NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

OFFICE OF THE ADMINISTRATOR

September 21, 1973

Mr. Bruce T. Lundin
Director
Lewis Research Center
National Aeronautics
and Space Administration
21000 Brookpark Road
Cleveland, OH 44135

Dear Bruce:

The Lewis "inspection" -- "Technology in the Service of Man" -- was absolutely outstanding!

I have nothing but praise for every facet of it; the subject matter, the way it was presented, the displays and demonstrations, the speakers, and the logistics were all great. I heard many comments, from both NASA people and from our outside guests, and all of them were favorable, expressed in superlatives.

If I have to single out one element of the tour, above all others, it would have to be the speakers -- the young men who demonstrated so well that NASA is still the best high technology agency in the world.

Please pass on my congratulations and sincere appreciation to all who were responsible for this outstanding event.

With best regards,

Sincerely yours,

George

George M. Low
Deputy Administrator

NASA

FLIGHT RESEARCH CENTER

OFFICE OF THE DIRECTOR

Dear Bruce,

Your inspection was outstanding! I felt like I was back in NACA. I wanted to put on my NASA badge to be sure that visitors knew I was related to the group putting on the show.

You've set a tough precedent for those who follow.

Best personal regards,

Lee

A BFR
2/Ins Files

AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS

WASHINGTON OFFICE
1625 I ST., N.W.
WASHINGTON, D.C.
20006
202/785-0293

October 24, 1973

Dr. Bruce Lundin
Director
NASA Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

Although this letter is three weeks overdue, I still want to take the time to write you my sincere appreciation for the splendid program you put on for the visitors to Lewis Research Center on September 19-21, 1973. In my memory, there has never been a better job of presenting to the public the programmatic activities of an agency. The speakers were clear and crisp, and your visual aids and demonstrations were nonpareil.

As I understand it, what Lewis was undertaking to do here was revive the fine old NACA tradition of biennial visitation. One can hope that the torch will now be picked up by several of the other centers, so that we can all have an opportunity to learn both about the applications of your work to domestic problems, and about new developments in aerospace. All good luck to you in this vital enterprise.

With warmest personal regards,

Cordially yours,

Holt

Holt Ashley
President, AIAA

HA:ms

cc: James Harford, Executive Secretary, AIAA
Walter Olson, Director-Region III, AIAA
Roy Jackson, Director, Office of Applied Science and Technology, NASA

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MAYNARD L. PENNELL, ALAN POPE, ALLEN E. PUCKETT, JAMES A. RALPH.

20 September 1973

AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS

Mr. B. T. Lundin
Director
Lewis Research Center
National Aeronautics and
Space Administration
Cleveland, Ohio 44135

Dear Mr. Lundin:

I wish to express my appreciation for the outstanding presentations of your Open House, "Technology in the Service of Man." Every aspect of the full day was performed to perfection with heart warming courtesy.

The need for communicating the benefits of technology to the public has been a considerable concern of mine for some time. If I might, may I suggest consideration of a television documentary to provide broader understanding. Similarly, availability of this message on film for public school usage would help the new generation have perspective in the origins and requirements for improved standard of living.

In summary I want to add my word of congratulations for a superior job of communications and encouragement to even expand the audience.

Sincerely,

William E. Simpkin

William E. Simpkin, Chairman
Air Breathing Propulsion, Technical Committee

HOLT ASHLEY, President, DANIEL B. DE BRA, Vice President-Education, GORDON L. DUGGER, Vice President-Publications,
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AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS

3100 Chester Avenue
Cleveland, Ohio 44114

October 3, 1973

Mr. Bruce T. Lundin
Director, NASA Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

The Cleveland-Akron Section of the AIAA is indeed appreciative of the use of the Lewis Research Center facilities for the AIAA-IEEE dinner meeting held September 19, 1973, and extends its thanks to the NASA Personnel who helped in presenting the meeting program "Technology In The Service of Man."

Attached is a list of NASA employees who, through their personal sacrifice in time and effort, made this an outstanding meeting to over one hundred guests.

Sincerely,

William C. Davis

William C. Davis
Vice Chairman
Cleveland-Akron Section, AIAA

AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS

3100 Chester Avenue
Cleveland, Ohio 44114

Speakers and Helpers who presented AIAA/IEEE Special Meeting the evening of September 19, 1973:

RESERVATION

Gloria O'Donnell

INTRODUCTION

Dr. Ted Olson

QUIETING THE FLEET

Bill Conrad
Bob Antl
Dick Woodward
Frank Montegani
Ken Baumeister
Bob Friedman

BIG BOOST FROM ROCKETS

Howard Douglas
John Kramer
Don Garman
R. Knight
Bob Rofal
Tom Coney
Neal Wingenfeld
Jim Stoll
Phil Masters
Ray Sotos
Tom Niezgoda
Mike Crnobrnja
John Catone
Jim Tresler
Gale Butler

CLEAN ENERGY FOR A BETTER LIFE

John L. Anderson
Paul Kerwin
Bill Bifano
Larry Sutter
Phil Ming

FLIGHT RESEARCH BLDG. DISPLAYS

Bob Becker

AIAA/IEEE NASA employees who also helped with meeting arrangements:

R. Weiler
A. Lovoff
G. Pablic
F. Nickle
D. Garman
R. Kuhnapfel
J. Kimmel
R. Myhre
J. Roberts
H. Bloomer
D. Boldman
D. Vincent
C. Meyer
S. Stevenson
D. Quentmeyer
P. Brinich
N. Hannum

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ENGINEERING MODEL & MOCK-UP DIVISION

September 21, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Ref: 1003

Dear Mr. Lundin:

We here at Atkins & Merrill who attended the program "Technology in the Service of Man" on Wednesday, September 19, wish to express our sincere appreciation to the personnel at Lewis Research Center for the excellent job that was done in making our visit most comfortable and indeed interesting.

We were impressed with your strides made in Advanced Research and Development and wish you continued success. We take pleasure in the knowledge that Lewis Research Center intends to continue its efforts into the years to come.

Thank you again for your invitation to inspect your facilities. We trust that we may be able to coordinate our own Advanced Research and Development efforts with NASA Lewis in the future.

Sincerely,

J. Leo Clark

J. Leo Clark
Vice President and General Manager

JLC/hp

BOEING AEROSPACE COMPANY
P.O. Box 3999 Seattle, Washington 98124

September 24, 1973
2-5000-28

Mr. Bruce T. Lundin
Director
Lewis Research Center
21000 Brookpark Road,
Cleveland, Ohio 44135

Dear Bruce:

I attended your open house "Technology in the Service of Man" on September 20. I was impressed and want to thank you for inviting me. It was evident from the displays, the ability of the speakers, and the organization and scheduling that a lot of thought and care went into its preparation. Only a couple of brief times did I get the feeling that your people were trying too hard to sell. I found the whole affair to be interesting and informative.

Both NASA and the aerospace industry need to present themselves well to congress, the public, and the press, as well as to one another, to improve our combined reputations. You have taken a good step in that direction. Congratulations!

Sincerely,

W. T. Hamilton

The Cleveland Baptist Association

American Baptist Convention

2246 EUCLID AVENUE
CLEVELAND, OHIO 44115
PHONE: 241-2380

October 1, 1973

Dr. Bruce T. Lundin, Director
Lewis Research Center
National Aeronautics and Space Administration
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Dr. Lundin:

Please accept my deep appreciation for an exceptionally informative and enjoyable day as a guest of the Center on Friday, 21 September, 1973, at the "Technology in the Service of Man " presentation.

I was impressed with the number of benefits to our daily lives as the result of the research and also with the excellent method and manner of the various presentations.

I am very glad I was able to attend and I am grateful for having had the opportunity to be enlightened.

Again my thanks to you and the staff.

Sincerely,

Herbert C. Hall

Herbert C. Hall
Minister-at-Large

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MISS HELEN A. SHEPARD, BOOKKEEPER

CLEVELAND TRUST
M. Brock Weir
President and Chief Executive Officer

October 1, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Bruce:

May I express to you and your associates at Lewis Research Center my thanks for a most enjoyable and informative day on the occasion of your program, "Technology in the Service of Man", on Wednesday, September 19th. I can assure you, based on the comments from a number of business acquaintances whom I saw at the open house, that they shared my gratitude.

I particularly felt that, at least in my own case, you accomplished much towards lifting the veil that usually shrouds scientific enterprises and I was particularly gratified to learn that so much attention is being paid to so many everyday problems that are bugging us all so much. It's comforting to an individual as well as to a corporate tax payer that our terrestrial problems are receiving as much attention as they are.

Sincerely yours,

M. B. Weir

MBW:jr

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September 20, 1973

Mr. Bruce T. Lundin, Director
Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio 44135

Dear Mr. Lundin:

I found your program yesterday resulting in one of the more informative and interesting days I've spent in quite a while. I'm sure few of us realized the breadth of activity being carried on by NASA.

We were also impressed by the well-organized and efficient manner in which this program was conducted.

Thank you very much for this opportunity.

Sincerely,

Dale P. Fosnight

Dale P. Fosnight
President

DPF/mlr

cc: File

HEAD OFFICE
Continental Bank Building
1255 Euclid Avenue
Cleveland, Ohio 44115
216/781-3355

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Center Ridge Road-West 210th Street
West 130th Street-Pearl Road

September 21, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics
And Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I certainly enjoyed my September 19 visit at the Lewis Research Center.

The speakers did an excellent job of conveying the message that many activities (in addition to space research) are going on at Lewis.

Thank you for a most pleasant visit.

Sincerely,

Howard W. Busse

Howard W. Busse
Assistant Vice President

HWB/al

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SYRACUSE, NEW YORK 13201

JOSEPH A. WAINRIGHT
VICE PRESIDENT
ENGINEERING

September 24, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

In response to your kind invitation, I attended your program, "Technology in the Service of Man" Thursday, September 20. It was a most interesting program, and the people who prepared and presented the program are to be congratulated on presenting so much information, so well organized, in such a short time.

Thank you very much for inviting me to such an excellent presentation.

Sincerely,

J a Wainright

JAW/bv

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September 20, 1973

Dr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Dr. Lundin:

I would like to thank you for a most informative and enjoyable day spent yesterday at Lewis Research Center while attending the program, "Technology in the Service of Man."

You and the Lewis Research Center and Other NAS personnel who participated in the planning and execution of the program are to be congratulated on the broad scope of material, quality of the presentations and adherence to the precise schedule which moved the program along very smoothly.

NASA is involved in some wonderful programs for the betterment of life for all mankind through the application of techniques and knowledge derived from space projects and other scientific endeavors. NASA has a record to be proud of, a fine story to tell and told it very well through this program.

Again, thank you for all of the courtesies extended to me and for a fine program.

Very truly yours,

LEO A. DALY COMPANY

Robert K. Dickerson

Robert K. Dickerson
Vice President

RKD/sls

cc: Mr. Leo A. Daly

FORM DV-1001 REV 8-63

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WILMINGTON, DELAWARE 19898

DEVELOPMENT DEPARTMENT

September 25, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Congratulations to you and your staff for the excellent program, "Technology in the Service of Man", which I was privileged to attend last Friday. Your presentations and the facilities with which you handled the large number of attendees were superb.

I trust you will think of the Du Pont Company whenever similar programs are held in the future. Thank you very much for making my visit informative and pleasant.

Yours very truly,

L. M. Magner
Staff Consultant

LMM:ksb

Elyria area chamber of commerce

P. O. Box 68 356 Second Street, Elyria, Ohio 44035 216-322-5438

September 20, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Please accept my sincere thanks for the opportunity of visiting your facility yesterday. It was an extremely interesting and informative day and you and your staff were most hospitable.

If you repeat this visitation program, I would certainly like to see several of our top business leaders here participate. Thank you again.

Cordially,

ELYRIA AREA CHAMBER OF COMMERCE

Richard J. Elliott
General Manager

RJE/bas

EXPAND IN ELYRIA!

100 ERIEVIEW PLAZA - 36TH FLOOR
CLEVELAND, OHIO 44114

September 21, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

This is just a quick note to tell you how much I appreciate being invited to your program "Technology in the Service of Man". I attended Thursday, and want to compliment you on a very instructive presentation, beautifully handled.

I was particularly impressed by each and every speaker, who obviously not only had rehearsed his presentation well, but also spoke succinctly and at all times to the point.

The exhibits, drawings and demonstrations were also extremely helpful to the layman trying to absorb all that was being told us.

I thank you.

Sincerely,

R. L. Ireland

RLI:js

BARRY M. GOLDWATER, JR.
27TH DISTRICT OF CALIFORNIA

COMMITTEE ON INTERSTATE
AND FOREIGN COMMERCE
COMMITTEE ON SCIENCE AND
ASTRONAUTICS

Congress of the United States
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Washington, D.C. 20515

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October 2, 1973

Bruce Lundin
Director
NASA
Lewis Research Center
Cleveland, Ohio 44135

Dear Bruce:

Susan and I certainly want to thank you for a very interesting and informative day we spent at Lewis last month. Your presentation was excellent, and I was particularly impressed with the obvious pride that your staff took in their jobs. This fact, of course, is only a credit to your expertise.

Again, it was a pleasure meeting you and having the chance to get a firsthand look at the diverse activities at Lewis.

Warm regards,

Barry

BARRY M. GOLDWATER, JR.
Member of Congress

BMG/jh

Ps Thanks for the fast action on those pictures, Barry

logged 11-5

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JOSEPH DEL RIEGO

November 2, 1973

Dr. Bruce T. Lundin
Director, Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio

Dear Dr. Lundin:

Thanks very much for sending me the booklet summarizing the presentations on "Technology in the Service of Man."

The booklet contained information which I feel will be useful to the Members of our Committee. I have taken the liberty of having each Member sent a copy.

Sincerely,

Jack Swigert

JOHN L. SWIGERT, Jr.
Executive Director

Copies sent to Hq 11-6 JDH

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United States Senate
COMMITTEE ON
AERONAUTICAL AND SPACE SCIENCES
WASHINGTON, D.C. 20510

September 24, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

Thank you so much for the delightful day which we spent at your center on Friday.

The nine presentations were exceptionally well done and I congratulate you on the selection of briefing officers and on the excellent visual aids used to augment the presentations.

Our trip up and back was extremely pleasant and just made the whole day a very rewarding experience.

Very sincerely,

Ralph E. Vandervort, Jr.
Assistant Chief Clerk

REV:cms

VETERANS ADMINISTRATION
REGIONAL OFFICE
FEDERAL OFFICE BUILDING
1240 EAST NINTH STREET
CLEVELAND, OHIO 44199

Date: September 25, 1973

In Reply Refer to: 325/00

Mr. Bruce T. Lundin
Director
NASA
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

Just a brief note to thank you and commend you for the outstanding program that was held on Friday, September 21, at your installation. It was a most beneficial day for me, and I felt that the individual presentations were well prepared and professionally presented.

I certainly wish to commend you and your staff for an outstanding job and know that all the participants were favorably impressed with the fine work that the Lewis Research Center is accomplishing.

Many thanks for your thoughtfulness in inviting me, and I am sorry that I did not get the opportunity to personally thank you during the day.

Sincerely yours,

"L"

L. M. MERRITT
Director

Show veteran's full name, VA file number, and social security number on all correspondence.

THE LIBRARY OF CONGRESS

Congressional Research Service

WASHINGTON, D.C. 20540

September 26, 1973

Dr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Dr. Lundin:

Your program on Technology in the Service of Man, which I was privileged to attend on September 21st, was a rewarding experience. It was inspiring to hear so many dedicated researchers explain their projects in a way everyone can understand.

The experience was particularly helpful to me because I am frequently called upon to do research and writing in the field of the impact on society of science and technology. Usually I work on international space activities for the Senate Committee on Aeronautical and Space Sciences, and have been impressed that international space cooperation depends upon a strong national program. There were several briefings during your program which were helpful to me. The State Department appointed me an advisor to the United Nations Working Group on Direct Broadcast Satellites and I spent two weeks with the U. S. Mission in New York, and I have Congressional requests for this subject. The National Academy of Sciences/National Academy of Engineering invited me to participate in a panel on the methodology of assessing the impact on the climate of a fleet of high-altitude planes (University of California, San Diego, in La Jolla) in August. I was on the panel concerned with social, economic and political effects with particular reference to political science and international law. And I am giving a paper at the International Astronautical Federation congress in Baku, USSR on Remote Sensing of the Earth by Satellites: Legal Problems and Issues. This will be at the Colloquium on the Law of Outer Space held by the International Institute of Space Law.

It was very important to me to see the hardware and hear about what is being done at the Lewis Research Center for I do not like to be confined to information from books and documents.

With appreciation,

Sincerely yours,

Eilene Galloway

Mrs. Eilene Galloway
Senior Specialist in International Relations

THE LIBRARY OF CONGRESS

Congressional Research Service

WASHINGTON, D.C. 20540

✓cc to Mr. Jenkins — (also sent Messrs. Barnett and Lubarsky)

September 26, 1973

Miss Marilyn Zering
c/o NASA Lewis Research Center
Mail stop 3-16
Cleveland, Ohio 44135

Dear Marilyn:

I feel inspired by the day I spent at the Lewis Research Center being briefed on Technology in the Service of Man. It is very reassuring to meet so many highly motivated researchers, and it makes one feel that everything is going to turn out happily in the end.

The Civil Service Commission has asked me to give a lecture at Oak Ridge, Tennessee on the relationship between executives with programs in the Executive Branch and the Congress with particular reference to informing them about all aspects of Congress. They wanted this in October, but I am going to the USSR to attend the IAF Baku conference on October 5th, so the date has been set in January. It was helpful to me to see the results of the research programs, and having had experience here with authorizing and appropriating funds, I think now I have some new examples of executive-legislative relations.

I am glad you are back with NASA. Without the kind of work being done at the Lewis Research Center it would be impossible to have a program of international space cooperation.

With appreciation,

Sincerely yours,

Eilene Galloway

Mrs. Eilene Galloway
Senior Specialist in International Relations

Ohio House of Representatives

DONALD J. PEASE
285 OAK STREET
OBERLIN, OHIO 44074

54TH HOUSE DISTRICT
LORAIN COUNTY (PART)

Columbus
43215

COMMITTEES:
EDUCATION, CHAIRMAN
WAYS & MEANS

October 25, 1973

Mr. Bruce T. Lundin
National Aeronautics and Space
Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Thank you very much for sending me the model of the Titan/Centaur which Andy Stofan arranged to give me during my recent day-long visit to NASA. I am very pleased to have the model and appreciate your thoughtfulness. Let me also say that I was very much impressed with what I saw of the Lewis Research Center during your "Technology in the Service of Man" program. I came away with a much better informed and greatly enhanced opinion of the important work you are doing.

Sincerely yours,

Don J. Pease

DON J. PEASE
(Dictated by Mr. Pease, but signed and mailed in his absence.)

Rec'd 10/29/73

City of Cleveland
RALPH J. PERK, MAYOR

DEPARTMENT OF COMMUNITY DEVELOPMENT
NEIL McGINNESS
DIRECTOR

September 28, 1973

National Aeronautics and
Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Gentlemen:

As a recent guest at your public program I take this opportunity first to thank you for the experience and exposure and then to offer some random observations.

The overall effect of the day-long program was one of great efficiency, economy of movement and technical proficiency.

As a non-technically oriented lawyer, I found the individual programs complex enough to insure my attention and concentration; not so detailed as to distract me.

Recognizing that at least one of several objectives of the program was to impress upon Congress and the voting public the non-space oriented technical advances spun off from research projects and their impact on the public in general, I would suggest a more prominent display in technical roles of both women and minorities; a subject certainly Congress is sensitive to and may even be concerned with.

Sincerely yours,

Neil McGinness
Director, Community Development

NMcG/fsl

ADDRESS ALL COMMUNICATIONS TO THE CLERK OF THE BOARD

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CLERK OF THE BOARD
LOUISE M. MULOCK

November 1, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and
Space Administration
Lewis Research Center
21000 Brookpark 44135

Dear Bruce:

Thanks so much for the NASA report, "Technology in the Service of Man." It is most interesting.

Sincerely,

Seth Taft
County Commissioner

ST:ga

1) ~~BTL (info)~~
2) Inspection File

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

REPLY TO
ATTN OF:

FILE 5896
OCT 2 3 1973

Dr. Bruce T. Lundin
Director
NASA/Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

I appreciate your comments concerning our help on your recent "Technology in the Service of Man" program.

Your entire program, which I was privileged to attend on September 20, was conducted in a thoroughly professional manner which reflected great credit, both on Lewis Research Center and on the entire Agency.

We appreciated the opportunity to contribute to the success of this program. You have set a very high standard, indeed, for Goddard and your other sister centers to match in future years.

Best personal regards.

Cordially,

John

John F. Clark
Director

Rec'd 10/25/73

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LANGLEY RESEARCH CENTER
HAMPTON, VIRGINIA 23365

October 4, 1973

REPLY TO
ATTN OF:

Mr. Bruce T. Lundin
Director, Code 0100
National Aeronautics and Space
Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, OH 44135

Dear Bruce:

On behalf of all the Langley people who visited the Lewis Open House, I would like to thank you and tell you how impressed we all were. On the plane returning home, we all revisited the several stops and compared notes. Everyone was bubbling with enthusiasm for the manner in which your staff conducted the affair; but more importantly, we felt that without exception, the presentations really got the message across concerning your significant contributions.

We were proud to see credit given for the joint efforts of Langley and Lewis; your choice of timely topics gave us all a boost. The only sobering thought was the fact that Langley will be expected to compete with your fine performance.

Thanks for the hospitality.

Sincerely,

Oran W. Nicks
Deputy Director

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

REPLY TO
ATTN OF:

SEP 25 1973

Mr. Bruce T. Lundin
Director
Lewis Research Center
National Aeronautics and
Space Administration
21000 Brookpark Road
Cleveland, OH 44135

Dear Bruce:

After we talked this afternoon on several subjects you had on your list and I again complimented you on the Lewis inspection, I read George Low's letter to you (copy enclosed).

I can see now that as pleased as I was with the small part I saw, I was so busy helping your guys sell Pat Mooney on NASA that I really didn't see the inspection with "eyes" like George's. I wished I could have, but then selling NASA to OMB is also important.

Please let me just say that from all I know and have heard, I can underscore all that George has said.

I compliment Bruce Lundin and the complete Lewis staff.

With warm personal regards,

Sincerely,

Roy P. Jackson
Associate Administrator for
Aeronautics and Space Technology

Enclosure

FLUOR OCEAN SERVICES, INC.

J. L. TATHWELL
PRESIDENT

6200 HILLCROFT · P. O. BOX 36878
HOUSTON, TEXAS 77036
TELEPHONE: (713) 771-5861

September 21, 1973

Dear Mr. Lundin:

I was most impressed by my visit to Lewis on September 19 to hear and see your program on "Technology in the Service of Man".

It is gratifying to learn that real progress is being made in coping with the problems associated with our environment and resources.

Thank you so much for including me on your guest list. I hope that an updating session will be forthcoming in the not too distant future.

Very truly yours,

J. L. Tathwell

Mr. Bruce T. Lundin, Director
National Aeronautics & Space Administration
Lewis Research Center
Cleveland, Ohio 44135

GENERAL DYNAMICS
Convair Aerospace Division

Kearny Mesa Plant, P. O. Box 1128, San Diego, California 92112 · 714-277-8900 Procurement, P. O. Box 172 · Accounting, P. O. Box 1708
Lindbergh Field Plant, P. O. Box 1950, San Diego, California 92112 · 714-296-6611

21 September 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Bruce:

I want to thank you for inviting me to your "Technology in the Service of Man" program. My visit on Wednesday was thoroughly enjoyable and very informative.

I would also like to congratulate you on the way that the program was managed and the very professional way in which the well rehearsed presentors discussed the activity in each of the labs we visited. A bonus benefit was the opportunity to renew acquaintances with many NASA and industry personnel, some of whom I haven't seen for several years.

Yours truly,

Dan

F. D. Applegate - Director
Product Engineering
601-0

GENERAL ELECTRIC
COMPANY
GROUP ENGINEERING DIVISION
CINCINNATI, OHIO 45215

MORRIS A. ZIPKIN
GENERAL MANAGER
ADVANCED ENGINEERING & TECHNOLOGY
PROGRAMS DEPARTMENT

October 12, 1973

Mr. Bruce Lundin, Director
National Aeronautic & Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

Just a note to let you know I thoroughly enjoyed the recent inspection day at the Lewis Research Center. While I am a relatively frequent visitor to the Center, I rarely get the chance to do more than just focus on the subject of the day. The opportunity to get a broad overview of your activities was most appreciated.

I want to also take this opportunity to remind you that it has been a long time since you visited the Aircraft Engine Group in Evendale. I believe you would find our advanced technology activity, much of it funded by NASA, of great interest. I am sure that Mike Toth, our Cleveland representative, would be happy to arrange for such a visit that would be consistent with your crowded schedule.

Sincerely,

Morrie

M. A. Zipkin

cc: MC Toth

GENERAL ELECTRIC

SPACE DIVISION

GENERAL ELECTRIC COMPANY . . . . . VALLEY FORGE SPACE CENTER
(MAIL: P. O. BOX 8555, PHILADELPHIA, PENNSYLVANIA 19101), Phone (215) 962-2000

1 October 1973

Mr. Bruce T. Lundin, Director
National Aeronautics & Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Thank you very much for affording me the opportunity to attend your recent program, "Technology in the Service of Man".

I regarded the proceedings as being extremely informative, very professionally presented, and very comprehensive.

Aside from imparting a great deal of useful technical information, I felt that the presentations did much to create an aura of good will and understanding between NASA-Lewis and the attendees.

Again, thank you and be assured that I am looking forward to NASA-Lewis's next open house.

Sincerely,

D. F. Huebner
General Manager
Energy Systems Programs

/m

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TO MAKE
GENERAL ELECTRIC
YOUR BEST BUY

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LAMP
BUSINESS
DIVISION

GENERAL ELECTRIC COMPANY, NELA PARK, CLEVELAND, OHIO 44112
Phone (216)

September 20, 1973

Mr. Bruce T. Lundin
National Aeronautics & Space Admin.
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I want to thank you for the opportunity to visit the Lewis Research Center.

You and your staff are to be highly complimented for your interesting and well-planned presentations and displays. It's always difficult to communicate to laymen and experts simultaneously. I don't believe it could have been done any better.

The planning and execution of the tour logistics and the many personal conveniences were superb.

Very truly yours,

Harold R Day

Harold R. Day, Manager
Lamp Manufacturing Research Laboratory
LIGHTING RESEARCH & TECHNICAL SERVICES
OPERATION

HRD:jkb
cc E. F. Apple

GENERAL ELECTRIC
COMPANY
AEROSPACE GROUP
3430 SOUTH DIXIE HIGHWAY
DAYTON, OHIO 45439

JOHN P. TURNER, JR.
MANAGER, CENTRAL REGION
DEFENSE AEROSPACE DIVISION
Aerospace Programs
Relations Division

25 September 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, OH 44135

Dear Bruce:

Once again I would like to express my appreciation for having been given the opportunity to attend your Program, "Technology in the Service of Man," on Friday, September 21.

This was an outstanding program and was conducted in a very professional manner. The arrangements, logistics and timing were excellent and the quality of the presentations was outstanding. I have been attending NASA, and formerly the NACA briefings of this type for over twenty years and sincerely feel that this one topped them all. It was a most interesting and very worthwhile day for me.

I enjoyed visiting with you at the close of the session and I hope I will have the pleasure of seeing you again on my next visit to Cleveland.

Sincerely yours,

JPT/mw

cc: M. C. Toth
General Electric Company

GENERAL ELECTRIC
COMPANY
WILMINGTON, MASSACHUSETTS 01887

AEROSPACE INSTRUMENT PROGRAMS
RALPH D. KETCHUM
GENERAL MANAGER

September 20, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics & Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I want to thank you for the opportunity of attending the NASA presentation on "Technology in the Service of Man." The presentation was very informative, extremely well done and helpful in understanding the role of NASA in today's technology. The whole affair was very professionally handled and made good use of my time.

Very truly yours,

Ralph D. Ketchum

baf/

THE GOODYEAR TIRE & RUBBER COMPANY
AKRON, OHIO 44316

VICE PRESIDENT

September 20, 1973

Mr Bruce T Lundin, Director
National Aeronautics & Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr Lundin:

This is just a word of appreciation for the opportunity to attend your excellent program yesterday on "Technology in the Service of Man".

It was a most informative session and you should be pleased with the job that your staff did in its preparation and execution.

Sincerely,

C R Milone

C R Milone
mb

~~1) BTL (info)~~
2) Inspection Files

The Harshaw Chemical Company
DIVISION OF KEWANEE OIL COMPANY

1000 HARVARD AVENUE
CLEVELAND, OHIO 44109
Telephone: 216 • 721-8300

October 23, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Sir:

I had the pleasure of attending NASA's program, "Technology in the Service of Man".

It has been some years since my last tour through this space facility and I was impressed with the overall effort.

The presentations by the various speakers were excellent, the coordination and cooperation equally excellent.

I came away with the feeling that this National science effort should give the citizens confidence in the future.

Please consider me for future programs.

Yours truly,

CJSlany

Charles J. Slany
Plant Manager

CJS/krd

Rec'd 10/25/73

The Higbee Company Public Square, Cleveland, Ohio 44113

Chairman of the Board
216/579-3650

September 24, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I just wish to thank you and all of your hosts and hostesses for the wonderful visit provided last Friday.

As I told several of your associates, I found the entire day one of great thrill. I only wish more Clevelanders could recognize what a wonderful asset we have in your organization.

Cordially yours,

Herbert E. Strawbridge

HES:RB

Herbert E. Strawbridge

LEZIUS-HILES

The Image Maker

1929 EAST 61st STREET
CLEVELAND, OHIO 44103
PHONE (216) 432-2000

October 30, 1973

Mr. Bruce T. Lundin
Director
Lewis Research Center
National Aeronautics and Space Administration
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

First, I wish to apologize for not writing sooner to tell you how very much I enjoyed touring your facility in September.

My compliments to you for conducting the tour in such an interesting and efficient manner.

Thanks for a wonderful day at Lewis Research Center and thanks also for forwarding to me a copy of your brochure.

Best regards.

Yours very truly,

Carl R. Lezius

Carl R. Lezius

crl/ew

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

SECTION CORRESPONDENCE

CLEVELAND SECTION

Please address reply to:

October 4, 1973

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Warrensville Heights, Ohio
44128
587-6660

Jack H. Bellack — *Vice Chairman*
The Illuminating Company
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Cleveland, Ohio 44101
623-1350 Ext. 3383

William L. Schultz — *Secretary*
Department of Physiology
Case Western Reserve University
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Cleveland, Ohio 44106
368-3366

Richard J. Schindler — *Treasurer*
The Ohio Bell Telephone Co.
20820 Chagrin Blvd.
Shaker Heights, Ohio 44122
921-9916

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Adolph Lovoff
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267-2210 Ext. 263
Publications & Publicity:
Herbert H. Heller 248-1200
Section News Manager:
George Duff 752-8400
Women's Auxiliary:
Mrs. Janet Thompson 845-3823

Mr. Bruce T. Lundin
Director
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

On behalf of the Cleveland Section of the IEEE, I want to thank you for making the NASA - Lewis facilities available for our first Section meeting which was held on the evening of September 19, 1973. Our more than one hundred members and guests very much enjoyed this opportunity to become better acquainted with the work at your laboratories. The presentations "Technology in the Service of Man" were given in a highly professional manner. The excellent preparation and organization of the tour made your hospitality even more enjoyable.

Please extend our sincere appreciation to the many employees at your facility that made this evening a success by contributing of their personal time. You will find their names on the attached list.

I hope that these open-house presentations will also prove to be successful from your point of view.

Sincerely,

Dr. Pieter G. Cath
Chairman

attachments

Speakers and Helpers who presented AIAA/IEEE Special Meeting the evening of September 19, 1973.

RESERVATION

Gloria O'Donnell

INTRODUCTION

Dr. Ted Olson

QUIETING THE FLEET

Bill Conrad
Bob Antl
Dick Woodward
Frank Montegani
Ken Baumeister
Bob Friedman

CLEAN ENERGY FOR A BETTER LIFE

John L. Anderson
Paul Kerwin
Bill Bifano
Larry Sutter
Phil Ming

FLIGHT RESEARCH BLDG. DISPLAYS

Bob Becker

BIG BOOST FROM ROCKETS

Howard Douglas
John Kramer
Don Garman
R. Knight
Bob Rofal
Tom Coney
Neal Wingenfeld
Jim Stoll
Phil Masters
Ray Sotos
Tom Niezgoda
Mike Crnobrnja
John Catone
Jim Tresler
Gale Butler

AIAA/IEEE NASA EMPLOYEES WHO WORKED

R. Weiler

A. Lovoff

G. Pablic

F. Nickle

D. Garman

R. Kuhnapfel

J. Kimmel

R. Myhre

J. Roberts

H. Bloomer

D. Boldman

D. Vincent

C. Meyer

S. Stevenson

D. Quentmeyer

P. Brinich

N. Hannum

The Institute of Noetic Sciences
575 Middlefield Road
Palo Alto, California 94301
(415) 328-2340

September 25, 1973

Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Bruce:

Thank you so much for your invitation for Captain Mitchell to attend your program at Lewis. He was out of town when your letter arrived and wi ll not be back until the end of this week. That does not excuse the tardiness of our responding and for that I am so sorry. Your letter somehow got misplaced and did not come to my attention until today. Please know, however, that he was not in your area so that the goof on my part did not cost you his presence.

Again, thank you for thinking of Captain Mitchell. The theme of your program is certainly the topic he spends all of his time promoting. The Institute of Noetic Sciences is in a large part dedicated to the careful stewardship of our planet.

No enclosure ab

Enclosed, is some information on the Institute. Hope you find it informative.

Sincerely,

Anita Rettig

Anita Rettig
Assistant to the President
Director Press/Public Affairs

P.S. Please give our best to Marilyn. I enjoyed meeting her during her visit last winter to Houston, and Ed & I were pleased to have spent an enjoyable dinner with her.

A. R.

AR/gb

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

SCIENCE AND TECHNOLOGY
POLICY OFFICE

September 26, 1973

Dr. James C. Fletcher
Administrator
National Aeronautics and Space Administration
400 Maryland Avenue, S.W.
Washington, D.C. 20546

Dear Jim:

I just wish to include my personal compliments on the very fine presentation, "Technology in the Service of Man" at the Lewis Research Center on Friday, September 21, 1973. The portrayal of the technical capabilities and accomplishments of that Center was done in a very effective and instructive manner for which you and Dr. Lundin, the Center Director, should be very proud.

Sincerely,

EJB

Edward J. Burger, Jr., M.D.

cc: Dr. Bruce T. Lundin
Director
Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio 44135

OGLEBAY NORTON COMPANY

THE HANNA BUILDING CLEVELAND, OHIO 44115

September 20, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and
Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

I do want to thank you for a very enjoyable day spent on Wednesday, September 19, 1973 at Lewis Research Center. The presentations were very interesting and extremely informative and the men who made them were exceptionally good. I do appreciate the opportunity to visit Lewis Research Center and want to thank you for inviting me.

Yours sincerely,

Assistant to the President

JLimbocker, Jr.
jms

PHONE: 412—547-2353
TELEX: 864-458

PERMALI
INCORPORATED
BOX 718, MOUNT PLEASANT (Pittsburgh Area), PENNSYLVANIA 15666

October 8, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Mr. Lundin, you and your most able staff are to be congratulated for your excellent program, "Technology in the Service of Man", which I attended on September 19.

I was particularly impressed by the skillful presentation of the speakers as well as the attention to a precise time schedule without a feeling of regimentation.

Robert A. Seabol
General Sales Manager

RAS:rk

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SUBSIDIARY OF GCA CORPORATION

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3737 WEST CORTLAND STREET, CHICAGO, ILLINOIS, 60647 • PHONE: AREA CODE 312 • 227-2660

CHESTER A. WARNER
President

September 21, 1973

Mr. Bruce T. Lundin, Director
Lewis Research Center
National Aeronautics & Space Administration
Cleveland, Ohio 44135

Dear Mr. Lundin:

It was a great privilege to accept your invitation to visit your facilities on September 20.

We had no previous idea as to the depth of creative science that is done at your Center. Obviously, there is no other way that such large scale research can be accomplished except under the auspices of our Federal Government and we hope that your programs continue to be supported.

It was a very pleasant as well as an educational day and the apparent "esprit de corps" that has been developed in your people was a delight to see. Congratulations on a well organized event and best wishes for continued success.

Sincerely,

Chester A. Warner

CAW:mk

Rocketdyne Division
Rockwell International

W. J. Brennan
President

6633 Canoga Avenue
Canoga Park, California 91304

September 24, 1973

Mr. Bruce T. Lundin, Director
NASA Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce:

Thank you for asking me to your "Technology in the Service of Man" program last week. It was most interesting and I found it informative and productive. Presentations were excellent, particularly displays and demonstrations.

Steve Domokos, our Vice President, Advanced Programs; Norm Reuel, Vice President, Liquid Rocket Programs; and Ed Monteath, Program Manager, join me in offering the opinion that we need more such programs to tell the general public what we are accomplishing.

Please accept the appreciation of all of us for providing us with a thought-provoking day.

With best wishes.

Sincerely,

W. J. Brennan

Rosemount

ROSEMOUNT INC., 12001 WEST 78th STREET / EDEN PRAIRIE, MINNESOTA 55343 / TEL: (612) 941-5560

TWX: 910-576-3103, TELEX: 29-0183

21 September 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I sincerely thank you for the privilege of attending your "Technology in the Service of Man" program on September 19. It was a very interesting and well prepared program which I feel did an excellent job of presenting many of the significant contributions of the NASA programs, particularly those at Lewis Center.

The values of aerospace technology are very real to our company, and to our customers also, we hope, since our growth and success has been based on applying such technology to the growing measurement and control needs of industrial processes.

Thank you again for the hospitality. We wish you continued success in your programs and look forward to further opportunities to work with you.

Sincerely,

William L. Murray
Vice President

WLM:agb

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ROTARY CLUB OF
CLEVELAND
HOTEL STATLER HILTON - Suite 358 - 44115
OHIO (216) 696-6640 U.S.A.

September 24, 1973

Mr. Bruce T. Lundin
National Aeronautics and
Space Administration
Lewis Research Center
Cleveland, Ohio 44135

My dear Mr. Lundin:

I write in behalf of our Rotary Club President Louis Hehman as well as myself in our effort to tell you how much we appreciated, learned and enjoyed on last Wednesday, September 19, when we had the privilege of visiting your Lewis Research Center. We certainly want to thank you again for including us. It was a stimulating, informative, challenging and fascinating experience. You certainly are doing a great job and we appreciate it.

Best wishes.

Sincerely,

Paul

Paul Armstrong
Executive Director-Secretary

PA:mlt

TAPPAN
APPLIANCE GROUP
TAPPAN PARK • MANSFIELD, OHIO 44901 • 419-529-4411

September 27, 1973

Mr. Bruce T. Lundin, Director
NASA
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Recently I represented the Tappan Company at the "Technology in the Service of Man" program and this is a note of thanks.

The concept of communicating to industry the areas of R & D activity makes good economic sense as well as good public relations. And most impressive was the caliber of the presentations and the friendly - helpful attitude of the Lewis employees.

Well done!

Sincerely,

R. M. Lamb, Jr.
CHIEF ADMINISTRATIVE ENGINEER

RML/hmm

cc: File

UNIFORM
TUBES, INC.

September 24, 1973

National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Attention: Dr. Bruce T. Lundin, Director

Dear Dr. Lundin:

I attended the NASA seminar "Technology in the Service of Man," and I could not help but be impressed by the range and obvious successes of research efforts at Lewis. And certainly everyone must agree that all of mankind will benefit for all times.

I take this opportunity to commend yourself and your associates for the excellent work as demonstrated by the success of our space programs, and by the presentations, and for an equally fine plan and execution for moving we visitors to the various sites.

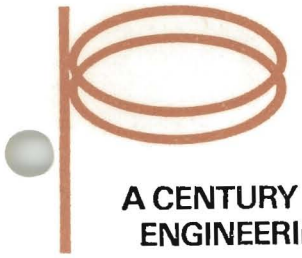
Very truly yours,

Nicholas Marcpis
Vice President - Engineering

NM/lm

COLLEGEVILLE, PENNSYLVANIA 19426 | PHONE 215/539-0700 TWX 510-660-6107 TELEX 84-6428

~~1) BTL~~
2) Inspection Files



Princeton University
SCHOOL OF ENGINEERING / APPLIED SCIENCE
DEPARTMENT OF AEROSPACE AND MECHANICAL SCIENCES
GUGGENHEIM AEROSPACE PROPULSION LABORATORIES

October 19, 1973

Mr. Bruce T. Lundin
Director, Lewis Research Center
NASA
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Mr. Lundin:

This letter is written to thank you for the invitation to your program "Technology in the Service of Man", and for the hospitality extended during the visit to your Center on September 21, 1973. Actually, I came on behalf of our University's School of Engineering and Applied Sciences and its Dean R. G. Jahn, who was attending another NASA function in Washington at that time.

Several scientists of your NASA Lewis Research Center are well known to us, since we have enjoyed the privilege of support by a NASA grant from NASA Headquarters for our Electric Propulsion Laboratory in the Department of Aerospace and Mechanical Sciences under R. G. Jahn, for more than the last ten years. The exchange of technical information and ideas over this period of time has, of course, been particularly intense with the scientists of your Research Center in some of the areas of W. E. Moeckel's interest and responsibility.

The presentations of the program were therefore instructive and very successful in exhibiting the capabilities in other areas of research in your Center, where remarkable achievements have been accomplished with which I had not previously been familiar.

The presentations were impressive, crisp and clear and, I believe, very effective in conveying the significance and advances in the selected research areas to the visitors. I thoroughly enjoyed not only the intelligence of the demonstrations, but also the high quality and skill of the presentations and like to offer my compliments to you and the other members of your Research Center who conceived this program and participated in it.

Mail Address: Guggenheim Laboratories, James Forrestal Campus, Princeton, New Jersey 08540

Rec'd 10-23

It is not quite clear to me in which more direct way I could be helpful in furthering the utilization and application of your Center's achievements and capabilities. Of course, I have reported on my visit to the Dean of the Engineering School and to some of my colleagues, as well as I shall mention what I remember to our students at appropriate occasions. Besides the highly technical curricula in Engineering at our University, there are now available to students also, programs in energy, transportation, environment and bioengineering, to mention but a few. These relatively new areas of study for recent and present student generations appear to parallel to a considerable extent the subject areas which were exhibited in your program, and may provide young men and women with the needed capabilities and potential for present and future challenges. This comparison could be extended to some thoughts of further implementation of the achievements and capabilities in the subject areas in your Center and, on the other hand, of the relevance of the education of young men and women in our Engineering School. This could be thought to be done in the form of sponsorship of certain projects, mutual exchange working visits and special fellowships.

The program on "Technology in the Service of Man" has been one of the finest which I attended and I appreciate to have been invited to it.

Very sincerely yours,

Woldemar v. Jaskowsky

Woldemar F. von Jaskowsky
Sr. Res. Engr. and Lecturer

WFvJ:dm

cc: R. G. Jahn, Dean, School of Engineering
Dr. E. Richley

OFFICE OF THE SUPERINTENDENT

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14713 RIDGE ROAD • NORTH ROYALTON, OHIO 44133

September 24, 1973

Mr. Bruce T. Lundin, Director
Lewis Research Center
Cleveland, Ohio 44135

Dear Bruce:

Thank you for inviting me to attend the "Technology in the Service of Man" last Friday. I was very much impressed with the entire day because it was very well organized, and the coordination of the entire day was really outstanding. I've attended many conferences the past several years, but they didn't come close to the impact that this experience had on me.

Please convey my appreciation to the members of your staff and particularly to the presenters who were just excellent in their talks. I truly look forward to the next opportunity I have to visit NASA.

Sincerely,

Jack Thomas

L. Jack Thomas
Superintendent

LJT/eg

DBB
2 Insp. Files

The University Of Alabama In Huntsville

P.O. Box 1247
Huntsville, Alabama 35807

Office of the President

October 23, 1973

Dr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Dr. Lundin:

Though belated, let me thank you for the hospitality extended to me and your other distinguished visitors during our day at the Lewis Research Center, September 21. Having been very close to the NASA operation here at Marshall Space Flight Center, I was most interested in the work you are doing in Cleveland.

I hope that the opportunity will present itself for you to visit Huntsville and perhaps include in your visit the University of Alabama in Huntsville. Much of our history and development has been closely related to NASA here in the city. Thank you again for a most pleasant and a very informative day.

Sincerely yours,

Benjamin B. Graves

Benjamin B. Graves

BBG/jb

Rensselaer Polytechnic Institute

TROY, NEW YORK

School of Engineering
Office of the Dean

Telephone
(518) 270-6203

October 1, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

May I take this opportunity to express my appreciation for the invitation to attend your recent program "Technology in the Service of Man" which was conducted at your Lewis Research Center. I thought that the presentations were carried out with very considerable skill and that the program proved to be very interesting and useful.

It is clear that much of your work has a direct relationship to our on-going activities on earth and as such should continue to receive support from the federal government. Your arrangements and hospitality leave no room for anything but highest praise.

Sincerely,

Stephen Yerazunis
Associate Dean

IRVING A. JOHNSEN
2265 BRADLEY ROAD
WESTLAKE, OHIO 44145

Dear Bruce:

I appreciated the opportunity to attend the Lewis Inspection and to be brought up to date on your activities and your accomplishments. The show was well done, as always, and I thoroughly enjoyed the day.

The diversity of the Lewis program and the benefits to mankind came out loud and clear in the presentations. Without exception, the comments from the members of my group were very complimentary.

Thanks for inviting me.

Sincerely,

Irv

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS ARNOLD ENGINEERING DEVELOPMENT CENTER (AFSC)
ARNOLD AIR FORCE STATION, TENNESSEE 37389

24 September 1973

Mr. Bruce Lundin
Director
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin

Mr. Don Eastman and I want to express our appreciation to you and the members of your staff for the excellent series of presentations and your personal courtesies last Thursday, the 20th of September. Your presentation of Technology in the Service of Man was exceptionally well done. Everyone in the silver group, including Joe Jones and Grant Hansen, was impressed with the manner in which the presentations were made. It certainly gave me a much better appreciation of the capabilities of the Lewis Research Center.

As we briefly discussed at lunch, I look forward to a continuing exchange of information between Arnold Center and Lewis. It is obvious that each of us has a great deal to gain by maintaining close coordination on improvements in instrumentation techniques, data processing and simulation facility utilization. I have asked Don Eastman to stay in touch with you and Mr. Bernie Lubarsky to assure that we continue to have a periodic forum to exchange ideas.

Again, thanks for your hospitality.

Sincerely

WEBSTER C. ENGLISH, JR.
Colonel, USAF
Vice Commander

ARNOLD RESEARCH ORGANIZATION INC
Subsidiary of Sverdrup & Parcel and Associates, Inc. ARNOLD AIR FORCE STATION, TENNESSEE 37389

September 27, 1973

Dr. Bruce T. Lundin
Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Dr. Lundin:

The periodic presentations by NASA of the work of the various Laboratories is always of great interest. I have attended many of these and invariably have been impressed by the quality of the presenters and by the effectiveness of the demonstrations.

The one which you put on last week was outstanding. Many of the attendees expressed the opinion that a television documentary of outstanding interest and value could be made simply by recording the presentations; I agree.

As you are undoubtedly aware, we have a more than casual interest in fatigue predictions since our second failure of a large compressor. The Strainrange Partitioning Technique which your people discussed has potential value in analyzing the failures and, hopefully, giving us the courage necessary to operate the remaining machines which have just been repaired. I would very much appreciate an opportunity to send Dr. David Fenton and perhaps one or two other people up for a discussion on this matter with those people directly involved. We can arrange this on short notice at any date acceptable to you and your people.

Again, thanks for a most interesting and useful day.

Sincerely,

R M Williams

R. M. Williams
President

answered 10/11/73

1010 October 11, 1973

Mr. R. M. Williams
President
Arnold Research Organization, Inc.
Arnold Air Force Station, TN 37389

Dear Mr. Williams:

Thank you for your thoughtful comments of September 27 on our program "Technology in the Service of Man".

With regard to your inquiry about sending Dr. David Fenton and others here to discuss "Strainrange Partitioning Technique", arrangements should be made directly with Mr. Samuel S. Manson, area code 216/433-4000, extension 268. Mr. Manson's calendar shows availability October 15 and 16, although you should confirm any appointment with him. I believe it would be helpful to engage our people from our Fan and Compressor Branch for these discussions and we are advising Mr. Manson to coordinate such participation with the Chief of that Branch, Mr. Melvin Hartmann. I hope we can be helpful to you on your compressor problems.

Thanks for your interest in NASA and the Lewis Research Center.

Sincerely,

/s/ by J. Burnett for

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
5500/S. S. Manson
2630/M. J. Hartmann
0100/B. T. LUNDIN
1010/WTOlson:cjp 10-11-73

Aviation Development Council

Hangar No. 2 (U.A.L.)
LaGuardia Airport
Flushing, New York 11371
(212) 457-7890

James T. Pyle, Director

September 24, 1973

Mr. Bruce Lundin, Director
Lewis Labs
Lewis Research Center
Cleveland, Ohio

Dear Bruce:

It was indeed a pleasure to be included in your "inspection" last Thursday at Lewis -- as always, it was a productive and meaningful day, and your troops did their usual fine job.

At the risk of burdening you with correspondence (and please don't bother to acknowledge this note!), I would like to make a few suggestions for your consideration and that of your associates involved:

1. With respect to the measurement of air pollution in the Cleveland area, I wonder if it would not be meaningful to locate several of the sensor stations both upwind and downwind from Cleveland Hopkins so that we can ascertain whether or not the airport itself is a contributor to the air pollution problem. Our experience to date at JFK indicates that it is not, but I would assume your program is more sophisticated and would give us better results than anything done heretofore.

2. I was very much interested in the presentation on the reduction of air pollution through improved combustor technology. This is an all-important area, and the biggest problem facing our aviation community right now is the ground idle situation, but I think in the long run, the high-temperature, nitrous oxide situation may become increasingly important. In both cases, I think it essential that the cost element of the solutions and/or alternatives be included.

3. The "Quieting the Fleet" presentation triggered some thoughts which I would like to pass on. It seems to me that, in the case of the older, low by-pass engines, they can be divided into two groups classified by installation -- the "exposed engines",

answered 10/2/73

The membership of the Aviation Development Council comprises The Scheduled Air Carriers Serving the New York Metropolitan Area / The Port of New York Authority / The Air Line Pilots Association / The Allied Pilots Association / The Aerospace Industries Association

The Federal Aviation Administration Provides Advisory Services

including the JT3D's on the DC-8 and 707 aircraft and the JT8D's on the 737's; and the fuselage-mounted JT8D's on the 727's and DC-9's.

There is a factor which does not seem to receive the consideration it warrants in my book -- the aircraft attitude during climbout and approach. Specifically, the "turbo machinery" noise from the front end during climbout under the revised standard ATA procedure (with no deck angle limitation) is minimal and in both the exposed and fuselage-mounted installations, the turbo machinery noise comes from the fan duct discharge -- the resultant spike that immediately precedes the jet exhaust noise. In the approach configuration ("exposed" types), however, the turbo machinery noise from the front end is obviously dominant, and full nacelle treatment would appear to be the only effective cure for that element of the noise problem.

In the fuselage-mounted case, however, it is a far different story. During climbout (ATA procedures) there is little, if any, front end turbo machinery problem due primarily to the high climbout angle and the shielding from the wing root and fuselage. There is, however, the discharge duct spike, and exhaust gas roar. In the approach configuration, again the wing root (and fuselage in the case of the 727) adequately shields the front turbo machinery output, and the biggest problem again is the discharge and exhaust elements. What this says to me is that, in the case of the 727 and DC-9, we might be able to get away with treatment of the discharge duct and obviate the expense and weight penalty of treating the front end of the nacelle. I really think this deserves some further investigation and precise measurements of inflight operations. The only concern may be the fact that the front end noise feeds back through the discharge duct and accordingly might require some element of treatment up front. If I am right, we might save a lot of money and weight in the case of the 727's and DC-9's.

A last point in this area -- I think the whole "nacelle treatment" exercise is to a large degree meaningless unless we address ourselves to the exhaust velocity problem -- either by the "refan" concept, or some form of acoustical treatment in the tailpipe. I am deeply concerned that we might be trapped by a requirement for nacelle retrofit which will be meaningless once the exhaust gas noises are isolated -- the public will not accept a retrofitted airplane with the present level of this type of noise.

4. With respect to the "Powered Lift" presentation, I would urge that the use of the criteria "95 PNdB, 500 ft. sideline" be abandoned and replaced by "95 PNdB from the vehicle in any direction". What concerns me is the fact that the sideline problem is no where near as important as the overflight problem, and unless we can be assured that we do not exceed this level under the flight path (both takeoff and approach), I think we are never going to sell V/STOL to the noise-conscious public. Incidentally, I personally feel 95 is too high for any airport facility in other than an industrial/commercial environment, where the ambient noise level is higher.

Again, congratulations on a great day, and I mean it when I say not to bother to acknowledge these random observations. However, if I can be of help to any of those involved, please feel free to have them contact me.

Sincerely,

October 2, 1973

1010

Mr. James T. Pyle
Director
Aviation Development Council
Hangar No. 2 (U.A.L.)
La Guardia Airport
Flushing, NY 11371

Dear Mr. Pyle:

This is just a quick note for the thoughtful comments that our September 20 program brought from you. We are sending your thoughts to the appropriate research leaders in the pollution and noise and powered-lift areas. I don't know whether they will have further comments for you; there will probably be general agreement with most of your thinking. Your views are a valuable piece of background information for us.

Again, thanks.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
0100/Director
2132/Robert E. Jones (w/attachment)
2520/Roger Luidens "
2530/E. W. Conrad "

1010:WTOlson:kmb 10-1-73

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TELEPHONE: AREA CODE 419 • 531-5525

September 20, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I enjoyed the tour through the Lewis Research Center very much. Most certainly the billions of dollars spent on aerospace have been useful in many areas in the development for mankind.

Do you have any particular data available on Fuel Cell development? We would be interested in securing such data as may normally be available without going into any extensive effort on your part, particularly concerning your views as to the use of Fuel Cell adaptation in automobile engines, possibly in comparison with spark plugs.

Very truly yours,

Jerry I. Baron
President

JIB:taf

answered 10/24/73

Olson
3-16

5123 October 24, 1973

Mr. Jerry I. Baron, President
Baron Drawn Steel Corporation
1400 Hastings
Toledo, OH 43607

Dear Mr. Baron:

I have been asked to respond to your letter of September 20 since my area of interest is fuel cells. Enclosed you will find a copy of a recent survey of the fuel cell area. It is meant to be a semi-technical review of all the current fuel cell efforts both in and out of government.

Your question concerning our views on the use of fuel cells in automobiles is more difficult to answer. Fuel cells have been put into automobiles, vans, trucks, tractors, etc. and they work. This is no surprise but I think your question pertains more to the replacement of the internal combustion engine with fuel cell power plants. Many articles have been written on this subject and in general there is agreement that fuel cells will not replace the standard engine for some time, if at all. If you would like to speak further on this issue or have other questions in the area of fuel cells, you are welcome to call us.

Sincerely,

Lawrence H. Thaller, Head
Fuel Cell Systems Section
Energy Conversion & Materials Science Division

Enclosure:
SP-5115

cc:
~~5100~~ 1010/W. T. Olson (info)
5120/EC Br. File
5123/L. H. Thaller

5123/LThaller:et/10/24/73

TEL. 461-1212
AREA CODE 414

GENERAL OFFICES
3300 NORTH 124TH ST

BRIGGS & STRATTON CORPORATION

P. O. BOX 702
MILWAUKEE, WISCONSIN 53201

CABLE: "BASCO"
TELEX: 26776

September 21, 1973

Mr. Bruce T. Lundin
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I recently attended your "Technology In The Service Of Man" program. First, let me say that I was impressed with the way the program was handled and the level of the technical information presented. I would like to express the appreciation of our corporation for being invited to this program.

There were several items of sufficient interest that I would like to know how we can obtain more information on them. I believe that it was during the "Materials For Man" session that mention was made of a new method of predicting fatigue life on metal parts. It was called "The Strain Range Partitioning Method", if I understood correctly. Any information available on this method would be of interest to us.

During the "Clean Energy For A Better Life" session we were told that NASA is working in the advanced windmill field. We are interested in any published information which is available on this subject. We were also told that NASA is working in battery technology. We are interested in power batteries that could be used for electric propulsion of small riding tractors and lawn mowers and would like to know if you have any published information that could help us. Your interest in bringing these developments to our attention is appreciated.

Very truly yours,

BRIGGS & STRATTON CORP.

Joseph R. Harkness

Joseph R. Harkness
Vice-President, Research

Answered 10/12/73

JRH/er

FRONTIER AIRLINES, INC.
8250 SMITH ROAD
DENVER, COLORADO · 80207

November 2, 1973

FRONTIER AIRLINES
A. L. FELDMAN
PRESIDENT

Technology in Service

Dear Bruce:

Thanks for the booklet you sent me the other day. Perusing it brought back some pleasant memories of my dealings with you and your staff at Lewis Labs.

Hope everything progresses well for you.

Best regards,

AL

A. L. Feldman

Mr. Bruce T. Lundin, Director
NASA Lewis Research Center
Cleveland, Ohio 44135

GENERAL DYNAMICS
Convair Aerospace Division

3302 Pacific Highway · P.O. Box 80877, San Diego, CA 92138

GRANT L. HANSEN
Vice President & General Manager

21 September 1973

Dear Bruce:

Your "Inspection" Open House on 20 September 1973 was excellent. Everything was very professionally done and very interesting. Thank you for inviting me. I was very happy to get some updating on some of the things going on at LeRC.

I appreciated your taking time during such a busy day to talk with me about Centaur and Convair. I will be looking into the matters we discussed and will be talking with you again soon. It's great to be on the team again.

Sincerely,

Grant

Grant L. Hansen

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

FSF

FLIGHT SAFETY FOUNDATION, INC.
1800 N. KENT STREET
ARLINGTON, VIRGINIA 22209
(703) 528-4100

9 October 1973

Mr. Bruce Lundin
NASA-Lewis Research Laboratory
Cleveland, Ohio

Dear Bruce:

It is a bit late but I want to say how much I appreciated the Technical Review on September 19. I've been to many of these but cannot recall one that was better organized or more interesting in respect not only to the aerospace industry but to the future of the nation.

I feel that NASA will continue to be the cutting edge of new technology despite the current passive public attitude.

Sincerely,

Jerry

Jerome Lederer

Cc: Mr. George Low
NASA Hq.
4th & Maryland Avenue, S.W.
Washington, D.C. 20546

3-16

5500 October 12, 1973

Mr. Joseph R. Harkness
Vice-President, Research
Briggs & Stratton Corporation
Post Office Box 702
Milwaukee, WI 53201

Dear Mr. Harkness:

Your letter of September 21, 1973, was referred to me by our Director. We did indeed make mention of a new method of predicting fatigue life of metals that we call Strain Range Partitioning. I am enclosing copies of the following papers that describe this technique:

"Creep-Fatigue Analysis by Strain-Range Partitioning" by S. S. Manson, G. R. Halford, and M. H. Hirschberg, NASA TM X-67838, May 1971.

"The Challenge to Unify Treatment of High-Temperature Fatigue - A Partisan Proposal Based on Strainrange Partitioning" by S. S. Manson, NASA TM X-68171, June, 1972.

Should you wish to discuss any aspect of this method with us, we will be pleased to do so.

Sincerely,

John C. Freche, Assistant Chief
Materials and Structures Division

Enclosures

cc:
0100/B. T. Lundin
1010/W. T. Olson
5500/J. C. Freche

5500:JFreche:hd:10/12/73

1010 October 18, 1973

MEMORANDUM

TO: 5214/Ron Thomas

FROM: 1010/Director, Technology Utilization & Public Affairs

SUBJECT: Information in the Area of Advanced Windmill Technology

REF: Attached Letter of 9-21-73 from Briggs & Stratton Corp.

Please furnish us with information with which to answer the last paragraph of the attached letter in the area of windmill technology.

Your immediate reply will be appreciated.

Walter T. Olson

Enclosure

1010/WTOlson:cjp 10-18-73

1010 October 18, 1973

MEMORANDUM

TO: 5100/L. Rosenblum

FROM: 1010/Director, Technology Utilization & Public Affairs

SUBJECT: Information in the Area of Battery Technology

REF: Attached Letter of 9-21-73 from Briggs & Stratton Corp.

Please furnish us with information with which to answer the last paragraph of the attached letter in the area of battery technology.

Your immediate reply will be appreciated.

Walter T. Olson

Enclosure

CENTER OF SCIENCE AND INDUSTRY
SCIENCE HEALTH INDUSTRY HISTORY

280 EAST BROAD STREET
COLUMBUS, OHIO 43215
TELEPHONE 614-228-6361

September 26, 1973

Mr. Bruce T. Lundin
Director
National Aeronautics and
Space Administration
Lewis Research Center
Cleveland, OH 44135

Dear Bruce:

It was indeed a pleasure being with you at Lewis Research Center on Thursday, September 20, 1973 and I enjoyed the TV interview with you which by the way was aired on Friday, September 21st on WBNS-TV, Channel 10 in Columbus on their main news program.

The 30-minute program which will again utilize your interview will take some time for editing and we will possibly be airing it sometime after the 1st of October. Perhaps I will be able to acquire the film from WBNS-TV and will be glad to send it to you for screening if you would like to see it.

We are most anxious to acquire any exhibits and/or parts from the demonstrations that you presented at the Open House. We have capable staff who would be able to interpret your interesting and important "message" on an almost daily basis as part of our lecturer-demonstration activities. I sincerely believe that this would be of great value in reaching the general public as well as possible leaders, educators, and politicians who are regular visitors to COSI.

We are currently doing this type of program by our staff in cooperation with the Atomic Energy Commission (AEC) and AEC has provided the hardware similar to the materials you used in your Open House demonstrations. AEC trained our staff and we now are carrying on the program in their and our mutual interest.

I will be out-of-town on vacation until October 10th and Chuck O'Connor our Exhibits Director will contact your offices by phone and hopefully you will direct us and help us with this project.

answered 10/3/73

We are not sure at this time who we are to work with on this - Hugh Harris, Jim Modarelli or others.

Our staff Education Director, Bill Schmitt, Earth Science Specialist, Sandy C. Hallock, Board of Trustee Member and former Director of Battelle Memorial Institute, Dave Minton, and COSI staffer, Joe Berwanger also attended the meeting Thursday, September 20th and were extremely impressed and enthused about the information they obtained and we hope to be able to continue to tell this story on a cooperative basis with you and if you can only help us by providing the necessary materials.

Enclosed you will find a complete packet of information on COSI.

Again thank you for a good full day at Lewis Research Center.

Yours very truly,

CENTER OF SCIENCE AND INDUSTRY

Sandy Hallock

S. N. "Sandy" Hallock, II
Executive Director

SNH/ry

enclosures

October 3, 1973

1010

Mr. S. N. Hallock, II
Executive Director
Center of Science and Industry
280 East Broad Street
Columbus, OH 43215

Dear Mr. Hallock:

Thank you for your letter of September 26 to Mr. Lundin. We would be interested in re-instituting NASA exhibits in your Center of Science and Industry. It may be useful for appropriate members of your staff to visit here and to discuss with us what items might be available and for what date periods. When you see an opportunity let us know and we will assemble appropriate people at this Center.

Best personal regards,

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

GREATER CLEVELAND GROWTH ASSOCIATION • 690 UNION COMMERCE BUILDING • CLEVELAND, O. 44115 • 621-3300

September 21, 1973

Dr. James C. Fletcher, Administrator
National Aeronautics and Space Administration
400 Maryland Avenue, S.W.
Washington, D.C.

Dear Dr. Fletcher:

I am sure that you must have heard the many favorable comments about the "Technology in the Service of Man" program at your Lewis Research Center yesterday. I found the tour to be most educational, even though I have been familiar with some of the work at Lewis in conjunction with our Lake Erie International Jetport project.

As I promised, I have enclosed two brochures which explain the history and development of this concept. The engineering, economic, environmental, and financial feasibility of building a Jetport and other related developments, is now under study by the Lake Erie Regional Transportation Authority. The Authority has been funded by the Federal Aviation Administration and the Greater Cleveland Growth Association in an amount approaching $3 million. As you might guess from our financial commitment to this project, it is a top priority for Greater Cleveland.

I have asked our Washington representative, Mr. George Thomas, to deliver to you a watercolor rendition of our concept. We are having this picture framed, and he will be in touch with you as soon as it is available.

George or I would be happy to provide any additional information which might be of interest to you.

Sincerely,

Fred Unger

Frederick B. Unger
Vice President

FBU/msr
Enclosure
cc: Mr. Bruce Lundin
Mr. George Thomas

answered 10/4/73

OCT - 4 1973

Mr. Frederick B. Unger
Vice President
Greater Cleveland Growth
Association
690 Union Commerce Building
Cleveland, OH 44115

Dear Mr. Unger:

Thank you for your letter and enclosures of September 21, 1973, and for your compliment on our program "Technology in the Service of Man." We were indeed gratified to receive many favorable comments and are understandably proud of the fine work done by the Lewis Research Center.

The brochures for the Lake Erie International Jetport Project are very informative and clearly reflect the serious commitment on your part to take maximum advantage of the opportunity provided by the extensive lake area adjacent to Cleveland.

I have sent your brochures and covering letter to our Office of Aeronautics and Space Technology for the information of cognizant office and technical staff.

Sincerely,

Original signed by
James C. Fletcher

James C. Fletcher
Administrator

bcc:
LeRC/Bruce Lundin
R/Roy P. Jackson

RO:KEHodge:dot:10/1/73:52360 A 19436

RO RD-P R
Original signed by
George W. Cherry
10/1 Original consumed by 10/2

EXXON COMPANY, U.S.A.
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REFINING DEPARTMENT
BILLINGS REFINERY

B. D. NOLAN
MANAGER

September 24, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics & Space Adm.
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

I want to express my thanks to you and the many other people at Lewis Research Center for your wonderful tour and hospitality. It was extremely interesting and very well done. Tours of this type need to be held more often to keep business up to date with the tremendous strides your people are making with your research.

I had to leave early to catch my airplane so I did not get any of the handouts presented at the end of the tour. I would appreciate it if you could send me three copies.

Thanks again.

Sincerely,

Barry D. Nolan

Barry D. Nolan

BDN:rmh

answered 10/2/73

October 2, 1973

1010

Mr. Barry D. Nolan
Exxon Company, U. S. A.
Post Office Box 1163
Billings, Montana 59103

Dear Mr. Nolan:

Thank you for your kind note of September 24 about our program, "Technology in the Service of Man".

Enclosed are three copies of the booklet presented at the end of the day.

Sincerely,

Walter T. Olson
Director of Technology Utilization
and Public Affairs

Enclosures 3

DETROIT DIESEL
ALLISON DIVISION
GENERAL MOTORS CORPORATION
INDIANAPOLIS

OFFICE OF
DIRECTOR OF ENGINEERING

September 25, 1973

Dr. Bruce T. Lundin
Director, National Aeronautics
and Space Administration
Lewis Research Center
Cleveland, Ohio

Dear Bruce:

I attended your Technology in the Service of Man seminar at Lewis last Thursday and was tremendously impressed by the breadth of your program, the competence of the people making the presentations and the professionalism displayed in the conduct of the entire affair.

One exhibit, in which I was particularly interested, I discovered in the corner of the hangar during the few minutes I had to spend there. This exhibit concerned the work you have been doing on the prevention of turbine wheel bursts. This work is of particular interest to us because you are working with the T63/250 engine which we have in production and we are currently doing a lot of work on the causes of and cures for the fatigue crack initiation and progression. The instrumentation technique which was described in that exhibit should be very useful to us.

To that end we would like to arrange for a visit by one or two of our people to your facility at an early date. If you can give me the name of the responsible people at Lewis, we would be happy to contact them directly to establish a mutually convenient time.

Again, congratulations on an outstanding display of your programs. We are looking forward to working even more closely with Lewis in the future.

Very truly yours,

G. E. Holbrook
Director of Engineering
Aircraft Gas Turbines

GEH:CF

answered 10/3/73

October 3, 1973

1010

Mr. G. E. Holbrook
Detroit Diesel
Allison Division
General Motors Corporation
Indianapolis, IN 46206

Dear Mr. Holbrook:

Thank you for your kind comments about the program, "Technology in the Service of Man" that you sent in your September 25 letter.

If you want to arrange a visit by members of your staff to discuss work that we have been doing on the prevention of turbine wheel burst, I suggest that arrangements be made directly with Mr. Frank E. Belles, Director of Aerospace Safety Research & Data Institute, Tel. 433-4000, Ext. 453. This Center has joint in-house and contract work on the subject. Mr. Belles should be able to arrange for discussion of both types of program as well as instrumentation techniques. I will advise him of your interest.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
0150/Frank E. Belles(with attachment)

1010:WTOlson:kmb 10-2-73

3M COMPANY

GENERAL OFFICES • 3M CENTER • ST. PAUL, MINNESOTA 55101 • TEL. 733-1110

Federal Government Services

PLEASE REPLY TO: 3M COMPANY • FEDERAL GOVERNMENT SERVICES
333 WEST FIRST STREET • SUITE 612 • DAYTON, OHIO 45402
TEL. (AREA 513) 224-1046

September 24, 1973

Mr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Lundin:

Your program, "Technology in the Service of Man", which I had the pleasure of attending last Friday was indeed a most worthwhile experience. You and your hard working staff are to be congratulated for your efforts.

The individual presentations were professional in every way, and the well organized preparations resulted in a most efficient operation.

I was also impressed with the many outstanding displays in the hangar as well as the multitude of applications for commercial and personal uses which utilize NASA technologies.

It would be appreciated if you could review your registration list and determine for me if any other "3Mers" attended your program. If so, please send me their names and addresses. Thank you for the favor as well as for the opportunity to visit Lewis Research Center and learn more about your missions.

Sincerely,

R. H. Lamb

Robert H. Lamb, Manager
Technical Services

RHL:kg

answered 10/25/73

October 25, 1973

1010

Mr. Robert H. Lamb, Manager
Technical Services
3M Company - Federal Government Services
333 West First Street, Suite 612
Dayton, OH 45402

Dear Mr. Lamb:

Thank you for your kind remarks to Mr. Lundin in your letter of September 24 regarding "Technology in the Service of Man".

A review of our registration list has determined that you were the only "3Mer" in attendance. I am glad you were able to be here.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
0100/Director

1010:WTOlson:kmb 10-25-73

Monsanto

MOUND LABORATORY
Operated for the U. S. Atomic Energy Commission

MONSANTO RESEARCH CORPORATION
P. O. Box 32
Miamisburg, Ohio 45342
Phone: (513) 866-7444

September 28, 1973

Re: INSP

Dr. Bruce T. Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Doctor Lundin:

I would like to formally express my congratulations to you and your staff for the well organized tour of your facilities which I took on September 20. It was obvious that the exhibits and the speakers had been carefully selected. The tour details were well handled. As it happened, I sat opposite Mr. Olsen at lunch and was able to personally extend my commendation.

I would like to obtain the name of a contact that we could make to discuss one subject. This is concerned with the Materials for Man activity. Specifically, we would like to discuss in further detail testing methods that you use, particularly involving the structural stress of materials.

Very truly yours,

R. K. Flitcraft

Richard K. Flitcraft
Vice President,
Director, Mound Laboratory

answered
10/5/73

RKF:glm

1010 October 15, 1973

Mr. Richard K. Flitcraft
Vice President
Director, Mound Laboratory
Monsanto Research Corporation
P. O. Box 32
Miamisburg, OH 45342

Dear Mr. Flitcraft:

Thank you for your kind letter of September 28 to Mr. Lundin about the program "Technology in the Service of Man". I recall with pleasure our luncheon conversation.

The person to contact on the subject matter "Materials for Man" including our testing methods is Mr. John C. Freche, Assistant Chief, Materials and Structures Division, telephone, 216/433-4000, extension 269.

We appreciate your interest in the Lewis Research Center and hope that we can be of help to you.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
5500/J. C. Freche
0100/B. T. Lundin

1010/WTOlson:cjp 10-11-73

TOWMOTOR CORPORATION

SUBSIDIARY OF CATERPILLAR TRACTOR CO.

Mentor Plant:
7111 Tyler Boulevard
Mentor, Ohio 44060
Telephone: (216) 255-5611

September 25, 1973

Mr. Bruce Lundin, Director
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, OH 44135

Dear Mr. Lundin:

I sincerely appreciate the opportunity of attending your "Technology in the Service of Man" on Wednesday, September 19. Your program, displays, demonstrations, and speakers were exceptionally professional. Without a doubt this was the most rewarding program I have attended in recent years. Your theme to advise the people of your contributions to our everyday way of life, and encouraging industry to benefit from the "spinout" of your research was very well accomplished.

I would appreciate receiving the names and phone numbers of your personnel so that I may contact them for further information that may apply to our engineering programs on the following subjects:

"Control of Fan and Airflow Noise"
"Exhaust Emissions Control"
"Energy Sources"
"Materials and Lubrications"

The considerable amount of time and money spent in preparation of this program was well appreciated, and I would suggest that continued use of this investment can be made by offering a condensed version to local technical societies. Last evening I advised the SAE Governing Board - Cleveland Section, of your program and suggested that we might borrow your displays and possibly speakers for a series of monthly meetings. If more is to come of this, the person responsible for setting up the monthly meetings will contact you personally.

Sincerely,

E. R. Sirotak
Chief Engineer

answered 10/2/73

ERS:sl

Tel: 433-4000

October 2, 1973

1010

Mr. E. R. Sirotak
Chief Engineer
Mentor Plant
Towmotor Corporation
7111 Tyler Boulevard
Mentor, Ohio 44060

Dear Mr. Sirotak:

Thank you for your thoughtful letter of September 25 to Mr. Lundin.

The individuals to be contacted for further information on the subject matter about which you asked are as follows:

"Control of Fan and Airflow Noise" -	Earl W. Conrad	- Ext. 369
"Exhaust Emissions Control"	Richard A. Rudey	6160
"Energy Sources"	Louis Rosenblum	310
"Materials for Man"	John Freche	269
"Lubrication and Wear"	Robert L. Johnson	464

We appreciate your interest in the work of this Center and will try to make our results available and useful to you and others.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
2130/Richard A. Rudey
2530/E. W. Conrad
2610/Robert L. Johnson
5100/Lou Rosenblum
5500/John Freche

1010:WTOlson:kmb

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Engineering
Department of Electrical Engineering

Sept. 26,1973

N.A.S.A.
Lewis Research Center
Cleveland, Ohio 44135

Dear Sirs:

Two faculty members of this department attended your displays last week on "Technology in the Service of Man" and have brought back the descriptive handbook with that title.

I think it would be very worthwhile, for our purposes and yours, if this booklet could have wider distribution here. I would be grateful if you would

(1) send me one copy for myself; or

(2) send, if you can, 20 copies for distribution among the faculty and graduate assistants of this department;

(3) let me know whether you would be interested in having several hundred copies distributed among the undergraduate students in this college, and whether there would be any charges for this.

Yours sincerely,

R.A. Chipman

Robert A. Chipman
Professor

answered
10/2/73

October 2, 1973

1010

Professor A. Chipman
Department of Electrical Engineering
The University of Toledo
Toledo, Ohio 43606

Dear Professor Chipman:

Under separate cover we are sending 20 copies of "Technology in the Service of Man" for distribution in your Department as you requested in your note of September 26.

If you want to distribute copies to the several hundred undergraduate students in the College of Engineering at the University of Toledo, we would be pleased to make copies available without charge to you. It will be a few weeks before we have enough copies reprinted for such distribution. Also, I suggest we attach a "buck slip" to each copy stating that the booklet describes engineering activities at a major federal facility near Toledo. Will you please let me know the number of copies, if any, you will need for this purpose.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

College of Engineering
Department of Aeronautics and Astronautics

October 3, 1973

Mr. Bruce T. Lundin
Director, Lewis Research Center
National Aeronautics & Space Administration
Cleveland, Ohio 44135

Dear Mr. Lundin:

I wish to thank you for your invitation to attend your laboratory program, "Technology in the Service of Man", which I attended on Friday, September 21. I wish also to compliment you on a most interesting and skillfully presented exposure of NASA's talents and planned future activities in this area. Without exception, in the blue group to which I was attached, all comments were favorable and there seemed to be a general consensus that we were experiencing the best program of its kind your laboratory has put on.

I am only sorry that more of the general public, and especially those who have expressed strong anti-technology feelings, could have been exposed to this excellent overview of your agency's activities in improving the environment in which we live. Might I ask whether any of the exhibits, and the engineers who so ably presented their current research activities, could be made available to universities, professional societies, high schools, etc., in the Pacific Northwest area. If there is any possibility of extending your story in this way, I will be only too happy to help coordinate the presentations in this area. I can assure you they would be very well received.

I thank you again for your invitation and for the excellence of your program.

Yours sincerely,

R. J. H. Bollard, Head
Department of Aeronautics
and Astronautics

RJHB:lj

cc: Vice President S. Katz
Dean R. W. Hill

1010 October 15, 1973

Mr. R. J. H. Bollard, Head
Department of Aeronautics
and Astronautics
University of Washington
Seattle, WA 98195

Dear Mr. Bollard:

Thank you for your kind letter of October 3 to Mr. Lundin about the program "Technology in the Service of Man".

With regard to your query about the availability of technical information presented in the program, although the specific package that you saw is no longer available, we do have speakers, exhibits, films and literature on a variety of subjects and directed at various audiences such as universities, professional societies, high schools, etc. Normally, such information would be provided to the Pacific Northwest area by our Ames Research Center, Moffett Field, California 94035, telephone 415/965-5000. Where the subject is sufficiently specialized that the Lewis Research Center, which is NASA's Center for aerospace propulsion and power technology, would be the appropriate source, the information could be made available from here. We have preliminary motion picture footage on the presentations that you attended on September 21, and we will try to develop them into useable films. At this writing, I do not know how that effort will work out. We will correspond with you further about it.

Your offer to help make presentations in your area is very much appreciated. I think that the best way for us to move is for you to let either us or the Ames Research Center know of specific occasions and audiences for which a program is sought. We would then be able to determine the most helpful thing to be done.

Many thanks for your supportive comments and offer.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
0100/B. T. Lundin
1011/C. Weiss

1010/WTOlson:cjp 10-11-73

EASTERN
RESEARCH CENTER

Stauffer Chemical Company
Dobbs Ferry, New York 10522 / Telephone (914) 693-1200

September 24, 1973

Dr. Walter S. Olson
National Aeronautics and Space
Administration
Lewis Research Center
2100 Brookpark Road
Cleveland, Ohio 44135

Dear Dr. Olson:

While my impressions are still fresh, I want to tell you how much I enjoyed the program "Technology in the Service of Man" that I participated in on September 20.

The program was very informative and well designed. Frankly, at the end of the day, I was rather exhausted in just staying alert to absorb all that interesting information that was presented.

One area of particular interest to us is your work on wear and lubrication. We plan to take advantage of your expertise in this area in the design of improved turbine lubricants in which we have a commercial interest.

As a citizen, I wish to express my appreciation for your new direction oriented to the "Service of Man". As you direct your outstanding capability to these societal projects, I cannot help but feel that NASA and the society both will benefit.

On behalf of Stauffer Chemical Company, I wish to thank you for the opportunity of being included in your outstanding program.

Sincerely,

J. C. H. Hwa

JCHH:bs

J. C. H. Hwa
Manager, Research Planning

cc: R.L.Johnson (Lubrication
Branch, NASA)

Forwarded to John Freche by W. Olson 10/3/73 for follow-up.

CASE WESTERN RESERVE UNIVERSITY · CLEVELAND, OHIO 44106

September 25, 1973

Mr. Bruce Lundin
Director
NASA Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio

Dear Bruce:

The 1973 inspection at Lewis was superb and was carried out in the best NACA/NASA tradition of excellence and perfection. It did give me some pain, however, to hear the underlying plea for appreciation by the public for the research efforts and accomplishments of the organization, especially in view of its spectacular achievement. I guess the budgetary affairs of past and recent months disproves the old mousetrap adage - at least as applied to accomplishment in research.

Of particular interest to me was the presentation on the Quiet Propulsion Life Engine and of the speaker's reference to digital circuitry to be used to coordinate the control of a multiplicity of engine operating parameters. I would be interested in learning more about this portion of the project. Is the data system being developed at Lewis, within greater NASA, on contract, or possibly under a university research grant? If possible, I would like to discuss this in greater detail with suitable individuals.

Again - congratulations to you and the Lewis staff.

Kindest regards,

H. W. Mergler
Professor of Engineering

Forwarded to R. Luidens by W. T. Olson 10/1/73 for follow up

HWM:dtw

School of Engineering
Solid Mechanics, Structures and Mechanical Design

AERONCA, INC.
AEROSPACE GROUP
1712 GERMANTOWN ROAD ■ MIDDLETOWN, OHIO 45042 ■ PHONE (513) 422-2751

September 20, 1973
Ref: BLR9-828

Mr. Bruce T. Lundin
Director
NASA-Lewis Research Center
Cleveland, Ohio

Dear Mr. Lundin:

My sincere compliments to you and your capable staff for the open house entitled, "Technology in the Service of Man".

The group I joined yesterday was mostly from local nonaerospace businesses. There were a number that went on the tour to "see how their tax money was being spent". The reaction in our group was very favorable, so I got the impression that your efforts were successful with those who attended.

However, I could not help but wish that your message could be told to a much larger audience, ideally on national television. To help spread the coverage, I was hopeful of obtaining a film that I might show to local groups such as our Company Management Club along with their wives.

I talked to some of your tour guides about the availability of such a film and I got the impression that most of the NASA films are oriented to aerospace technology per se. The public needs to understand that there are many benefits other than, "we put a man on the moon" or "we had three men in orbit for 59 days" or "we are going to the planets", etc. I'm afraid that the general public is reacting to that in the manner of "who needs it".

I am hopeful to locate a film that illustrates the nonaerospace "spin-off" benefits such as you illustrated in your open house. I think the public should be better informed on the advancements made in the fields of communications, transportation, computers, orthopedics, energy conversion, textiles, medicine, natural resources, weather, and many others.

Forwarded to Cal Weiss by W.T. Olson 10/1/73 for follow-up.

AERONCA, INC.

I think your exhibit was a major step toward illustrating the general benefits to mankind and I would like to see it much more widespread.

Sincerely,

AERONCA, INC.
Aerospace Group

B. L. Reynolds

Byron L. Reynolds
Director of New Products

BLR:psr

cc: Dr. Fletcher

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

September 27, 1973

REPLY TO
ATTN OF: 1010

MEMORANDUM

TO: Record

FROM: 1010/Director, Technology Utilization and Public Affairs

SUBJECT: Telephone call to W. T. Olson from Stan Sommers, Ametek Corporation, Los Angeles, CA (213-724-9670)

As a results of attendance at "Technology in the Service of Man" Mr. Sommers, Ametek Corporation, telephoned Dr. Olson to say he was interested in more information, especially with regard to wear as related to Wankel engine rotor seals. Referred him to Robert L. Johnson.

Walter T. Olson

cc:
1012/Technology Utilization Office
2610/Robert L. Johnson
Inspection Office

1010:WTOlson:kmb 9-27-73

THE UNIVERSITY OF TOLEDO / TOLEDO, OHIO 43606 / [419] 531-5711

College of Engineering
Office of the Dean

October 5, 1973

Mr. Walter Olson
NASA Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Olson:

From recent communication between you and Dr. Chipman of our faculty, I understand that copies of "Technology in the Service of Man" are available for our distribution in the College of Engineering. I had the privilege of attending the program itself and was highly impressed by both the program and the brochure. We would like to make 500 copies available to our students and faculty and would be happy to receive them when they become available.

Sincerely,

James B. Farison

James B. Farison
Dean

JBF:paw

10-10-73
Sent copy of this letter to Hugh Harris asking him to forward the 500 copies.

cjp

ROUTING SLIP

INSTRUCTIONS: If action is the same for all addressees, circle the number(s) that apply. If action differs for addressees, show the action number in the column to the left of the addressee's name. Each addressee will line through his name, initial, date and forward to next addressee. DO NOT use this form as a RECORD of approvals, concurrences, disapprovals, clearances, or similar actions.

ACTION NO.	TO *(Name, office, location)*	INITIALS	DATE	ACTION TO BE TAKEN	
	Cal			1	Approval
				2	Circulate
				3	Concurrence
				4	Coordinate
				5	File
				6	Information
				7	Investigate & Advise
				8	Note and forward
				9	Note and return
				10	Per request
				11	Recommendation
				12	See me
				13	Signature
				14	Take action
				15	Reply for signature of:
				16	
				17	

At the recent inspection, the following individual expressed an interest in learning about our catalogs and availability of tapes, films, literature, etc. for use in high school instruction. Please send him an informational kit such as film lists, publications list and instructions on how to obtain resource material:

John P. Taylor
Assistant Director
Aeronautics and Space Engineering Board
2101 Constitution Avenue, NW
Washington, DC 20418

Thanks,

FROM: *(Name)*
WTOlson

DATE	ORG. CODE	MAIL STOP	PAX	PBX
10-2-73	1010	3-16	2269	300

NASA-C-38h (Rev. 5-68)

October 3, 1973

1010

Mr. Donald L. Woodland
Area Development Representative
Columbia Gas Distribution Companies
50 West Broad Street Suite 1330
Columbus, OH 43215

Dear Mr. Woodland

Enclosed is the booklet, "Technology in the Service of Man" that you asked me for. Also, you inquired about information on energy. I am enclosing a copy of a broad review that we had about the applicability of our technology for the Electric Power Industry in 1968. We are going to the printers soon with a booklet describing current capabilities of the Lewis Research Center in this field; we will send you one as soon as it is printed. Other enclosures in this letter describe how the NASA Information System is set up; you may find it useful. Meanwhile, if there is anything further we can do to help you, please let us know.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

Enclosures

Electric Power Booklet mailed 11-6-73

October 3, 1973

1010

Mr. Waldo H. Kliever
Kliever Development Laboratories
P. O. Box 136
Gates Mills, OH 44040

Dear Mr. Kliever:

You asked me for Dr. John F. Victory's address the other day.

It is:

2810 East Stratford Drive
Tucson, Arizona 85716

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

1010 October 17, 1973

Dr. Edwin Pounder
Acting Manager
Mariner Mars 1971 Project
Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive
Pasadena, CA 91103

Dear Dr. Pounder:

This is just a note to tell you that the photo-mosaicked globe of Mars that Jet Propulsion Laboratory prepared for Lewis Research Center arrived in time to be featured at the September 19-21 program "Technology in the Service of Man". Subsequent Open Houses brought a total audience of 22,000 people to the Lewis Center between September 19 and October 9; most of these people saw the globe and the related exhibit materials.

The globe is a beautiful and instructive item. We are most appreciative of the professional and technical skills that made it possible. We expect many more people to see it in the months and years ahead.

Many thanks to you and your organization for effectively processing the work involved.

Sincerely,

Walter T. Olson
Director, Technology Utilization
and Public Affairs

cc:
Director, JPL

HARRY F. BURMESTER
UNION COMMERCE BUILDING
CLEVELAND, OHIO 44115

October 16, 1973

Dr. Bruce T. Lundin
Director, Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio 44135

Dear Dr. Lundin:

I want to tell you how much I appreciated the invitation and the opportunity to attend the presentation of your "Technology in the Service of Man" on September 21. As your records might indicate, I have been an invitee for many years and this program was the greatest in all respects. I admit we learn from experience on how to make these presentations more interesting and attractive but you took a big step forward in this one.

I have already been in touch with Dr. Ted Olson respecting some thoughts that I wanted to make known to him which specifically fall into the area of communications with the interested citizens who represent industry and commerce and those of us who would also like to be better informed on a more regular basis of the progress that NASA is making and on projects that are receiving your consideration. All of us in the corporate field are accustomed to some character of an annual report which gives the stockholders an opportunity to evaluate the progress made.

Again, many thanks for the enlightening opportunity that you gave us, and I hope to be able to attend another similar occasion in due course.

Sincerely

Harry F. Burmester

cc Dr. W. T. Olson

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER
KENNEDY SPACE CENTER, FLORIDA 32899

REPLY TO
ATTN OF: CD

OCT 5 1973

Mr. Bruce T. Lundin
Director
NASA, Lewis Research Center
Cleveland, OH 44135

Dear Bruce:

My colleagues and I thoroughly enjoyed our visit to Lewis. We were especially impressed by the high level of competence which characterized the lecture-demonstrations arranged for the Open House program. I am sure that many other visitors shared our pride in the progress which your Center continues to achieve.

Dr. Fletcher remarked that some of the demonstrations would be very useful in the public education program which we operate at our Visitors Center. Incidentally, we greeted the seven-millionth tour patron September 27.

I assume that you will put to good use some of the items displayed during the Open House in connection with your visitor activities. But in view of the Administrator's keen interest, which I fully endorse, are there any models or exhibits which you might share with KSC? I found particularly intriguing those displayed in connection with your work in clean energy, quieting the fleet, powered lift, cleaner skies and materials for man. Short of the hardware, working drawings from which we might fabricate displays would be of use to us.

I can assure you a large and interested audience who would profit from learning of the good work being carried on by your Center.

Sincerely,

Kurt H. Debus
Director

WALTER T. BONNEY

BOX 247. EASTVIEW • ROUTE 8. FREDERICK. MARYLAND 21701 • 301-473-5947

October 9, 1973

Bruce T. Lundin, Director
NASA Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Dear Bruce,

Back in place, finally after our trip that extended to Minneapolis upon completion of my sessions in Cleveland with Abe Silverstein and Irv Pinkel PLUS attendance at the Friday presentation of "Technology: In the Service of Man", I hasten to voice my enthusiastic reaction to the '73 version of the old Inspections, and to add my thanks for all the courtesies extended me, by you and Gene Manganiello and Ann Barber and Jim Modarelli especially.

Focusing for a minute on the Inspection program ... I would be hardput indeed to find matters to be critical about; the young men from Lewis (and I expect you will understand why I refer especially to those from Lewis) had their presentations letter perfect, so that they could be made without reference to notes, but nevertheless in a style of delivery that avoided any appearance of being by rote. Surely, Dr Ames, who in the first instance set the style and tone of the Conference/Inspection sessions, and Dr Victory, who in later years was the indefatiguable preceptor of what was right and what was not, would have been proud that their traditions have been held so high.

There were three matters touched upon that, I expect, will have special relevance to the history I'm working on. One...reference to the statement by one of Jules Verne's fictional characters, that one day hydrogen would be used for fuel/energy I have sufficiently researched to require no additional assistance. But the other two, I do need help on! They are:

(1) The allusions, in the Impact of Wear presentation, about the essentiality of the tallow daub to the first wheels comprise an excellent example of how one thing depends upon another. If I could be sent that portion of the Impact of Wear text, I'd be grateful.

(2) In the Clean Energy presentation, a slide was shown, of a large windmill in Puerto Rico. Here, if possible, I'd like the section of text about the windmill, an indication of what NACA airfoil section was chosen, and why, and a print of the picture of the windmill. (Respecting the windmill airfoil section, I'd like to know when it was developed, too.)

You may be interested to learn that this time, my tapes do contain words spoken during the Silverstein and Pinkel interviews. Once the transcriptions have been completed (actually, the way I'm having it done, by my former secretary om the West Coast, it's a fairly time consuming process) I'll forward copies.

Again, Bruce, my sincere thanks, and with best wishes,

Yrs,
Walt

LEWIS & OTHER CENTERS
"THANK YOU LETTERS"

EAR

1973 LEWIS INSPECTION

THANK YOU LETTER ADDRESSEES

mailed 10/10/73

Name	Mail Stop
Abbott, John M.	501-4
Adlard, Charles J.	23-1
Alexovich, Robert E.	54-5
Altimus, Richard L.	15-2
Anagnostou, Evelyn	302-1
Anderson, John L.	500-201
Andrew, Rose	15-3
Ansic, Art	54-5
Antl, Robert J.	501-4
Antoine, Albert C.	309-1
Bailey, Everett E.	5-9
Bailey, M. Murray	500-205
Baldizzi, Frank	15-5
Ball, Cas	500-314
Balombin, Joe	501-4
Barbaglia, Marge	6-2
Barber, James R.	500-203
Bauerline, Dick	23-1
Baumeister, Kenneth J.	501-4
Beatty, Susanne	60-3
Beckett, Bonnie	5-2
Behrendt, Bob	23-1
Benninger, Gary N.	
Biby, Jean	11-1
Bifano, William J.	302-1
Bill, Robert C.	23-2
Billy, Robert F.	15-5
Blaze, Casey J.	50-1
Bobeczko, Steve	14-1
Boehlke, Jim	23-1
Botos, Elmer E.	15-2
Bourke, Edward A.	500-205
Bozek, Sue	86-2
Braham, Catherine	5-5
Brainard, William A.	23-2
Brasty, John R.	77-3
Brej, Robert	4-2
Breunlin, Douglas C.	501-4
Brodersen, Harold	5-5
Brooks, Clifford	5-5
Brown, Dick	5-6
Brown, Gerald V.	301-1
Brown, Martin	5-5
Buescher, Urban	5-5
Bullock, Joseph	
Burkhart, James A.	54-5
Burton, Eugene R.	105-1
Butler, Gale L.	110-1

Cake, James E.	500-107
Calmer, Edward T.	5-5
Calvert, Howard F.	60-6
Caswell, Pam	5-5
Chapman, Jean	501-1
Chiccine, Pat	500-209
Ciepluch, Carl C.	501-4
Cieslak, Bernie	11-1
Cimber, Roy N.	15-5
Clapper, Dick	500-314
Clark, Greg	5-1
Clarke, Bob	23-1
Clinton, David J.	5-5
Cmok, Marianne	500-209
Codespoti, Sebastian D.	100-2
Colegrove, Jack	15-5
Coleman, Karen	3-18
Colladay, Raymond S.	77-2
Collins, Bob	4-11
Combs, John E.	21-4
Coney, Thom A.	500-204
Conrad, Earl W.	501-4
Cooper, Dale	77-1
Cornish, John	500-314
Corpas, E. L.	500-209
Correll, Karen	500-312
Cory, Frank D.	301-1
Cuthrell, Jack L.	54-7
Dastoli, Benjamin J.	501-4
Demongeot, Carole A.	301-1
Derwis, Melvin	5-5
Deubel, Phil	107-1
Dewitt, Richard L.	500-203
Diedrich, James H.	501-4
Diehl, Larry A.	60-4
Dittmar, James H.	501-4
Dlubac, Rose	5-5
Dobias, Helen	500-302
Dolinshek, Albert F.	105-1
Dombroski, Harry	4-1
Donahue, Edie	500-209
Dorner, John P. Jr.	100-2
Dorony, Thomas	49-1
Douglass, Howard	500-205
Drabik, Judy	86-1
Dunn, Frank H.	86-1
Easley, Annie	86-4
Easter, Robert W.	309-1
Ehlers, Robert C.	60-4
Ely, James H.	54-7
Englund, Bob	77-1
Esgar, Genevieve	5-9
Essary, Jefferson D.	500-202
Ewashinka, John G.	302-1
Exner, Donald J.	100-2

Faddoul, James R.	49-3
Fahnenbruck, Merri	60-3
Farkas, Robert Z.	50-1
Fear, James S.	60-4
Fenderbosh, Richard W.	11-3
Forbes, Clarence	500-314
Foutty, Chris	500-211
Freche, John C.	49-1
Rriedman, Robert	501-4
Frastaci, Dino	5-1
Fredericy, Gloria M.	60-4
Fusaro, Robert L.	23-2
Gahn, Randall F.	309-1
Garman, Donald	500-120
Garrett, Floyd	49-1
Gedney, Richard	301-1
Getz, Peter M.	15-5
Gilbert, James A., Jr.	21-4
Ging, Robert E.	50-1
Goble, Donald T.	15-5
Goebel, Dottie	21-7
Golladay, Richard	501-4
Gordon, William A.	105-1
Graber, Edwin J., Jr.	60-6
Grady, Sidonna	5-1
Gray, Hugh R.	49-1
Green, John	5-5
Greer, Harry	5-1
Gregory, John W.	500-203
Greissing, John	16-1
Grey, Reginald	6-1
Guzik, Ted	14-1
Hager, Roy D.	5-9
Hanna, Ruth	50-2
Harper, Jack	3-15
Harris, Hugh W.	3-11
Hauser, Cavour H.	5-9
Heighway, John E.	301-1
Hein, Gerald F.	501-1
Heintz, Peg	3-14
Hembly, Suzanne	15-5
Hemmerich, Darlene	3-9
Henderson, Murray	5-5
Herman, Louis E.	105-1
Hislop, Joan	60-4
Hite, Flo	3-7
Hobzek, Joe	302-1
Holdeman, James D.	60-6
Holt, Colleen	4-1
Holt, Frank	54-7
Holt, William H.	24-1
Hornaday, Muriel	301-2
Horvath, Terry	6-3

Hudac, Rose	501-3
Hudach, Victor T.	23-1
Huebler, Donald	5-5
Huff, Ronald G.	501-4
Hunter, Gene C.	100-2
Hurst, Everett	54-1
Hutchison, Millie	500-113
Jacobson, Thomas P.	23-2
Jecko, Albert	5-5
Jedlicka, Albert	5-1
Jira, Joseph C.	21-4
Johnson, Robert L.	23-2
Johnston, James R.	49-1
Jones, Kenneth E.	105-1
Jones, Robert	11-3
Jones, Robert E.	60-6
Jones, Sanford G.	501-1
Jones, William R., Jr.	23-2
Jonic, Mary	500-303
Kahoe, Thomas J.	105-1
Karchmer, Allen M.	501-4
Kaufman, Ken	302-1
Kazaroff, John	500-214
Kazmierczak, Kathy	5-5
Keating, Joan A.	54-1
Keberle, Helen	3-3
Keliher, Dan	21-10
Kelm, Gary G.	501-4
Kerwin, Paul T.	500-202
Kick, Paul J.	5-5
Kiessling, Ron	54-7
King, John P.	105-1
Kirby, Carol	500-317
Klein, Charles	50-1
Kluchnik, Basil P.	54-7
Knight, Rodney M.	500-107
Kocsis, Sandy	3-19
Kohl, Robert	500-205
Komorowski, Hattie	5-1
Konkoli, Lynne	5-5
Kotch, Gary N.	5-2
Kovach, James	105-1
Kovachik, Richard	49-2
Kovacs, Victor	5-1
Kramer, John	500-103
Krause, Lloyd	77-1
Kravanya, Rudolph F.	4-2
Krawczonek, Eugene M.	500-209
Krejci, Mathew B.	5-5
Kren, Louis J.	24-1
Krochmal, Barbara	5-5

Krudy, John	107-1
Krumwiede, Lawrence M.	15-2
Kubic, Ethel	50-1
Kuchta, Frank J.	15-2
Lacovic, Raymond F.	500-116
Laisure, Paul	15-5
Lalli, Benjamin	5-1
Lalli, Frank	5-1
Larson, Dorothy M.	23-2
Laudato, Anthony	5-5
Laufman, Arthur L.	5-2
Lehlbach, Kay	500-302
Leidy, Ray	50-2
Leiner, Gloria	5-5
Leonard, Bruce R.	501-5
Leroy, Bruce E.	54-3
Light, Louis	500-110
Lipker, Grace	3-18
Lisy, Fred	14-1
Loomis, Steven	5-5
Lorenz, Gary V.	24-1
Luidens, Roger W.	501-2
Lukac, Steve	5-5
Lukas, Albert	5-5
Maclean, John R.	23-1
Mahnke, George L.	11-3
Malone, Jerry H.	500-116
Manyak, Louis J., Jr.	105-1
Mark, Herman	301-1
Martin, Dolores	500-211
Marton, John	5-5
Masek, June G.	54-1
Maslach, Henry	23-1
Meges, Daniel	77-3
Meilander, Bud	110-1
Mellner, Max B.	500-209
Meng, Phillip R.	500-201
Metroka, Robert R.	105-1
Meyer, Bob	21-6
Michalski, Joe	14-1
Miller, Anna	3-18
Miller, Brent	501-4
Miller, Edward F.	54-5
Miller, Patricia L.	54-7
Modarelli, James J.	5-5
Monroe, Emma	3-6
Montegani, Francis J.	501-4
Montori, Lynn	66-1
Morrissey, James	5-5
Morrow, Melvin E.	105-1
Mularz, Edward J.	60-6

Mulroy, Mary Anne	60-4
Murray, Peter J.	15-2
Nachman, Ellen	86-3
Nichols, Lester D.	301-2
Nieberding, Bill	77-1
Nieberding, John J.	500-119
Nimrichter, Rose	500-311
Nolan, Clarence	11-3
Nosky, Phyllis	3-18
Novak, George	500-106
Oberlin, Jean	3-15
Ockuly, Tom	87-1
O'Donnell, Pat	309-1
Ofcar, Marge	3-18
Olsen, William A., Jr.	501-4
Olson, Walter T.	3-16
Osgood, Mary Ruth	3-4
Otto, Edward	54-1
Palmer, Roger S.	500-120
Pavli, Albert J.	500-203
Penko, Paul	501-4
Peoples, Frances	3-18
Pepper, Stephen V.	23-2
Perhala, George	5-5
Pincombe, Wilbur	7-1
Pindor, Andrew	5-6
Plank, Leroy	105-1
Poferl, Dave	77-2
Poley, William	3-15
Pope, Dale E.	500-120
Powell, Jack	5-5
Prahst, Norman C., Jr.	102-1
Priebe, James J.	24-1
Prok, Daniel	15-5
Quayle, Elaine	3-15
Raabe, Dick	107-1
Ragone, Judy	501-4
Raquet, Charles A.	301-1
Reader, Karl F.	54-5
Regner, Bonnie	301-1
Repas, George A.	500-209
Reutter, Jane	50-2
Reynolds, June	11-1
Ricciardi, Nicholas M.	23-1
Rice, Edward J.	501-4
Richardson, Michael D.	501-4
Richley, Betty	3-7
Richley, Edward A.	3-15
Riedel, Paul	5-5
Robert, Ernest Jr.	106-1
Roberts, John P.	23-1

Roe, Howard R.	3-18
Roelke, Richard J.	77-2
Rohal, Robert G.	49-3
Rosenblum, Louis	302-1
Roskilly, Ronald R.	501-4
Rouge, Carl J.	49-3
Rowlen, Peggy	
Sagerman, Gary D.	500-318
Sagerser, David A.	501-7
Sarkan, Elaine	500-314
Sater, Louis E.	23-1
Schaefer, John W.	501-4
Scheman, Rodger D.	100-2
Schertler, Ronald J.	301-1
Schmiedlin, Ralph	501-4
Schneider, Jack	15-5
Schneider, Jean	3-15
Schultz, Marcia	5-1
Scott, Irma	500-311
Scott, Jim	501-4
Scudder, Larry R.	302-1
Sender, Dennis	5-5
Serafini, Tito T.	49-3
Shaltens, Richard K.	23-1
Sheehan, Jack	5-5
Shelton, Charlene	3-18
Sherwin, Betty	5-5
Shure, Lloyd I.	500-201
Sikora, John C.	77-3
Sikora, Joseph J.	77-3
Skony, Chester S.	50-2
Slauter, Chuck	14-1
Sliney, Maureen	5-5
Sloan, Joseph	5-5
Smith, Wanda	5-5
Solomon, Holly	5-9
Soltis, Richard F.	5-9
Sotos, Ray G.	500-209
Spalvins, Talivaldis	23-2
Spaulding, Robert G.	15-2
Spera, David A.	49-1
Speer, Grady S.	23-1
Sponsler, Joyce	5-1
Staab, Eileen	3-15
Stakolich, Edward	501-4
Stefka, Stephen	5-1
Steiner, Gordon	23-1
Stenger, Frank	309-1
Stewart, William	5-1
Stibley, Virginia	5-5
Stone, James R.	501-4
Stone, Phillip L.	105-1
SCHULKE, RICHARD	5-5

Strawn, Curtis D.	50-1
Strom, Thomas N.	23-2
Sumner, Irving E.	500-203
Swartz, Peggy	500-206
Swikert, Max	23-2
Takac, Robert	23-1
Taranto, Nick J.	21-4
Terepka, Francis M.	49-3
Tesack, Harold J., Jr.	105-1
Texler, Richard E.	5-2
Thoennes, Donald	301-1
Thomas, Mack G.	54-7
Thomas, Wayne A.	500-209
Thompson, Linda	3-14
Thompson, Michael C.	15-2
Thomson, Rosemary	5-4
Tisdial, Ann	105-1
Tomasch, Eugene	5-5
Tunder, George	24-1
Tupper, James G.	105-1
Uhinck, Richard W.	49-1
Urasek, Donald C.	5-9
Urban, John Jr.	54-7
Valentine, Harold H.	500-318
Vanta, Paul S.	50-1
Vidoli, Carol	5-5
Wagner, Jack M.	501-4
Waite, William	4-1
Waters, William J.	49-1
Wazyniak, Joe	501-4
Weaver, Arlene	5-1
Weaver, Marilyn	5-5
Webb, Kathy	50-2
Wedeven, Lavern D.	23-2
Weigand, Albert J.	54-1
Wenger, Norm	77-1
Wharton, Harold	77-3
Whelan, Margaret E.	60-4
Widra, Gil	500-302
Wilke, Frances	3-18
Williamson, Phyllis M.	49-3
Wine, Howard T.	125-1
Wingenfeld, Neal F.	500-209
Winter, Mary Jane	86-4
Winzig, Charles	5-3
Wisniewski, Al	21=9
Witzke, Howard	107-1
Woleen, Norman	5-5
Woodward, Dick	501-4
Wright, David L.	501-1
Wycoff, Arthur R., Jr.	3-7
Wymor, Lawrence D.	54-7

Yesberger, Charles	86-1
Youngman, Jim	21-9
Yuska, Joseph A.	501-7
Zednik, Karen	15-5
Zehring, Marilyn	3-16
Zellars, Glen	49-3
Zitello, Helen	3-14
Zmijewski, Leonard A.	105-1
Zubricky, Francis J.	54-7