LEWIS FLIGHT PROPULSION LABORATORY

GEORGE WILLIAM LEWIS COMMEMORATION CEREMONY

SEPTEMBER 28, 1948

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

GEORGE WILLIAM LEWIS

1882 - 1948

National Advisory Committee for Aeronautics

GEORGE WILLIAM LEWIS

COMMEMORATION CEREMONY

LEWIS FLIGHT PROPULSION LABORATORY

Cleveland, Ohio September 28, 1948

PROGRAM

Call to Order	Dr. J. C. Hunsaker, Chairman, NACA
Extract from Committee Minutes and Tribute from Personnel	J. F. Victory, Executive Secretary, NACA
Commemoration Address	Vice Admiral Emory S. Land, U.S.N. (Ret.)
Formal Naming of Laboratory	Dr. J. C. Hunsaker, Chairman, NACA

OPENING OF COMMEMORATION CEREMONIES

by Dr. Jerome C. Hunsaker, Chairman, NACA

As Chairman of the National Advisory Committee for Aeronautics, it is my privilege to welcome you to the 1948 Annual Inspection of this laboratory. Most of you are familiar with the objectives and work of the NACA. For the benefit of those of you who are paying us a first visit, let me briefly review the part of NACA in insuring that the United States has the most advanced types of aircraft that it is possible to provide.

The National Advisory Committee for Aeronautics was established by act of Congress in 1915 to "supervise and direct the scientific study of the problems of flight with a view to their practical solution." We interpret this to mean that our primary objective is to provide the aircraft industry and the military services with information and technical data of a fundamental nature that will assist them in constantly improving military and civilian aircraft. The only measure of the success of our efforts lies in the extent to which you, the representatives of the industry and the armed forces, make use of our product. These inspection tours were conceived as a means to make you more familiar with what the NACA currently has to offer in our joint task.

Since we met here last year, we have all been saddened by the death of Doctor George W. Lewis, for nearly thirty years Director of Aeronautical Research for the NACA. In deep appreciation of Doctor Lewis' splendid leadership of the Committee's activities, the Committee took certain action at its meeting on July 14, 1948. The appropriate sections of the minutes of this meeting will now be read by Mr. John F. Victory, Executive Secretary of the Committee.

EXTRACT FROM COMMITTEE MINUTES AND TRIBUTE

FROM PERSONNEL

by John F. Victory, Executive Secretary, NACA

Mr. Chairman, Mrs. Lewis, members of the Lewis family, and friends:

As Secretary of the NACA, I quote from the minutes of the meeting held at the Ames Aeronautical Laboratory, Moffett Field, California, on July 14, 1948:

(Quote) "The Chairman reported the death on July 12, at his summer home at Lake Winola, near Dalton, Pennsylvania, of Doctor George W. Lewis, Research Consultant to the Committee and prior to 1947 Director of Aeronautical Research for many years.

"There was general discussion of the action which should be taken by the Committee on this occasion.

"On motion of Dr. Wright, duly seconded and carried, it was

"RESOLVED, That the name of the Committee's Flight Propulsion Research Laboratory at Cleveland be changed to Lewis Flight Propulsion Laboratory, in honor of Dr. George W. Lewis, the change to be effective at the time of the next Annual Inspection of the Laboratory." (unquote)

Mr. Chairman, it was my honor to be the first employee of the NACA in 1915. The employment of Dr. George W. Lewis in November 1919 was in my opinion the most important of the many important steps taken by the Committee to assure continued progress in the science of aeronautics in the United States.

"Doc," as he was affectionately called by the members of the staff who knew him well, gave something of himself to every employee with whom he came in contact. I count myself the most fortunate single employee of the NACA in that it was my privilege to work side

by side with Dr. Lewis in the most intimate teamwork throughout his 29 years of service with the Committee. I learned a great deal from him and am deeply indebted to him.

On behalf of the entire personnel of the NACA, now numbering about 6700 employees, I am happy to say that Dr. Lewis was beloved, admired, and respected by all, and that he gave every employee a square deal. He was our inspiration, our counselor, and our friend. The success of the organization was due largely to his ability to be exacting and demanding of the staff, and at the same time to inspire their loyalty and enthusiasm. We loved him for his warm, human, personal qualities that made service with him a privilege.

Dr. Lewis loved his work as he loved his fellow workers. He labored unceasingly without rest or vacation during the last world war. Truly he gave all he had - his very life - to his work, and never reckoned the cost either to himself or to his family.

To the Chairman and Members of the Committee, let me say, on behalf of all the personnel of our organization, that your action in naming this Flight Propulsion Research Laboratory in honor of our former leader is deeply appreciated. Although the memory of Dr. Lewis will live in our hearts as long as we shall live, we are made happier by the enduring recognition you give him today in enshrining his memory in this great Laboratory. We return sincere thanks and a pledge of continued loyalty to you and to our new Director of Aeronautical Research, Dr. Hugh L. Dryden, and from your action we take renewed inspiration and encouragement to carry on the fundamental work of the National Advisory Committee for Aeronautics to keep America pre-eminent in aeronautical science.

GEORGE WILLIAM LEWIS

An Address

by Emory S. Land, Vice Admiral, U.S.N. (Ret.)

The certain measure of a man is not found on the stone that marks his grave. An epitaph too often is only an expression of the stone engraver's art. The measure of a man's life is not in stone, but in the affections he has inspired among his family, his friends and his associates; the respect he has gained among those with whom he has labored; and the way he has utilized and expended his talents for the benefit of his fellow men.

By any such standards, the name of George William Lewis is high in the list of those who have achieved a full and useful life. When he came to the end of life's journey last July, he was resting at the summit of a career which he had reached by the purest merit. A forceful and lively intelligence, a tremendous talent for engineering and a great capacity for administration, and above all, a character that inspired emulation, lifted him to a plane in aeronautical engineering achieved by few men in this branch of science which, in its applied principles, is scarcely a half-century old.

To most of us here today, the achievements of George William Lewis are familiar landmarks in development of the aeronautical sciences. We know that to an astounding degree the military security of this nation in the air during the last war, and the prewar and postwar technical progress of civil aviation were due to the labors of Dr. Lewis and the organization he directed for so many years. We know that research into all those branches of science that contribute to aviation was his very life, pursued with a passion that was an inspiration to those of his co-laborers whose lives he touched. We know of his exceeding modesty, of his disinclination to seek personal credit for the remarkable contributions he made to aviation, and of his cold relentlessness in the pursuit of facts, a severity tempered by a great compassion for those who delved into research with the same vigor as their leader. We knew him as a great engineering intelligence, as a most practical visionary, as a great researcher. The imprint of his personality is still upon us, and will last so long as we live.

Nevertheless, with the passing of time, the conscious memory of all of us will also pass. That is why it has been determined to bestow upon this great laboratory the imperishable name of the Lewis Flight Propulsion Laboratory -- that it shall always be a reminder of him who created it, and who brought its unparalleled results to the aid of military and civil aviation at a time when aeronautical development was of the utmost importance to the course of a world conflict and to the future of commercial flight.

I think perhaps the entire professional belief of George William Lewis may be summed up in the title of an article he prepared for a magazine away back in 1928. Its title was "Research -- The Price of Survival". Certainly his efforts then and afterwards were carried out in the spirit that there was to be no procrastination in aeronautical research; that our world leadership in aviation, and -- unknowingly then -- our ability to build better, faster planes for combat depended on research in the sciences, its evaluation and eventual application.

For almost three decades the National Advisory Committee for Aeronautics -- the government's aeronautical research agency -- was under the direction of Dr. Lewis. When he assumed this most important post, the NACA had a staff of 43 persons. Under his leadership it has grown to 6,000 employees and on its rolls are many outstanding leaders in specialized branches of aeronautical sciences. It is worthy to note that the three major research stations, which have a plant value in excess of ninety millions of dollars, grew out of a laboratory consisting of a single wind tunnel.

The first 20 years of Dr. Lewis' labors with NACA were devoted principally to the means of improving flight. It was his leadership and the earnestness of his persuasion in procuring the required funds, that led to the establishment of a series of wind tunnels which, step by step, led to the enormous amount of research facilities we have in NACA today. Twelve tunnels for major phases of flight study were constructed between 1921 and 1941. Dr. Lewis' broad vision of the growing research needs of aviation inspired him to pioneer efforts in design, construction and use of tunnel equipment. His use of variable-density, full-scale, refrigerated, free-flight, high-speed and other types of wind tunnels was, in most cases, original -- the sort of achievement that historians of aviation will certainly label as pioneer efforts.

At the same time, Dr. Lewis realized that the field of power plant design for aircraft was one ripe for research. With characteristic understanding and vigor he formulated a program of collaboration with aircraft manufacturers designed to raise the standards of engine performance, of providing means for testing and evaluating new equipment, design and application of suggested innovations.

This great laboratory was born in Dr. Lewis' mind in 1939. In that year he visited Europe. He returned to the United States vastly impressed with the facilities for aeronautical engine research in the countries he visited. He realized full well that unless the United States took immediate steps to expand engine research we were in danger of being overtaken and of losing our heritage of air supremacy. He lost no time in advocating steps necessary to correct the situation.

A special NACA committee confirmed Dr. Lewis' position. The evidence was presented to the proper Congressional leaders, and in 1940 this great laboratory was authorized.

The choice of Cleveland as the site of the project was made only after 72 communities were surveyed. This city offered the finest combination of climate, living and working conditions, proximity to flying fields, industrial, scientific and technical centers, availability of power, and adequate area for expansion and results have confirmed the wisdom of the choice.

Because of the modesty and usual anonymity of scientists -- a characteristic strongly inherent in Dr. Lewis' character -- the true value of the work of the Laboratory during the war may never be widely known. Yet there are many of us here who know that the competence of our combat airplanes, the stamina, speed and quality of design built into the thousands of planes that flew the battle areas, were due in great measure to the efforts of Dr. Lewis and his great crew of specialists. In our war production program, quantity and quality of aircraft were paramount. Our talent for mass production provided the quantity, but it was the genius of our researchers that provided the quality.

Then victory was won, the Laboratory reverted to its original purpose -- long-range research on future means of aircraft propul-

sion. As we all know, this now means jet propulsion; and most of the effort of the Laboratory is, and will be, concentrated on turbo-jet, ram-jet and rocket type engines, with an eye to the long possibility of nuclear energy to drive airplanes around the world at supersonic speeds.

When Dr. Lewis retired in 1947 as Director of Aeronautical Research for NACA, and became its Research Consultant, the race for supremacy in jet propulsion was well under way. Other governments were subsidizing the efforts of their scientists and engineers to evolve the most practical and efficient applications of this postwar development.

I believe I am safe in saying that should we not have this great physical plant, and the efficiently organized team of 6,000 participants in its work, that the United States would not now be in the forefront of jet aircraft development, and we would not have the measure of security in the air that could come only with such effort as this Laboratory affords.

The list of Dr. Lewis' achievements, and the honors that have been bestowed for his efforts are far too numerous to detail here. His work in flight research, in the handling qualities of aircraft, in engine research, are well known, for they are epochal contributions to aeronautics. Yet his interests pervaded every phase of flight problems. Thermal ice prevention, coordination of engine and fuselage design, aeronautical meteorology, development of specialized instruments -- these are only a few of the phases of the aeronautical arts on which he played the great illumination of his intelligence and experience.

It is one thing to be a great engineer. It is another to be a good administrator. When you have those abilities combined in one man, however, the force that emanates from such a character is compelling and decisive. The world recognized the talents and capabilities of George William Lewis, and showered upon him the honors he so richly deserved. As early as 1929 he was selected by the American Society of Mechanical Engineers as one of the ten men most responsible at that time for advances made in the aeronautical sciences. He received the Guggenheim Medal in 1936, the Spirit of St. Louis Medal in 1944, and the Presidential Medal for Merit in 1948. He

represented his country in international aviation conferences, and contributed much time and effort to many professional organizations.

This Laboratory is a fitting memorial to the man. It is representative of his stature, of the affection and respect he accumulated in a long and useful life. The hundreds of university students and graduates and teachers who are now delving into aeronautical research in a nationally coordinated program designed uniquely to mobilize our facilities for research, are another memorial to this great character. For it was his vision and insight that made it possible for the physical and human resources of more than a score of educational institutions to be added to research into the complicated problems of the aeronautical sciences.

It would be well for all of them, and for all of us, too, to reflect occasionally on the things for which the Lewis Flight Propulsion Laboratory stands. I repeat that the measure of a man's life is not in stone, but in the hearts of those whom he inspires. As this Laboratory stands, it bears a worthy name. For those of us left to carry on the work he began, I can offer no better admonition than to emulate him in perseverance, in industry and in all the human qualities that make one endeared and respected, and make one's life a benediction to those whose journey is not yet over.

I should like to digress from Dr. Lewis' official accomplishments and look upon him as a human being -- a one hundred per cent American -- in the finest definition of that oft-abused term.

He had those qualities of character, loyalty, approachability, gregariousness and humor that made him a real man -- qualities essential for dealing with other men on a four-square basis.

As a public relations official, he had few peers and no superiors in his profession.

Once upon a time I had a desk in the old Bureau of C. & R. in the Navy Department, one province being what was in slang called "The Fool-Killer" to which was referred various and sundry patents, designs, ideas, and what-not. George Lewis performed, amongst many other duties, this "Fool-Killer" function and probably did a better job than most of us believed possible.

In writing a reference to a most able executive secretary, which I was lucky enough to have in the U. S. Maritime Commission for nine years, I briefed it to the general extent that she was the only person in the U.S.M.C. who could say "No" to a Senator or a Congressman and make him like it. That's a marvelous attribute -- one which Dr. Lewis possessed, whether dealing with civil or governmental personnel.

Frankly and correctly, George Lewis was "a Grand Guy."

"All the world can stand up and say:
This was a man!"

The highest praise I can give any man is to say:
"He is the salt of the Earth!"

George Lewis is in that select category, and my final comment is to give him the highest Navy encomium:

Well done!

FORMAL NAMING OF LABORATORY

by Dr. Jerome C. Hunsaker, Chairman, NACA

Pursuant to authorization by the National Advisory Committee for Aeronautics at its last meeting, it is now my honor and privilege officially to rename this laboratory in honor of our late Director of Aeronautical Research, Doctor George W. Lewis.

I hereby declare that henceforth the Flight Propulsion Research Laboratory at Cleveland, Ohio shall be known as the LEWIS FLIGHT PROPULSION LABORATORY.

In testimony of this action, I now unveil a bronze plaque on which appears the name of the committee a bas relief of Dr. Lewis and the words: "In honor of George William Lewis, Sc.D., Director of Aeronautical Research, 1919-1947, this laboratory is named Lewis Flight Propulsion Laboratory, September 28, 1948."

REMARKS

by Dr. Hugh L. Dryden, Director of Aeronautical Research, NACA

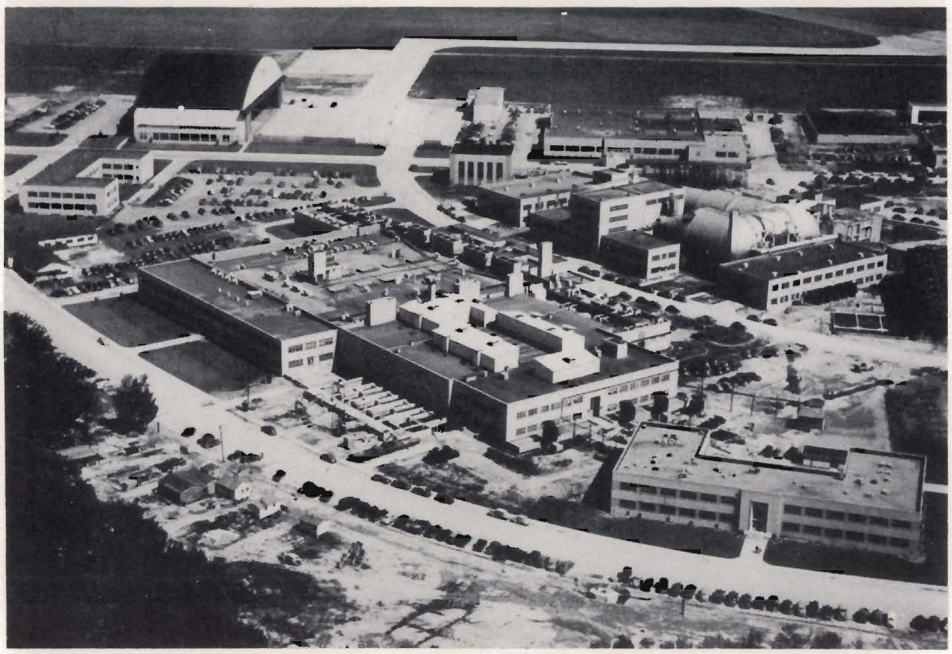
It is very fitting that the first public activity of this laboratory in its new designation as the Lewis Flight Propulsion Laboratory should be the second annual inspection. Not only does the inspection give you an opportunity to see the buildings and equipment and to meet some of the staff of the organization which was built up under the leadership of Dr. Lewis; it also represents a type of activity in which he was intensely interested, the dissemination of information about the work of the NACA in practical and understandable language. If you leave today with a fair idea of what goes on in this laboratory, and of its contribution to the production of better aircraft, you owe a debt to a type of reporting created under his direction.

This laboratory is dedicated not to the design and development of specific power plants, but to research on the problems of flight propulsion, to obtain basic data which will lead to the development by the aircraft industry of power plants of increased performance and reliability and of decreased cost in manhours and materials.

Research information and data are of limited value in the files of a research laboratory or in the minds of its staff. It must be made available to those who need it and who can apply it to aircraft and engines under development. We attempt to do this in many ways, including technical reports, specialized technical conferences, and interchange of visits. Highly technical questions can only be handled by such means, and those of you who have such questions are invited to bring your needs to our attention.

The annual inspections represent a different type of reporting and are not intended for highly technical discussions. The aim is to describe the work of the laboratory in broad terms to you, the leading men of aviation, business men, officers of the armed services, government officials, all who have a stake in assuring American leadership in the air. We need your intelligent interest and the impact of your thinking to aid us in preparing for the future.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS



In Honor of

GEORGE WILLIAM LEWIS, Sc.D.

Director of Aeronautical Research, 1919-47

This Laboratory Is Named

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