

NASA LEWIS RESEARCH CENTER:
PART 4

HON. DENNIS J. KUCINICH

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

Thursday, July 31, 1997

Mr. KUCINICH. Mr. Speaker, I rise today to make note for the RECORD of the future of the National Aeronautics and Space Administration's [NASA's] Lewis Research Center [Lewis].

Throughout the 1990's, Lewis, along with many other NASA field centers suffered due to downsizing and budget cutbacks. However, the future appears to be full of promise.

In NASA's most recent strategic plan, published in February 1996, the overall agency mission provides for near-, mid-, and long-term goals. Within these time parameters there are various missions which will be carried out. Comparing Lewis' current roles and missions, they could feasibly be involved in all of the missions in each of the time periods. Contributing to such things as research on the international space station, developing technologies that will enable human missions beyond Earth orbit and advancing the implementation of routine, affordable space travel are just some of the programs in which Lewis has the relevant expertise.

As the Center of Excellence in Turbomachinery and NASA's No. 1 aeropropulsion research facility, Lewis is set to play an important role in all of NASA's future planned missions through the year 2025. This unique expertise would be difficult to find elsewhere and NASA would not be able to meet its goals without Lewis.

The backing of both Congress and the White House in NASA is evident from the fiscal year 1998 budget recommendation. In turn, NASA's faith in Lewis is seen from the fact that their 1998 funding level is likely to be increased by \$50 million. As long as the Nation continues to benefit from the important work that NASA conducts, they will receive the necessary funding, their near-, mid-, and long-term goals will be met and Lewis' position as an important and central component to this success will be secured.

I recommend the following report, which has been prepared by the Congressional Research Service, commenting on the promising future of Lewis Research Center.

NASA LEWIS RESEARCH CENTER—PART 4
THE FUTURE OF LEWIS

When the potential for closing NASA centers is discussed within the space community, some mention Lewis as a center likely to be closed. The reductions at Lewis over the past four years may have furthered the impression that the center is a candidate for closure. One way of gauging the potential for closing LeRC is by comparing NASA's future plans with the current roles and missions of Lewis. If future NASA plans require the resources and facilities of Lewis, that lessens the likelihood that LeRC will close. The following two sections look at how Lewis' roles and missions compare with NASA's current strategic plan. The first section looks at NASA's overall goals and whether Lewis would be involved with fulfilling those goals, and the second section compares Lewis' main role in aeropropulsion and turbomachinery with the strategic plan.

NASA'S STRATEGIC PLAN—OVERALL AGENCY
GOALS

NASA's future plans are portrayed in its strategic plan, the most recent of which was published in February 1996. The plan provides the overall agency mission and defines the near-, mid-, and long-term goals that NASA wants to achieve over the next 25 years and beyond. NASA has determined that it has 3 mission areas: To advance and communicate scientific knowledge and understanding of Earth, the solar system, and the universe and use the environment of space for research; to explore, use, and enable the development of space for human enterprise; and to research, develop, verify, and transfer advanced aeronautics, space, and related technologies.

Each of these mission areas has 3 main goals for the near-, the mid-, and the long-term periods for a total of 9 main goals per period. In comparing Lewis' current roles and missions, the center could contribute to at least one goal over each time period in each of the 3 missions. The following lists the goals in which Lewis could have a role.

Near-term Goals (1997-2002)

Explore nature's processes in space; assemble and conduct research on the International Space Station and enable a long-term U.S. presence in space; develop new technologies and processes to enhance research and make space programs more affordable; and develop affordable technologies for U.S. leadership in the aviation growth markets of the 21st century.

Mid-term Goals (2003-2009)

Expand long-duration research to understand nature's processes in space; live and work in space to develop and demonstrate critical capabilities and systems to prepare for expanded human exploration; lead the activities of industry, DOD, and others to develop advanced technologies that will enable human missions beyond Earth orbit; dramatically improve aeronautics and space system design cycles, technologies and applications to enhance research and foster new products and industries; and apply knowledge gained from space-based experimentation to ground-based research, development, and manufacturing.

Long-term Goals (2010-2025 and beyond)

Expand our understanding and use of nature's processes in space; achieve affordable, routine space travel to enable research and human enterprise; enable advances to aeronautics and space systems to support "highways in the sky," "smart aircraft," and revolutionary space endeavors; and support the maturation of established aerospace industries and the development of new high-tech industries such as space-based commerce.

At this level of analysis, it appears that Lewis could have a significant role in achieving the agency's goals over the next 25 years and beyond. As the Center of Excellence in turbomachinery, Lewis is attempting to position itself as a world-class center whose expertise and facilities are not matched by any other U.S. facilities. As such, the closure of Lewis would appear to inhibit the agency's ability to achieve the goals that have been set forth.

AEROPROPULSION AND TURBOMACHINERY AND
THE STRATEGIC PLAN

A more detailed analysis of Lewis' future can be achieved by examining how the center's main mission as the Lead Center for Aeropropulsion and the Center of Excellence for Turbomachinery coincides with the agency's strategic plan. This main mission of Lewis maintains a FTE level of approximately 970, representing almost half of the total Lewis FTE level. The future of Lewis is

more closely tied to this mission area than any other Lewis mission.

NASA has divided the work it undertakes in its strategic plan into 4 main areas which are known as "enterprises." Each center undertakes activities in one or more enterprises, but each is associated with one primary enterprise. Lewis is associated with the Aeronautics and Space Transportation Technology Enterprise.

This enterprise divides its strategic plan goals into three areas known as "pillars": Global Civil Aviation, Revolutionary Technology Leaps, and Access to Space. The future plans of these three areas are stated in 10 goals. Lewis could have significant involvement in 7 of these 10 goals. A listing of the 7 goals that could involve Lewis participation follows. With each goal, a brief description of how Lewis could be involved is included.

Reduce the emissions of future aircraft by a factor of three within ten years, and by a factor of five within 20 years. This is a goal related to aeropropulsion. It involves the pursuit of engine technologies that lead to cleaner-burning and higher-efficiency engines.

Reduce the perceived noise levels of future aircraft by a factor of two from today's subsonic aircraft within 10 years, and by a factor of four within 20 years. This goal includes the development of engine configurations that would reduce engine noise.

Reduce the cost of air travel by 25% within 10 years, and by 50% within 20 years. Research efforts to meet this goal will include the development of new design techniques and concepts to advance today's state-of-the-art for engines.

Reduce the travel time to the Far East and Europe by 50% within 20 years, and do so at today's subsonic ticket prices. This goal includes the development of technologies for supersonic engines that are cleaner and quieter than today's subsonic engines.

Invigorate the general aviation industry, with U.S. industry delivering 10,000 aircraft annually within 10 years, and 20,000 aircraft annually within 20 years. This goal includes the development of general aviation aircraft engines that are ultra-reliable, maintainable, and affordable, and allow for faster flight.

Provide next-generation design tools and experimental aircraft to increase design confidence, and cut the development cycle time for aircraft in half. This goal includes the testing of air-breathing engines and engine design concepts on experimental aircraft.

Reduce the payload cost to low-Earth orbit by an additional order of magnitude, from \$1000s to \$100s per pound, by 2020. This goal includes the development of air-breathing propulsion for use in space launch vehicles. Aeronautical air-breathing engine concepts will be applied to space launch vehicles.

One could argue that Lewis' expertise in aeropropulsion and turbomachinery and its unique facilities allow the center to have a significant role in fulfilling the strategic goals of the Aeronautics and Space Transportation Technology enterprise over at least the next 25 years. The expertise could be portable, but the unique facilities would be difficult to replicate elsewhere, making it difficult to achieve the strategic goals without, Lewis.

CONCLUSION

During the 1990s, NASA Lewis has undergone significant reductions in its budget and FTE levels, and its areas of work responsibility have been reduced. When compared to other NASA centers, Lewis has had the highest percentage reduction in budget of all NASA centers; has had the second highest FTE percentage reduction; and has a total

planned FTE percentage reduction through FY2000 that is surpassed by KSC and MSFC.

During discussion in the space community, Lewis often makes the list of potential NASA centers that could be closed in the future. The reductions at Lewis over the past four years may have furthered the impression that the center is a candidate for closure. Based on the current strategic plan, however, the near-term closure of Lewis appears unlikely. Recent statements of NASA Administrator Dan Goldin support that supposition. In an April 24, 1997 hearing before the Senate Subcommittee on Science, Technology and Space, Mr. Goldin was asked if the agency had any future plans for the closure of some of its centers. He responded that NASA's future requires all of its centers and that there were no plans for closing any centers. He did assert that his response was predicated on the assumption that NASA's out-year budget plans would be met.

That caveat is important to note. NASA's strategic plan assumes that the agency will have stable budgets over the next few years. If NASA were to undergo significant reductions in its budget, the possibility of center closures might become more likely. The future of Lewis would then be tied to what priority the nation gives to NASA's Aeronautics and Space Transportation Technology enterprise versus the other three NASA enterprises. If budget constraints precipitated the decision to reduce or eliminate NASA's aeronautics mission, the future of Lewis would be in doubt. However, such a scenario appears unlikely in the near-term.

IN HONOR OF DEPUTY SHERIFF
JIMMIE HENRY

HON. JANE HARMAN

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 1, 1997

Ms. HARMAN. Mr. Speaker, I rise today to honor the late Deputy Jimmie Henry of the Los Angeles County Sheriff's Department. On August 4, 1997, the city of Avalon, CA, which is in my congressional district, will be holding a memorial ceremony honoring Deputy Henry who died in the line of duty. The California Peace Officer's Association will present a medal of valor to his wife, Sue, and their only son, David J. Henry.

In 1984, Deputy Jimmie Henry was assigned to police the unincorporated area of Santa Catalina Island when a U.S. Navy jet crashed in a remote part of the island. At the request of the Navy, Sheriff's Department personnel were immediately dispatched to the scene of the disaster to check for survivors and to secure the area until Navy investigators could respond and assume control of the investigation. Deputy Henry was assigned to check the wreckage for survivors at the bottom of a canyon, and sadly to say, there were none.

During Deputy Henry's investigation, he was exposed to toxic chemicals that were leaking from the aircraft. It was only when Navy personnel arrived the next day and approached the wreckage that there was any indication of the seriousness of his exposure to unknown substances.

Deputy Henry's state of health steadily declined following the accident, and on May 12, 1995, Deputy Henry died of his injuries heroically sustained in the line of duty.

I proudly join Mayor Pro Tem Tim Winslow, the city of Avalon, and Sheriff Sherman Block

in honoring the memory of this courageous fallen hero, and I offer my gratitude and support to his wife, Sue, and their son, David, on the occasion of this important memorial ceremony.

A TRIBUTE TO PAMELA SACKETT

HON. GERALD B.H. SOLOMON

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Friday, August 1, 1997

Mr. SOLOMON. Mr. Speaker, I would like to take this opportunity to pay tribute to a great woman and a selfless advocate of children's welfare, Pamela Sackett, who has served as the executive director of the Task Force for Child Protection since 1985. Pamela Sackett will be recognized for her many accomplishments at a retirement dinner on Tuesday, August 12, 1997, in Poughkeepsie, NY, of my congressional district.

Mr. Speaker, Ms. Sackett received her education in New York State first at Marist College in Poughkeepsie, NY, and later at Fordham University located in the Bronx, NY. Soon after her graduation from Fordham University where she received her masters of social work, Pamela began working as the coordinator of community services for the Task Force for Child Protection. Holding this post from 1981 to 1984, Pamela developed her skills as a social worker and a community leader. Indeed, Pamela recognized the truth in the old cliché that our children are our future. Throughout her career Ms. Sackett has worked with the one noble goal of helping others. Prior to her tenure as executive director, Pamela continually took on ever more duties. She was simply glad to do her part for our Nation's youth. Among her varied responsibilities during these years she gave of her time as a crisis counselor, a board member, and a supervising social worker. While many would be satisfied with this list of accolades Ms. Sackett continued to give of herself.

Mr. Speaker, her unflagging efforts for the welfare of children is what makes Pamela Sackett so special to those she has helped over the years. While the task force was under her supervision many programs were developed with the one aim of children's welfare. In 1987 the task force began the KIDS program which supervised visits for families involved in family court. Among her other achievements, too numerous to list here, the task force opened the first child advocacy center in New York State. That's why I have always admired people like Pamela Sackett who offer their services to those in need, especially to those that society tends to forget. This type of service does not involve much wealth or acclaim. But it often helps those forgotten children.

Actions like these are what make Pamela an asset to the Salt Point community of upstate New York, where she now resides. We would do well to emulate her brand of caring service for children. On that note, Mr. Speaker, I ask that you and all Members of the House rise and join me in this tribute to Pamela Sackett.

TRIBUTE TO DR. JAMES H.
HARGETT

HON. BOB FILNER

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 1, 1997

Mr. FILNER. Mr. Speaker, and colleagues, I rise today to pay tribute to Rev. James H. Hargett, who is retiring after 42 years in the ministry, the last 10 years as Pastor of the Christian Fellowship Congregational United Church of Christ.

Dr. Hargett, as he is known by his parishioners, friends and colleagues alike, always makes it a point to blend African-American history with theology. In his sermons or during his numerous public speaking engagements, Dr. Hargett will always discuss the present conditions of African-Americans in the context of the history of almost 250 years of slavery. "A son of the South", Dr. Hargett was born in Greensboro, North Carolina 67 years ago. He grew up to march with Dr. Martin Luther King Jr., and participated in numerous civil rights demonstrations and causes. "It was at this time," noted Dr. Hargett, "that I got the chance to witness the system of separate but equal from a close up point of view."

He recognized that a system based on segregation and bigotry would weaken our society. From that moment on, Dr. Hargett dedicated his life to fighting prejudice and injustice wherever it exists.

Dr. Hargett married Louilyn Funderburke Hargett. Together, they have three adult children and five grandchildren. Since graduating from North Carolina A&T and the Yale Divinity School in the Mid-1950's, Dr. Hargett had ministries in Hawaii, North Carolina, Los Angeles, New York, and New Jersey before moving to San Diego a decade ago.

He was active in the effort against Proposition 209, the anti-affirmative action initiative that was approved by California voters in 1996. He still believes that through strong leadership and organization, equal opportunity will continue to be the cornerstone of this democracy.

Dr. Hargett has been a man of vision and dedication. He has been a minister and a teacher—a conscience for us all.

Mr. Speaker, I hope that all of my colleagues will join me in paying tribute to Dr. James H. Hargett on this special occasion.

TRIBUTE TO ALBERT SCHERZ

HON. BOB SCHAFFER

OF COLORADO

IN THE HOUSE OF REPRESENTATIVES

Friday, August 1, 1997

Mr. BOB SCHAFFER of Colorado. Mr. Speaker, I would like to take this opportunity to tell you about a good friend and fellow Republican who was recently taken from us and sent to the Lord. I speak of Albert David Scherz of Loveland, CO. David was born November 24, 1932, in Timpson, TX, and passed away on July 19, 1997. His son, David wrote a eulogy in commemoration of his father that best expresses the kind of person he was, and I would like to submit it for the RECORD.

My father and I used to joke about who video taping the service for our own funerals.