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NEWS RELEASE

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Address by
Walter L. Lingle, Jr.
Deputy Associate Administrator
for Industry Affairs
before the National Capitol Section of the American
Institute of Aeronautics and Astronautics

As you know, I have recently been appointed Deputy Associate Administrator for Industry Affairs of NASA, after having spent 30 years in the soap business with Procter and Gamble.

Naturally, you must be asking yourself, "what can a background of experience in the soap business contribute to the Space Program?" I guess the best answer I can make is that cleanliness is said to be next to Godliness; and it seemed to me that becoming associated with outer space and its vast eternity was a good first step in trying to make this transition.

The phrase "Industry Affairs" means that I am responsible for an over-all purview of NASA's relations with Industry. At the moment, however, I am focusing my attention on three parts of that relationship.

First, I am reviewing our Agency's procurement policies to be sure that we state these policies and communicate them to industry as clearly as possible. Second, I am studying our procedures for putting those policies into effect, to be sure that we exercise all of our capability to, in fact, carry out the policies which we enunciate.

Third, I am working closely with Dr. George L. Simpson, Jr., our Assistant Administrator for Technology Utilization, to be sure that we have systems to maximize the technological spin-off from the government-financed research and development effort of our contractors. In this connection, I am also serving as Chairman of NASA's Industrial Applications Advisory Committee. This Committee is composed of the top research managers of several of the leading companies in this country.

I would like to emphasize at the outset NASA's confidence in industry and dependence on industry. Most of you know that our budget for the current fiscal year, approved by Congress last September, is \$3.7 billion, and that the President has submitted a budget for the fiscal year beginning July 1, 1963 of \$5.7 billion. About 90% of this year's budget is being

contracted out to industry. I think this is evidence that we have a great deal of respect for industry and have confidence in industry's ability -- not only to make the hardware which will be required for our missions -- but also to contribute heavily to the imaginative engineering and systems planning which is essential to make our program succeed.

This does not mean, of course, that we are simply going to negotiate our contracts and then relegate our over-all management responsibility for the program to our contractors.

A fact which we must face is that our Federal Government is the only entity in this country -- and one of the two entities in the World -- which has the resources to carry out a broad space program. This being true, the Administrator of NASA and his organization, cannot escape the full and direct responsibility for the conception and successful execution of each project in our program. Furthermore, if we are to carry out this responsibility, we must have, within NASA, not only the managerial, but also the technical competence to coordinate the efforts of our contractors. To attain and achieve this technical competence, it is

essential for us to retain in-house some portion of the basic research and design effort on our projects.

I would like to review our principal procurement policies for you. I am sure that many of you have heard them before -- but perhaps coming from industry as I do, I will state them in a little different way.

First, there are the organizational policies which we follow in carrying out our procurement processes.

Our principal organizational policy is that our procurement processes are truly de-centralized. Our program is too large and intricate for its procurement functions to be carried out at an acceptable pace on a centralized basis.

Responsibility for coordinating and directing the conception of each of our major projects lies in our Program Offices in Washington. A project plan and a procurement plan are created for each project and are personally approved by Dr. Robert C. Seamans, Jr., our Associate Administrator. Once the project and its procurement plan have been approved, the responsibility for carrying out the procurement is placed in one of our nine major Centers. The responsible Center negotiates

the contract for the project, administers the contract, and signs off for the Agency when the contract is concluded.

There is a minimum of control or direction from Washington in connection with the detailed actions on any contract. We set up policy guidelines from Washington, and we expect the Centers to stay within these guidelines. We, of course, maintain communication with the Centers during the progress of each contract to be sure that we and the Centers are interpreting the guidelines in the same way.

For every procurement for Research and Development of \$1 million or more, a Source Evaluation Board is appointed to evaluate all companies who participate in the procurement competition. This Board reports to the Director of the responsible Center, if the procurement is for less than \$5 million. It reports to the Administrator of the Agency on procurements of more than \$5 million.

I emphasize that this is a Source Evaluation Board and not a Source Selection Board. Depending on the size of the procurement, the final responsibility for the selection of the contractor must rest on the Director of the responsible Center, or the Administrator of the Agency.

We do not ask our Source Evaluation Boards to select and recommend the final contractor because we do not think that the members of these boards can be in a position to take all factors into account. The Center Director, or the Administrator, must add to the evaluation of the Board, those elements of judgment and knowledge which he may have and which the Board may not be in a position to have.

In making his final selection, and adding these judgment elements, Mr. James E. Webb, our Administrator, consults very, very closely with Dr. Hugh Dryden, our Deputy Administrator and Dr. Robert C. Seamans, Jr., our Associate Administrator.

I know that our system of decentralized procurement sometimes represents a problem to our contractors, particularly the sub-contractors, who are anxious to get some business and who have difficulty in finding the locus of the procurement decision before it is too late to properly present their case. To those who occasionally have this problem, I can only reply that we do our best to avoid this, and that they would be even more unhappy with a large over-centralized slow-moving procurement organization.

Another key point of organization policy in our procurement process is that we have avoided building up a large independent contract administration capability of our own. In the interest of economy, and rapidity, and simplicity of action, we have, wherever possible, used some element in the Department of Defense contract administration organization to do our contract administration. At the present time, about 2,500 people from the Department of Defense are allocated to contract administration for us.

It is our objective in NASA to have one overriding objective in all of our procurement policies; and that is so to make our contracts that we will achieve the highest standards in reliability and systems performance. Any procurement policy which interferes with, or damages, the reliability of our systems, or the performance of our hardware, is a wrong policy -- or, the policy has not been properly applied.

Coming from industry, I can perhaps speak to the point of reliability with more understanding than someone who has not been responsible for production processes.

I have come to the conclusion that most managers in industry, and those responsible to them, including foremen and production workers on the line, think that their standards of reliability are higher than they are. Most of them think that their standards are very little short of perfection.

The fact is, of course, that a very high degree of reliability is very expensive; and that the customers of most businesses are either unable or unwilling to pay for a really high degree of reliability.

When we, in NASA, ask contractors to achieve a high standard of reliability, we often cannot at first convince the contractor that he does not already have the standard we seek. Then, when we do convince the contractor's management, the management, in turn, has a tremendous problem educating his work force to adopt and carry out a higher standard.

Reliability is a state of mind. As you well know, when an organization has been trained to one state of mind, it does not quickly and readily swing over to another attitude or state of mind.

I think that one of the most important elements of technological spin-off that can accrue to American

industry from the Space Program is a capability in industry to produce a higher degree of reliability when it is demanded.

Aside from organizational policy, the principal points of procurement policy which we have uppermost in our minds are as follows:

In the best tradition of American business, we naturally think that contractors will put on their best performance and that in the long run, both their own interests and the Government's interests will best be served if we have as much competition as possible among "would be" NASA contractors. I suspect that most of you would agree with the feeling which I always had when I was in industry; namely, that I believe strongly in the free enterprise system, and in competition. But -- you couldn't make me say that I enjoyed the competition.

Wherever possible, we do, of course, obtain competition, by advertising formally, using precise specifications. As you know, this process is possible on only a limited amount of our procurement -- because we cannot write precise specifications at the outset of most of our projects.

On these research and development projects, where we cannot write precise specifications, and where consequently prospective contractors cannot risk fixed price bids, we try to get competition through other processes. We do this by writing as precise a definition as we can of the project and issuing requests for proposals to interested companies. We try to have as many eligible companies as possible compete for a negotiated contract.

If expensive or elaborate design work and calculations are involved, we only invite companies which we believe to be capable of performing under the planned contract to submit proposals. However, any other company which asks to submit a proposal is permitted to do so, and it gets full consideration.

Too many of our contracts have had to be negotiated on a cost plus fixed fee basis because of the absolute impossibility of estimating target costs at the outset of the project. I am sure that we would all like to eliminate the cost plus fixed fee type of contract, if we could possibly find a way to do so.

One way to do so is, of course, to put financial incentives into a contract, which are not based on a fixed price, but which are built around either cost, schedule, or quality targets. Most of us are inclined to associate these incentives with cost targets. I think we, in NASA, are increasingly inclined to believe that schedule or quality targets are of the greatest importance. Schedule targets, if sensibly set, and achieved, will not only produce the rewards of having the project accomplished as planned, but also in most cases, inherently reduce costs as well. Target date slippage, of course, produces increased costs, because overheads continue for an added period of time.

If we do not recognize this principal, and set our incentive targets accordingly, we will quickly disinterest those who accept incentive contracts in becoming repeaters.

It is our policy to give small business every chance to get a fair share of the procurement in our Space Program. Since NASA is placing very few of the larger prime contracts which small business has a chance to procure, we must make certain that our prime contractors place their sub-contracts, and that their sub-contractors place their sub-contracts in a way

which treats small business fairly. This means that we, in NASA, have an important job to do in making certain that our prime contractors understand their responsibility in this matter; and that they do, in fact, carry out their responsibility.

On the first of January, 1963, with agreement with the Bureau of the Budget, we set up a system under which 12 of our prime contractors and their first-tier sub-contractors are asked to send us a postcard as they place each sub-contract, or order for material. As one item on this postcard, they indicate whether or not the order has been placed with a small business. This mechanism will help to keep us more precisely informed as to how small business is faring with NASA.

It is our policy in NASA to avoid sole-source procurement, unless there is a very good reason to go sole-source. These good reasons do sometimes exist. We also do all we can to avoid competitive procurements which are carried out in such a way that the winner of the competition, because of an established position, becomes a de facto sole source.

Finally, we are negotiating into each of our major contracts a clause which requires the contractor and his sub-contractors, not only to report patentable innovations to us, but also to report non-patentable innovations which flow from the expenditure of Government funds. This is going to be a difficult clause to administer. However, we have considerable evidence that non-patentable innovations outnumber patentable innovations by four or five to one. We think we have a responsibility to make certain that all of industry, whether space-related or not, has an opportunity to utilize these non-patentable innovations when they are developed with Government funds.

The development of this type of innovation is not the major reason for our Space Program by any means -- but it is a very important by-product which we must be sure is utilized to the fullest.

I wish that I could tell you that we have perfected the administrative machinery for putting these policies into effect. We all know that improving the administrative mechanism will be a never-ending task. I believe, however, that we are making constant and steady progress toward our administrative goals; and I hope that this review of our procurement policies has helped to give you some better idea of our approach to procurement in NASA.

Thank-you.

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