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Senator Daniel K. Inouye Papers
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news from

Senator DANIEL K. INOUE

topic: SPEECH BY SENATOR DANIEL K. INOUE, before
the National Academy of Science Public Meeting on
Cabin Air Quality, June 14, 1985.

date:

release date:

I am very pleased to be here today to participate at the first public meeting of the Committee on Airline Cabin Air Quality. It is fulfilling and assuring to know that a study finally is being done to determine whether air quality conditions and standards aboard commercial aircraft are adequate for our health and safety. I feel it is very appropriate that a study of such importance is being undertaken by an organization of such high integrity and expertise as the National Academy of Sciences.

Because I must make frequent trips back to my State of Hawaii, I spend a total of 20 to 25 days each year in airline cabins. As a result, I have always paid special attention to the airline cabin environment. I had long noticed the discomfort associated with the dry, stagnant air in the airline cabin and the frequent illness which follows long flights. Thus it came as no surprise to me when I was presented with data revealing the inadequate and unsafe condition of cabin air. When I first tried to pursue the issue of cabin air quality five years ago, however, the airlines didn't want to hear anything about it. Furthermore, the agency whose responsibility it is to establish standards of aviation health and safety, the FAA, was unwilling to listen and investigate the situation. This despite the existence of numerous studies, statistics, and personal accounts demonstrating the unhealthy and unsafe conditions aboard commercial aircraft resulting from inadequate cabin air quality.

Because of the FAA's unwillingness to address this issue which so clearly called for attention, I introduced a bill in 1981 calling for an independent study of the air quality conditions aboard commercial aircraft. It seemed to me

that such a study would be the best way to determine the extent of the problem and explore possible solutions. Hearings were held on the bill in the Senate Commerce Committee in 1982, and again in 1983. Expert testimony was received and the bill was refined to reflect the new information and input. The result was the legislation that last year became Public Law 98-466, directing the FAA, still against its will, to contract with the National Academy of Sciences to undertake this study.

It is difficult to overstate the importance and timeliness of the Academy's study. In many of the aspects of cabin air quality to be examined in this study, no standards currently exist and no measures have been established to protect the health and safety of the airline passenger. In other areas, FAA standards are badly outdated and need to be overhauled based on new technology and information. In this sense, the study could serve as a benchmark in aviation safety, by clearly identifying the source of the problems and recommending remedies.

This study could also help prevent untold suffering and loss of livelihood to 50,000 flight attendants working in airline cabins. We are just now seeing the long term effects of inadequate quantities of oxygen, insufficient pressurization, and excessive amounts of bacteria in the cabin environment, as flight attendants are increasingly being afflicted by recurring respiratory diseases that threaten their careers and their health. There are also serious concerns currently being expressed that bacteria and solar radiation that flight crews are exposed to in the cabin environment could be causing different types of cancer. By investigating these issues, the Committee will be contributing to vital improvements in occupational health.

This NAS study can also be a life-saver by outlining the safety precautions necessary to protect passengers in case of in-flight fires and the resulting smoke and fumes. Currently, 90% of all aircraft fires occur in-flight and yet passengers have virtually no protection against them. As a result, two years ago 23 persons--half the people in the aircraft--died of smoke inhalation when an Air Canada jet experienced an in-flight fire. Tragedies such as this will occur again unless the necessary safeguards and equipment are established to protect passengers and crew. With the recommendations of this study, perhaps another tragedy can be avoided.

In closing, I commend the Academy for undertaking this important task and I look forward to learning of the study's progress when the first interim report of the Committee is released. I would also like to offer my complete cooperation if I can be of any assistance in the study. I am confident a comprehensive job will be performed and that it will contribute to improved aviation health and safety.

SPEECH BY SENATOR DANIEL K. INOUE BEFORE THE NATIONAL
ACADEMY OF SCIENCE PUBLIC MEETING, JUNE 14, 1985

I AM VERY PLEASED TO BE HERE TODAY TO PARTICIPATE ~~BE IN~~
THE FIRST PUBLIC MEETING OF THE COMMITTEE ON AIRLINE CABIN
AIR QUALITY. IT IS FULFILLING AND ASSURING TO KNOW THAT A
STUDY ^{IS} FINALLY ~~IS~~ BEING DONE TO DETERMINE WHETHER AIR QUALITY
CONDITIONS AND STANDARDS ABOARD COMMERCIAL AIRCRAFT ARE
ADEQUATE FOR OUR HEALTH AND SAFETY. I FEEL IT IS VERY
APPROPRIATE THAT A STUDY OF SUCH IMPORTANCE IS BEING
UNDERTAKEN BY AN ORGANIZATION OF SUCH HIGH INTEGRITY AND
EXPERTISE AS THE NATIONAL ACADEMY OF SCIENCES.

BECAUSE I MUST MAKE FREQUENT TRIPS BACK TO MY STATE OF HAWAII, I SPEND A TOTAL OF 20 TO 25 DAYS EACH YEAR IN AIRLINE CABINS. AS A RESULT, I HAVE ALWAYS PAID SPECIAL ATTENTION TO THE AIRLINE CABIN ENVIRONMENT. I HAD LONG NOTICED THE DISCOMFORT ASSOCIATED WITH THE DRY, STAGNANT AIR IN THE AIRLINE CABIN AND THE FREQUENT ILLNESS WHICH FOLLOWS LONG FLIGHTS. THUS IT CAME AS NO SURPRISE TO ME WHEN I WAS PRESENTED WITH DATA REVEALING THE INADEQUATE AND UNSAFE CONDITION OF CABIN AIR. WHEN I FIRST TRIED TO PURSUE THE ISSUE OF CABIN AIR QUALITY FIVE YEARS AGO, HOWEVER, THE AIRLINES DIDN'T WANT TO HEAR ANYTHING ABOUT IT.

FURTHERMORE, THE AGENCY WHOSE RESPONSIBILITY IT IS TO ESTABLISH STANDARDS OF AVIATION HEALTH AND SAFETY, ~~THE FAA~~ WAS UNWILLING TO LISTEN AND INVESTIGATE THE SITUATION. THIS DESPITE THE EXISTENCE OF NUMEROUS STUDIES, STATISTICS, AND PERSONAL ACCOUNTS DEMONSTRATING THE UNHEALTHY AND UNSAFE CONDITIONS ABOARD COMMERCIAL AIRCRAFT RESULTING FROM INADEQUATE CABIN AIR QUALITY.

^{THIS}
BECAUSE OF ~~THE FAA'S~~ UNWILLINGNESS TO ADDRESS THIS ISSUE WHICH SO CLEARLY CALLED FOR ATTENTION, I INTRODUCED A BILL IN 1981 CALLING FOR AN INDEPENDENT STUDY OF THE AIR QUALITY CONDITIONS ABOARD COMMERCIAL AIRCRAFT.

IT SEEMED TO ME THAT SUCH A STUDY WOULD BE THE BEST WAY TO DETERMINE THE EXTENT OF THE PROBLEM AND EXPLORE POSSIBLE SOLUTIONS. HEARINGS WERE HELD ON THE BILL IN THE SENATE COMMERCE COMMITTEE IN 1982, AND AGAIN IN 1983. EXPERT TESTIMONY WAS RECEIVED AND THE BILL WAS REFINED TO REFLECT THE NEW INFORMATION AND INPUT. THE RESULT WAS THE LEGISLATION THAT LAST YEAR BECAME PUBLIC LAW 98-466, DIRECTING THE FAA, ~~STILL AGAINST ITS WILL~~ TO CONTRACT WITH THE NATIONAL ACADEMY OF SCIENCES TO UNDERTAKE THIS STUDY.

IT IS DIFFICULT TO OVERSTATE THE IMPORTANCE AND
TIMELINESS OF THE ACADEMY'S STUDY. IN MANY OF THE ASPECTS
OF CABIN AIR QUALITY TO BE EXAMINED IN THIS STUDY, NO
STANDARDS CURRENTLY EXIST AND NO MEASURES HAVE BEEN
ESTABLISHED TO PROTECT THE HEALTH AND SAFETY OF THE AIRLINE
PASSENGER. IN OTHER AREAS, FAA STANDARDS ARE BADLY OUTDATED
AND NEED TO BE OVERHAULED BASED ON NEW TECHNOLOGY AND
INFORMATION. IN THIS SENSE, THE STUDY COULD SERVE AS A
BENCHMARK IN AVIATION SAFETY, BY CLEARLY IDENTIFYING THE
SOURCE OF THE PROBLEMS AND RECOMMENDING REMEDIES.

THIS STUDY COULD ALSO HELP PREVENT UNTOLD SUFFERING AND LOSS OF LIVELIHOOD TO 50,000 FLIGHT ATTENDANTS WORKING IN AIRLINE CABINS. WE ARE JUST NOW SEEING THE LONG TERM EFFECTS OF INADEQUATE QUANTITIES OF OXYGEN, INSUFFICIENT PRESSURIZATION, AND EXCESSIVE AMOUNTS OF BACTERIA IN THE CABIN ENVIRONMENT, AS FLIGHT ATTENDANTS ARE INCREASINGLY BEING AFFLICTED BY RECURRING RESPIRATORY DISEASES THAT THREATEN THEIR CAREERS AND THEIR HEALTH. THERE ARE ALSO SERIOUS CONCERNS CURRENTLY BEING EXPRESSED THAT BACTERIA AND SOLAR RADIATION THAT FLIGHT CREWS ARE EXPOSED TO IN THE CABIN ENVIRONMENT COULD BE CAUSING DIFFERENT TYPES OF CANCER.

BY INVESTIGATING THESE ISSUES, THE COMMITTEE WILL BE CONTRIBUTING TO VITAL IMPROVEMENTS IN OCCUPATIONAL HEALTH.

THIS NAS STUDY CAN ALSO BE A LIFE-SAVER BY OUTLINING THE SAFETY PRECAUTIONS NECESSARY TO PROTECT PASSENGERS IN CASE OF IN-FLIGHT FIRES AND THE RESULTING SMOKE AND FUMES.

CURRENTLY, 90% OF ALL AIRCRAFT FIRES OCCUR IN-FLIGHT AND YET PASSENGERS HAVE VIRTUALLY NO PROTECTION AGAINST THEM. AS A RESULT, TWO YEARS AGO 23 PERSONS--HALF THE PEOPLE IN THE AIRCRAFT--DIED OF SMOKE INHALATION WHEN AN AIR CANADA JET EXPERIENCED AN IN-FLIGHT FIRE.

TRAGEDIES SUCH AS THIS WILL OCCUR AGAIN UNLESS THE NECESSARY SAFEGUARDS AND EQUIPMENT ARE ESTABLISHED TO PROTECT PASSENGERS AND CREW. WITH THE RECOMMENDATIONS OF THIS STUDY, PERHAPS ANOTHER TRAGEDY CAN BE AVOIDED.

IN CLOSING, I COMMEND THE ACADEMY FOR UNDERTAKING THIS IMPORTANT TASK AND I LOOK FORWARD TO LEARNING OF THE STUDY'S PROGRESS WHEN THE FIRST INTERIM REPORT OF THE COMMITTEE IS RELEASED. I WOULD ALSO LIKE TO OFFER MY COMPLETE COOPERATION IF I CAN BE OF ANY ASSISTANCE IN THE STUDY. I AM CONFIDENT A COMPREHENSIVE JOB WILL BE PERFORMED AND THAT IT WILL CONTRIBUTE TO IMPROVED AVIATION HEALTH AND SAFETY.

United States Senate

MEMORANDUM

June 6, 1985



SENATOR--

Attached for your approval is a draft speech for next Friday's National Academy of Sciences public meeting on their study of Airline Cabin Air Quality. You will be opening the meeting, speaking to a group comprised mainly of representatives from the aviation industry, the field of public health, and the flight attendants' and pilots' unions.

--Peter

DRAFT SPEECH ON CABIN AIR QUALITY
National Academy of Science Public Meeting
June 14, 1985

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PUBLIC MEETING

JUNE 14, 1985

NATIONAL ACADEMY OF SCIENCES
AUDITORIUM
2101 Constitution Avenue, N.W.
Washington, D.C.

COMMITTEE ON AIRLINER CABIN AIR QUALITY
BOARD ON TOXICOLOGY AND ENVIRONMENTAL HEALTH HAZARDS
COMMISSION ON LIFE SCIENCES

AGENDA

9:30 a.m. Welcome and Introductory Remarks
Frank Press
President, National Academy of Sciences
Senator Daniel K. Inouye
ranking minority member, Committee on Commerce,
Science, and Transportation
Thomas McSweeney
Office of Airworthiness
Federal Aviation Administration
Thomas C. Chalmers
Chairman, Committee on Airliner Cabin Air Quality
Alvin G. Lazen
Executive Director
Commission on Life Sciences, National Research Council

PRESENTATIONS

10:00 Aerospace Industries Association
John Reese

10:20 Air Transportation Association
J. Donald Collier

10:40 National Transportation Safety Association
Wayne E. Williams

11:00 Coffee Break

11:20 Joint Council of Flight Attendants Unions
Margaret Brennan

11:40 Association of Flight Attendants
Matthew Finucane

12:00 Xenex Corporation
Bertil Werjefelt

12:20 Air Duct Decontamination, Inc.
Wallace Rhodes and Larry Foster

12:40 Lunch

1:40 Coalition on Smoking or Health
American Lung Association
American Heart Association
American Cancer Society
Matthew Myers

2:00 Exposure Assessment and Acute Medical Effects of
Environmental Tobacco Smoke: Results of a Review
Performed for The Tobacco Institute
Salvatore DiNardi, University of Massachusetts
Philip Witorsch, Center for Environmental Health
and Human Toxicology

2:20 American Lung Association
Mark Schenker

2:40 Action on Smoking and Health
John Banzhaf

3:00 American Association for Respiratory Therapy
Sam Giordano and Richard Beckham

3:20 Commercial Airline Pilot
Hugh B. Fulton, Jr.

3:40 Environmental Protection Agency
Office of Air and Radiation
James Repace

4:00 Toxicity and Risk Analysis of Environmental Tobacco
Smoke: Results of a Review Performed for The Tobacco
Institute
Sorell Schwartz, Georgetown University
Mark Reasor, University of West Virginia

4:20 General Discussion and Closing Remarks
Thomas C. Chalmers, Chairman
Committee on Airliner Cabin Air Quality

PUBLIC MEETING

COMMITTEE ON AIRLINER CABIN AIR QUALITY
June 14, 1985

National Academy of Sciences
Auditorium
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

PRESENTERS

John Banzhaf
Action on Smoking and
Health

Richard Beckham
American Association for
Respiratory Therapy

Margaret Brennan
Independent Union of Flight
Attendants and Joint Council
of Flight Attendant Unions

Salvatore DiNardi
University of Massachusetts

J. Donald Collier
Environment and Operational
Engineering
Air Transportation Association
of America

Matthew Finucane
Association of Flight Attendants

Larry Foster
Air Duct Decontamination, Inc.

Captain Chuck Fulton
Commercial Airliner Pilot

Sam Giordano
American Association for
Respiratory

Thomas McSweeney
Office of Airworthiness
Federal Aviation Administration

Matthew Myers
Coalition on Smoking or Health

Mark Reasor
University of West Virginia

John Reese
Aviation Programs
Aerospace Industries Association

James L. Repace
Office of Air and Radiation
U.S. Environmental Protection
Agency

Wallace Rhodes
Air Duct Decontamination, Inc.

Sorell Schwartz
Department of Pharmacology
Georgetown University Medical
School

Mark Schenker
American Lung Association

Bertil Werjefelt
Xenex Corporation

Wayne E. Williams
National Transportation Safety
Association

Philip Witorsch
Center for Environmental Health
and Human Toxicology

PRE-REGISTERED OBSERVERS

Sree Chakrabarty
Finley, Cumble and Wagner
Attorneys at Law

Frank M. Coda
American Society of Heating and
Air Conditioning Engineers

James Danaher
Bureau of Technology
National Transportation Safety Board

Martin Deutsch
Frequent Flier Magazine

Robert Dodd
Department of Engineering and
Air Safety
Airline Pilots Association

Edith First
Consumer Federation of America

Larry Foster
Sears Air Decontamination, Inc.

John Hutchings
Division of Maternal and
Child Health
Department of Health and Human
Services

Timothy Kelley
Office of the Secretary
U.S. Department of Transportation

Heather Lancaster
onsultant
Piedmont Airline

John Leydon
Public and Employee Communications
Division
Federal Aviation Administration

John Lyons
Paul, Hastings, et al.
Attorneys at Law

Melanie Payne
Total Flood Corporation

Fred Pelzman
Community and Consumer
Liaison Division
Federal Aviation Administration

Mark Quam
Regulation and Policy Division
Federal Aviation Administration

Rip Rice
Ashton, Maryland

Curtis Sandler
Human Performance Division
National Transportation Safety Board

Barbara Tauben
Office of the Administrator
Federal Aviation Administration

Andy Yates
Alexandria, Virginia

COMMITTEE ON AIRLINER CABIN AIR QUALITY

Board on Toxicology and Environmental Health Hazards
Commission on Life Sciences

Chairman

Chalmers, Thomas C., President Emeritus, Mount Sinai Medical Center

Members

Burge, Harriet A., Department of Internal Medicine (Allergy), University of Michigan

Calabrese, Edward J., Division of Public Health, University of Massachusetts

Halfpenny, Paul F., Group Supervisor (Retired), Lockheed California Company

Horvath, Steven M., Institute of Environmental Stress, University of California

Laird, Nan M., Department of Biostatistics, Harvard School of Public Health

Matanowski, Genevieve M., School of Hygiene and Public Health, The Johns Hopkins University

Melius, James M., Hazard Evaluations and Technical Assistance Branch, National Institute for Occupational Safety and Health

Parker, John A., Chemical Research Scientist (Retired), National Aeronautics and Space Administration Ames Research Center

Spengler, John D., Environmental Health Sciences Department, Harvard School of Public Health

Stedman, Donald H., Department of Chemistry, University of Denver

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COMMITTEE ON AIRLINER CABIN AIR QUALITY

Board on Toxicology and Environmental Health Hazards
Commission on Life Sciences

STATEMENT OF TASK

A report covering the matters addressed in Public Law 98-466 shall be submitted to the FAA not later than April 11, 1986. The report shall contain a section on each of the following areas: (1) the quantity of fresh air per occupant and overall quality of air onboard; (2) the quantity and quality of humidification; (3) onboard environmental conditions and contamination limits, including exposure to radiation, carbon dioxide, carbon monoxide, ozone, hydrocarbons, particulates especially from tobacco smoke, infectious agents such as pathogens, and others determined necessary by the committee; (4) emergency breathing equipment, including toxic fume-protective breathing equipment; (5) measures, procedures and capabilities for detecting and extinguishing fires, and the removal of smoke and toxic fumes within safe pressurization limits; (6) safe pressurization of the aircraft, considering the broad range of cardiopulmonary health of the traveling public, and dissemination of information to the medical profession and the general public on current pressurization limits and practices to assure valid medical advice concerning the health effects of air travel; (7) the feasibility of collection and dissemination by the aviation industry, the FAA, or any other private or governmental organization of a data base of medical statistics and environmental factors relating to air travel, including but not limited to maintenance and operation records and procedures of aircraft in an effort to assess the adequacy of aircraft systems, design, regulations, standards and practices relating to airline cabin air quality from the standpoint of health and safety and for the purpose of issuing FAA's advisory circulars or airworthiness directives to correct any deficiencies disclosed; (8) the adequacy of current preflight and inflight health and safety instructions for air travelers that relate to airline cabin air quality, including but not limited to safety procedures during inflight fire, smoke and toxic fume emergencies; (9) a comparison of foreign industry practices, regulations, and standards; and (10) how the material and recommendations from the above sections relate to the overall health and safety of transport airplane crew and passengers. The report may contain additional information that the NRC committee determines to be advisable for promotion of health and safety in relation to airline cabin air quality, including recommendations for legislative, regulatory, and industry changes.