A Guide To Manuscripts and Oral Histories

SCIENCE AND TECHNOLOGY

RESOURCES

In the

Dwight D. Eisenhower Library

Compiled by

Dwight E. Strandberg

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INTRODUCTION

Scope and Content

The simplest definition of science and technology is exceptionally broad, encompassing all sciences and a number of allied trades and professions such as engineers, educators, and psychologists; and significant aspects of other vocations such as politics and journalism. The simple definition is a reflection of the simple fact that science and technology pervades our entire culture. The problem with this definition though is that it constitutes such a large quantity of documentation that by volume it ranks with the Library's union catalog of holdings and defeats the purpose of a subject guide which is to provide a focused finding aid with relatively detailed descriptions. In order to retain the benefits of the subject guide and at the risk of obscuration the following guidelines have been used in the selection of material for this survey:

Material of the following kind has been included:

- (1) Physical sciences
- (2) Biological research and engineering
- (3) Medical and veterinary research
- (4) Technological development
- (5) Technological implementation when undistinguishable from technological development
- (6) Energy research
- (7) Nuclear energy and power
- (8) Weapons research and development
- (9) Weapons implementation when employing nuclear technologies and other infant technologies
- (10) Aeronautics and astronautics
- (11) Water resources
- (12) Education for the physical, biological, and veterinary sciences and engineering
- (13) Collection and distribution of scientific information
- (14) International cooperation in science

Survey Methodology

Collection finding aids were surveyed for folder titles within the scope of the topic. Also, as many of the Eisenhower Library finding aids contain subject annotations for generic chronological and correspondence files, these annotations were screened for citations to the topic. It should be noted that because annotations are not available for all generic files the accuracy of the survey is uneven.

In arriving at a figure for science and technology material that is classified, the percent of classified material for the entire collection in question was used as a best estimate.

To compute quantities of documentation the following averages were used:

40 pages per folder 800 pages per box 2000 pages per linear foot Variable pages per citation (bases on circumstances)

This survey was compiled by searching finding aids to manuscript collections and oral history transcripts. The method, valuable as it is, nevertheless possesses two inherent drawbacks which should be born in mind by users of the survey. The first drawback is generic arrangement. Many collections contain chronological files and alphabetical correspondence files which give no indication of the subject content of the material within. Except where circumstances provide a strong case for inferring the subject content—the reading file of the science adviser to the President--these generic files have been excluded from this survey. The second drawback is general folder titles and the use of general subject descriptors. An example is the folder title "Defense Budget." To avoid clogging the survey with non or marginally related documentation general titles and descriptors have been included on a case by case basis. Users are therefore encouraged to conduct secondary searches in related subject areas.

Declassification

Systematic declassification at the Eisenhower Library is a limited operation which has achieved the declassification of much routine material and some substantive documents. It is limited to those categories of materials covered by agency guidelines and is conducted when staff resources are available. Most of the highest level documents in the Library's holdings however must be reviewed by agency personnel. These materials are submitted to the appropriate agencies through the mandatory review process. Most of the 100,000 pages declassified since the early 1970's can be attributed to its use by the scholarly community. This material represents at least 20 percent of the Library's original classified holdings.

In the context of the overall progress in declassification the science and technology holdings are a special case. Because mandatory review has been the primary mechanism, declassification has not evenly affected all subject areas. The declassification of science and technology documentation reflects the demands of the scholarly community for that information.

MANUSCRIPT HOLDINGS

This part of the survey is divided into Major Collections and Minor Collections. Major collections contain more the 500 pages or very significant concentrations of less than 500 pages. Minor collections contain less the 500 pages. All Major Collection descriptions include biographical and historical notes when necessary, quantity of material with percentage classified noted in parentheses () after the approximate number of pages, types of documentation, and topics. Minor collections are listed by title. No additional information is provided.

MAJOR COLLECTIONS

Cochran, Jacqueline: Papers, 1932-75

Cochran was neither a scientist nor an engineer but a pilot. As a consequence this collection documents the implementation of aviation technologies rather than their development. While in general this survey has excluded technological implementation, exception is made in the case of this documentation because it dates from the early period of aviation history when development and implementation were not significantly differentiated.

Linear feet: 66 Approximate pages: 132,000 (less than 1%)

<u>Documentation</u>. Correspondence, memoranda, speeches, articles, scrapbooks, clippings, publications, speed record statistics, organizational records, administrative files, Air Force personnel files, flight records.

<u>Topics</u>. Early aviation; space programs; aircraft development; women in aviation; women in space program; Air force operations; aircraft testing; aircraft speed records; The Ninety-Nines; Women's National Aeronautic Association; Air Transport Auxiliary; Women's' Air Force Service Pilots; National Aeronautic Association; Federation Aeronautique Internationale.

Dulles, John Foster: Papers, 1951-59

Linear feet: .5 Approximate pages: 1,000 (18%)

Documentation. Correspondence, memoranda, memoranda of conversation, general and Presidential telephone memoranda, White House memoranda, memoranda of meetings with the President.

<u>Topics.</u> Nuclear testing; Atomic Energy Act; nuclear weapons; missiles; nuclear power; Atomic Energy Commission; thorian nitrate; atomic information; EURATOM; Russian atomic power; sale of research reactors; US-USSR air capabilities; Atoms for Peace; radiation; UK and nuclear weapons; USSR and nuclear weapons; International Atomic

Energy Agency; nuclear bomb tests; British nuclear testing; Soviet atomic testing; Great Britain and missiles; NATO and nuclear testing; exchange of nuclear information with British space program; space race with USSR; Sputnik; space agency; British and atomic energy agreements; USSR and atomic talks; peaceful uses of atomic energy; balloons; international atomic energy; Antarctica; saline water conversion; US-USSR and outer space; Italy and missiles; AEC and nuclear fallout.

Eisenhower, Dwight D.: Papers as President of the United States, 1953-61 (Ann Whitman File)

Maintained by Ann C. Whitman Eisenhower's personal secretary, Ann C. Whitman, this Collection served as Eisenhower's working file and later as the primary source for writing his memoirs.

Linear feet: 3 Approximate pages: *6,000 (15%)

<u>Documentation.</u> Correspondence, memoranda, diaries, Cabinet meeting minutes, memoranda of conversation between Eisenhower and policy advisers (Goodpaster Memcons), telephone conversation summaries, legislative meeting minutes, NSC summaries of discussion, press conference briefing notes and summaries, and speeches.

<u>Topics</u>. High energy physics; outer space; mathematics and science education; airpower; atomic weapons; atomic energy; nuclear power plants; nuclear weapons; peaceful uses of atomic energy; Atomic Energy Commission; air pollution; missiles; electromagnetic communications; International Atomic Energy Agency; nuclear testing; meteorology; medical research; water pollution; radiation protection; space technology; US-USSR cooperation in space research; scientists and engineers; water resources; agricultural research; government support of scientific research; Euratom; international science relations; Salk polio vaccine; satellites; carcinogenic food additives; seismic research; National Science Foundation; cigarette smoking and lung cancer; automated postal service; exchange of weapons technology with Great Britain; aeronautical research; aircraft development; comparative nuclear capabilities of the US-USSR; foreign nuclear development; arms race; scientific cooperation and research; conversion of saline water; electronics industry; telecommunications, chemicals.

*This quantity could be significantly higher. Unfortunately present circumstances do not allow a more accurate assessment.

Eisenhower, Dwight D.: Records as President White House Central Files, 1953-61

The White House Central Files comprise the largest collection in the Library. All of the major foreign and domestic issues and policies associated with the Eisenhower Administration, as well as the political events of the period, are documented by the Central Files. Of the several segments to the Central File only three are important for research in the area of science and technology. The Official File, totaling approximately 766,000 pages contains a substantial quantity of high-level materials reflecting major issues of public policy and Presidential actions. The General File, totaling approximately 1,054,000 pages, consists essentially of expressions of public opinion on major issues by

individuals for public office. However one can occasionally find in the files important correspondence and memoranda originated by members of Congress, the judiciary, and executive departments. Finally the Confidential File, totaling approximately 100,000 pages, contains the highest-level materials in the Central Files on many subjects.

Linear feet; 53.5 Approximate pages: 107,000 (1.9%)

<u>Documentation</u>. Correspondence, memoranda, drafts of speeches and executive orders, telegrams, reports, studies, agendas, and press releases.

<u>Topics</u>. The immense quantity of material in the White House Central Files and its extremely varied subject content make the collection difficult to assess. Nevertheless this quantitative and topical richness coupled with the fact that the material reflects policy making at the highest levels of government makes the Central files imperative for the vast majority of research topics. It is recommended that the finding aids to this collection be consulted for and research in the area of science and technology during the Eisenhower Administration.

Furnas, Clifford Cook: Papers, 1918-1969

Chancellor, University of Buffalo, 1954-62; Chairman, Guided Missile Commission, Research and Development Board, 1952-53; Chairman, Department of Defense Advisory Panel on Aeronautics, 1954-69; member, National Advisory Committee for Aeronautics, 1955-57; Assistant Secretary of Defense for Research and Development, 1955-57; Chairman, Air Navigation Development Board, 1956-57; member, Defense Science Board, 1957-69; member Naval Research Advisory Committee, 1958-59; Chairman, Defense Science Board, 1961-65; vice chairman National Research Council, 1968-69.

Linear feet: 8.8 Approximate pages: 17,200 (4.7%)

<u>Documentation</u>. Articles, speeches, correspondence, reports, and Congressional testimony.

<u>Topics</u>. Role of science and technology in the Department of Defense; the impact of science and technology on regional development, problems in aircraft construction; a study of Department of Defense In-House Labs; the relationship of the National Academy of Engineering to the National Research Council and the National Academy of Sciences; various scientific and technological problems within the Department of Defense arsenals and laboratories; chemical engineering; aeronautical research; the roles of science and research in society; higher education; the American missile development.

Glennan, T. Keith: Diary, 1958-1961

Administrator, National Aeronautics and Space Administration, 1958-61.

Linear feet: -1 Approximate pages: 470 (none) Documentation. Diary and memoir

<u>Topics</u>. Initial organization and consolidation of NASA's administrative structure; the assimilation of department of Defense projects and facilities into NASA; interservice rivalries over responsibilities in the space program; NASA budgetary matters; development of NASA program priorities and long-range goals; NASA procurement and contracting policies; Glennan's working relationships with members of Congress and other members of the administration and his contacts with people for industry and the academic community.

Kistiakowsky, George B.: Diary, 1959-60

Special Assistant to the President for Science and Technology, 1959-61.

Linear feet: -1 Approximate pages: 471 (none)

<u>Documentation</u>. Diary which formed the basis for Kistiakowsky's <u>A Scientist in the</u> <u>White House</u>.

Collection is unprocessed.

McCone, John A.: Papers, 1958-61

Chairman, Atomic Energy Commission, 1958-61.

Linear Feet: 2 Approximate pages: 4,000 (20%)

<u>Documentation</u>. Memoranda and notes, memoranda of conferences with the President, reports, working papers, memoranda of conferences of the Committee of Principals, studies, and correspondence.

<u>Topics</u>. Views of the President's science advisers, Dr. James R. Killian and Dr. George B. Kistiakowsky, and members of the President's Science Advisory Committee; high energy physics; international atomic energy matters; potential hazards of nuclear reactors; Soviet atomic energy programs; the Joint Congressional Committee and Atomic Energy; nuclear testing; Euratom; saline water conversion; Stanford accelerator; USS <u>Triton</u>; US-USSR space vehicle capabilities.

National Aeronautics and Space Administration: Selected Documents, 1953-62

Linear feet: -1 Approximate pages: 400 (none)

<u>Documentation</u>. Copies of reports and other official documents donated by various NASA officials.

<u>Topics</u>. Technological data on satellites and their scientific, military, and psychological value; the Soviet Union's capacity for satellite production; recommendations for creation of a top level committee on satellites; NASA long-range planning; and OCB Working Group deliberations on the satellite program.

Odlum, Floyd B.: Papers, 1892-1976

Head of Atlas Corporation; on the board of the Lovelace Foundation and the Hertz Foundation; business interests in Convair, Hughes Tool Company, Townsend Brown Foundation;

Linear feet: 70 linear feet Approximate pages: 140,000 (none)

Documentation. Reports, correspondence, publications

<u>Topics</u>. Missiles, aviation, peaceful uses of atomic energy, weather control, medical research, electrohydrodynamics, support for academic research in applied science

Quarles, Donald A.: Papers, 1917-60

Assistant Secretary of Defense for Research and Development, 1953-55; chairman, Air Navigation Development Board, 1954; member, National Advisory Committee for Aeronautics, 1954; Secretary of the Air Force, 1955-57; Deputy Secretary of Defense, 1957-59.

Linear feet: 10 Approximate pages: 10,000 (3.4%)

<u>Documentation</u>. Diaries, speeches, press conference transcripts, Congressional testimony, correspondence, articles, BOD minutes (AIEE).

<u>Topics</u>. Military research and development; American Institute of Electrical Engineers; Atomic Industrial Forum; United Engineering Center; radar systems; Air Force Science Advisory Board.

U. S. President's Committee on Scientists and Engineers: Records, 1956-58

The National Committee for the Development of Scientists and Engineers was established by the President on April 3, 1956. The name of the committee was changed to the President's Committee on Scientist and Engineers on May 7, 1957. The President's Committee, created as the result of recommendations of an earlier Special Interdepartmental Committee, took action in all appropriate ways to promote a substantial growth in the national supply of scientific and technological manpower. The committee submitted its final report to the President on December 17, 1958 and expired on December 31, 1958.

Linear feet: 16 Approximate pages: 32,800 (none)

<u>Documentation</u>. Correspondence, press releases, speeches, printed materials, vouchers, local-action kits, telegrams, programs, itineraries, minutes of committee meetings, progress reports of the President, and inter-office memoranda.

<u>Topics</u>. Arousing public interest in the shortage of scientists and engineers; stimulation of interest among potential scientists and engineers; new methods for teaching mathematics, science, and science related subjects; shortage of top-level science and mathematics teachers; national organizations interested in increasing the number and improving the quantity of scientists and engineers.

U. S. President's Science Advisory Committee: Records 1957-61

In 1951 President Harry S. Truman established a Science Advisory Committee as part of the Office of Defense Mobilization (ODM). On November 29, 1957 President Dwight D. Eisenhower transferred ODM's Science Advisory Committee to the White House Office, reconstituting and enlarging it as the President's Science Advisory Committee. The Committee had no operating responsibilities. Its purpose was to provide advisory opinions and analysis on science and technology matters to the entire Federal Government and specifically to the President.

Linear Feet: 2.7 Approximate Pages: 4600 (30%)

<u>Documentation</u>. Handwritten minutes, agenda, notes of annual meetings with President Eisenhower, correspondence, memoranda, calendars of documents, records of action, briefing papers, press releases, project reports, position papers, panel reports, and lists of members and consultants.

<u>Topics</u>. Science support of national security objectives; establishment of NASA; missile development; satellites; testing of nuclear weapons; arms limitations negotiations; strengthening of science and engineering in the U. S. and allied nations; exchanges of scientific information with NATO countries; encouragement of basic research and graduate education in the sciences; space science, chemical research, nuclear research, high energy physics; oceanography; radio astronomy; creation of a Department of Science and Technology; budgetary problems; competing with the Soviet Union in science and technology; PSAC administrative matters.

White House Office, Office of the Special Assistant for National Security Affairs; Records 1952-1961

The Special Assistant position was created early in the first Eisenhower administration. The succession of individuals to hold the position was Robert Cutler, Dillon Anderson, William Jackson, Robert Cutler for a second incumbency and finally Gordon Gray. The Special Assistant served as liaison between the President and the NSC staff who focused upon long-term national security policy. Linear feet: 4.5 Approximate pages; 9,000 (40.5%)

<u>Documentation</u>. Correspondence, NSC policy papers, briefing notes, memoranda, reports, press releases, NSC agendas and minutes, records of action, status of projects reports, reports on the status of U.S. national security programs, and reports on current policies of the U.S. relating to National Security.

<u>Topics</u>. Space programs; atomic energy and atomic weapons; nuclear testing; satellites; missiles; research and national security policy; sharing atomic energy information with certain allies; technological capabilities; technical surveillance countermeasure requirements; international exchange of technical information; human effects of nuclear weapons development; peaceful uses of atomic energy; disarmament research; nuclear weapons as an industrial tool; solar energy; desalinization; deep hole drilling; scientific cooperation in NATO; telecommunication detection of nuclear detonations; weapons.

White House Office, Office of the Special Assistant for Science and Technology; Records 1957-61

On November 3, 1957 President Eisenhower established the Office of the Special Assistant to the President for Science and Technology and appointed James R. Killian, Jr. to the position. Dr. Killian and his successor, Dr. George B. Kistiakowsky, served concurrently as Chairman of the President's Science Advisory Committee. President Eisenhower established the new Special Assistant position in response to a need for the organization and utilization of American scientific and technological expertise as a collective resource. The primary responsibility of the Special Assistant was to keep the President informed of the progress of scientific and technical programs of various government agencies, presenting his findings, facts, and evaluations to the President, including recommendations with respect to scientific and technological matters. He was also available as an advisor on scientific matters to Cabinet members and other policy-making officials of government.

Linear feet: 18 Approximate papers: 36,000 (13.2%)

<u>Documentation</u>. Constituent mail, correspondence, photographs, memoranda, reports, charts, notes, opinions, plans, recommendations, employment applications, publications, speeches.

<u>Topics</u>, All areas of science and scientific organizations but with an emphasis on those with a close relationship to national security matters: oceanography; missiles; air defense; computers; NASA; AEC; agricultural research; nuclear weapons; communications; disarmament; nuclear testing; satellite; atomic energy; high temperature research; high energy physics; water; life sciences; space technology; aircraft nuclear propulsion; weapons technology; atmospheric science; basic research; behavioral science; biological science; electronics; education for science and technology; geological research; fire research; and international scientific cooperation.

White House Office, Office of the Staff Secretary: Records of Paul T. Carroll, Andrew J. Goodpaster, L Arthur Minnich and Christopher H. Russell, 1952-61

The Office of the Staff Secretary was responsible for overseeing the orderly flow of documents and correspondence within the White House Office and for organizing and supervising the clerical and secretarial services required for this task. Another function of the Office, falling to L. Arthur Minnich, was the preparation of the official minutes of Cabinet meetings, Legislative Leaders meetings, and White House staff meetings. In the course of performing its various functions the Office of the Staff Secretary collected and maintained a large body of material encompassing foreign relations and national security matters. While documenting high level policy making, this material also possesses a valuable record of program and project implementation.

Linear feet; 4.5 Approximate pages; 9,000 (25.1%)

<u>Documentation</u>. Correspondence, memoranda, studies, reports, speech drafts, daily logs of presidential actions; handwritten minutes of Cabinet meetings and legislative leaders meetings; memoranda of conversation between Eisenhower and policy advisers (Goodpaster Memcons), State Department messages and telegrams; Minnich historic and human interest memoranda for the record, OCB planning board activity reports.

<u>Topics</u>. This collection is recommended for any science and technology topic related to national security. There is a large body of AEC material encompassing all nuclear related matters. Also, there is a substantial quantity of documentation of the Department of Defense that includes considerable research and development material on specific programs, projects, and facilities. Topics that are neither nuclear nor national security related include: governmental research and development; carcinogenic food additives, seismic research; lunar probe; Antarctica expedition; satellite program; telecommunications; proposed cooperative satellite launching; malaria eradication; peaceful uses of outer space; NASA; meteorology.

White House Office, Staff Research Group: Records, 1956-61

This office was under the direct supervision of the Staff Secretary, General Andrew Goodpaster. From 1956 to the end of the administration the Research Group prepared on virtually a daily basis two-page summaries ("Staff Notes") to inform the President and his senior aids of activities and policies of the departments and agencies which could not be gleaned from the press and routine meetings.

Linear feet: .85 Approximate pages: 1,700 (25%)

Documentation. Submissions for "Staff Notes," "Staff Notes," memoranda, reports.

<u>Topic</u>. Atomic Energy Agency; radioactive fallout; strontium-90 in milk; exchange of atomic information with foreign governments; nuclear-powered cargo ships; missile

development; Asian Nuclear Center; Colombo Plan Nuclear Center; NASA; National Science Foundation; nuclear testing; missiles; satellites; Sputnik.

MINOR COLLECTIONS

Adams, Sherman: Records, 1952-59 Adkins, Bertha S.: Papers, 1907-83 Allen, George E.: Papers, 1942-69 Anderson, Jack Z.: Papers, 1952-68 Agreeda, Phillip E.: Papers, 1952-62 Aurand, Evan P.: Papers, 1934-72 Aurand, Henry S.: Papers, 1873-1967 Bacon, Edward A.: Papers, 1896-1968 Beach;, Edward L. and Evan P. Aurand: Records, 1953-61 Beach, Edward L.: Papers, 1935-62 Benedict, Stephen: Materials re General Eisenhower's 1952 Campaign Speeches, 1952 Bennett, Elmer F.: Papers, 1953-61 Benson, Ezra Taft: Papers, 1952-61 Bortman, Mark: Papers, 1956-67 Bragdon, John Stewart: Records, 1949-61 Burns, Arthur F.: Papers, 1930-69 Clark, Edwin N.: Papers, 1939-80 Collins, J. Lawton: Papers, 1896-1975 Cook, Richard W.: Papers, 1940-73 Council of Economic Advisors, Office of: Records, 1953-61 Council of Economic Advisors, Office of the Chairman: Records, 1953-60 Draper, William G.: Records, 1953-61 Eisenhower, Dwight D.: Papers, Pre-Presidential, 1916-52 Hagerty, James C.: Papers, 1953-61 Harlow, Bryce N.: Records, 1953-61 Lambie, James M., Jr.: Records, 1953-61 McPhee, Henry R.: Records, 1953-61 Merriam, Robert E.: Records, 1955-61 Mitchell, James P.: Records, 1953-64 Morgan, Gerald D.: Records, 1953-61 Morrow, E. Frederic: Records, 1950-61 Ouesada, Elwood R.: Papers, 1920-67 Schaefer, J. Earl: Papers, 1913-70 Smith, Walter Bedell: Collection of World War II Documents, 1941-45 U.S. Army: Unit Records, 1940-50 U.S. Army: U.S. Forces, European Theater, General Board: Reports, 1942-46 U.S. Commission on Intergovernmental Relations: Records, 1953-55 U.S. Council on Foreign Economic Policy, Office of the Chairman: Records, 1954-61 U.S. President's Advisory Committee on Government Organization: Records, 1953-61 U.S. President's Commission National Goals: Records, 1959-61 White House Office, Office of the Special Assistant to the President for Personnel

Management: Records, 1953-61

ORAL HISTORIES

Adams, Sherman (OH-162) Adkins. Bertha S. (OH-58) Aiken, George (OH-28) Astin, Allen V. (OH-49) Aurand, Henry S. (OH-90) Beach, Edward (OH-128) Berding, Andrew H. (OH-16) Bethe, Hans A. (OH-483) Bissell, Richard M., Jr. (OH-168 & OH-382) Bowie, Robert R. (OH-102) Bricker, John (OH-110) Brode, Wallace (OH-281) Brownell, Dr. Samuel M. (OH-18) Burke, Arleigh A. (OH-284) Burke, James V. Jr. (OH-173) Bush, Prescott (OH-31) Butz, Earl L. (OH-95) Clark, Mark W. (OH-131) Clay, Lucius D. (OH-285) Cook, Richard W. (OH-358) Davis, Clarence A. (OH-89) Douglas, James H., Jr. (OH-288) Eisenhower, John S. D. (OH-15 & OH-291) Folsum, Marion B. (OH-112) Franke, William B. (OH-182) Gavin, James, M. (OH-184) Goodpaster, Andrew J. (OH-37 & OH-378) Harwood, Wilson (OH-84) Hague, Gabriel (OH-190) Johnson, Jesse C. (OH-67) Keating, Kenneth B. (OH-197) Killian, James R., Jr. (OH-216) Kirk, Grayson L. (OH-364) Kistiakowsky, George (OH-412) Knowland, William F. (OH-333) Lemnitzer, Lyman (OH-301) Lovett, Robert (OH-302) Miller, Henry L. (OH-304) Morse, True D. (OH-40) McCone, John A. (OH-201 & OH-396) McElroy, Neil H. (OH-26) McGuire, E. Perkins (OH-257)

Nichols, Kenneth D. (OH-262) Paarlberg, Don (OH-52) Robinson, William (OH-392) Sargeant, Howland (OH-149) Scheele, Dr. Leonard (OH-85) Scribner, Fred C., Jr. (OH-235) Seamans, Robert C., Jr. (OH-313 & OH-315) Sharp, Dudley C. (OH-236) Shoup, David M. (OH-206) Smith, Howard K. (OH-99) Sprague, Mansfield D. (OH-100) Stanley, Timothy (OH-398) Strauss, Lewis L. (OH-271) Thye, Edward J. (OH-22) Twining, Nathan F. (OH-274) Watkins, Arthur (OH-125) Williams, Ralph E. (OH-503)