with the testimony given to the effect that ARPA is utterly useless?

Dr. YORK. Most of that testimony was given at the time when ARPA was an independent agency reporting to the Secretary of Defense.

Senator YOUNG. That was a year ago.

Dr. YORK. Yes, and the changes I am speaking of have been within the last 2 months.

In other words, in part, we did do what was being recommended when people were making this statement. We have taken ARPA out of the programs which are virtually near the operational stage, and, in particular, those are the space programs. We have also eliminated their independent status. I don't know how to put it in percentages, but a great deal of what I am sure the people had in mind when they were making that testimony has been accomplished.

Senator YOUNG. Lt. Gen. Bernard Shriever, and other knowledgeable people testified, as you know, that ARPA should have been done away with last July.

Dr. YORK. I don't remember what the testimony was, but I am sure those things they had in mind have essentially all been complied with. We could have changed the name, but a rose is a rose.

Senator YOUNG. Is it not just another illustration that an agency—like taxes—once you create it, is hard to get rid of it?

Dr. YORK. Well, it does no longer exist as an independent office.

FUNDING FOR ARPA HAS BEEN REDUCED BY HALF

Senator YOUNG. But is it a fact that ARPA does exist, as the taxpayers well know, because they are paying for it?

Dr. YORK. They are paying for the program, but these are programs approved through the Congress and the Bureau of the Budget. It does spend the taxpayers' money, but with the taxpayers' approval, as I see it.

Senator YOUNG. Could you state in the record that ARPA should be continued as it has been functioning?

Dr. YORK. It should be continued in its present form, which is different from the form it existed in when the testimony you spoke of was taken.

Senator YOUNG. Just as expensive, though?

Dr. YORK. No. It is actually spending much less money. Much less money is flowing through ARPA.

Senator YOUNG. How much less?

Dr. YORK. Less than half as much. That is not due to the cancellation of any programs, but the transfer of these programs to other organizations. That does not represent a saving, but it is a fact that ARPA does spend much less money.

Senator YOUNG. Approximately half of its functions have been transferred to other organizations?

Dr. YORK. No, because the programs that have been transferred out are of the space program. These programs never did take more than half of the people; and other programs, in particular, that are connected with the antimissile problem, were only about one-third or one-fourth the expenditure rate of the space program. But they are in more complicated matters, and have always had more people working on them than on the space program.

Those people who are primarily concerned, or who were primarily concerned with the space program, many of them already have left the organization.

Senator YOUNG. That is all.

Senator STENNIS. Dr. York, just one or two other questions here.

What was the additional amount of money that the President recently requested in the 1961 budget for the Saturn program?

AN ADDITIONAL \$90 MILLION HAS BEEN REQUESTED FOR SATURN FOR FISCAL 1961

Dr. YORK. I believe it was \$90 million, but I know that only from Dr. Glennan's testimony.

Senator STENNIS. Was that the figure, Dr. Glennan?

Dr. GLENNAN. I would like to correct that. Actually it was \$113 million for the superbooster program, but the portion which would be directly applicable to the Saturn, as it was then known, is the \$90 million.

Senator STENNIS. Just how did it happen? How did it happen that this program was not pushed 3 or 6 months earlier, to get that extra \$113 million? That is a good sum of money even on a program like this.

Dr. YORK. \$90 million was for the Saturn, and the other \$23 million was for other programs. I should answer that question, because 6 months ago it was entirely within the Department of Defense, which therefore means it was under my responsibility. At that time we were preparing the budget for the overall problems in the Department of Defense, and considering all of the things we had to do, and how much resources we could anticipate for doing it.

There has been testimony before on how the Defense Department budget was made up. The services in ARPA were all requested to submit two sets of figures to the Department of Defense, a basic budget and an addendum budget. In the basic budget ARPA submitted \$122 million for Saturn, and in the addendum budget another \$50 million.

I added \$18 million, which brought it up to \$140 million, along with making a great many other adjustments along with all the other departments.

I discussed this problem, because it was obviously of interest to everyone. There was continual reference as to how big the Saturn program should be, coming from all possible directions.

I went over this question 6 months ago. I spent a whole afternoon on this question with the principal research and development officials, from all four of the services, and the Advance Research Project Agency. The question was: Shall we put more of our resources behind Saturn, or shall we not?

With the exception of the ARPA, whose program was put over, it was ruled against putting any more resources behind this program, considering all the other things there were to do.

For example, \$250 million, which was the upper figure that ARPA requested, is greater than our whole antisubmarine warfare program. It is half of all the Army's budget in connection with limited war. It is twice all the basic research. It is about equal to the total development program of the Polaris system. It is 2½ times the Pershing, which is the next biggest rocket the Army has.

It is not to say it is not important, but simply comparing it with all the things we had to do, it was the collective judgment of essentially everybody at upper levels, in both the Department of Defense and the services, that \$140 million looked like what we could give here.

Senator STENNIS. Well, what change came about that caused you to decide that the original amount was not enough and that you needed \$90 million extra?

Dr. YORK. It was transferred from an agency whose principal problem is defense to an agency whose principal problem is space exploration, which is what this vehicle is for. It was transferred from an agency in which this was one of a great many important things to an agency in which it became, as a matter of fact, the most important thing. That is the main thing that happened.

Senator STENNIS. And therefore you got this accelerated program because of the emphasis on space; is that correct?

Dr. YORK. Yes.

Senator STENNIS. And you would have gotten that emphasis earlier if it had been transferred earlier, would it not?

Dr. YORK. I suppose so.

Senator STENNIS. Well, I think that about sums it up.

Senator Martin, do you have something?

Senator MARTIN. No, sir.

Senator STENNIS. Colonel BeLieu, do you have any questions?

TRANSFER INITIATED BY DEPARTMENT OF DEFENSE

Mr. BELIEU. Speaking for the Department of Defense, you approve this transfer of the ABMA team to NASA?

Dr. YORK. Yes.

Mr. BELIEU. Dr. Glennan previously testified, and history shows, that he asked for a portion of this team in December of 1958 and was turned down and given a working agreement, and then, if I understand him correctly this afternoon, he did not request the team again. Rather, Mr. McElroy came to him, and that has resulted in the proposed transfer now; is that correct?

Dr. YORK. Yes; that must be correct.

Mr. BELIEU. My point is, then the transfer was initiated by the Department of Defense, rather than by NASA?

Dr. YORK. That is correct. The NASA did not come to the Department of Defense with the objective of reopening these discussions which had been closed earlier.

FINAL DECISION FOR TRANSFER WAS MADE IN THE WHITE HOUSE

Mr. BELIEU. And I suppose the proposal had to be taken somewhere else for a decision. Where would it go?

Dr. YORK. It went ultimately to the White House. It had to go to the lowest executive agency having authority over the two principal agencies involved, and that would be the White House.

Mr. BELIEU. When was the decision made in the Department of Defense to transfer?

Dr. YORK. There were quite a number of discussions and sub-decisions leading up to this. The Department of Defense made up its mind in toto not very much before it went to the White House; so it was a matter of some weeks. I don't remember precisely when it was, but the final action in the Department of Defense, or what I would regard as the final action, was a meeting of the Armed Forces Policy Council.

Mr. BELIEU. I suppose it went to the National Aeronautics and Space Council, too, then?

Dr. YORK. I don't know at what point it went to the Space Council.

Mr. BELIEU. Wasn't the Defense Department's initiation of this action predicated on the assumption that the military had no requirement for large boosters?

Dr. YORK. It was predicated on the assumption that NASA would do an adequate job in the field of large boosters, on the assumption that there was no previously defined requirement; but on the further assumption that such a requirement would probably develop; and also on the further assumption that there was certainly a requirement in connection with space exploration, and that, I believe, NASA would do an adequate job of development in this field.

Mr. BELIEU. Dr. Glennan testified that since the transfer of the program, it did not have the highest priority before.

Dr. YORK. That is right.

Mr. BELIEU. Yet we needed the 1.5-million-pound booster.

Dr. YORK. Yes, but we need a great many other things, too.

Mr. BELIEU. Also he has testified that the upper stage configuration has now been agreed on. It was not agreed upon during the discussions within the Department of Defense?

Dr. YORK. That is right, but that was because it was under study primarily at ABMA. But also being reviewed elsewhere.

Mr. BELIEU. That is all.

SATURN HAS BEEN STEPPED UP SEVERAL TIMES

Senator STENNIS. Dr. York, with all deference to everyone, it just seems to me as a layman that it was a mistake not to have stepped up the development of the Saturn to a higher priority level even earlier. I got the impression, the feeling, from inspecting the project, that the extra \$90 million should have come earlier. No one particularly told me that. I made a memorandum that I was going to look into it further when I got back here in January, and I was making a few notes with the possible idea that I might make a statement about it when the President asked Dr. Glennan to look into it and step it up.

Dr. YORK. It was stepped up quite a few times from the original budget request.

Senator STENNIS. I am talking about the \$90 million.

Dr. YORK. Yes, but during 1960 there was the transfer of between \$20 million and \$30 million from the Department of Defense emergency fund to the program after the budget was originally made up.

Senator STENNIS. That was within the 1960 budget that you made those transfers?

Dr. YORK. Within the 1960 budget, to the Department of Defense. The account was increased. Had it not been transferred to NASA, it is possible that some increase would have been made at this time.

I cannot predict what the future would have been, however, had the project not been transferred to NASA.

Senator STENNIS. Doctor, if you can stay, I would like for you to stay. We are going to conclude these hearings as soon as we reasonably can. If you are compelled to leave, it is all right; but these might be some more questions which would come up.

General Medaris and General Schomburg, would you gentlemen please come up together? It is certainly a privilege, General Medaris and General Schomburg, to have you here with us this afternoon.

General Medaris is the former commanding general of the Army Ordnance Missile Command, and General Schomburg is the present commanding general.

In view of this subject matter of this resolution, and before this committee passes on it, we felt we ought to have your observations and recommendations, because of your very intimate knowledge of it, and particularly because General Medaris did so much when he was there.

I believe you were the original commander on this project.

STATEMENT OF MAJ. GEN. J. B. MEDARIS (RETIRED), FORMER COMMANDING GENERAL, U.S. ARMY ORDNANCE MISSILE COMMAND

General MEDARIS. Of ABMA? That is correct, sir. Later of AOMC.

Senator STENNIS. And so you have a worthy successor in General Schomburg, and the committee is glad to hear you gentlemen.

Do either of you gentlemen have a prepared statement?

General SCHOMBURG. I do not.

General MEDARIS. I have some prepared notes, from which I would like to speak, if I may.

Senator STENNIS. You may speak from notes, or any other way you wish, and make what comments you may wish, General Medaris.

GENERAL MEDARIS VIEWS TRANSFER AS A CERTAINTY, BUT SEES NO NEED FOR TRANSFER RESOLUTION

General MEDARIS. Thank you very much, Mr. Chairman.

I am appreciative of this opportunity to clarify a few points, and my own views, that I think have become somewhat confused in the minds of Members of the Congress.

This afternoon I am in a position of schizophrenia, if I may put it in those terms, because, first of all, I must say that I believe from an entirely practical standpoint that the proposed transfer is a certainty. By that I mean that I cannot conceive that sufficient opposition would be mustered within the next 20 days to deny the President's request to make this transfer.

I also agree, from long and bitter experience, that uncertainty is much worse than anything else. I think even a death sentence should be promptly carried out. The waiting is worse than anything.

So that from this standpoint I would have to say that I would favor the resolution, if there were no other points to be considered. However, as a matter of principle, I must state my considered view with respect to the basic situation as it exists, and as it is further developing with this and other problems that are before the Congress, and hope that a deep and proper view of the whole situation can be taken by the Congress.

I must agree with Congressman Stratton in this respect, as to the illogic of the entire situation.

And from this standpoint it appears to me that the adoption of the joint affirmative resolution might have a continuing effect beyond that contemplated by some of its proponents. The affirmative action would, in fact, advance the date of approval by only about 20 days, since, without action, it should be approved on about the 15th of March. It can well be construed that positive affirmative action, as suggested, might in fact mean that the Congress fully approved both this transfer and the overall organization resulting therefrom.

And then, as a matter of precedent, it might tend to bind the hands of the Members of this distinguished body in any future and further consideration of the basic needs of this country, in respect of making

the military requirement, could have met the foreseeable military needs, as well as the immediate future requirement in the space exploration field. And in fact today, as a result of the transfer of Saturn, we may be seeing the dual expenditure of funds for the development of two different systems which could be avoided.

The slightly smaller one could have been eliminated by using a bigger booster than was actually required by some 10 percent perhaps, in carrying out the defense mission; but this would have, in my opinion, been more than offset by the saving in development, and by the saving of funds that would accrue by having only one development.

AIR FORCE WAS GIVEN SPACE RESPONSIBILITY BY DEPARTMENT OF DEFENSE

At the same time and during the same period, the roles and missions question once again entered the scene. After many struggles—and I will not bore this august body with the nature of them; and I am sure you could find out about them from other and more authoritative sources—the upshot was that the Department of Defense assigned to the Air Force all responsibility for the development, production, and launching of all space vehicles for the Department of Defense.

In summary, the situation had by this time developed to the following: The Army, with the only major in-house resources of the Department of Defense for the development of large vehicles, was without a mission in the space field. The Saturn, as a project, was itself threatened. And funds were not being provided from within the Department of Defense budget.

Senator STENNIS. Did you say wrecked?

General MEDARIS. Was threatened. And funds were not budgeted by the Department of Defense within its resources to get the project funded properly.

ARMY FACED A SOLOMON'S CHOICE

In the meantime, NASA would not assign the work to ABMA, as an Army activity, that it might propose to assign to it now as an in-house, family resource. The decision that was placed upon us at that time, or, I should say, the requirement that we make up our minds what position to take, has a great parallel in the Bible. It was in fact

effective the organization for the prosecution of the Nation's vital missile and space program.

So, from that standpoint, I would feel that perhaps while there would be a 20-day benefit in terminating the uncertainty, I do not in fact think that the uncertainty exists; and therefore I do not see quite the necessity for the joint resolution, and feel that it might have some binding effect in the area of precedent. So I cannot state myself as in favor of the passage of the joint resolution.

I feel that I must make my personal position clear in respect to the situation as it existed in late 1958. I think there is a great misinterpretation of that situation, and I would like to try to clear it up.

GENERAL MEDARIS HOPES NASA WILL BE A "SYMPATHETIC FOSTER PARENT"

Facing the subject realistically, I saw no alternative at all but to support the transfer of that resource to the National Aeronautics and Space Administration, hoping it would find a sympathetic foster parent, if you want to use that kind of language, and this is exactly how I felt.

My own position, then, is clearly as follows: I do not agree that the continuation of the division between missiles, military space, and civilian space exploration, is either the effective, or the practical, or the economical way to get the most for our tax dollar; nor is it the way to move forward most rapidly in this total, vital field of international competition of missiles and space.

GENERAL MEDARIS SUPPORTS TRANSFER AS THE "LEAST BAD" SOLUTION

However, under the presently developed system, and the situation as it exists now, and within the present national organization, I believe that this transfer is the least bad solution that can be found, and I therefore support it.

But we have, gentlemen, now reached the ultimate in terms of division of effort. We have not been satisfied with the tripartite division in the services. We have now made one further division. We now have a quadripartite approach, in this closely related field of national activity tied together by the common technology. And we have this matter of the Armed Forces having developed all the resources that can be used in the missile and space program, but these resources are now divided between executive departments. And I do not believe that this is the way to do the job.

I will be happy to entertain your questions, sir.

Senator STENNIS. Before answering questions, I certainly want to say you made a very impressive statement, General. You heard Congressman Stratton testify. Were you sitting where you could hear him?

General MEDARIS. Yes; I was.

Senator STENNIS. His proposal, if I understood it, was a joint command to manage the

program, as I mentioned, the space activity of ABMA comes to about 35 percent.

In the meantime, the work assigned was most successfully carried out by the Army, through the Army Ordnance Missile Command, at ABMA, for both ARPA and NASA, as was acknowledged by the directors of both organizations.

But in the summer the war started all over again. First of all, there were considerable restrictions put on the scope of the Jupiter and Redstone programs, both of them now coming to an early termination.

Secondly, in early summer a tentative decision was made with respect to the upper stages of the Saturn, and affirmed by ARPA, and the responsibility assigned to ABMA, to carry out that mission and to begin work on the upper stages.

The decision stood, I believe, for all of 3 weeks; and, at the end of that time, we were presented with a hold order: Wait. It

and space will know that, without question, the technologies are so similar as to be almost identical; that, in fact, space activity can be said to be the child of missile activity, and the initial space vehicles themselves were military vehicles. The problem is not primarily one of mission but of overall organization. The progression and relation is from missiles, surface to surface; to missiles that don't come back to the surface; to missiles hopefully that will go on to some other surface.

Now, in a field of complex technology, it is almost impossible, through the medium of coordination alone, through cooperation, to assure that all knowledge is promptly disseminated through all portions of the area. Given the best will in the world, the problem is too complex.

INDEPENDENT APPROACHES INEVITABLY LEAD TO CONFLICT AND DUPLICATION

Because of the old psychological factor that causes people to want to try again that which has failed in someone else's hands—they feel that they can make it work; and the same psychological factors that compel individuals to be satisfied only with those items which they have had something to do with themselves; and so long as you have independent approaches within this same area of technology you will inevitably have conflict, you will have duplication.

You will not only have duplication, but you will be unable to find it. You will not only have it, but it will be done, and it will be done in good conscience, and done from a sincere desire to do the proper thing; but it will be done because in a splintered effort you cannot have the controlled approach to all projects that you would get in a single undivided organization, and you cannot impose restrictions, whether positive or negative, in an effort to keep someone from doing over again tasks that have been done before.

Now, none of the technology is different until you get to the question of what kind of a payload are you going to put on the end of it; and this means that we are attempting, by the present approach, to divide our missile and space effort as if you divided all of the railroads in the United States on the basis of what kind of cargo they were going to carry: it would not be on the basis of the fact that they are a transportation medium, or a means for doing something in transport; but on the basis that only the Norfolk & Western could carry coal, and only the New York Central could carry flour.

This is an unrealistic division of the effort.

NEW MILITARY IDEAS ARE OBTAINED FROM CIVILIAN SCIENTISTS

There is ample proof in history that civilian exploration of new scientific fields is not only compatible with military desires and military objectives, but the forward-looking military officer is conscious of the fact that he has never had a new military idea that has not been obtained from original civilian exploration for scientific purposes alone, and I think history will show that the military has sponsored civilian effort to the limits of its resources and has perhaps been responsible for forwarding more scientific effort, as such, than all of the other agencies of the Federal Government combined.

So there is no reason to say that scientific exploration is incompatible with military psychology, nor military management incompatible with industry's progress. The contrary can be proved by history.

GENERAL MEDARIS FEELS THAT A SINGLE, UNDIVIDED SPACE COMMAND SHOULD BE IN DEFENSE DEPARTMENT

Now, if we are willing to accept the fact that it is costly to divide an effort, because you come up with more similarities than differences; and if we then, from that, recognize that we can actually save resources, or, in other terms, get more accomplished with the same amount of dollars if we can bring them into solid control under a single, undivided command effort; we are then faced with the question of where and how could such an effort be unified.

I propose that it be under the Department of Defense, not because that is necessarily where it belongs, but because I do not see that it is feasible to do it elsewhere, and because there are economies to be effected.

And when I speak of economies, I am talking about economies to the taxpayer. I don't think it makes much difference to the taxpayer whether it is a Defense dollar that is being spent or NASA dollars. Is there some difference in the \$90 million, that we could not get \$90 million Defense dollars, but NASA can get \$90 million NASA dollars? When they come out of my pocket as a taxpayer, they all look alike to me; and when they are spent, I think they cost the same amount.

We could either get more effort for the same money or the same effort for less money—spending the same amount of money could get more accomplished if we could do this within a single packaged management.

I think there is a fundamental inconsistency in assuming that any Department of Defense, of any nation, could properly and appropriately be deprived of its responsibility for any direct weapon for the defense of the nation with which it is charged.

If this is accepted, this would preclude the unification of effort outside the Department of Defense by the simple result of clear logic.

Then, if it is to be unified, it appears it could only be so unified within the Department of Defense.

There is nothing inconsistent with the Department of Defense carrying forward civilian activities, as well as military. On the contrary, since this has been done for many years—and I find no one rising up in protest at the inconsistency of the Corps of Engineers doing all the rivers and harbors work, nor of the Signal Corps carrying on the Alaska Communications System until it becomes profitable for some commercial enterprise to enter the field.

So it is quite obvious from history that the defense responsibility is not inconsistent with carrying forward civilian responsibilities also, if they are by nature allied to the resources and the means and the knowledge and the capabilities of the military services.

I further submit, Senator, that all of the resources in the United States, all of them, with no exceptions, that are capable of being used in large space exploration projects, as well as missiles, either

belong to, did belong to, or were developed by the armed services. Those that exist in industry were developed by the armed services, for their purposes. Today I do not know of a single organization of any importance that is doing work in space vehicles or their related accoutrements that is not also doing work in some military field in the same organization; this is in our industrial economy.

Therefore, in addition to the technology, we have the visible fact that all of this work, whether directed by one, two, three, four, or a dozen agencies, will finally be performed within places and by people who will be occupied in parts or all of the several programs.

GENERAL MEDARIS FAVORS GREATER USE OF JOINT COMMANDS

The Congress has recently, by its own action, pointed the way to a solution of this problem, in the last reorganization act, the last amendment to the national defense organization, as to the use of the joint command as a means for eliminating service rivalry and getting unified effort accomplished.

I consider that wise because this is, so far, the only device that has arrived at real unification of the armed services—a joint command. Within such a joint command, the operations are smooth, there is full cooperation, and service rivalry does not cut into the bone and sinew of the effort.

Such joint commands now have practically all the tactical and strategic responsibilities outside the continental limits of the United States.

So far, the full utilization of the joint command—that is, one which the Congress said should report to the Joint Chiefs of Staff and thereby be guided from that group and separated from the single-service allegiance that caused some of the trouble and jealousy—so far joint commands have been used in the sense of theater commands, area geographic commands of all military resources. There is one exception: the Defense Atomic Support Agency operates as a joint command, and a very smoothly operating and functioning one; and it is in the technical support field, in the field of providing atomic weapons, atomic weapon capability to all the services.

I propose then that, on the basis of the clear mark that has been laid down by Congress for the future development of the Armed Forces, and the vital necessity of unifying the entire missile and space program under single management, and the impracticability of unifying it other than within the Department of Defense, that it should be so unified within the Department of Defense; the charter and the mission should be assigned to the Department of Defense, and a joint command representing all of the services, and thereby bringing all the resources to bear in its support, should then be created and assigned a complete mission of missile and space development activities for the Nation.

SIXTY-FIVE PERCENT OF ABMA'S CURRENT WORK IS MILITARY

Senator STENNIS. Well, I am thoroughly enjoying your presentation, but I would like to ask just one or two questions.

Did you say that only 35 percent of ABMA's program is now military?

General MEDARIS. No; only 35 percent of the work, the in-house work of ABMA—during the current fiscal year 1960, only 35 percent is space-related; 65 percent of ABMA Development Operations activity during the current fiscal year is still on military weapons.

Senator STENNIS. Where will it be next year or 2 years from now?

General MEDARIS. On the basis of this transfer, it will be practically zero 2 years from now, and will be reduced as much as possible next year.

FUNDING FOR SATURN FOR FISCAL YEAR 1961 IS ADEQUATE BUT LOST TIME CANNOT BE REGAINED

Senator STENNIS. As I understand it, you said that the \$90 million would mean full speed ahead for the Saturn program?

General MEDARIS. Full speed starting from the present situation. As I knew the figures some few weeks back, when I was still fully familiar with the details, it would appear to me that the money requested, or being requested, for next year probably now represents optimum funding for the Saturn.

Senator STENNIS. For the remainder of the current fiscal year?

General MEDARIS. And for the next fiscal year, the additional \$90 million for next year. The point is, of course, that time which has been lost cannot be bought back; and the amount of money that could have been spent next year, had we spent \$140 million this year, cannot now be profitably spent next year.

Senator STENNIS. But you do think that the current figures are perhaps the optimum figures?

General MEDARIS. They are perhaps very close to the optimum figures.

Senator STENNIS. Thank you.

Senator Martin?

"TRANSFER IS A 'REQUIRED MOVE' UNDER CURRENT SEPARATION OF MISSIONS

Senator MARTIN. General, you believe strongly in unification of ABMA development operations, and space effort generally; is that right?

General MEDARIS. I believe in more than that, Senator. I feel that the missile and the space efforts should be all, not just ABMA's portion, all of them brought together under a single joint command within the Department of Defense.

Senator MARTIN. Now, is the proposed transfer of ABMA, the Development Operations Division, to NASA, a move away from centralization?

General MEDARIS. I don't know that it is significant one way or another, Senator, because the separation is already "in the wood," in the terms of the separate mission assignment to NASA; and all this transfer does is to bring together the group with the capability, the people who have the money, and the mission; so, in that sense, we have to do it.

Senator MARTIN. To that extent, it is a desirable move?

General MEDARIS. To that extent, it is almost a required move.

SENATOR MARTIN DOES NOT FEEL THAT PASSAGE OF THE CURRENT RESOLUTION WOULD BIND FUTURE CONGRESSES IN ANY WAY

Senator MARTIN. I did not follow your initial remarks opposing action by Congress in the matter, because I did not look upon adoption of this joint resolution by Congress as limiting the action of Congress in the future.

General MEDARIS. I am sorry, I do not look upon it as limiting, but I think we have all encountered the fact that when an affirmative action has been taken, one is less inclined to change his mind than if no action had been taken and one were still free to make an original decision. And only 20 days is to be bought by this decision.

Senator MARTIN. And that is not an important purchase?

General MEDARIS. I cannot see that it has any importance. Because, in fact, I know that all the plans are made, and I am sure that whether the transfer is approved now or 20 days from now they will transfer it, and it will be effective on July 1. There is no way of moving that July 1 date forward.

Senator MARTIN. Present plans indicate this Congress will adjourn in approximately 5 months. Do you think it important for us to keep our congressional forces free for other action within the coming 5 months, or did you have in mind something beyond the 5 months?

General MEDARIS. I would not have the temerity to suppose that any action as important as this, which I could propose, could be brought to a full completion within 5 months' time. I would suspect, however, that some of the people who are now in the present Congress would be back for the next one.

Senator STENNIS. If the Senator will yield, let me say that is a very fond hope of many Members.

Senator MARTIN. I won't add any comment to that, under the present circumstances. I don't intend to run for reelection. I am a Member of the Senate who does not intend to be back next year, and I don't look upon the approval of this joint resolution by the 86th Congress as binding in any way upon any future Congress, psychologically or otherwise.

I have seen a lot of laws change in the last 21 years I have been here, and changed on relatively short notice, on proper showing of need for that change.

I think you overestimate the psychological impact of an action of Congress in this regard.

General MEDARIS. Senator, I would attempt to make no case for its importance, and I certainly would defer to the judgment of any of you gentlemen in this regard, because I do not consider myself skilled in the field.

Were there any positive benefits to be derived from the passing of the resolution, it would be far more than sufficient to offset whatever detriment there might be, but I do not see any benefit.

Senator MARTIN. That is an important point I wanted to have clarified, because you say that you see no positive benefits from taking this action by Congress immediately.

General MEDARIS. I can see none.

Senator MARTIN. And the saving of 20 or 30 days in application to this move is not adequate?

General MEDARIS. The time schedule is so carefully worked out, it must be so tied to the end of the fiscal year on July 1, that I do not believe any action at this time would change one move in that entire chain of events.

Senator MARTIN. Thank you, General.

That is all I have, Mr. Chairman.

Senator STENNIS. Thank you, Senator.

Senator Young, do you have any questions?

Senator Young. I have no questions.

Senator STENNIS. Colonel Belieu, do you have something you want to ask the General?

Mr. BELIEU. No, I think not.

Senator STENNIS. General Medaris, keep your seat, please, if you will.

Now, General Schomburg, do you have a prepared statement?

STATEMENT OF MAJ. GEN. AUGUST SCHOMBURG, COMMANDING GENERAL, U.S. ARMY ORDNANCE MISSILE COMMAND

General SCHOMBURG. No, I don't. I am here at your convenience.

Senator STENNIS. Do you have some memorandum or some points you wish to make, or any observations you want to make on the entire issue, or any related issue? We will be glad to hear it from you.

General SCHOMBURG. I will be glad to do that. As you know, I am the new commander of the Army Ordnance Missile Command, since General Medaris' retirement. But I think I should state my qualifications to you further than that. I have been in the Army missile business for the last 4 years, first as Assistant Chief of Ordnance for Research and Development, and then as Deputy Chief of Ordnance.

I was the Army's principal negotiator at the time of the transfer of the Jet Propulsion Laboratory to NASA, and arranged at that time for the use of Dr. von Braun's team by NASA; and I was the Army's principal negotiator just recently for the transfer that is about to take place.

GENERAL SCHOMBURG SAYS HE WILL SEE THAT THE TRANSFER IS PROPERLY CARRIED OUT

I think you would be interested in my attitude, because one of my major responsibilities now is to see that the transfer of this team is accomplished without any loss of momentum whatsoever. This certainly is a job of mine. When I first heard that this transfer might come along, I cannot say that I was very pleased. As a matter of fact, when I heard that I was going down to take command, I think then I felt the transfer was not too easy to take, and for good reasons. The transfer is going to involve about \$100 million of facilities and equipment right in the center of our installation. As you have heard here it will take almost 5,000 people right out of the heart of the command. These people have an in-house knowledge, which is really needed in our missile business in the Army.

In addition, I heard you speak here today somewhat of the additional supergrades for the NASA people, and I do agree with Dr.

Glennan that he has to have a high pay scale to get the people he needs. We have fewer supergrade positions for our civilians than the von Braun team has. This will place us in a poorer competitive position as to personnel.

We have made arrangements in our Pershing system, which is one of the most important programs that the Army has, and I am sure that the arrangements will be worked out with the team, that this job will get done, and will get done properly.

However, after the transfer, when the Pershing job is finished, and when they have finished with the Jupiter and Redstone, we no longer have a priority on the talent of the von Braun team for the Army program. At that time we are going to have to get in on an as-available basis, and this means that space will take higher priority than military projects within the team itself.

Now, in spite of all this, I have been a soldier a good many years, and when a decision is made I am in the habit of accepting that decision. So I would like to assure you that—as a matter of fact, I think I was probably selected to go down and take this job because of my familiarity with the negotiations that have gone on. I have definite instructions that I am to see that this team is transferred without any loss of momentum, as I said before.

Dr. Glennan has already stated that, in the negotiations that have taken place—which I think are quite remarkable, there was a great deal of objectivity shown on both sides. He was very pleased that between us, we in the Army who are doing the job and Dr. Glennan's people, we were able to reach agreement to the point that we did not have to go anywhere for a referee. I think, under the circumstances, this is most unusual.

So I would end my remarks by assuring you that this transfer will take place properly. There is absolutely no doubt about it in my mind. I have to see that the Army missile work carries on as it should go, without loss, and, in the meantime, I am faced with a stupendous task of rebuilding this organization, this part of it that we are losing. This is only a part of the Army Ordnance Missile Command, but it is a very essential part, and we are going to have to do some rebuilding. We shall not come up to the previous level, because it won't be necessary. But we will have to do some rebuilding, so that we can do this Army missile job in the typical Army fashion.

Do you have any questions?

ARMY WILL CONTINUE THE DEVELOPMENT OF TACTICAL MISSILES

Senator STENNIS. You have made a good statement.

What do you mean by an Army missile program that you will have to build up again? Are you referring to tactical missiles?

General SCHOMBURG. I am.

Senator STENNIS. Your ground-to-air development of the Nike-Zeus?

General SCHOMBURG. This is part of it. In connection with the Nike-Zeus, it is not touched by this program. That is handled by an entirely different part of the organization. That organization will not be affected. These are the tactical missiles, the Nike-Zeus, the Hercules, the Ajax, the Lacrosse, and many others.

The AOMC organization mainly consists of three agencies at Redstone Arsenal, and the White Sands Missile Range in New Mexico. At Redstone there is the Army Rocket and Guided Missile Agency; then the Army Ballistic Missile Agency, which has been discussed today; and the support agency, which is an organization actually named Redstone Arsenal, and which supports all the operations.

Senator STENNIS. You say the Army missile program, whatever it is, has suffered because of this transfer?

General SCHOMBURG. I would say it this way: That in order to do our job in the future—and I won't say that the programs that are going on now have suffered, because Dr. Glennan's people have arranged a procedure whereby we can see that they do not suffer—but I would say, in order for us to continue to do our job in the future as we should, we are going to have to have an in-house knowledge and capacity, and of course we do most of the work by contract, but we have to have this contract properly managed and technically supervised, and we are losing people now that will, to some extent, have to be replaced, so that we in the future can do the job in the typical fashion of the past.

Senator STENNIS. Your tactical missile is a battlefield missile?

General SCHOMBURG. Plus air defense and antimissile missiles.

Senator STENNIS. You are not opposed because of this change to the tactical missile program?

General SCHOMBURG. Oh, I would say that is right, sir. There are only two Army missiles that are in the ABMA. These are the Pershing and the Redstone. These two—we have made arrangements to complete those programs, and this is an important area.

Senator STENNIS. Now, what is it that is going to happen in the Army program because of the transfer, just a drop or time lag; is that right?

ARMY WILL HAVE TO REBUILD AN INHOUSE CAPABILITY

General SCHOMBURG. No, I wouldn't want to say that. We have to rebuild an inhouse capability, and I said that is one of the jobs that I will have to do. I cannot say that any of our present programs will suffer.

Senator STENNIS. I want to be certain that if you think they will, you say so; and I know you will say so. But it is just the rebuilding of this inhouse capacity in the support?

General SCHOMBURG. We have to replace part of it. And of course competition for personnel will be a little bit of a problem. But there is nothing definite I can put my hand on.

We are losing a lot of facilities, and losing people that we will have to get back, but arrangements are being made for the current program.

Senator STENNIS. I was impressed with what you said about your background and experience. You have knowledge in this area. Dr. Glennan and his staff have stepped in with you and you both are really making an effort, as I understand it, to put this thing on its feet—the decision having been made—and you want to see that it is properly carried out?

General SCHOMBURG. I will feel just as badly about that as Dr. Glennan does, if anything happens to his space work, for which we now have responsibility.

then answer any questions that the members of the committee might have.

Senator STENNIS. All right. The statement will be submitted, without objection, and will be included in the record. Also, without objection, we will include the charts in the record.

(Statement of Albert F. Siefert, and charts, are as follows:)

STATEMENT OF ALBERT F. SIEPERT, DIRECTOR OF BUSINESS ADMINISTRATION, NASA, RELATING TO THE PRESIDENT'S PLAN FOR THE TRANSFER OF THE ABMA DEVELOPMENT OPERATIONS DIVISION TO NASA

(Presented before NASA Authorization Subcommittee of the Senate Aeronautical and Space Sciences Committee on H.J. Res. 567)

It is a privilege to discuss before this Senate committee the President's plan of January 14 for the transfer of the von Braun team from the Army Ballistic Missile Agency (ABMA) to the National Aeronautics and Space Administration. When the President made his decision on October 21, 1959, Dr. Glennan assigned me as NASA's principal negotiator to work out the details of the transfer with the Army. This has been substantially a full-time assignment since that time. NASA considers it essential that this transfer be made in such a fashion as to avoid disruption to on-going space and military missile programs. Our planning has been fully coordinated with Dr. von Braun and his staff. I believe you will find Dr. von Braun fully concurs with our proposals concerning this transfer.

Dr. Glennan has discussed with you the relationship of the transfer of the Development Operations Division to our national space effort. He has outlined the development and growth of NASA's space capabilities and the planned use of the von Braun team in the development of large vehicle systems. I would like to present more detailed information concerning the effect of the proposed transfer on our total organization, briefly outline the major aspects of the proposed transfer, and discuss the status of our planning and relationships with Army.

1. EFFECT OF THE PROPOSED TRANSFER ON THE NASA ORGANIZATION

The addition to NASA of a group as large and as important to us as the von Braun team has made it essential that we review our total organizational structure. The addition of the Huntsville group will be of maximum benefit only if their skills can be fully utilized and integrated into our overall organization structure. This planning has already taken place and necessary adjustments in our headquarters organization have been placed in effect. Our headquarters organization 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:

Senator STENNIS. I appreciate that attitude, and I am going to say something about it at the proper time on the Senate floor.

There is no holding back by you or anybody else in the Army with reference to making this an all-out transfer?

General SCHOMBURG. It is all out and Dr. Glennan commented that customarily he received this kind of cooperation. He did in connection with JPL. This was a repetition.

Senator STENNIS. Senator Martin, do you have any questions?

GENERAL SCHOMBURG AGREES THAT THERE COULD BE A PSYCHOLOGICAL BENEFIT IF THE CURRENT RESOLUTION PASSES

Senator MARTIN. The joint resolution before us has to do with the transfer of the Development Operations Division of the Army Ballistic Missile Agency to NASA. In your opinion, is it

ual realignment of missions assigned to our field installations. Basically, these mission assignments are now arranged as follows:

Huntsville.—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 Center remain basically unchanged, as does Wallops Station. Emphasis at all of our research centers will, however, be directed increasingly toward the conduct of space research.

NASA believes that the definition of primary areas of emphasis for the several field centers will help to assure a concentration and economy of effort that is necessary in order to achieve rapid progress in our program. This is not to say, however, that our field centers will be precluded from making research and development contributions in other areas than those within their primary field of assignment.

2. OUTLINE OF THE ARMY-NASA TRANSFER PLAN

I have outlined the internal organization adjustments which the addition of the Huntsville group has prompted in order to take full advantages of the skills of the Von Braun team. NASA and Army personnel have been working since October on the management problems which are inherent in the transfer of the Development Operations Division of ABMA to the National Aeronautics and Space Administration. Copies of the initial agreements of November 16, 1959 (attached to end of this statement), and the summary of the more detailed plan of December 11, 1959 (attached to end of this statement), which NASA and Defense approved on December 18 are available for study and placing in these hearings if the committee desires.

I would like at this time to outline some of the key points of the transfer plan so that the committee may know specifically what is involved in terms of the personnel and facilities affected by this proposed move.

General SCHOMBURG. This primarily is connected up with appropriations and fiscal-year business, and not doing it inefficiently because of being too much in a hurry.

Mr. BELIEU. Normal governmental procedure, and bookkeeping?

General SCHOMBURG. This is partly it.

We are now in the management saddle. If NASA wants to maintain complete and effective control, the best way is to leave it running as it is until the first of July, and then start the change at the beginning of the fiscal year.

Army support only starts to taper at that time. Right after the first of July we will still be doing most of the things for them as we are now. It will taper off sharply in the fiscal control area. But they are going to have to take over a great deal that would be in the area of support, and we will be helping right up until the end of the

Chart 1 shows the new NASA operating organization. Earlier we discussed the adjustments in NASA organization which the transfer of the Huntsville group has stimulated. This chart shows that Dr. von Braun, as the new Director of NASA's Huntsville Center, will report to the headquarters of NASA through the office of Launch Vehicle Programs. This will assure that Dr. von Braun's group has direct access to the top in NASA in order to get resolutions of major problems with the minimum of confusion or delay.

CHART 1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OPERATING ORGANIZATION

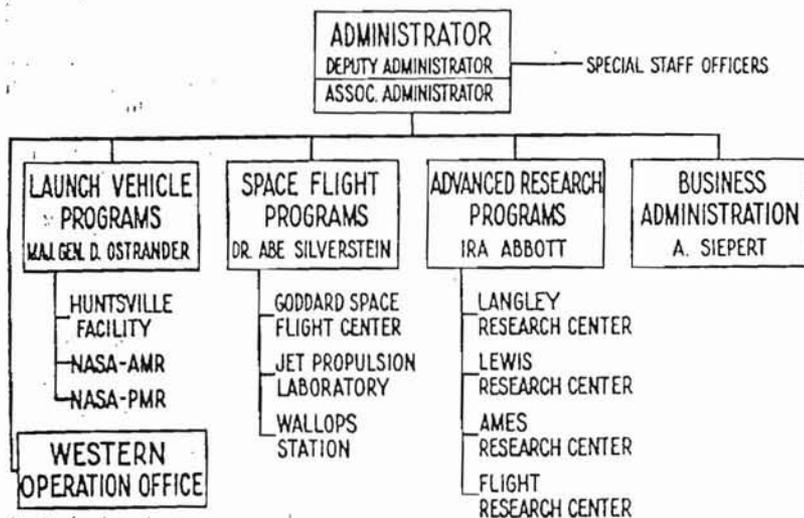


Chart 2 shows the organization of the U.S. Army Ordnance Missile Command. The Army Ballistic Missile Agency organization is only one part of the total Missile Command under General Medaris, and now under his successor, General Schomburg. The von Braun group has received its entire administrative support from resources maintained outside his own division; specifically the Army Ordnance Missile Command, the Army Ballistic Missile Agency, and the Redstone Arsenal. In planning the new NASA organization at Huntsville we must plan to replace the administrative support formerly received from these groups by our own personnel, but this time operating under Dr. von Braun's overall supervision.

CHART 2

U.S. ARMY ORDNANCE MISSILE COMMAND

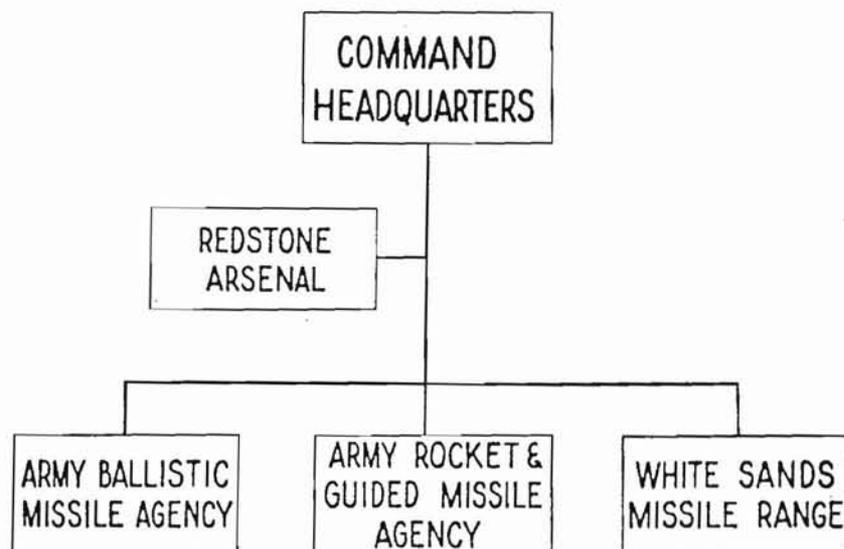


Chart 3 shows the internal organization of the Army Ballistic Missile Agency. The Development Operations Division headed by Dr. von Braun is one part of this ABMA organization. This is the technical program division which has been responsible for conceiving and developing the Redstone, Jupiter, Pershing, and Saturn vehicles. The other divisions of ABMA provided administrative and management support to the von Braun team. As I have mentioned, NASA will need to replace much of this support personnel with our own management. And NASA has also agreed that von Braun's group will continue on a reimbursable basis to completion any work now underway on Army weapons such as the Pershing system and the Jupiter combat training launches.

CHART 3

ARMY BALLISTIC MISSILE AGENCY

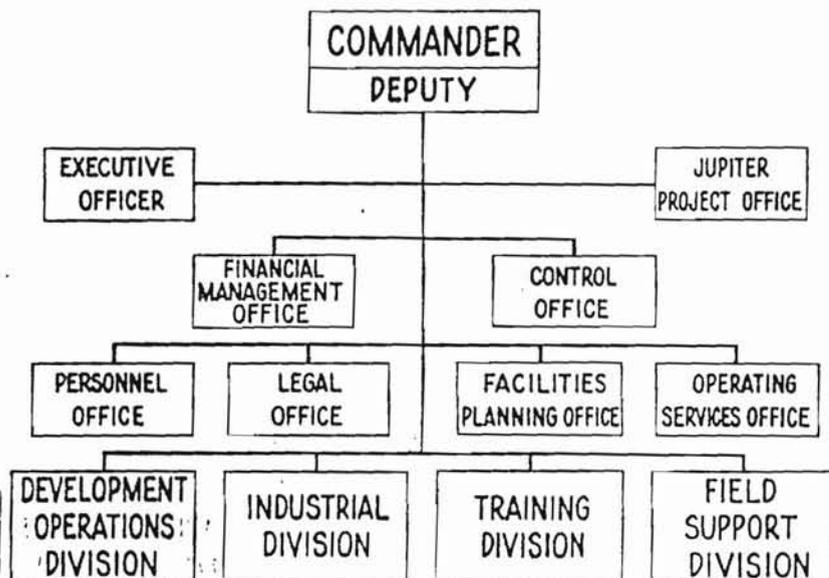


Chart 4 shows the proposed staffing of the Huntsville facility. Our fiscal year 1961 budget now before Congress provides for 4,300 civilian civil service personnel. The Development Operations Division has 4,213 civil service people at present. The actual number to be transferred to NASA is estimated to be 3,863. The difference between these figures is based on the fact that Army will be allowed to recruit approximately 350 personnel from the Development Operations Division to continue the development, monitoring, and evaluating of Army weapons systems work placed on contract with industry. Dr. von Braun has agreed that this number can be transferred to Army without adversely affecting his total operation. I would like to stress that each employee who chooses to remain with Army will do so on his own option. We will replace these 350 employees in two ways: By some outside recruitment but also by offering conversion of certain military specialist personnel to civil service status upon completion of their military service.

CHART 4

PROPOSED STAFFING - HUNTSVILLE FACILITY

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

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

The administrative support requirements at Huntsville have been studied very carefully to determine what functions are needed and what personnel staffing levels are appropriate. About 1,200 positions will be needed to assure that there is no breakdown of our logistics and supply operations which support the technical team under Dr. von Braun. I would point out that this 1,200 includes a sizable number of what we term "technical services" employees. These include professional employees engaged in facilities engineering, construction, and related activities as well as a large force of blue-collar workers who will be responsible for shop support, guard security, and maintenance of the laboratory facilities and grounds.

The same groups which now service the von Braun team are also servicing the other Army organizations located at the Redstone Arsenal. Army must keep these organizations essentially intact if they are to continue to operate their own weapons programs as in the past. For this reason, NASA and Army have agreed that NASA will actively recruit from selected Army organizations at the arsenal only some 815 of the total of the 1,200 required as shown on these charts. The remainder will be sought from other sources, although we will, of course, consider the applications of other Army employees at Redstone the same as any others who voluntarily express interest in NASA. We believe that this agreed core of 800 experienced employees will help assure the transfer from Army to NASA with a minimum of disruption to on-going programs.

Chart 5 shows our current plans for obtaining adequate administrative services. The committee will see that NASA plans no duplication of presently existing Army facilities wherever the Army is in a position to provide the service

CHART 5

PROVISION OF ADMINISTRATIVE SERVICES

PERFORMED BY NASA

PERFORMED FOR NASA BY ARMY

MANAGEMENT CONTROL

- * ACCOUNTING
- * BUDGETING
- * PERSONNEL

PROCUREMENT AND SUPPLY

MAINTENANCE OF BUILDINGS & GROUP OFFICE SERVICES

- * MAIL AND MESSENGER SERVICE
- * TRANSPORTATION

SECURITY AND GUARD SERVICES

SAFETY

FACILITIES ENGINEERING

for NASA. It would be cost plants, roadways, and so forth these cross service arrangements

Chart 6 is a map of the shown in red. One very which the von Braun team rather than Army control and unconditional lease shown in yellow represent occasionally; these we w

TRANSFER OF VON BRAUN TEAM TO NASA

CHART 7

MAP OF ABMA FACILITIES



CHART 6

MAP OF HUNTSVILLE FACILITY (REDSTONE ARSENAL)

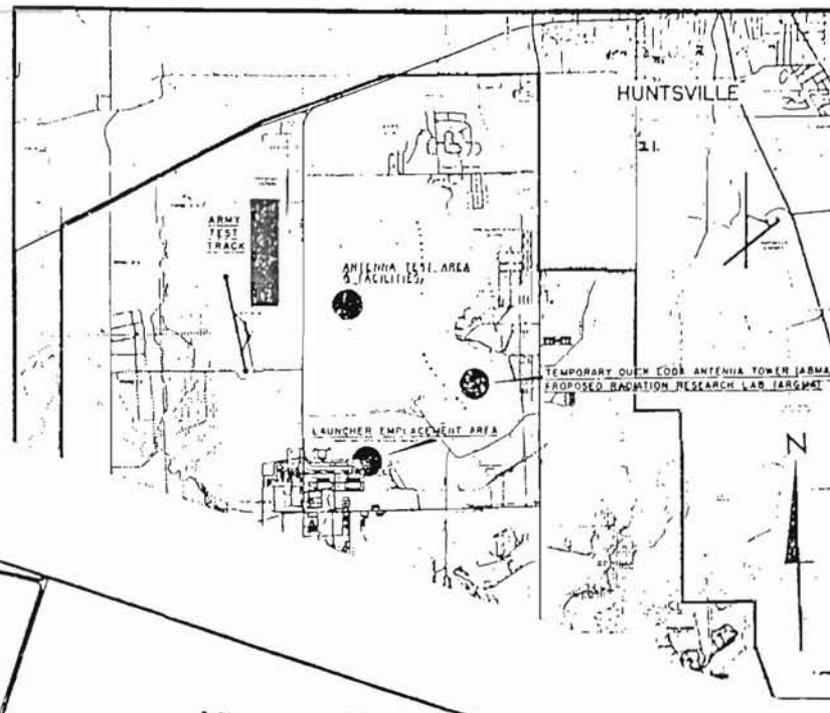
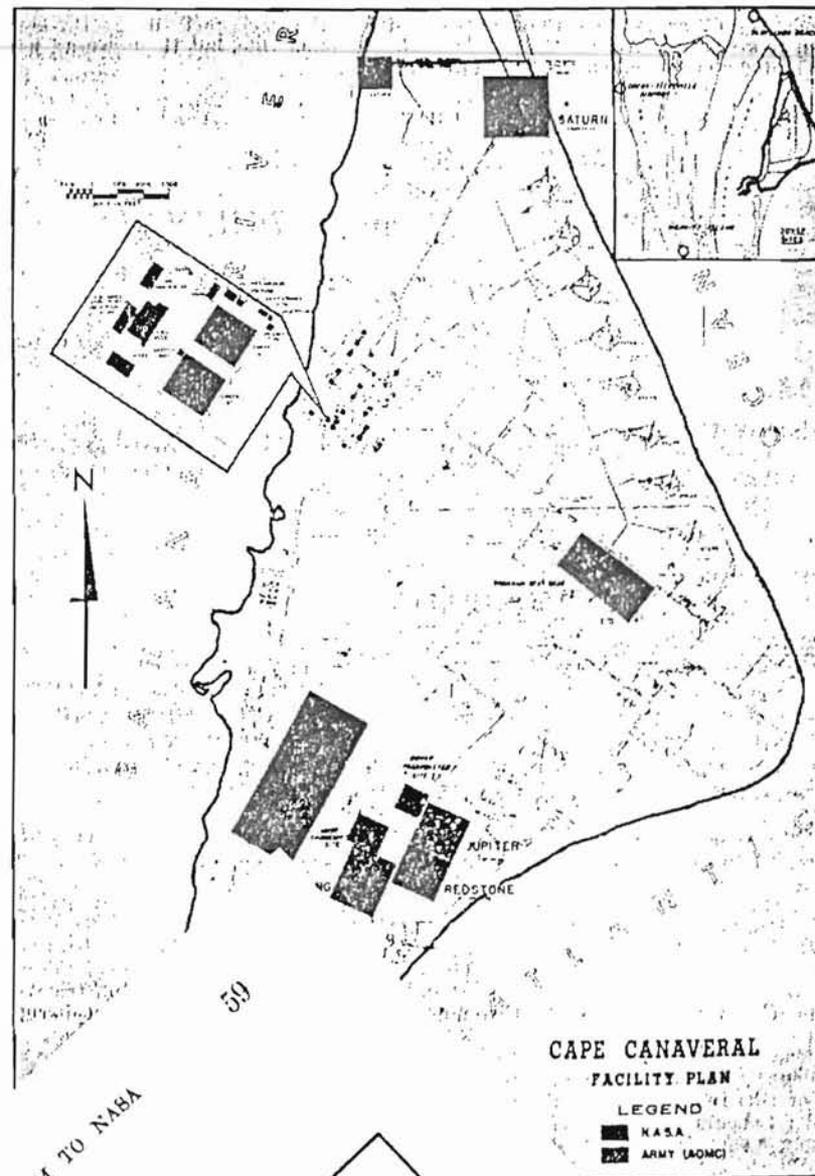


Chart 8 is entitled "Cape Canaveral." All areas on this chart in either green or yellow are areas which the Army has been operating up to the present time. In the transfer agreements, all areas shown in yellow will be taken over by NASA. The areas in green are ones which will continue to be needed by the Army for its own weapons development. The Pershing launching pad, for example, will continue to be needed by the Army for the forthcoming firings of its new Pershing missile. However, Dr. von Braun's launching expert, Dr. Kurt Debus and his staff, though they will all transfer to NASA, will continue to perform firing assignments for both NASA and the Army; consequently, Dr. Debus will be responsible for managing the total facilities, both Army and NASA, in a manner which best expedites the missions of both agencies.

CHART 8

CAPE CANAVERAL FACILITY PLAN



TRANSFER OF VON BRAUN TEAM TO NASA

CHART 7 FACILITIES

The final chart, No. 9, is entitled "Army-NASA Transfer of Development Operations Division (ABMA) at Huntsville, Ala., Facilities." This chart summarizes some of the basic facts concerning the extent of facilities to be transferred to NASA. 1,200 acres of land in the middle of the arsenal will be leased to NASA. Approximately 98 buildings at Huntsville will be turned over to NASA. Facilities and equipment valued at approximately \$114 million will be included in the transfer. (This includes approximately \$100 million of facilities at Huntsville and \$14 million at Cape Canaveral.) Title to the fixed facilities at the cape remains with the Air Force, as this is their ground rule, but their overall use, as stated above, would be entrusted to Dr. Debus.

CHART 9

**ARMY-NASA TRANSFER
OF
DEVELOPMENT OPERATIONS DIVISION (ABMA)
AT
HUNTSVILLE, ALABAMA**

FACILITIES

	<u>APPROX AMTS</u> 1,200 ACRES
<u>LAND</u>	
<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
<u>JOINT USE WITH ARMY</u>	
SATURN RIVER DOCK	ARMY TEST TRACK
ARMY TEST FACILITIES	VARIOUS STORAGE FACILITIES
ARMY AIRFIELD	QUICK-LOOK ANTENNA SITE
HQ ADMIN. (Temporary Use)	LAUNCH EMPLACEMENT
ANTENNA TEST AREA	SPECIFIED CAPE CANAVERAL FACILITIES

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

The charts give some idea of what is involved in this transfer in personnel and facilities. Negotiations of this sort are never simple and seldom easy. The NASA, however, has received full cooperation from the principal Army negotiator, General Schomburg, and every other AOMC and ABMA representative in resolving a number of potentially difficult problems. Dr. von Braun, his deputy, Mr. Rees, and key members of his staff have also worked closely with us in every phase of the negotiations. The result is that we sincerely believe there is now before your committee a workable plan for accomplishing this transfer. Its effectiveness presumes that we must accomplish the changes 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 the time to work out details thoroughly before making the official shift of personnel. For this reason many of the personnel shifts and fiscal adjustments are scheduled to begin at the start of the next fiscal year on July 1.

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 without disrupting ongoing 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 (H.J. Res. 567) to expedite favorable action on the transfer plan. This resolution has already passed the House. Its adoption by the Senate at an early date would remove any lingering employment uncertainties for those now connected with the Development Operations Division 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.

NOVEMBER 10, 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 85-508, 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 R2 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 of 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 expedited 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.

Date: November 18, 1959, Washington, D.C.

WILBER M. BRUCKER,
Secretary of the Army.
T. KRITH GLENNAN,
Administrator, NASA.

DECEMBER 11, 1959.

SUMMARY AND CONCEPTS OF ARMY-NASA TRANSFER PLAN

In accordance with the agreement between the National Aeronautics and Space Administration (NASA) and the Department of Defense dated October 21, 1959, approved by the President on November 2, 1959, and the supplementary agreement between NASA and the Department of the Army dated November 10, 1959, relating to the transfer of the Development Operations Division of the Army Ballistic Missile Agency to NASA, the following transfer plan has been jointly developed by NASA and the Department of the Army.

GENERAL CONCEPTS

The plan provides for the transfer to NASA of personnel, facilities, and equipment of the Development Operations Division and of appropriate supporting organizations in sufficient numbers and quantities 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.

PERSONNEL

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-system 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 stationwide 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.

LAND AND FACILITIES

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.

ABMA headquarters office structure (4488 and 4484) will remain with the Army but will be shared until appropriate permanent arrangements can be made.

Existing AOMC facilities at Cape Canaveral will, in general, be shared by the Army and NASA to assure that the requirements of each are met. The Pershing and Saturn complexes now under construction will be assigned respectively to the Army and NASA.

This plan provides for the Army to grant to NASA a long-term, nonrevocable, and renewable use permit for the agreed-upon Redstone Arsenal land and facilities.

EQUIPMENT AND INVENTORIES

The plan provides for transfer to NASA or retention by the Army of equipment and inventories as appropriate in the particular case. In general, the plan will provide the transferred organization with equipment and supplies it requires to maintain its capability. At the same time the plan provides for retention by the Army of equipment related primarily to Army weapons system and of a share of common-use equipment and inventories. Teams of NASA-Army people will effectuate this concept under agreed-upon criteria. The equipment and inventories agreed upon for transfer to NASA will be transferred on a non-reimbursable basis.

TRANSFER TIMING AND FUNDING

The plan contemplates the transfer to NASA of the personnel of the Development Operations Division effective July 1, 1960. Between the time of the Executive order issuance and July 1, 1960, a direct planning and technical relationship will exist between NASA and the Development Operations Division to permit sound development of transitional arrangements.

Transfer of supporting personnel would largely occur on or before July 1, 1960, as NASA builds its organization. Each service area would, however, be dealt with on a case-by-case basis as NASA develops its staffing, systems, and procedures, with complete transition by January 1, 1961. In general, the phasing of responsibility for a service area will coincide with the transfer of the bulk of the personnel.

Funding of ongoing programs in 1960 will continue to flow from present sources for the balance of 1960, except that the unobligated funds and the unexpended funds for major contracts in the Saturn program will be transferred to NASA as of the date of the Executive order.

The plan contemplates full assumption by NASA of managerial and funding responsibilities and functions on July 1, 1960. Effective with fiscal year 1961, NASA will obtain on a reimbursable basis the services to be provided by the Army. Work on military weapons systems by NASA for the Army will also be on a reimbursable basis.

TESTIMONY OF ALBERT F. SIEPERT—Resumed

Mr. SIEPERT. There have been a number of questions raised concerning some of the management problems in carrying off this transfer effectively. We thought it might be helpful to the committee if, through the medium of these charts, we might give you a picture of the problem of transferring \$100 million in facilities and a team of 5,000-plus people from the Army into the National Space Program under NASA.

DESCRIPTION OF NASA ORGANIZATION

The first chart is the present NASA organization. I say "present" in that it has been revised specifically to accommodate the new Huntsville facility, which would come to us under the President's plan.

You will notice that, as contrasted with a year ago, there are now two offices concerned with parts of the space development program, the hardware and the flying program.

There is a new one called the Launch Vehicles Program under General Ostrander, and the Huntsville field station is the large field station that reports under it. This has been done in order to assure that the von Braun team may be able to get immediate and quick results in this operation.

DESCRIPTION OF AOMC AND ABMA ORGANIZATIONS

Chart 2, the Army Ordnance Missile Command organization, has been described by General Schomburg.

The particular parts with which the negotiators have been concerned are the Army Ballistic Missile Agency and the Redstone Arsenal. The arsenal is a housekeeping operation which supplies certain important services to the von Braun team.

Senator STENNIS. Do they supply these services to other groups as well?

Mr. SIEPERT. Oh, yes; it supplies them in common to ARGMA, ABMA, and the AOMC headquarters as well. This is part of the difficulty of arranging for the servicing of two separate organizations. You will see, if you look closely on chart 3 for the Army Ballistic Missile Agency, that at the bottom there on the left-hand side is the Development Operations Division.

This is the von Braun team. This is the 4,200 or 4,300 technical people who conceive and develop the hardware and monitor the contracts with industry to build such vehicles as the Jupiter, the Saturn, the Redstone. The rest of that organization, the ABMA, has management functions which are critical to the support of Dr. von Braun's team.

In other words, he has never had under his supervision any of the management of the plant-support facilities or funding functions, which are vital to any research and development operation. Therefore, it is our primary task in a very short time to create the same resources by transfers from the Army of certain additions to our staff. These will now be organized as NASA functions, all under Dr. von Braun, who will be the new leader of our Huntsville research facility.

Senator MARRIN. That transfer will not take place until July 1?

Mr. SIEPERT. The transfer of the people from Army payroll procedures to NASA payroll procedures would occur July 1. Program responsibility is now being transferred all along the line.

In other words, NASA is in control of what is done programwise on any of the space projects. That has been accomplished quickly, as for instance, when the President transferred the Saturn project. The July 1 changeover is related more to bookkeeping procedures than to the question of program responsibility.

DESCRIPTION OF PROPOSED STAFFING AT HUNTSVILLE FACILITY

Now, when this occurs, you see on chart 4, there will be 4,213 people on the rolls of the Development Operations Division. But 3,863 is the number we are using in our budget estimates as the number of people who will actually come under NASA. The difference is 350 people.

These 350 are individuals which NASA agreed with the Army could be invited to stay in the Army so that AOMC might have the

seed with which they could reinstate a minimum technical capability to carry on their own Army missile system work.

Dr. von Braun has agreed that this number can be transferred without destroying the essential capabilities of his own team.

In each case I would like to emphasize, though, that the people who choose to stay will do so on their own election. The individual's own interests will be considered. We will then rebuild that strength to 4,300.

The difference of 100 more than the present civil service strength comes from the fact that the Division has the additional services of enlisted personnel, who are technical specialists. We will be converting about 100 of them.

Senator STENNIS. Will they come out of uniform?

Mr. SEPERT. They will come out of uniform when their periods of obligated service expire. This has been a very valuable recruiting process for Dr. von Braun. Some of his brightest young men in his launching team come into civil service posts through that way.

On the management support side, the part of the organization which we must rebuild under NASA, the requirement is covered in the figure of 1,200 positions; 815 of these positions will be filled by agreement with the Army with personnel who are now in selected components of the Army at Redstone. We will negotiate with those people individually, and if they agree to come with us, they will count against that quota of 815.

IMPORTANCE OF TIMING

This creates a major problem of staffing in the time available to us. There raises a point to which I would like to speak on the timing schedule. I must disagree with General Medaris, because I think 20 days is important to NASA. Every 24 hours is important. It is important to us if we are to accomplish satisfactorily this transfer by July 1. There are major elements of our management which we must have ready for operation, such as NASA's personnel system, because it has to transfer 4,300 people on that day.

We must have in operation on July 1 a complete NASA fiscal, accounting system. This must be pulled out as a separate activity from the Army. Before July 1, we must be well advanced in a method of handling our own procurement.

In order to create this, we have the responsibility of working out in some way a key staff to plan that operation. To date only 1 key individual to head up the 1,200 staff is signed up and committed to this new organization.

When we offer a position to a person who is in the Army, it is reasonable that he waits until the Congress acts before he chooses to cast his permanent career with civilian NASA, or to stay with the Army. I hope you will bear with me, since perhaps I am too close to the situation, when I state that 20 days does mean something in terms of signing the key staff up in these next 3 weeks. These 3 weeks of planning, of course, will be gained if we can say that here is a firm job offer, that it is offered with an assured civil service status, in a civilian space effort. Action by the Congress at this time is not only psychologically important, but it is actually important in terms of accomplishing this transfer on time.

PROVISION OF ADMINISTRATIVE SERVICES

Now, these administrative services are not all going to be provided by NASA. Actually it would take more than the 1,200 people if all the services shown on chart 5 were covered by NASA.

We have reached agreement with the Army that some services will continue to be supplied us on a reimbursable basis. If there is a capital plant investment of some size, it would be nonsense to duplicate water or sewer systems, roadways, and that type of thing.

You will notice this perimeter security, including visitors' control, would be handled under one organization, the Army. However, the services on the left are related to NASA's own internal programming. These we are setting up to do the job ourselves as rapidly as we can.

DESCRIPTION OF MAP OF REDSTONE ARSENAL

I know that the committee has been down to the arsenal several times, and I thought you might like to see—on chart 6—actual area that is involved. This is shown in blue. Access to the area can only come through the arsenal reservation, so this automatically places a heavy premium on joint cooperation, and joint service.

The outlying areas in yellow represent certain test facilities which the Army and NASA both use from time to time. Rather than duplicate them, we will work out an agreement so that these will remain under the Army, but they will be happy to let NASA use them.

On the Tennessee River, for example, is the Army dock where the Saturn booster will be shipped down the Tennessee River and then down the Mississippi River and through and around to Cape Canaveral.

DESCRIPTION OF CLOSEUP MAP OF ABMA FACILITIES

Chart 7 is a closeup of the area that we showed earlier in blue. You will note that in the northern part of this area are the technical laboratory buildings used by the Von Braun team. In the southern part are the liquid-propellant test facilities, including the big Saturn test stand.

If some problems might still come up on the Jupiter, and if the Army needs more liquid-propellant testing, we will be happy to arrange that for them in this area.

We have had difficulty on facilities in the area shown as "ABMA headquarters." This arises from the fact that there is simply not enough office space at the arsenal in order to accommodate the two organizations.

Similarly we found just to the south of the office building, a computation laboratory which performs scientific computations for von Braun's group, and also processes the Army worldwide missile system.

These are facilities we must share for the moment but the requirements of both agencies are certain to be increased. We have made an agreement that the Army would seek to obtain from the Congress authority to build its own computation facilities, and we in turn would seek authority to build our own office building.

DESCRIPTION OF MAP OF FACILITIES AT CAPE CANAVERAL

Lastly, on chart 8, at Cape Canaveral there are a wide range of facilities built largely by the Army, and assigned by the Air Force to the Army for their use. Certain of these facilities will no longer be needed by the Army, and they are vital to NASA uses. The areas in green are facilities under the agreement which will remain with the Army.

One of these, for instance, the one at the bottom, is the Pershing launching pad, on which the Army will soon be entering a missile-firing schedule.

Those in yellow represent telemetry stations, launching pads, and up in the left, hangar space which will be turned over to NASA for its work in the future.

Notice also at the very top of the cape are the Saturn launching pads and the Saturn dock, where the boosters will come in from Huntsville.

While these facilities will be divided between the two agencies, we have reached an agreement that Dr. Debus, who is Dr. von Braun's launching expert, and his staff will carry on both NASA and Army firing commitments. For this reason, the Army is willing that Dr. Debus manage both the yellow and the green complexes in a way that neither NASA nor the Army will get in the way of each other.

I believe that is all I have, unless you have some questions you want to ask me.

Senator STENNIS. Senator Martin, do you have any questions?

EARLY ACTION WOULD BE HELPFUL TO NASA

Senator MARTIN. I am interested in your comment, Mr. Siefert, concerning an early decision in the matter of this transfer, whether the Congress will make a real contribution by adoption of this proposed joint resolution.

I think, from your remarks, you are very firm in your belief that early action will be helpful to NASA in protecting your organization between now and July first.

Mr. SIEPERT. Yes; I should point out this will not basically affect in any way what Dr. von Braun's 4,300 people do. They are going ahead and are working overtime on Saturn.

The problem is to be sure that we have a management backup that will keep the supply lines, the funding, and transportation needs going without interruption when we take charge. This takes staff time and advance planning time.

Senator MARTIN. And the earlier you know this plan has been fully approved by action of Congress in the form of this joint resolution—instead of by the expiration of the 60 days when the President's proposal will become effective without congressional action—the earlier you know that, the better it will be for your planning in NASA?

Mr. SIEPERT. We can make an individual a definite offer, and he can see exactly where he fits in, only when he knows that he does not have to keep the retreat doors open back to the Army, should something go wrong.

Senator STENNIS. Thank you very much, Senator.

You have a good statement here. Your charts and explanations are very clear.

I had three or four other questions here. I think, though, that you have partly covered them, so if you will look them over and send us your answers by tomorrow, I think this will round out the record.

Mr. SIEPERT. I will be glad to do so, sir.

(Questions and answers are as follows:)

QUESTIONS TO ALBERT F. SIEPERT, DIRECTOR OF BUSINESS ADMINISTRATION, BEFORE THE NASA AUTHORIZATION SUBCOMMITTEE OF THE SENATE AERONAUTICAL AND SPACE SCIENCES COMMITTEE ON HOUSE JOINT RESOLUTION 567, FEBRUARY 18, 1960

1. Question. Under the provisions of the Space Act of 1958 NASA is allowed 260 supergrade or excepted positions. In view of this limitation, do you anticipate any difficulty in absorbing some 4,200 people into your agency from the Army Ballistic Missile Agency?

Answer. The present 260 limit on NASA excepted positions will not directly complicate our transferring the 4,200 civil service employees now in the Development Operations Division. NASA is obligated to provide positions of equal grade and responsibility to those now held in the Army organization. The President's plan stipulates that the supergrade and Public Law 313 positions of any transferring Development Operations Division employees will be moved to NASA. In total some 18 allocated positions are involved. NASA, therefore, can absorb the entire technical staff of 4,200 people at their present grades without difficulty.

2. Question. Would you care to comment on the statement of Dr. von Braun before the House Committee on Science and Astronautics on February 2, 1960, wherein he indicated that the Development Operations Division in Huntsville will approximate 30 percent of the total personnel strength of the National Aeronautics and Space Administration: But of the 260 excepted positions they will get only 20, which is less than 10 percent of the 260 authorized?

Answer. The Huntsville transfer group will, indeed, represent about 30 percent of the total NASA strength. But I would suggest that the number of excepted positions for Huntsville should more properly be compared with the other NASA field centers on the basis of the number of scientists, engineers, and research administrators at each installation rather than the total working force. Huntsville, for example, uses wage board personnel for certain functions, such as fabrication and assembly work, on a scale not approached at any other NASA center.

Out of the present limit of 260 NASA excepted positions, Huntsville would get 20 in addition to the 18 now allotted, or a total of 38. This would provide excepted positions for about 3 percent of the present Huntsville staff of 1,353 scientists and engineers (details of the personnel staffing are contained in the attached personnel distribution for the Development Operations Division). The next two largest NASA research centers (Langley and Lewis) now have excepted positions for 3 percent of their professional staff, while the smaller Ames and Goddard Centers are 5 percent and 7 percent respectively. It would be our hope, as rapidly as increased position ceilings might permit, to extend the use of these excepted positions more widely in order to recognize other exceptional and deserving individuals in all these field centers. Perhaps 5 percent of the total staff in this category would seem a more realistic and yet conservative estimate for NASA as a whole. On this basis Huntsville at its present strength would merit 65-70 excepted positions overall. Under the same sort of criteria, the total NASA requirements would be in the neighborhood of 325. This would compare with the present authorization of 278 which includes the 260 authorized by the National Aeronautics and Space Act, plus the 18 transferred from the Department of Defense to NASA under the President's plan.

Senator MARTIN. The passage of this joint resolution would enable you to proceed with the program at once?

Mr. SIEPERT. Yes.

Senator MARTIN. Otherwise you must wait until the expiration of the 60 days?

Mr. SIEPERT. In any event.

Senator MARTIN. And I can see that that is of some importance to NASA.

Mr. SIEPERT. We have, for instance, been negotiating for people in the personnel field. We must hire them first thing, and we don't have any commitments on our offers to the top personnel people, while they wait and see what action the Congress takes on the whole transfer matter.

Senator STENNIS. Well, we want to cooperate in what is needed, and I thought that the people down there had already made up their minds that they were going to stay.

Mr. SIEPERT. I think they would like to look at NASA across the table and say, "Where are your positions, and where is your money; and then I will come."

Senator STENNIS. Are you going to ask for money now? You said something about the funds in the House appropriation. Are you asking for a supplemental amount to hire people before July 1, 1960?

Mr. SIEPERT. We are not actually asking for money at this time. We are asking for authority to increase our personnel ceiling by 100, and we can then cover this need by reprogramming existing funds.

Senator STENNIS. You will get the money somewhere else?

Mr. SIEPERT. Yes; we are asking funds for an acceleration of Saturn, and by rescheduling other expenditures can hold off the actual appropriation until FY 1961.

Senator STENNIS. Is there anything else?

All right, we thank you very much, and the rest of the witnesses, for their attention.

Unless someone else has another matter, the committee will take a recess subject to the call of the Chair.

(Thereupon, at 5:12 p.m., the subcommittee recessed, subject to the call of the Chair.)

CERTAIN TRANSFERS FROM THE DEPARTMENT OF
DEFENSE TO THE NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

RELATIVE TO

MAKING CERTAIN TRANSFERS FROM THE DEPARTMENT OF
DEFENSE TO THE NATIONAL AERONAUTICS AND SPACE ADMIN-
ISTRATION, PURSUANT TO SECTION 302 OF THE NATIONAL
AERONAUTICS AND SPACE ACT OF 1958

JANUARY 14, 1960.—Referred to the Committee on Science and Astronautics
and ordered to be printed

To the Congress of the United States:

In pursuance of the provisions of section 302 of the National Aeronautics and Space Act of 1958 I transmit herewith a transfer plan headed "Making certain transfers from the Department of Defense to the National Aeronautics and Space Administration." This message, together with the transfer plan, constitutes the report to the Congress, relative to the transfers, as required by the provisions of section 302.

Under the National Aeronautics and Space Act of 1958, the National Aeronautics and Space Administration (NASA) has primary responsibility for the Nation's program of space exploration. The Department of Defense has responsibility for the Nation's defense program, including the development and operation of space vehicles for defense purposes.

I have recently reviewed the needs and requirements of the two agencies in their respective fields. It is clear that NASA, in order to carry on a vigorous and effective program for the exploration of space,

both manned and unmanned, requires boosters for space vehicles greatly exceeding the thrust of any boosters now available. Furthermore, there is at present no clear Department of Defense requirement for such very large boosters. For this reason I assigned sole responsibility for development of space vehicle boosters of very high thrust to NASA last November. In carrying out this responsibility, NASA will be fully responsive to specific requirements of the Department of Defense for the development of very large boosters for future military missions. At the same time the Department of Defense and NASA will continue with a coordinated program for the development of boosters based on the current intercontinental ballistic missile (ICBM) and the intermediate range ballistic missile (IRBM) and growth versions of those missiles.

On the basis of this assignment of responsibility the National Aeronautics and Space Administration has assumed technical direction of the Saturn booster project which was previously under the direction of the Department of Defense. This booster which promises to increase greatly the Nation's ability to explore space is being developed by the Army Ballistic Missile Agency and will soon constitute the major workload of the Development Operations Division of that agency.

The foregoing reflects the pertinent arrangements as they now exist. I have concluded that it is in the best interest of the Nation to take another step at this time—to provide NASA with an organization capable of and equipped for developing and operating large space vehicle boosters and conducting related research. This can be done by transferring to NASA the Development Operations Division of the Army Ballistic Missile Agency and certain supporting personnel. At the same time it is recognized that the Army must continue to be able to discharge its responsibilities for development of missile systems. The transfer plan forwarded herewith is designed to accomplish these purposes.

In carrying out the transfer plan every effort will be made to prevent the dislocation or disruption of ongoing missile or space vehicle projects. The development of military weapons systems and related programs, currently being worked on by the Development Operations Division, will be continued by the Army, utilizing the skills of the transferred personnel as requested by the Army, on a reimbursable basis.

The transfer of personnel, property, and funds, under the plan, will be accomplished in such manner as to serve the objectives I have outlined.

I urge the Congress to allow the transfer plan transmitted herewith to take effect.

DWIGHT D. EISENHOWER.

THE WHITE HOUSE, January 14, 1960.

TRANSFER PLAN

Transmitted by the President and delivered to the Congress January 14, 1960, pursuant to the provisions of section 302 of the National Aeronautics and Space Act of 1958 (72 Stat. 433)

MAKING CERTAIN TRANSFERS FROM THE DEPARTMENT OF DEFENSE TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

SECTION 1. Those functions (including powers, duties, activities, and parts of functions) of the Department of Defense, or of any officer or organizational entity thereof, relating to the development of space vehicle systems (excluding ballistic missiles) and research connected therewith, which are being performed by the Army Ballistic Missile Agency of the Department of the Army, or by any officer or organizational entity of the said Agency, are transferred to the National Aeronautics and Space Administration.

SECTION 2. (a) The following shall be transferred to the National Aeronautics and Space Administration, pursuant to authority conferred by the provisions of section 302(a) of the National Aeronautics and Space Act of 1958 and other applicable authority, at such time or times as may be appropriate:

(1) So much of the unexpended balances of appropriations, allocations, and other funds of the Department of Defense, available or to be made available, as the Director of the Bureau of the Budget shall determine to relate to the functions transferred by the provisions of section 1 of this transfer plan and to be needed by the National Aeronautics and Space Administration in connection with those functions.

(2) To the extent needed by the National Aeronautics and Space Administration in connection with the aforesaid transferred functions, (i) civilian personnel employed in the Development Operations Division of the Army Ballistic Missile Agency, and other civilian personnel employed in the Department of the Army for administrative and technical support of the Development Operations Division, together with their respective positions, and (ii) records and property of the Department of Defense (including those of any organizational entity of the Department of Defense) relating to the said transferred functions. The Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, jointly, or, to any extent that they shall fail to agree, the Director of the Bureau of the Budget, shall (A) determine the number of employees to be so transferred and the identity of the particular employees who are to be transferred, (B) designate the specific records and property to be transferred, and (C) fix the date or dates of these transfers.

(b) Without limiting the foregoing provisions of this transfer plan, the functions transferred to the National Aeronautics and Space Administration by the provisions of section 1 of this transfer plan shall include so much of the functions of the Department of Defense, or of any officer or organizational entity thereof, as relate to the appointment and pay of civilian personnel employed in the Development Operations Division of the Army Ballistic Missile Agency, including authority to continue certain transferred positions in grades 16, 17, and 18 of the General Schedule of the Classification Act of 1949, as amended, pursuant to the provisions of section 1 of Public Law 86-377, and authority to continue certain transferred positions

requiring the services of specially qualified scientists or professional personnel pursuant to the provisions of section 2 of Public Law 86-377.

(c) Such further measures and dispositions as the Director of the Bureau of the Budget shall deem to be necessary in order to effectuate transfers under the foregoing provisions of this section shall be carried out in such manner as he shall direct and by such agencies as he shall designate.

Sec. 3. The provisions of this transfer plan shall become effective upon the expiration of the first period of sixty calendar days of regular session of the Congress following the date stated in the heading hereof unless the Congress has during that period adopted a concurrent resolution stating that Congress does not favor this transfer plan. Thereafter, as promptly as may be, this transfer plan shall be published in the Federal Register.

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CHART 6

MAP OF HUNTSVILLE FACILITY (REDSTONE ARSENAL)

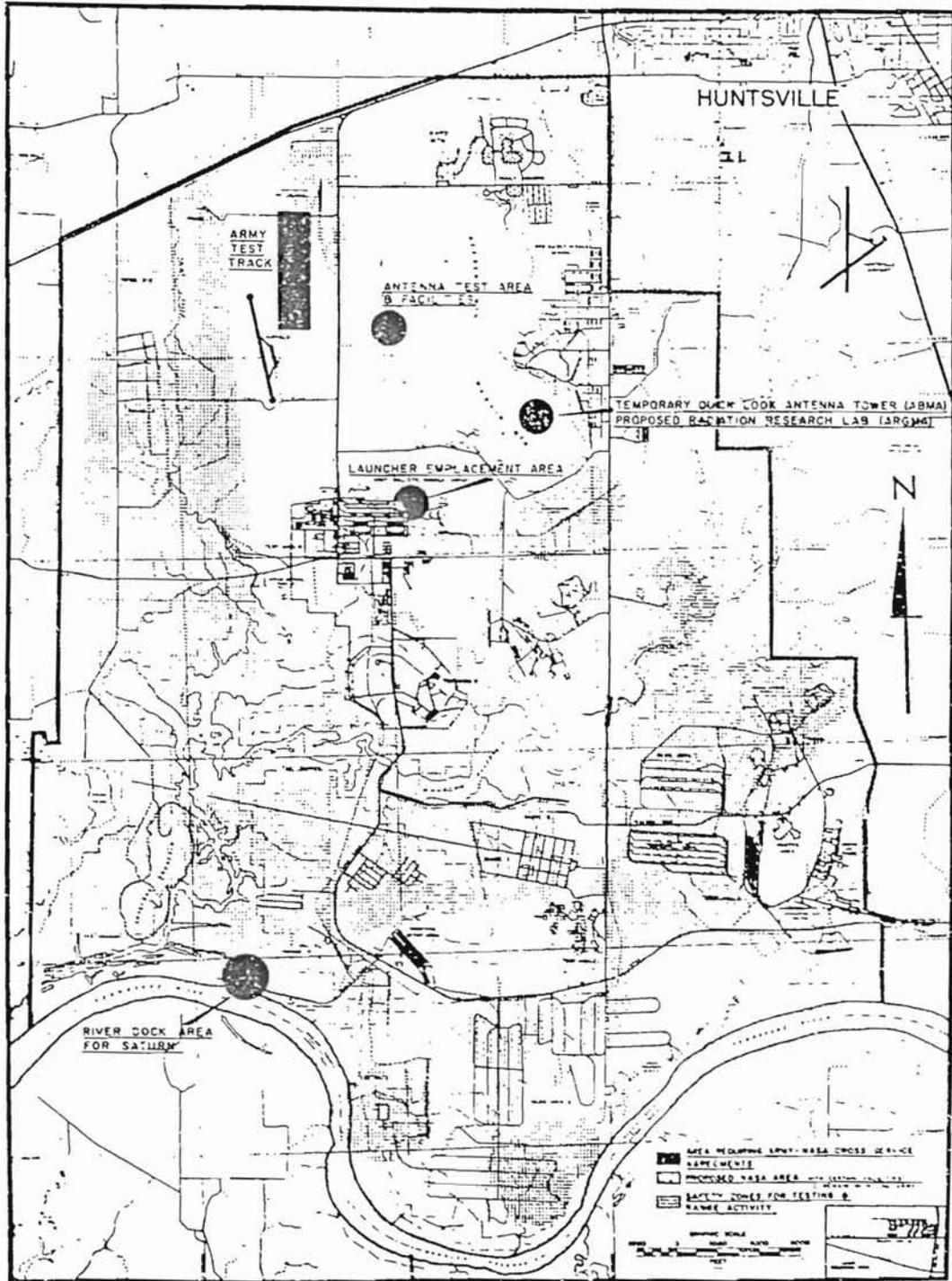
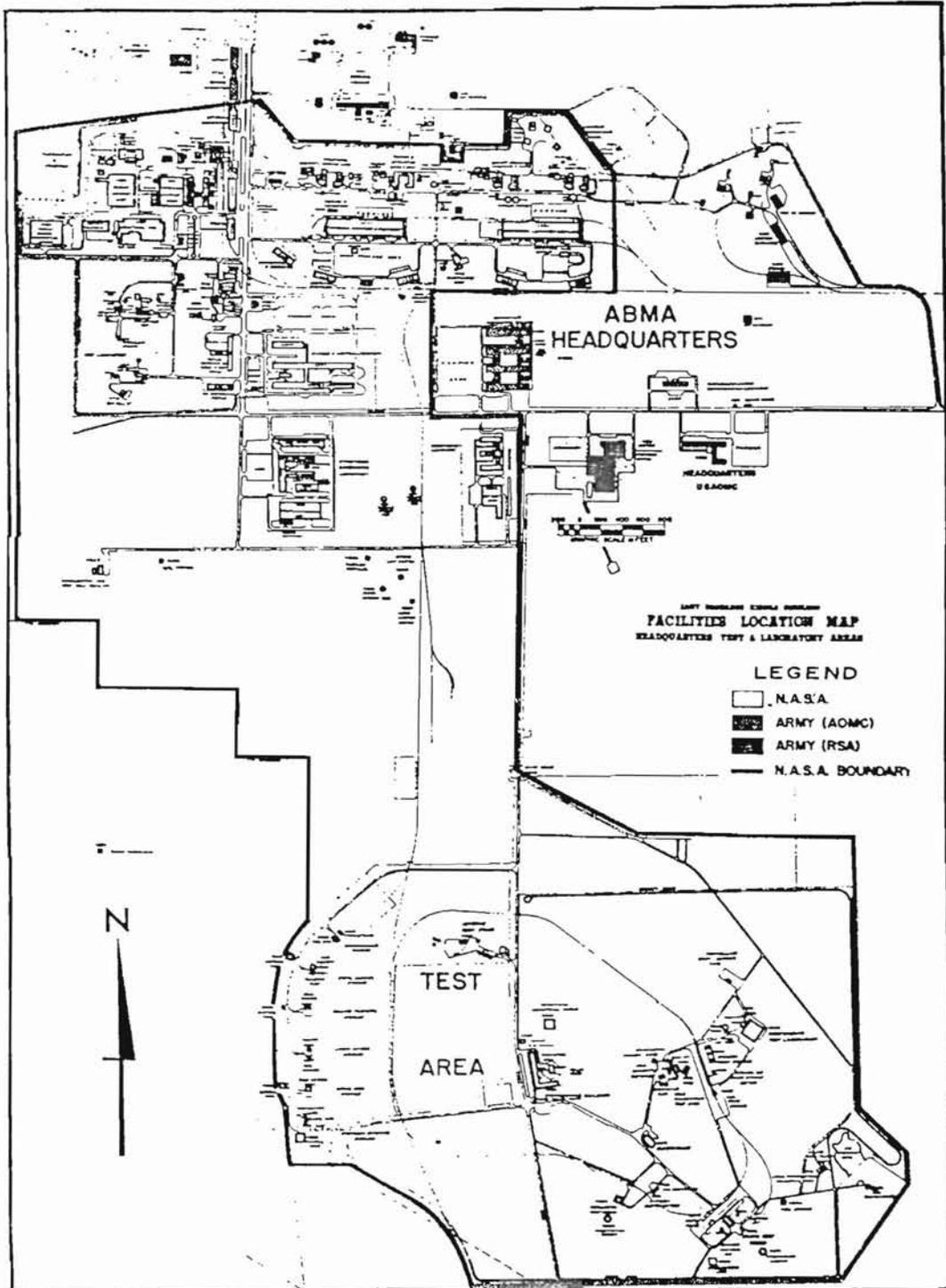


CHART 7
MAP OF ABMA FACILITIES

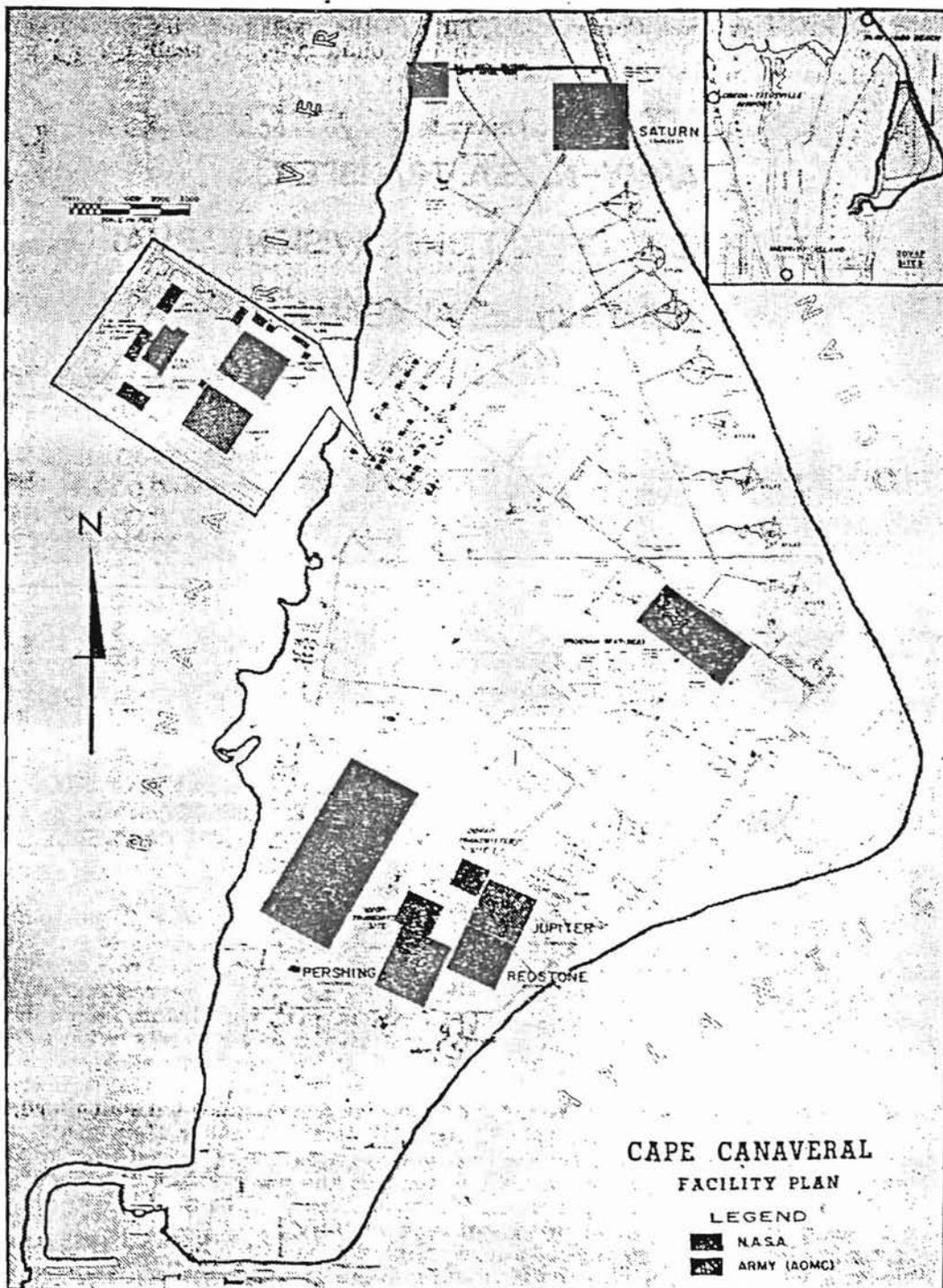


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CHART 8

CAPE CANAVERAL FACILITY PLAN



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CHART 10

DEVELOPMENT OPERATIONS DIVISION
DISTRIBUTION OF SCIENTIFIC AND ENGINEERING PERSONNEL BY LABORATORY AND GRADE

	Office of Director	Aeroballistics Lab	Computation Lab	Exp & Assy Lab	Guidance & Control Lab	Missile Firing Lab	Research Proj Lab	Struct & Mech Lab	Sys Anal & Rel Lab	Sys Sup Equip Lab	Test Lab	Grand Total	Percent of Total Sci & Engr in each Grade
PL 213 and Super Grade	5	1	1	1	3	2	1	2	1	1	1	19	1.4%
GS - 15	8	16	8	11	30	13	5	29	13	10	11	154	11.3%
GS - 14	16	13	9	14	49	11	9	55	19	20	10	225	16.6%
GS - 13	9	18	6	26	79	20	7	84	23	25	37	336	24.8%
GS - 12	4	19	14	14	67	23	5	48	13	10	14	231	17.1%
GS - 11	2	21	16	5	36	5	2	31	2	7	9	136	10.1%
GS - 9	1	16	20	5	34	11	1	32	11	9	5	145	10.7%
GS - 7	0	21	3	3	20	6	1	12	6	2	10	84	6.2%
GS - 5	0	4	4	0	4	8	0	2	0	0	1	23	1.7%
Total Scientific and Engineering	45	129	83	79	322	99	31	295	88	84	98	1353	
Other GS	69	52	26	132	193	112	16	192	160	40	67	1079	
Total GS	114	181	109	231	515	211	47	487	248	124	165	2432	
Wage Board	0	19	3	601	279	105	0	147	98	150	389	1791	
Total Strength	114	200	112	832	794	316	47	634	346	274	554	4223	
Percent of Sci & Engr to Laboratory GS Strength	39.4%	71.3%	76.1%	34.2%	62.5%	88.4%	65.9%	60.6%	35.5%	67.7%	59.4%	55.6%	
Percent of Sci & Engr to Total Laboratory Strength	39.4%	64.5%	74.1%	9.5%	40.6%	31.3%	63.9%	46.5%	25.4%	30.7%	17.7%	32.0%	
Distribution of Sci & Engr Personnel	3.3%	9.5%	6.1%	5.8%	23.8%	7.3%	2.3%	21.8%	6.5%	6.2%	7.2%		

11 February 1960

3. Questions arise because of certain Answer find exceptions NASA management group by experience of these in its own view NASA board representative Redstone problems curement, that cooperation parties so bitter or part of the organization

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