NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LEWIS RESEARCH CENTER
CLEVELAND, OHIO 44135

September 12, 1973

REPLY TO
ATTN OF: 1010

MEMORANDUM

TO: A/Administrator

FROM: 1010/Director, Technology Utilization and Public Affairs

SUBJECT: Proposed opening remarks for September 19 program at Lewis Research Center, "Technology in the Service of Man"

In accordance with the instructions from your office to this Center, a proposed scenario for the opening 25 minutes scheduled for 9 am EDT, Wednesday, September 19, in the Auditorium of the Development Engineering Building, at Lewis is enclosed.

Copies of this transmittal are also being sent to the other participants in the opening ceremony. Any questions or concerns about the program at Lewis may be directed to this office.

The management of the Lewis Research Center is delighted that the Administrator and members of his staff will be here. We expect to meet you on arrival.

Walter T. Olson

Walter T. Olson

Enclosure

cc:
AD/Deputy Administrator
R /Associate Administrator for Aeronautics and Space Technology
R1/Frederick W. Bowen, Jr.
0100/Director
1003/Edward A. Richley
1010/WTOlson
Inspection Office

1010:WTOlson: kmb 9-11-73

Proposed Opening Remarks

"Technology in the Service of Man"

Lewis Research Center
Cleveland, Ohio

Wednesday, September 19, 1973

9 am EDT, Mr. Bruce T. Lundin

Ladies and gentlemen, may we come to order.

I'm Bruce Lundin, Director of the Lewis Research Center.

It is an honor to have the Administrator of the National Aeronautics and Space Administration, Dr. James C. Fletcher, with us today. Appointed by President Nixon and confirmed by the Senate in March 1971, he is only the fourth man to head the Nation's civilian aerospace agency. As many of you know, he brings to this position three decades of experience and leadership in industry, academia, military affairs, and government, including six years as chief executive of a private corporation and seven years as president of the University of Utah. The Administrator -- Dr. Fletcher.

9:01 am EDT Dr. James C. Fletcher

I'm delighted to see the fine response to Mr. Lundin's invitation to today's program at our Lewis Research Center, because today more than ever, it is important for the leaders and opinion-shapers in our Nation to understand and to convey to others the nature and value of technology and its role in shaping the future.

Before you move off to hear about the specific work here, I'd like to say just a few words about NASA's program and the future.

NASA will be 15 years old on October 1. Only 15 years ago, jet aircraft were just beginning to cross the ocean. Last year the scheduled airlines carried an almost unbelievable 450 million passengers; 30 million of them traveled overseas. Today, aviation is an $18 billion industry, employing 750,000 people, and, by exports, contributing $3 billion annually to our balance of trade.

This high technology industry can be expected to grow, probably by a factor of four in the next dozen years; that would project a $100 to $150 billion manufacturing market alone.

But there are some fundamental barriers, or constraints, to this growth: noise and pollution; congestion, - in the air, on the ground, and in and around the terminal; and development costs. It is against these factors that most of NASA's aeronautical research activities are directed. You will hear about some of them today.

Only 15 years ago, the United States had just orbited the first satellite. Our earliest satellites were exploratory. We

explored the physics and the chemistry of the new environment above our thin layer of air. We studied man at work in space. We explored the moon and the close-up appearance of our neighboring planets. And we explored the techniques of serving earthly needs from orbiting platforms; communications, weather observations, and navigation were naturals.

In our present and continuing space programs, the main thrust is directed toward improving our space flight capabilities and toward using these capabilities against contemporary problems. Communications has already evolved into a going business, the Intelsat organization with $260 million per year revenue. The 36,000 2-way voice channels overseas that Intelsat satellites provide are already more than four times the capacity of all cables. More significantly, they link the peoples of the world in the transactions of commerce, culture, and personal relations as never before. We foresee an increasing role of space communications in impacting education, transportation, preventative and emergency medicine, search and rescue, and disaster alerts.

The future with weather satellites is clearly toward more thorough and profound observations, and, from these, better long-term, that is, 2 weeks, forecasts. The economic payoff here is tremendous.

And you will hear today about the value of our new abilities to look at spaceship earth by eye and by instrument from a sister spaceship flying alongside it.

The Skylab now in operation permits some of man's very first experiments in metallurgical, physical, and biological processing or manufacturing in weightlessness. It is teaching us more about flying in space for long durations. And its solar laboratory is adding a new level of data about our primary energy source to earlier observations with orbiting solar observatories.

We will continue to explore our solar system. Observational flybys of Jupiter will occur this December and again next December; flight times from earth are almost two years. This Lewis Center was responsible for these, and more than 50 other launches. And Lewis will launch the unmanned Mars landers planned for 1975.

To continue to carry out the many useful space missions we foresee at substantially lower costs than present, and to encourage broadening participation in future space flights, we are developing a space transportation system called Space Shuttle. About the size of a DC-9 airplane, it will take off with rocket boosters, deliver 65,000 pounds to orbit, and fly and land like an airplane. It should be ready to play its major role by the end of the decade.

I'm looking forward very much to seeing and hearing the program that the Lewis staff has created for us today. "Technology in the Service of Man" is what NASA is all about. Thank you, Mr. Lundin.

9:08 am EDT Mr. Lundin

Thank you, Dr. Fletcher. With Dr. Fletcher today is NASA's Deputy Administrator, Dr. George M. Low. George is an old friend to many of us here at Lewis where he began his career. Among his many achievements is direction of the Apollo Spacecraft Program from January 1967 through Apollo 11 in July 1969, the first manned lunar landing. He was appointed to his present position by the President in November 1969. George.

9:09 am EDT Dr. George M. Low

Thank you, Bruce, I guess I'm to blame for asking the Lewis Research Center to make this presentation of its current activities as what I hope will be the first of a series to be repeated at various other Field Centers. For it is through our nine Field Centers that NASA's strategies and plans are put into execution. Here is where the action is. And having started my career at Lewis, I knew that I could turn with confidence to these people to set a high standard for us.

I find it evident that the United States is clearly first in the world in aeronautics and in space exploration and technology. But without throwing gloom on what I expect to be a pleasant day, let me note that we are under pressure in both areas.

Foreign competition in aeronautics is growing as foreigners eye the 100 to 150 billion dollar market of the future that Dr. Fletcher mentioned. We are already aware of this competition in short-haul aircraft and in supersonic transports. Our 3 billion dollar favorable export balance in this field could be eroded away, as it already has in other high technology fields.

And much of my interest in being here today is tucked up in that theme "Technology in the Service of Man". For I note that a number of programs in aeronautics and in space technology that will be presented today are clearly aimed at giving us more aerospace for the buck.

Thank you, Bruce.

9:14 am EDT Mr. Lundin

Thank you, Dr. Low.

Also here today is my own boss, the Associate Administrator for Aeronautics and Space Technology, Mr. Roy Jackson. Roy, will you take a bow? Thank you.

Since its origin in 1941, over three decades ago, the Lewis Research Center has been dedicated to the principle of technical excellence in the service of others. As the propulsion research center of the National Advisory Committee for Aeronautics until 1958, it was our particular task under this guiding principle to advance the technology of our Nation's aircraft engines. From this effort, in partnership with other research laboratories and American industry, came many benefits to our Nation. The air arm of our military forces was strengthened, a new level of mobility was provided to our people and their goods, and American aircraft came to dominate the commercial fleets of the free world.

In October of 1958, just fifteen years ago, Lewis became part of the NASA with a broadened responsibility in the fields of both propulsion and power for both aeronautical and space applications. Here our technologies have helped explore the planets, place men on the moon, measure the stars, and view the resources and environment of our earth from a vantage point in space. The ultimate benefits of this new knowledge and these new technical capabilities are truly immeasurable.

Within recent years, the technical capabilities born of the aerospace program and the many needs of people here on earth have started to become joined. A major thrust of our aeronautical research

today is on making our aircraft quieter, safer, cleaner, more economical and more convenient to the traveler. Our capabilities in the many complex disciplines of power generation and energy conversion for space have much in common with our energy problems here on earth. We are, therefore, particularly pleased to be able to apply our technical capabilities to providing abundant, clean energy and economical, clean transportation for all of our people.

Following our traditional role of technical service to others, I am also very pleased to note here the emergence of many productive relationships and joint endeavors with many other agencies of our government - federal, state and local. Among the several agencies at the federal level with which we have joined forces are the Department of Transportation, Department of Interior, Environmental Protection Agency, and National Science Foundation, to name a few, in addition, of course, to our traditional relationships with the several departments of our defense establishment.

Our program today is intended to give you a look at our Center and to review most of our current activities and their purpose. Topics to be discussed will include quieter engines; cleaner skies; new modes of air transportation; rocket-related technologies; services from satellites; and recent advances pertinent to energy and power, lubrication and wear, materials, and communications.

It is an exciting time - this broadening of the application of our technologies to many purposes. All of us of Lewis are pleased that we are able to share with you a few selected examples of "Technology in the Service of Man".

And, now, to start us on our way, may I introduce my colleague, Dr. Walter T. Olson. Director of Technology Utilization and Public Affairs here, who has served as General Chairman in the organization of this program. Ted.

9:20 am EDT Dr. Walter T. Olson

Thank you, Bruce.

Photo!

Our plan today is to move you by buses in groups of about 50 from one to another of nine tour stops. Each stop will feature a 25-minute discussion. While the timing is not so split-second that buses may collide at intersections, you may get the feeling of being tightly organized. Can't be helped. To try to ease that feeling, we've included coffee-breaks in both the morning and afternoon. Some services available are listed on the back of your badge:

1. A message center. Incoming messages here will be delivered to you.

2. You can almost always reach a telephone.

3. We have a baggage room in this building and buses will stop by here for baggage at the end of the day.

4. And we can help you with travel, transportation, hotels, dispensary, lost and found, or emergency transporation out of the Center.

The key to these services, and, in fact anything else that we can do to help make your day comfortable and useful is your tour group leader. Look at the color on your badge. That's your group color. Your tour group leader carries a sign of that color. And your bus is so labeled. Ask your tour group leader for whatever you need. We want to be good hosts; let us know your needs or wishes.

We'll all have lunch together.

At about 4:30, we'll all be together again in our Flight Research hangar, where NASA-wide exhibits are on display and where we hope you will enjoy an attitude adjustment time with members of our staff who ~~worked~~ participated in on today's program. From there, starting at 5 pm, buses will shuttle at about 5 minute intervals to the parking lot and depart at about 5 minute intervals to the airport and motels, via the baggage room. We'll remind you of these departure plans again at the end of the day.

Now: it's 9:24, time to move out to the buses to which your badge color-codes you. Up these aisles, out through the lobby. Have a good day.