HOLZMAN, Benjamin G(rad) - 5' 8" - 170 lbs - Grey-green eyes - grey-black hair - (Married)
BORN: 25 January 1910, Los Angeles, California

EDUCATION:

A.B., A.M. - California Institute of Tech. - 1927-34

OCCUPATIONS:

Meteorologist, Eastern Air Lines, - 1934
Chief Meteorologist, American Air Lines - 1935
Research Meteorologist, Department of Agriculture - 1936
Teaching Fellowship, California Inst. of Tech. - 1937
Meteorologist, U. S. Weather Bureau - 1938-42
Air Corps - 1942-date (Rank: Colonel)

ORGANIZATIONS:

American Meteorological Society - Councillor - Chairman of Committee on Professional Ethics and Standards
District of Columbia Meteorological Seminar - President
American Geophysical Union - Vice President Meteorological Section
American Association for Advancement of Sciences

HOUGHTON, Henry G(arrett) - (Married) - 5' 10" - 170 lbs - Brown Hair - Brown eyes
BORN: 2 February 1905, New York City

EDUCATION:

B.S. - Drexel Institute - 1926
M.S. - Mass. Institute of Technology - 1927

OCCUPATIONS:

Engineering Asst., Bell Telephone Labs., Philadelphia, Pa.	1927-28
Assistant Research Assoc., M. I. T.,	1928-32
Research Associate, Mass. Inst. of Technology,	1932-39
Asst. Professor (Meteorology), Mass. Inst. of Tech.	1939-42
Assoc. " " " "	1942-45
Professor " " " "	1945-date

ORGANIZATIONS & SOCIETIES:

American Meteorological Society - 1946
American Geophysical Union
American Physical Society
American Association for the Advancement of Sciences
Institute of Aeronautical Sciences
Society of Sigma Xi

SPECIALTIES:

Meteorological Physics - Physical and Chemical Properties of Fog
Transmission of Radiation thru Fog - Local Dissipation of Fog.

INFORMATION NOT YET AVAILABLE ON

JONES, Loren F.

KAPLAN, Joseph - (Married) - 6' ½" - 210 lbs - Brown eyes - Brown Hair

BORN: Tapolza, Hungary, 8 September 1902 (Brought to USAin 1910)
Naturalized 1 July 1920 (Father's papers)
Derivative Citizenship - Cert. #33940, 28 August 1942.

EDUCATION:

B.S. - John Hopkins University - 1924
M.S. - " " " - 1926
PhD. - " " " - 1927 (Physics)

OCCUPATIONS:

National Research Fellow, Princeton University - 1927-28
Asst. Professor, University of Calif., Los Angeles - 1928-35
Assoc. " " " " " - 1935-40
Professor (Physics) " " " " - 1940-date
Operations Analyst, Hq. AAF, Dec. 1943 to Sept. 1945.

ORGANIZATIONS:

American Physical Society - Secretary for Pacific Coast - 1947
Meteorological Society, Councillor since January 1947 - Columbia Unniv.
American Astronomical Society
International Astronomical Union - Commission 22
American Geophysical Union
Ophral Society of America
American Meteorological Society
Society of Research Meteorites
Astronomical Society of the Pacific
Tau Beta Pi
Tau Delta Phi
Scabbard and Blade

SPECIALTIES:

Geophysics; Spectroscopy; Molecular Physics; Aurora Borealis; Light of the Night Sky; Structure of Earth's Atmosphere. Discoverer of laboratory production in auroral spectrum and light of night sky. Co-discoverer of two series of nitrogen species known as the Volgard-Kaplan Bands and the Goldstein-Kaplan Bands. Discoverer of atomic nitrogen in earth's upper atmosphere.

KENT, Robert H(arrington) - (Single) - 5' 7½" - 168 lbs - Brown eyes - Gray Hair
BORN: 1 July 1886, Meriden, Conn.

EDUCATION:

A.B. - Harvard University - 1910 (Physics)
A.M. - " " - 1916 "

OCCUPATIONS:

Assistant in Physics, Harvard University - 1910-16
Instructor in Mathematics, " " - 1914
Electrical Engineer, Pennsylvania - 1916
Captain Ordnance Dept., USA - 1917-19
Ordnance Engineer (Wind Tunnel Div.) Aberdeen Proving Ground - 1922-date

ORGANIZATIONS & SOCIETIES:

American Physical Society, - 1922 - date
American Association for Advancement of Sciences - 1922 - date
Institute of Mathematical Statistics - 1940 - date
Army Ordnance Association - 1920 - date

SPECIALTIES:

Ordnance Engineer - Exterior and Interior Ballistics - Instruments for Ballistics Measurements - Projectile Aerodynamics.

LANGMUIR, Irving

BORN: 31 January 1881, Brooklyn, New York

EDUCATION:

B.S., M.S. - Columbia University - 1903
PhD. - Gottingen, Germany - 1906

DEGREES AND AWARDS:

ScD. - Northwestern University - 1921
LlD. - Edinburgh University, Scotland - 1921
ScD. - Columbia University - 1925
ScD. - Union, New York - 1923
ScD. - Kenyon College - 1927
ScD. - Princeton University - 1929
Dr. Eng. - Tech Hoschschule, Berlin - 1929
ScD. - Lehigh College - 1934
ScD. - Rutgers - 1941
ScD. - Queen's College, Canada

Nichols Medal, American Chemical Society - 1915
Hughes Medal, Royal Society of London - 1918
Nichols Medal, American Chemical Society - 1920
Rumford Medal, American Academy of Sciences - 1921
Cannizzaro Medal, Royal National Academy, Lincei, Rome - 1925
Perkins Medal, Society of Chemical Industrialists - 1928
School of Mines Medal, Columbia University - 1929
Chandler Medal - 1929
Willard Gibbs Medal - 1930
Nobel Prize - 1932
Popular Science Monthly Award and Gold Medal - 1932
Franklin Medal, Franklin Institute - 1934
Holley Medal, Society of Mechanical Engineers - 1934
John Scott Award and Copper Medal, Philadelphia - 1937

OCCUPATIONS:

Johnson Foundation Lecturer, Penn. - 1937
Asst. Research Director, Research Laboratories, General Electric 1909-32
Assoc. Director and Director, " " " " 1932-date

ORGANIZATIONS & SOCIETIES:

American Chemical Society, President 1929
National Academy for Advancement of Sciences, President 1941
American Physical Society
American Philosophical Society
American Academy of Arts and Sciences

LANGMUIR, Irving Continued

American Chemists Club - Honorary Member
Royal Society of London
London Chemistry Society - Honorary Member
Royal Institute of Great Britain - Honorary Member
Deutsch Chemichel Gesell - Honorary Member
Academy of Sciences, Halle
Royal Society Uppsala
Royal Physiological Society, Sweden
Academie Brasil de Science

SPECIALTIES:

Chemistry - Kinetics of gas reaction, expecially at low pressures - Dissociation of hydrogen, nitrogen, and argon-filled tungsten lamps - vapor pressure of metals - production of high vacuum - electron discharges - constitution of solids and liquids - absorption - surface tension - structure of atoms - theory of chemical valence - accoustic devices for submarine detection - electric discharged in gases - surface chemistry.

LINDSLEY, Donald B(enjamin) - (Married) - 6' - 180 lbs - Blue eyes - Black hair

BORN: 23 December 1907, Brownhelm, Ohio

EDUCATION:

A.B. - Wittenberg College - 1927
A.M. - University of Iowa - 1930
PhD. - " " " - 1932

OCCUPATIONS:

Instructor Psychology, University of Illinois - 1932-33
National Research Fellowship, Physiology, Harvard Medical School - 1933-35
Research Associate, Brush Foundation, School of Medicine Western Reserve University, Cleveland, Ohio, - 1935-38
Asst. Professor, Brown University (On Leave 1943-45) 1938-46
Psychologist, Bradley Hospital, Riverside, Rhode Island - 1938-46
NDRC - Director Research Project, Yale Univ. Contractor - 1943-45
Professor, Northwestern Univ., Evanston, Ill. - 1946-date

ORGANIZATIONS & SOCIETIES:

American Association for the Advancement of Science
Society of Experimental Biology
American Physical Society

SPECIALTIES:

Electroencephalography - experimental physiological and clinical psychology.

LOVELACE, William R(andolph) II - (Married) - 6' - 190 lbs -
Brown eyes - Black Hair
BORN: 30 Dec. 1907, Springfield, Missouri

EDUCATION:

A.B. - Washington Univ., St. Louis, Mo., - 1930
M.D. - Harvard Medical School
Student School of Aviation Medicine, Randolph Fld. - 1937

OCCUPATIONS:

Interne, Bellevue Hospital, New York 1934-36
Fellow in Surgery, Mayo Clinic, Rochester, Minn., 1936-39
1st Asst. in Surgery, " ", *(Asst. to Dr. C.W.Mayo) 1939-40
Chief, Surgical Section - 1941-date
Surgeon - Lovelace Clinic, Albuquerque, N. Mex., 9/1/46
Aero Medical Laboratory, Wright Fld. - 1942-46

ORGANIZATIONS & SOCIETIES:

American Board of Surgery, Phila., Penna. - 1942
Fellow, American College of Surgeons, Chicago, Ill. - 1942
Fellow, Institute of Aeronautical Sciences, New York - 1944
Avn. Medical Organization
Fellow, Aero Medical Association - 1942 (Pres. 1942-43)
Aviation Medicine Organization
Alumni Association of Mayo Foundation for Medical Education & Research - 1939
American Medical Association - 1938
Association of Military Surgeons - 1942
Wings Club (Aeronautical Assoc.) - 1944
Sigma Alpha Epsilon (Social Fraternity) 1927
Nu Sigma Nu (Medical Fraternity) 1930
Sigma Ki (Honorary Medical Fraternity) 1940

AWARDS & DEGREES:

Distinguished Flying Cross, presented by Gen. H. H. Arnold for parachute jump to test oxygen equipment.
Air Medal - Three Combat Stars - 1944

MacDOUGALL, Duncan P(eck) - (Married) - 6' - 150 lbs - Blue eyes- Brown hair

BORN: 13 April 1909 - College Station, Texas

EDUCATION:

A.B. - Pomona College, California - 1929
Fellow - University of California - 1930-33
PhD. - " " " - 1933

OCCUPATIONS;

Teaching Fellow, University of California - 1930-33
Instructor Chemistry, " " " - 1933-34
Instructor, Harvard University - 1934-37
Asst. Professor, Clark University, Mass. - 1937-41
Phy. Chemist, Bureau of Mines, Pittsburgh - 1941-43
Deputy Research Director, Laboratory, Carnegie Inst. of Tech. - 1943-46
Chief Explosives Division, Ordnance Lab., USN, 1/46 to date.

ORGANIZATIONS & SOCIETIES:

Alpha Chi Sigma - 1929 - date
Phi Beta Kappa - 1929 - date
American Chemical Society - 1934 - date
Lambda Chi Alpha - 1939 - date

SPECIALTIES:

Chemistry - Cyrogenic investigations below one degree absolute
Molecular vibrations.

MacNAIR, Walter A(rcher) - (Married) - 5' 10½" - 135 lbs - Brown eyes - Gray hair

BORN: 29 April 1901, Houghton, Michigan

EDUCATION:

B.S. - Colgate - 1920
A.M. - John Hopkins University - 1924
PhD. - " " " - 1925

OCCUPATIONS:

Asst. Physicist, National Bureau of Standards - 1921-22
Instructor of Mathematics & Physics, Michigan College of Mines, - 1922-23
National Research Fellow (Physics) John Hopkins University - 1925-26
National Bureau of Standards (Physicist) - 1926-27
Research Dept., Victor Talking Machine Co., 1928-29
Research Physicist, Bell Telephone Laboratories 1929-date

ORGANIZATIONS & SOCIETIES:

Accoustical Society of America - 1928 - date
American Physical Society - 1925 - date
American Association for the Advancement of Science - 1925-date
Franklin Institute - 1929-date

SPECIALTIES:

Physics - Resonance radiation - Fine structure of spectrum lines - Accoustics.

MORTON, George A.

BORN: 24 March 1903

EDUCATION:

B.S. - Massachusetts Institute of Technology - 1926
M.S. - " " " - 1928
PhD. - " " " - 1932

OCCUPATIONS:

Research Laboratory, General Electric Co., 1926-27
Research Assoc. & Instructor, M. I. T., 1927-33
R. C. A. Laboratories, 1933 - date
Clinton Laboratories (On Leave from RCA) July 1946 - July 1947

DEGREES & AWARDS:

Certificate of Appreciation presented by General Arnold for outstanding work towards the War effort as member of the Scientific Advisory Group.

SPECIALTIES:

Physics - Radio Engineer - Electron physics - Secondary emmission and electron optics - Television.

NEWMARK, Nathan M. - (Married) - 5' 9" - 170 lbs - Brown eyes - Brown hair
BORN: 22 September 1910, Plainfield, New Jersey

EDUCATION:

B.S. - Rutgers - 1930
M.S. - University of Illinois - 1932
PhD. - University of Illinois - 1934

OCCUPATIONS:

Asst. Civil Engineer	-	Univ. of	Illinois	- 1930-32
Asst. Professor	-	"	"	- 1934-36
Assoc. Professor	-	"	"	- 1936-37
Research Asst. Prof.	-	"	"	- 1937-43
Research Professor	-	"	"	- 1943-date
OSRD - Field Consultant and Analyst				- 1943-46

ORGANIZATIONS & SOCIETIES:

American Society of Civil Engineers
American Concrete Institute
American Society for Testing Materials
American Railway Engineers Association
Society for Experimental Stress Analysis
Phi Beta Kappa
Sigma Xi
Phi Epsilon Pi

AWARDS & DEGREES:

Certificate of Appreciation presented by General Arnold for outstanding work in the War effort while a member of the Scientific Advisory Group

SPECIALTIES:

Civil Engineer - Structural Engineer - Arch Bridges - Applied Mechanics - Theory of Elasticity - Highway Bridge Slabs

PERKINS, Courtland D(avis) - (Married) - 6' - 160 lbs - Blue eyes - Brown hair

BORN: 27 December 1912, Philadelphia, Penna.

EDUCATION:

Massachusetts Institute of Technology

OCCUPATIONS:

Branch Engineer - American Radiator Co.,10/35 - 10/39
Graduate Student & Research Asst. M.I.T., 10/39 - 6/41
Senior Aero. Engineer, Air Materiel Command - 6/20/41 - 10/31/45
Assoc. Professor Aero. Engineering, Princeton Univ. - 10/45 - date

PICKERING, William H(ayward) - (Married) - 5' 10" - 140 lbs - Blue eyes - Brown hair
BORN: 24 December 1910, Wellington, New Zealand
Naturalized: Los Angeles, Calif. 14 Feb. 1941 Cert. # 5188597

EDUCATION:

B.S. - California Institute of Technology - 1932
M.S. - " " " - 1933
Coffin Fellow " " - 1933-35
PhD. - " " - 1936

OCCUPATIONS:

Asst. & Teaching Fellow - Calif. Inst. of Tech. - 1932-36
Assoc. Professor, Calif. Inst. of Technology - 1936-date
Lecturer, Univ. of Southern California - 1938

ORGANIZATIONS & SOCIETIES:

American Institute of Electrical Engineers
I. R. E.
American Physical Society

AWARDS & DEGREES:

Certificate of Meritorious Service presented by General Arnold for outstanding work in the War effort while a member of the Scientific Advisory Group.

SPECIALTIES:

Electrical Engineer - Radio Engineer - Cosmic Radiation - Radio and Electronics - Development of Cosmic Ray Radio Sonde.

RIDENOUR, Louis N(ocet), Jr. - (Married) - 6' - 195 lbs - Blue eyes
Blond hair
BORN: 1 November 1911, Montclair, New Jersey

EDUCATION:

B.S. - Chicago University - 1932
Fellow - Calif. Institute of Technology - 1932-35
PhD. - " " " - 1936

OCCUPATIONS:

Member - Institute for Advanced Study, Princeton, N. J.
8/36 to 2/37
Instructor - Princeton Univ. 2/37-6/38
Asst. Professor - Univ. of Penna. 9/38 to 6/41
*Assoc. Professor - " " 6/41 to 6/46
*On Leave from Univ. of Penna. from 1/41 to 8/46, Staff
Member, Radiation Laboratory, M. I. T. (OSRD) 1/41 to 1/46
Expert Consultant, Office, Secretary of War - 11/43 to 6/45
Professor - Univ. of Penna. 6/46 to 6/47
Professor and Dean, Univ. of Illinois - 7/47 to date

COUNTRIES VISITED DURING WAR AS CONSULTANT OSW:

Portugal, Ireland, England, Algeria, French Morocco, Gold Coast Africa, Brazil, Greenland, Iceland, France, Belgium, Netherlands, Germany, Italy, Philippines, China, India, Burma, Iran, Libya, Australia, New Guinea, Ceylon.

ORGANIZATIONS & SOCIETIES:

American Physical Society and others

SPECIALTIES:

Physics, Nuclear Physics, Artificial Radioactivity.

SEARS, William R(ees) - (Married) - 5' 9" - 132 lbs - Hazel eyes - Brown hair
BORN: 1 March 1913, Minneapolis, Minnesota

EDUCATION:

B.S. - (Aero. E) University of Minnesota - 1934
PhD. - California Institute of Technology - 1938

OCCUPATIONS:

Asst. Instructor, Calif. Inst. of Tech. - 1934-37
Instructor (Aerody) " " " - 1937-39
Asst. Professor " " " - 1939-41
Chief, Aerodynamics, Northrop Aircraft Co. 1941-46
Director, Graduate School of Aeronautical Engineering, Cornell University 1946-date

ORGANIZATIONS & SOCIETIES:

Institute of Aeronautical Sciences - 1934-date
Young Democrats - 1939-41 (California)
Others

AWARDS & DEGREES:

Certificate of Appreciation presented by General Arnold as a Member of the Scientific Advisory Group.

SPECIALTIES:

Aerodynamics - Theoretical Aerodynamics - Airfoil Theory

SODERBERG, Carl Richard - (Married) - 6' 1" - 200 lbs - Blue eyes - White hair

BORN: 3 February 1895, Ulvohamn, Sweden, came to USA in 1919
Naturalized: 15 December 1927, Pittsburgh, Penna.
Cert. # 2714597

EDUCATION:

Naval Architect Diploma - Chalmers Institute of Technology Gotenberg, Sweden - 1919
American-Scandinavian Foundation Fellow - 1919-20
B.S. - Mass. Institute of Technology - 1920

OCCUPATIONS:

Hull Designer, N. Y. Shipbuilding Co., - 1920-22
Development Engineer for large electrical machinery, Western Electric & Mfg., Pittsburgh, Penna. - 1922-28
Chief, Turbo-Generators, Swedish General Electric, Vastaas, - 1928-30
Chief Turbine Engineer, Westinghouse Electric, Philadelphia - 1931-38
Professor, Mechanical Engineering, M. I. T. - 1938-date

ORGANIZATIONS & SOCIETIES:

American Society of Mechanical Engineers - 1930-date
American Academy of Arts and Sciences - 1936-date
American Association for Advancement of Sciences - 1938-date
American Society of Naval Architects & Marine Engineers - 1939-date
Society of Automotive Engineers - 1944-date
British Institution of Mechanical Engineers - 1933-date
Svenska Teknologforeningen, Stockholm, Sweden - 1929-date
Franklin Institute - 1932-date
U. S. Naval Institute - 1946-date
American Society for Engineering Education - 1943-date
Sigma Xi - 1934
Tau Beta Pi - 1944-date

SPECIALTIES:

Designer and inventor of Steam Turbines and Generators for Land and Marine application. Engineergin - Vibration in high-speed rotating machinery - Design of turbo-generators - heat flow - mechanical strength - moisture precipitation in condensing turbines - high temperature machinery.

STEVER, Dr. Horton G(uyford)

BORN: 24 October 1916 - Corning, New York

EDUCATION:

A.B. - Colgate University - 1938
PhD. - California Institute of Technology - 1941

OCCUPATIONS:

Staff, Radiation Laboratory, M. I. T. - 1941-42
Technical Aide, OSRD - M. I. T. - 1942-46
Project METEOR, M. I. T. - 1946-date

ORGANIZATIONS:

American Physical Society

SPECIALTIES:

Physics - lifetime of Mesatron - Cosmic Rays - Discharge of mechanism of fast Geiger counters - Directional Geiger counters.

SWEENEY, William J(oseph) - (Married) - 5' 9" - 150 lbs - Green eyes - Gray hair

BORN: 5 May 1898, Boston, Massachusetts

EDUCATION:

B.S. - Massachusetts State College - 1919
M.S. - Pennsylvania State College - 1924
DuPont Fellowship - M. I. T. - 1927-28
ScD. - Mass. Institute of Technology - 1928

OCCUPATIONS:

Instructor & Asst. Professor, Penn. State College - 1919-26
Director Industrial Research, " " " - 1928-29
Research Chemist & Engineer, Standard Oil Co., La. - 1929-32
Asst. Director Research, " " " " - 1932-34
Director of Research, " " " " - 1935-36
Assoc. Director Research, " " " N.J. - 1936-45
Asst. Mgr. & Manager, " " " N.Y. - 1945-46
Vice President, " " " " - 1946-date

ORGANIZATIONS & SOCIETIES:

American Chemical Society
American Institute of Chemical Engineering
Society of Automotive Engineers
American Institute of Chemists
American Petroleum Institute
Sigma Phi Epsilon
Alpha Chi Sigma
Phi Lambda Epsilon

SPECIALTIES:

Chemistry - High-pressure oil hydrogenation - Theory of corrosion - Solvents,- Fuels - Constitution of Petroleum - Manufacture and quality of Aviation Fuels.

TSIEN, Hsue-shen - (Married) - Chinese - 5' 7½" - 125 lbs - Black hair - Black eyes
BORN: 2 September 1909, Shanghai, Kiangsu Province, China

CITIZENSHIP: Chinese
Date of entry: 2 September 1935
Port of entry: Seattle, Washington
Alien Registration Number - 4656846

EDUCATION:

B.S. - Chiao-tung University, China - 1934
M.S. - Mass. Institute of Technology - 1936
PhD. - California Inst. of Technology - 1939

OCCUPATIONS:

Research Fellow, California Inst. of Tech. - 1938-43
Asst. Professor, " " " - 1943-45
Assoc. Professor, " " " - 1945-46
Assoc. Prof. & Professor, M. I. T. - 1946-date

ORGANIZATIONS:

Hydrodynamics - Strength of thin shells - Compresibility effects in high-speed airplane design - Application of compresibility fluids to exterior ballistics - Theory of Elasticity

VALLEY, George E(dward), Jr., - (Married) - 5' 10½" - 190 lbs -
Blue eyes, Black hair
BORN: 5 September 1913, New York, N. Y.

EDUCATION:

B.S. - Mass. Institute of Technology - 1935
PhD. - University of Rochester - 1939
National Research Fellow - 1940-41

OCCUPATIONS:

Engineer - Bausch & Laub Optical Co. - 1935-36
Graduate Student, University of Rochester - 1936-39
Research Fellow (Mass Spectroscopy), National Research Council, Harvard University - 1939-41
Research Associate, M. I. T., Radiation Lab.- 1941-46
Assoc. Professor, M. I. T., - 1946-date

ORGANIZATIONS & SOCIETIES:

American Physical Society
Association of Cambridge Scientists

SPECIALTIES:

Nuclear Physics - Artificial Radioactivity - Isotope abundance of stable Nuclei - Nuclear Radiation Spectra

VON KARMAN, Theodore - (Single) - 5' 8" - 150 lbs - Hazel eyes - Gray hair
BORN: 11 May 1881 - Budapest, Hungary
Naturalized: U. S. District Court, Los Angeles, 7/24/36
Certificate No. 4052565
Port of Entry: New York City, 29 September 1926

EDUCATION:

Gymnasium, Budapest (High School)
B. S. (Mechanical Engineering), Royal Technical University, Budapest - 1902
M.S. & PhD. - University of Goettingen, Germany - 1908

OCCUPATIONS:

Research Engineer, Ganz & Co., Budapest - 1903
Professor, University of Goettingen, Aachen, Germany - 1909-12
Professor & Director, Aerodynamical Institute of Technology, Hochschule, Aachen, Germany - 1913-29
Director, Daniel Guggenheim School of Aeronautics, California Institute of Technology - 1929-date
Special Consultant to Commanding General, AAF - 11/44 - 3/46
Lecturer, Columbia University - 1946-date
Consultant to Junkers Airplane Works, Germany - 1924-28
Consultant to Kawanishi Airplane Works, Japan - 1927-29
Consultant to Northrop Aircraft Co. - 1941-date
Consultant to Aerojet Engineering Corp. - 1943-date

FOREIGN MILITARY SERVICE:

1st Lieut. & Capt., Air Force, Austria-Hungary - 1902-3, 1914-19
Chief, Export Aircraft, Austria-Hungary Air Corps - 1916-7

AMERICAN OVERSEAS SERVICE:

AAF Mission - 6 months 1945, ETO - 6 months 1946, ETO - 6 months 1947, ETO

LANGUAGES:

English, Hungarian, German, French, Spanish, Italian

LECTURER:

Visiting Lecturer in Universities in Japan, China, India, England, France, Belgium, Russia - 1926-date.
Visiting Professor CRB Foundation, Belgium
Rouse Ball Lecturer, Cambridge, England, William Wright
Lecturer, Royal Academy of Sciences, London, 1937,
Gibbs Lecturer, American Mathematical Society - 1939

VON KARMAN, Theodore continued

DEGREES & AWARDS:

ScD - Honorary (Aero. Eng.) Technical Hochschule, Berlin - 1929
ScD - Honorary, Brussels, Belgium - 1937
Sylvanus Reed Award - AIAS - 1941
Medal, American Society Mechanical Engineering - 1941
LlD - University of California - 1943
Medal for Merit (Highest Civilian Award) presented for outstanding service to the country during the War - 1945
ScD - Aero. Eng., Princeton University - January 1947
ScD - Liege, Belgium - August 1947
ScD - Marseilles, France

ORGANIZATIONS & SOCIETIES:

American Society of Mechanical Engineers
National Academy of Sciences (Member)
Royal Society of London (Oldest Scientific Institution in World, founded by Samuel Pepys), Member - 1946
French Academy of Sciences, Member
Royal Academy of Sciences, Rome Italy, Member - August 1947
Institute of Aeronautical Sciences, Honorary Fellow
Ordnance Association, Member
American Society of Chemical Engineers
American Philosophical Society, Member
National Research Council
Tau Beta Pi, Member
Sigma Xi, Member

SPECIALTIES:

Outstanding authority on : Physics - Aerodynamics - Aeronautics-Mechanics - Chemistry - Mechanics - Thermodynamics - Hydrodynamics-Theory of Elasticity - Strength of Materials

WATTENDORF, Frank L(eslie) - (Married) - 5' 7" - 150 lbs - Blue eyes - Brown hair

BORN: 23 May 1906 - Boston, Mass.

EDUCATION:

A.B. - Harvard University - 1926
M. S.- Mass. Institute of Technology
M.S. - University of Goettingen, Germany - 1928-29
M.S. - Institute of Technology Hochschule, Germany - 1929-30
PhD. - California Institute of Technology - 1933

OCCUPATIONS:

Research Fellow, Daniel Guggenheim Airship Inst, Ohio - 1930-31
Research Fellow, California Inst. of Technology - 1932-35
Research Engineer, Metropolitan Water Dist, So. Cal. - 1932-35
Professor Aeronautical Engineering - Tsing-hus Univ. Peiping, China. - 1936-38
Consulting Engineer (Self), Newton Centre, Mass. - 1938-9
Aeronautical Engineer, AMC, Wright Field, Ohio - 1939-46
Research Advisor, AMC, Wright Field, Ohio - 1946-date
Air Force Scientific Advisory Group - 11/44 to 3/46

AWARDS & DEGREES:

Medal of Freedom, awarded for outstanding service to the country during the War.
Certificate of Appreciation awarded by General Arnold for outstanding service to Air Force during the War.

ORGANIZATIONS:

Institute of Aeronautical Sciences - 1932-date
Royal Aeronautical Society

ZWICKY, Fritz - (Single) - 6' - 190 lbs - Hazel eyes - Brown-grey hair

BORN: 14 February 1898 - Varna, Switzerland
Citizenship: Swiss

EDUCATION:

Graduate Eedgen Technical Hochschule, Zurich, Switzerland - 1920
PhD. - " " " " " - 1922

OCCUPATIONS:

International Educational Board Fellow - 1925-27
Asst. Professor Theoretical Physics, Calif. Inst. of Tech. - 1927-29
Assoc. Professor " " " " " - 1929-42
Professor & Director of Physics & Astrophysics, " " " " - 1942-date
Director of Research, Aerojet Enging. Corp, Azusz, Calif. - 1943-date

ORGANIZATIONS & SOCIETIES:

American Academy of Sciences
American Physical Society
Swiss Physical Society

SPECIALTIES:

Physics - Equation of state of gases - Liquids and solids - Behavior of slow electrons and ions in gases - Physics of crystals - Light through Interstellar space - Novae - Supernovae - Cosmic Rays.

ZWORYKIN, Vladimir K(oema) - (Married) - 5' 8" - 170 lbs - Blue eyes - Grey-blond hair
BORN: 30 July 1889, Mourom, Russia (Came to USA in 1919)
Naturalized: 16 September 1924, Pittsburgh Penna.
Certificate No. 2046885

EDUCATION:

M.S. - Electrical Engineering, Petrograd Institute of Technology, Russia - 1912
Student, College de France - 1912-14
M.S. - University of Pittsburgh, Penna. - 1922-23
PhD. - " " " - 1926

OCCUPATIONS:

Research Engineer, Westinghouse Electric, Pittsburgh - 1920-29
R.C.A., Research Engineer, Camden, N. Jersey - 1929-35
Assoc. Director, Research Labs, R.C.A., Camden, N. J.- 1935-42
Director of Electronics, R.C.A. Labs, Princeton, N.J.-1942-46
Vice President & Director, R.C.A. Research Labs., " - 1946-date

DEGREES & AWARDS:

Morris Liebmann Memorial Prize (for outstanding contribution to development of television - 1934
ScD. - Polytechnic Institute of Brooklyn - 1938
Modern Pioneers' Award, American Manufacturers Assn. - 1940
Rumford Medal, Academy Arts and Sciences - 1941
Certificate of Appreciation presented by General Arnold - 1945

FOREIGN MILITARY SERVICE:

Signal Corps, Russian Army - 1914-18

FOREIGN COUNTRIES VISITED:

England, Germany, Holland,
France and Russia (RCA business) - July 1933 to Sept. 1933.
England, Germany, Italy and Russia (RCA business) 9/34 - 11/34
England, Germany, Belgium
Holland, Hungary, and France (RCA business) 1/36 - 3/36
England, France, Germany, Poland (RCA business) 9/37 - 11/37
England, Italy (RCA business(7/38 - 9/39

SPECIALTIES:

Physics - Photoelectric cells - Facsimile,- Sound Movies - Television - Cathode Ray Tubes - Oscellographs - Electron Optics - Photo Cells and their application - Electron Microscopes

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Original start page:	835	**Inserted note page:**	848	**Archive starts after note:**	849

Why it belongs in this release

Secret Air Materiel Command / RDB “Technological Estimate of New Weapons,” including unorthodox aircraft and engine configurations.

Complete release-note text from UAP 4

4. NARA_RG330_Entry341_Box44_R&DB_Projects.pdf — secret technological estimate of new weapons.

This document deserves inclusion because it shows Air Materiel Command submitting a Secret “Technological Estimate of New Weapons” to the Research and Development Board’s Committee on Aeronautics in May 1948. The file explicitly covers aircraft and power plants under development, estimates for the next ten to fifteen years, and an appendix on “various new techniques,” “unorthodox configurations of aircraft and engines,” and new approaches to established technical barriers. Congress and NARA should obtain the full appendices A–E, especially Appendix E, and compare them against Air Force UFO assessments, contractor studies, RAND work, AMC technical intelligence, and any classified projects involving unusual propulsion, lift, materials, control, electromagnetic effects, or pilotless aircraft. This is a logical public-release document because it shows that unconventional aircraft concepts were being formally studied under Secret R&D channels almost immediately after the 1947 saucer wave.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

SECRET

C O P Y

RESEARCH AND DEVELOPMENT BOARD

COMMITTEE ON AERONAUTICS

HEADQUARTERS

AIR MATERIEL COMMAND

MCRE(MCREOA) MCREOA/PBK/bk

3 May 1948

SUBJECT: Technological Estimate of New Weapons

TO: Executive Director, Committee on Aeronautics
Research and Development Board
1724 F. Street, N.W.
Washington 25, D. C.
ATTN: John B. Jacob

1. In compliance with letter from Committee on Aeronautics, subject, as above, dated 7 April 1948, and in accordance with instructions contained in Memorandum for all Members, Associates, and Deputies, Committee on Aeronautics, subject, "1948 Technological Estimates of New Weapons," dated 15 April 1948, there is submitted herewith the requested information.

2. The information is submitted in Appendix form for clarity and ease of reference.

a. Appendix "A" contains estimates of both aircraft and power plants currently under development.

b. Appendix "B" contains estimates of performance characteristics for both aircraft and power plants that are considered capable of development within the next ten (10) years.

c. Appendix "C" contains estimates of performance characteristics for both aircraft and power plants that are considered capable of development within the next ten (10) years.

d. Appendix "D" contains estimates of performance characteristics for both aircraft and power plants that are considered capable of development within the next fifteen (15)

SECRET

Encl. C to
Item 4,
14th Agenda

RG 330
Entry 341
Box 44
R & D Board

years.

e. Appendix "E" contains discussions, evaluation and/or development estimates on various new techniques in design and employment of aircraft, conceivable development in unorthodox configurations of aircraft and engines, new approaches to the solution of established problems currently impeding more rapid advancement, etc.

3. Appendices "B", "C", and "D" have been divided into two parts. Part I indicates the estimate of technological advancement assuming current (F.Y. 1948) level of funds expenditure throughout each 5-year period and carrying on to the end of the whole 15-year period on the same basis. Part II indicates the estimates of technological advancement for the same period but assumes an increase of funds expenditure over that currently being expended. The increased level of funds expenditure is not assumed to be without a limit, but rather increased to an extent that would enable expeditious completion of the project with a justifiable return for each dollar spent. It does not assume that every ounce of advancement is to be made regardless of cost as is the case during a critical national emergency. It is quite possible that an increased rate of funds expenditure can actually reduce the cost of the end item and, at the same time, effect its completion sooner. This is true because the duration of expenditures for overhead can oftentimes be materially reduced. In both Part I and Part II the estimated cost of the airframe alone has been entered. Following this is an estimate of the total cost of the end item, which cost includes both the cost of the airframe and the cost of development and procurement of the GFP associated with the end item. It is believed that the total cost of the end item is more significant than the cost of the airframe alone.

4. Attention is invited to the "Characteristics" estimates on the development items presented in the Appendices. These estimates are projected estimates and are not to be confused with standard performance data that is compiled from actual flight testing.

5. The cost of production tooling has not been included in the estimated airframe development costs. Inclusion of production tooling would increase the costs of the prototype development between $10,000,000 and $25,000,000 depending upon the size and complexity of the project.

FOR THE COMMANDING GENERAL:

Incl
Appendices (A,B,C,D,E)

/s/ Allen R. Crawford
Maj. Gen., Eng. Div., AMC

S E C R E T

APPENDIX "E"

TECHNOLOGICAL ESTIMATE ON DEVELOPMENT OF VARIOUS NEW TECHNIQUES, REVOLUTIONARY DESIGNS OR CONFIGURATIONS, REVOLUTIONARY PROPULSIVE MEANS, ETC.

NEW WEAPONS AND COUNTERMEASURES

ITEM: NUCLEAR ENERGY FOR PROPULSION OF AIRCRAFT (NEPA PROJECT)

SUMMARY STATEMENT: Shortly after the dropping of the atomic bombs in Japan, Air Force officers approached Manhattan Engineering District, which was then in charge of all nuclear projects, with respect to utilizing this new source of energy for the propulsion of aircraft. It was fully recognized that tremendous problems would be presented, but the potential reward justified the effort required for the solution of the problems.

The Manhattan Engineering District permitted the Air Force to consider the project on the basis that personnel would not be hired from the District; one agency would be the point of contact with the project and all research and development projects would be coordinated with the District prior to their initiation. On this basis, the Air Force selected the Fairchild Engine and Airplane Corporation as the monitoring agency with a Board of Consultants representing each contractor engaged in the manufacture of tactical engines for the Army and Navy; the Bureau of Aeronautics, Navy Department, and the National Advisory Committee for Aeronautics. This Board was to meet at regular intervals, having now had five meetings, to advise the NEPA organization established by Fairchild and become informed on the problems involved in the application of nuclear energy to aircraft propulsion.

It is the ultimate intention that if and when nuclear power plants have been demonstrated as feasible, the NEPA Division will no longer exist and the various engine manufacturers will be placed in the same competitive position they occupy with respect to the more conventional engine types.

The NEPA Division functions through subcontracts, not only to the member companies that have formed the Board of Consultants, but also to universities, non-profit organizations and other industrial organizations. In addition, the NEPA Division has at Oak Ridge a small staff of scientists and engineers investigating the problem on a full-time basis, and a large group of consultants that have had long and intensive experience with the nuclear project.

The nuclear reactor should be considered as a heat source, to be made available at a temperature which can be utilized in some type of heat engine. Because of the nature of the reaction, this heat source may be available for several hundred hours without additional fuel. With this heat source is presented many new problems of heat transfer and high temperature materials.

APPENDIX "E" (continued)

Encompassed in this problem of aircraft propulsion are, because of weight limitations, many problems new to the Atomic Energy Commission and its contractors. At opposite ends of the spectrum of nuclear science and engineering are the slow, or thermal neutron piles, used for plutonium conversion and isotope manufacture and the atomic bomb, or fast neutron reactor. It is in the more or less unexplored intermediate ground in which aircraft propulsion reactors will automatically be oriented. The problem is the selection of the desirable features of each type of reactor to obtain the smallest overall reactor mass and volume. To evaluate this area will require the closest cooperation between the Atomic Energy Commission and the Air Force in extending the knowledge and in conducting the feasibility experiments which will require fissionable material. The shielding problems, so readily solved in stationary reactors by large quantities of concrete which is obviously impossible for aircraft, presents one of the most serious problems. This problem in itself encourages the use of the smallest possible reactor.

The problems of maintenance, repair, storage, and general operation of nuclear powered aircraft present problems, the solution of which are quite uncertain. It is probable that nuclear powered aircraft will be used for special missions and will not be of the type normally collected into squadrons and groups for operation as tactical aircraft are now utilized.

There is no positive assurance that nuclear powered aircraft will be successful; but the possibility of aircraft of unlimited range is so attractive that extensive research and engineering effort is warranted. No estimate can be made as to when nuclear powered aircraft will be available because of the enormous amount of research and development required, but it will probably be of the order of 10 to 15 years with the projected rate of fund expenditure. It is anticipated that funds to the amount of twelve to fifteen million dollars per year will be required after Fiscal Year 1950 when the program will be fully under way and provided funds to this extent are made available.

APPENDIX E

TECHNOLOGICAL ESTIMATE ON DEVELOPMENT OF VARIOUS NEW TECHNIQUES, REVOLUTIONARY DESIGNS OR CONFIGURATIONS, REVOLUTIONARY PROPULSIVE MEANS, ETC.

NEW WEAPONS AND COUNTERMEASURES

DETACHABLE LANDING GEAR

RY STATEMENT: This type of landing gear will be developed steadily over the next fifteen years. The initial development has been a take-off cart which is used for take-off at heavy gross weights. A conventional landing gear which is retracted prior to take-off is used for landing at reduced weight which saves weight in the landing gear and retracting mechanism. It is anticipated that the development will include take-off carts or catapults and the use of skids for landing, with development of items of equipment for rapid ground handling. The use of catapults is common at the present time, however, development is required to reduce weight and increase the mobility. Skids have been used for landing of gliders and one experimental aircraft. Considerable development on the skids and ground equipment must be made prior to extensive use of this type of design. The benefits which can be derived from this development are the reduction in weight of landing gears thus enabling the airplanes to have greater range, and the simplification of airplane design by the elimination of the storage problems which accompany the present landing gear design. The future development will be along the lines of improved catapults and the elimination of all landing gears as now known. The aircraft will be landed on reinforced fuselage skin and will be brought to a halt by the use of arresting gear devices. The development of means of rapid ground handling must accompany this development program. It is estimated that such a development will cost $25,000,000 over the next 15 years.

APPENDIX E

TECHNOLOGICAL ESTIMATE ON DEVELOPMENT OF VARIOUS NEW TECHNIQUES, REVOLUTIONARY DESIGNS OR CONFIGURATIONS, REVOLUTIONARY PROPULSIVE MEANS, ETC.

NEW WEAPONS AND COUNTERMEASURES

TRIPHIBIOUS GEAR

Y STATEMENT: This gear is being developed to alleviate, where possible, the necessity of building extensive forward bases for fast fighter aircraft and possible application to all larger craft. This program will consist of developing a hull with such strength and a configuration to allow operation from water, ice, and snow, with operation from land made possible by the use of carts and special handling equipment. In this way, forward bodies of water, such as lakes and harbors, could be used as bases with only the addition of loading docks or seaplane tenders, in addition to frozen areas and any strips equipped with proper handling equipment.

Triphibious gear development is in the initial stages. Experimentation as to hull curves, types of material to be used in the bottoms and skids, types of shock absorption, if any, must be compiled and tabulated, using present knowledge of skis, floats, and skid construction as a basis. Development of this item is a four to seven year project, with extended usage becoming effective in ten years. Complete development costs of this type of gear are estimated at $2,000,000.

ESTIMATE B

New Weapons and Countermeasures

Item: INTERSTELLAR SPACE SHIP

Date 1965

Status: Rocket and Atomic Power for space propulsion under development. Development of navigational and other equipment in very early stages.

Estimate of Characteristics:

Capable of sustained operations in outer space, including space combat and attacks against enemy installations. Exploration of solar bodies and waging war against enemy planets.

Probability of achievement - Low.

Estimate of Dollar Effort: Unknown.

ESTIMATE B

New Weapons and Countermeasures

Item: SATELLITE AIRDROME-AIRBASE FOR ROCKET SHIPS OR GUIDED MISSILES.

Date: Complete engineering could be accomplished by 1965.

Status: Inactive

Estimate of Characteristics:

Inter space platform in orbit around earth to serve as a refueling and service base for inter-space rocket ships or control point for long range missiles.

Probability of achievement - Medium to Low.

Estimate of Dollar Effort: Unknown. Cost may be prohibitive to achievement.

SUMMARY CHARTS OF RESEARCH AND DEVELOPMENT PROJECTS

NOTES

1. The column headed "Service Organization" refers to the particular organization in whose report may be found a fuller description of the project.

2. The column headed "Project Number" refers to the number assigned by the agency making the report as indicated on the JRDB cards. In the case of BuShips listings, "Index Numbers" have been used where project numbers were not available.

3. The columns headed "Funds" show funds in thousands of dollars.

SUBJECT CLASSIFICATIONS

For ease in examining the various aspects of the Electron Tube Program, a classification of projects is set forth below. In the summary charts, projects are listed in accordance with this classification.

1.0 RF TUBES

- 1.1 Pulsed, High Power Tubes (1MW peak and greater)
- 1.2 CW, High Power Tubes
- 1.3 Pulsed, Medium and Low Power Tubes (less than 1 Mw)
- 1.4 CW, Medium and Low Power Tubes (less than 10 kW)
- 1.5 Local Oscillator Tubes
- 1.6 Traveling Wave Tubes
- 1.7 Small HF Tubes
- 1.8 TR Tubes
- 1.9 ATR Tubes
- 1.10 TR & ATR Study
- 1.11 Gas Switching Tubes
- 1.12 Crystals

2.0 POWER TUBES

- 2.1 Thyratrons
- 2.2 Hard Tube Modulators
- 2.3 Ignitrons
- 2.4 Rectifiers
- 2.5 Voltage Regulators

3.0 SPECIAL TUBES

- 3.1 Noise Diodes
- 3.2 Indicator Tubes
- 3.3 Storage Tubes
- 3.4 Special Devices

4.0 RECEIVING TUBES

- 4.1 Sub-Miniature Types
- 4.2 Miniature Types
- 4.3 Regular Receiving Types

KEY TO SPONSORS:

AMC - Air Materiel Command, Wright Field, Ohio

ESL - Evans Signal Laboratory, Belmar, New Jersey

930A - Code 930A, Bureau of Ships, Washington, D. C.

NRL - Naval Research Laboratory, Washington, D. C.

Note: Those designations under "Sponsor" other than AMC, ESL, 930A, and NRL refer to Service sponsored tube developments under equipment contracts.

NOTE ON CONTRACT NOS:

A typical ESL contract is preceded by — W36-039; AMC by — W33-038; Watson by — W28-099

DATE OF ISSUE: 19 November 1947

RESTRICTED

Draft #1
HRandall/MArnold
5/27/49

THE RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

RDB 224/1

Agenda, 23rd Meeting

Item — Recommendation concerning Allocation of Primary Responsibility for Research and Development in the Field of Electronic Components.

Reference: RDB 133/2, Statement of Policy on Allocation of Responsibility for Research and Development Programs.

Attached: EC 277/1.1, Memo to the Executive Secretary, RDB, from Chairman, Committee on Electronics, RDB, dated 11 May 1949, subject above.

1. In compliance with RDB 133/2, the Committee on Electronics has considered the desirability of allocation of responsibility for research and development in the field of electronic components. The Committee considered the criteria set forth in paragraph 2 of RDB 133/2, the policy concerning allocation of responsibility, and has reached the following conclusion: All of the Services have similar requirements in this area, all of the Services maintain competent component groups, and the Munitions Board has made no single service purchase assignment in this field. The Committee also believes that it is unnecessary to obtain concurrences from other Committees.

2. In view of the nature of the field and the general interest in the field on the part of all the Services, the Committee has recommended that no allocation of primary responsibility for research and development be made.

3. It is recommended that the Board:

Concur with the unanimous recommendation of the Committee on Electronics that no allocation of primary responsibility in this field be made to a single Department at this time.

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THE RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

RDB 224/2

21 June 1949

MEMORANDUM TO MEMBERS, RDB

Subject: Recommendation concerning Allocation of Primary Responsibility for Research and Development in the Field of Electronic Components

Reference: RDB 133/2, - Statement of Policy on Allocation of Responsibility for Research and Development Programs

Attached: EC 277/1.1, Memo to the Executive Secretary, RDB, from Chairman, Committee on Electronics, RDB, dated 11 May 1949, subject above

RDB 224/2.1, Action Sheet

1. In order to restrict the 23rd agenda to only two items which will concern the FY 1951 Budget Estimates and the FY 1950 Planned Obligations, the Executive Council agreed that other items should be circulated or held over for the 24th meeting. There are several matters that should be acted upon by the Board prior to its August meeting, all of a non-controversial nature. Each of these will be circulated as soon as staff recommendations have been completed.

2. The attached memorandum from the Committee on Electronics advises of action taken, with respect to the allocation of responsibility for research and development in the field of electronic components, in compliance with the provisions of RDB 133/2. After consideration of the criteria contained in referenced policy, the Committee noted that its Panel on Components, and the subpanels thereof, coordinate the work in this field on an individual project basis, and unanimously recommended that no allocation of primary responsibility for research and development be made. Full details of the Committee's action are contained in EC 277/1.1, attached.

3. It is recommended that the Board concur with the Committee recommendation that no allocation of primary responsibility to a single Department for research and development in this field be made at this time. An action sheet, RDB 224/2.1, is attached for your reply.

F. E. RICHARDSON
Deputy Executive Secretary

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RDB 224/2.1

ACTION SHEET

ON

RECOMMENDATION CONCERNING ALLOCATION OF PRIMARY

RESPONSIBILITY FOR RESEARCH AND DEVELOPMENT

IN THE FIELD OF ELECTRONIC COMPONENTS

Please check one:

Approve__________

Defer__________

____
Board Member

____
Date

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RDB 224/3

National Military Establishment
RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

file

19 July 1949

MEMORANDUM TO THE EXECUTIVE DIRECTOR, COMMITTEE ON ELECTRONICS

Subject: Recommendation Concerning Allocation of Primary Responsibility for Research and Development in the Field of Electronic Components

Attached: RDB 224/2, Memo to Members, RDB, from Deputy Executive Secretary, RDB, dated 21 June 1949, subject as above

1. The recommendation of your Committee on the above subject was submitted to the Board by RDB 224/2, copy attached. Note that the Executive Council recommended, in paragraph 3 of the memorandum to the members, that the Board concur with your recommendation "at this time"; this assumes that your Committee will reconsider this matter at a later date to determine that the bases for your action have not altered.

2. The Board has now approved the Council's recommendation. This report of Board action is furnished for your information.

/s/ F. H. Richardson
F. H. RICHARDSON
Deputy Executive Secretary

Item 14 Agenda Et 2/22

14 - 4

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Draft #1
HRandall/MArnold

THE RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

file

RDB 225/1

Agenda, 23rd Meeting

Item: Recommendation Concerning Allocation of Primary Responsibility for Research and Development in the Field of Electron Tubes.

Reference: RDB 133/2, Statement of Policy on Allocation of Responsibility for Research and Development Programs.

Attached: EC 278/1.1, Memo to the Executive Secretary, RDB, from Chairman, Committee on Electronics, RDB, dated 11 May 1949, subject above.

1. In compliance with RDB 133/2, reference above, the Committee on Electronics has considered the desirability of allocation of responsibility for research and development in the field of electron tubes.

2. With respect to the criteria set forth in paragraph 2 of RDB 133/2, the Committee has reached the following conclusions: All Services are concerned with research and development in this field, all Services have competent groups working in the field, and the Munitions Board has made no single service purchase assignments. Furthermore, the Panel on Electron Tubes of the Research and Development Board Committee on Electronics has been operating in such fashion as to carry out the functions which would normally be achieved by the assignment of an allocation of primary responsibility to a single Department.

3. Accordingly, the Committee on Electronics has unanimously recommended that no primary allocation of responsibility be made in this field and that the Panel on Electron Tubes continue to operate as it has in the past.

4. The Executive Council recommends that the Board:

A. Note that the purposes of the policy with regard to primary responsibility for research and development are being carried out in the field of electron tubes,

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B. Concur with the recommendation of the Committee on Electronics that no allocation of primary responsibility in this field be made to a Department at this time.

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THE RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

RDB 225/2

21 June 1949

MEMORANDUM TO MEMBERS, RDB

Subject: Recommendation Concerning Allocation of Primary Responsibility for Research and Development in the Field of Electron Tubes

Reference: RDB 133/2, - Statement of Policy on Allocation of Responsibility for Research and Development Programs

Attached: EC 278/1.1, Memo to the Executive Secretary, RDB, from Chairman, Committee on Electronics, RDB, dated 11 May 1949, subject above

RDB 225/2.1, Action Sheet

1. In compliance with RDB 133/2, the Committee on Electronics considered the field of electron tubes with respect to allocation of responsibility for research and development therein. The Committee's Panel on Electron Tubes is unlike any other panel in the Research and Development Board organization. In substantially its present form, it was in operation before the Research and Development Board was established. The group is supported by a permanent secretariat furnished under a joint service contract. By Departmental agreement, the Panel has authority beyond that of other Research and Development Board panels. The Panel's activities include the accomplishment of the coordination which would be done by a Department allocated primary responsibility for research and development in this area. In addition to the above factors, the Committee considered the criteria listed in RDB 133/2, a summary of the Committee views on each is contained in paragraph 4 of EC 278/1.1, attached. The Committee's recommendation is that no allocation of primary responsibility for research and development in this field be made.

2. It is recommended that the Board:

a. Note that the present operation of the Panel on Electron Tubes in effect accomplishes the purposes of RDB 133/2.

b. Concur with the recommendation of the Committee on Electronics that no allocation of primary responsibility to a Department for research and development in this field be made at this time.

An action sheet, RDB 225/2.1, is attached for your reply.

F. H. RICHARDSON
Deputy Executive Secretary

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RDB 225/2.1

ACTION SHEET

ON

RECOMMENDATION CONCERNING ALLOCATION OF PRIMARY RESPONSIBILITY FOR RESEARCH AND DEVELOPMENT IN THE FIELD OF ELECTRON TUBES

Please check one:

Approve_____

Defer_____

_____
Board Member

_____
Date

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RESTRICTED

NATIONAL MILITARY ESTABLISHMENT
RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

RDB 225/3

22 July 1949

file

MEMORANDUM TO EXECUTIVE DIRECTOR, COMMITTEE ON ELECTRONICS

Subject : Board Action on Recommendations of the Committee on Electronics Concerning Allocation of Primary Responsibility for Research and Development in the Field of Electron Tubes

Reference: (a) EC 278/1.1, Memo to Executive Secretary, RDB, from Chairman, Committee on Electronics, RDB, dated 11 May 1949, on above subject

(b) RDB 225/2, Memo to Members, RDB, from Deputy Executive Secretary, RDB, dated 21 June 1949, on above subject

By reference (a) your Committee submitted its recommendation that no primary allocation of responsibility be made in subject field. In reference (b) it was recommended that the Board:

a) Note that the present operation of the Panel on Electron Tubes in effect accomplishes the purposes of RDB 133/2.

b) Concur with the recommendation of the Committee on Electronics that no allocation of primary responsibility to a Department for research and development in this field be made at this time.

The Board, by circulation, has taken the actions recommended above. This report is transmitted to you for information.

/s/ F. H. Richardson
F. H. RICHARDSON
Deputy Executive Secretary

Item 14 agreed 8/2/22

14-3

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CONFIDENTIAL

RDB 226/2

THE RESEARCH AND DEVELOPMENT BOARD
Washington 25, D. C.

7 June 1949

MEMORANDUM TO MEMBERS, RDB

Subject: Assignment of Responsibility for Research and Development in the Field of Guided Missiles

Attached: EC 280/1.2, Memo to Executive Director, Committee on Guided Missiles from Deputy Executive Secretary, dated 31 May 1949, subject above

RDB 226/1, Memo to Chairman, RDB, from Secretary of Defense, dated 25 May 1959, subject above

RDB 226/1.1, Memo to Secretary of Defense from Acting Secretary of the Army, dated 16 May 1949, subject, "Assignment of Responsibility for Guided Missile Operations and Development"

RDB 226/1.2, Memo to Secretary of Defense from Acting Secretary of the Army, dated 16 May 1949, subject, "Assignment of Responsibility for Guided Missile Operations and Development"

RDB 226/1.3, Memo to Joint Chiefs of Staff from Secretary of Defense, dated 25 May 1949, subject, "Assignment of Responsibility for Guided Missile Operations"

EC 280/1.1 Letter to Secretary of Defense from Chairman, RDB, dated 2 June 1949

1. The attached correspondence is transmitted in order to apprise the Board members of the Secretary's instructions on the subject matter, and the action taken by the Secretariat to date.

F. H. RICHARDSON
Deputy Executive Secretary

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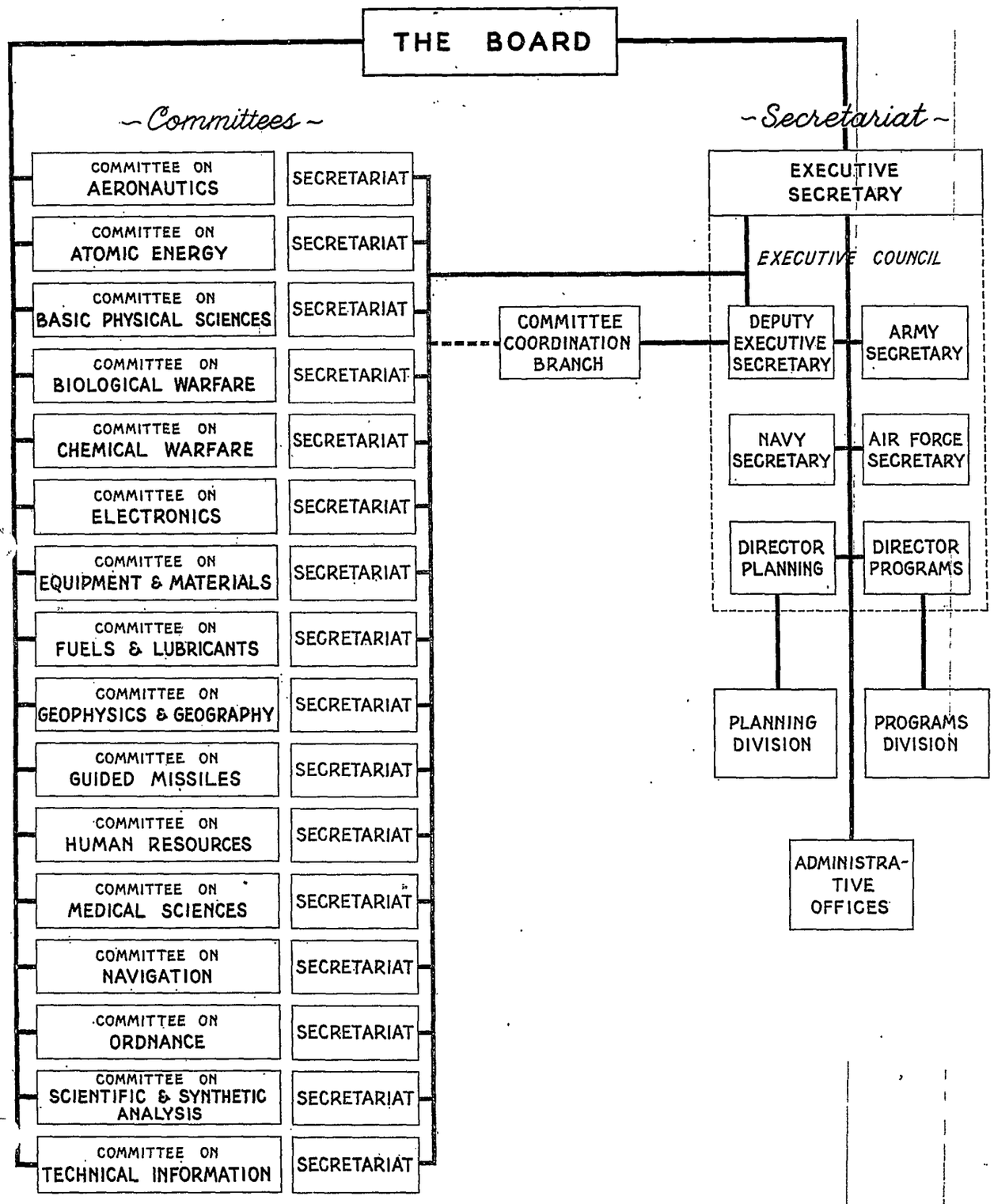
RESEARCH AND DEVELOPMENT BOARD

CHART I

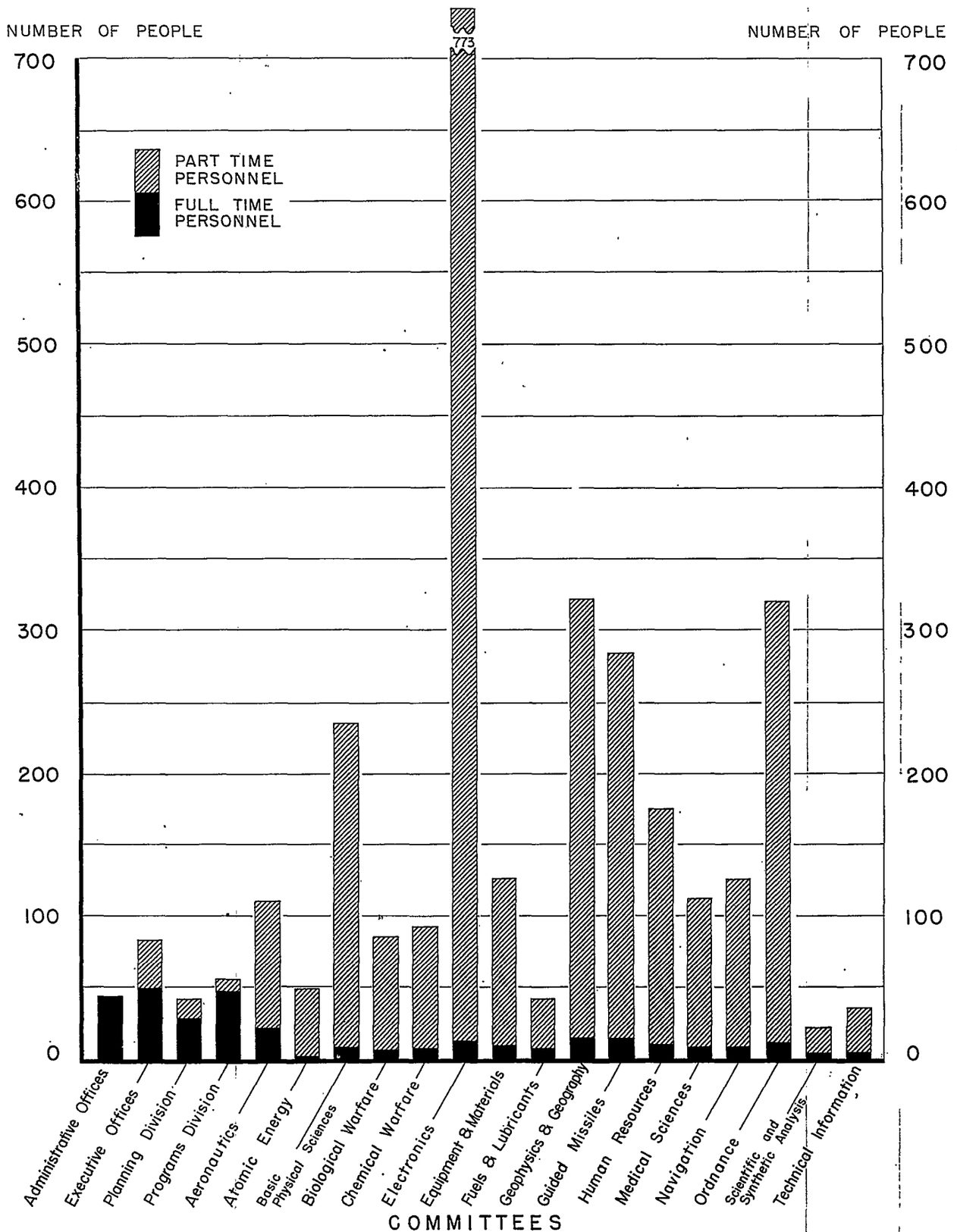
ORGANIZATION CHART SHOWING CHAIN OF COMMAND



RESEARCH AND DEVELOPMENT BOARD

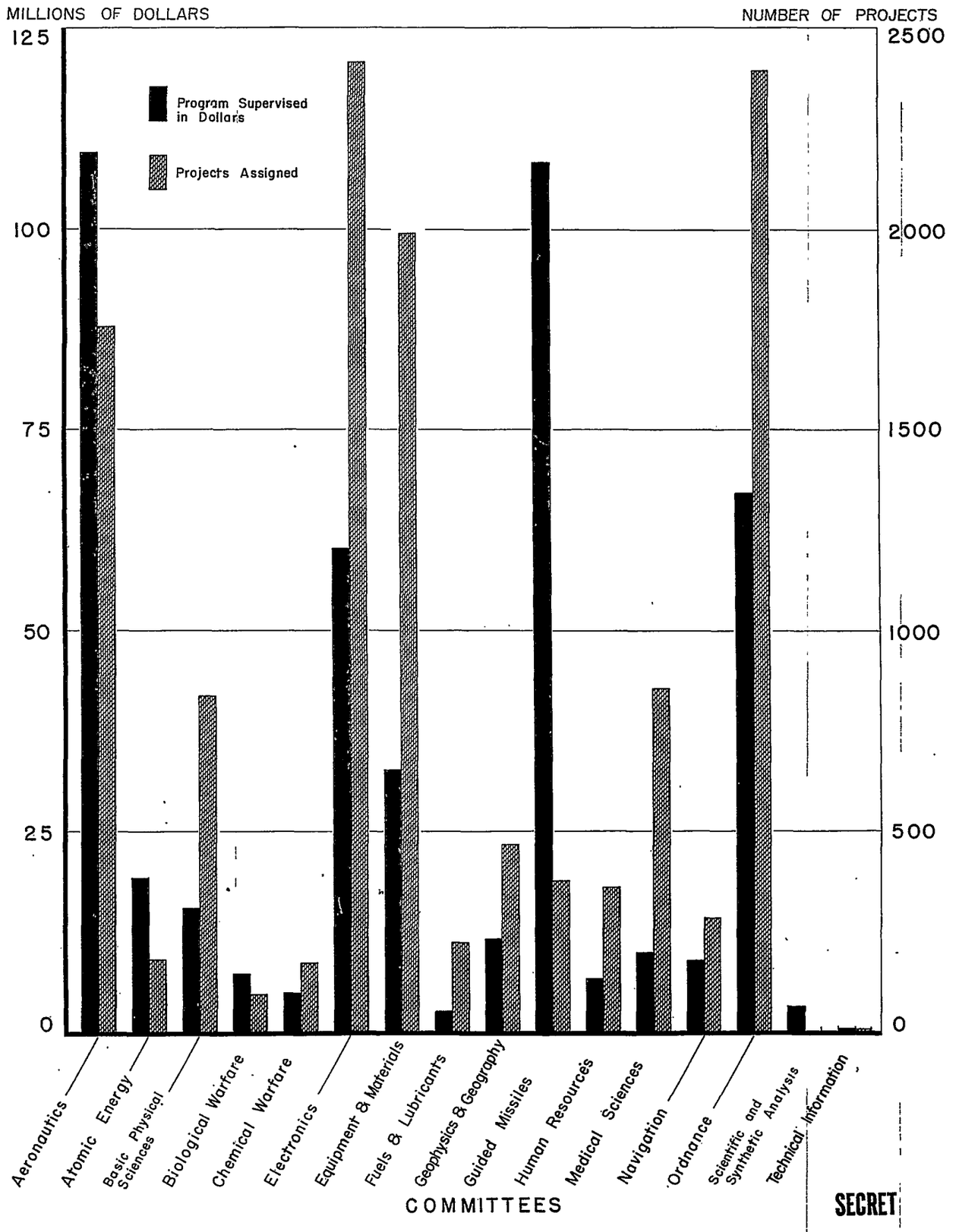
CHART 2

ASSIGNMENT OF ALL PERSONNEL



RESEARCH AND DEVELOPMENT BOARD **SECRET** *CHART 3*

MEASURE OF WORKLOAD IN RDB COMMITTEES



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RESEARCH AND DEVELOPMENT BOARD

CHART 4

OBLIGATIONS FOR FISCAL YEAR 1949

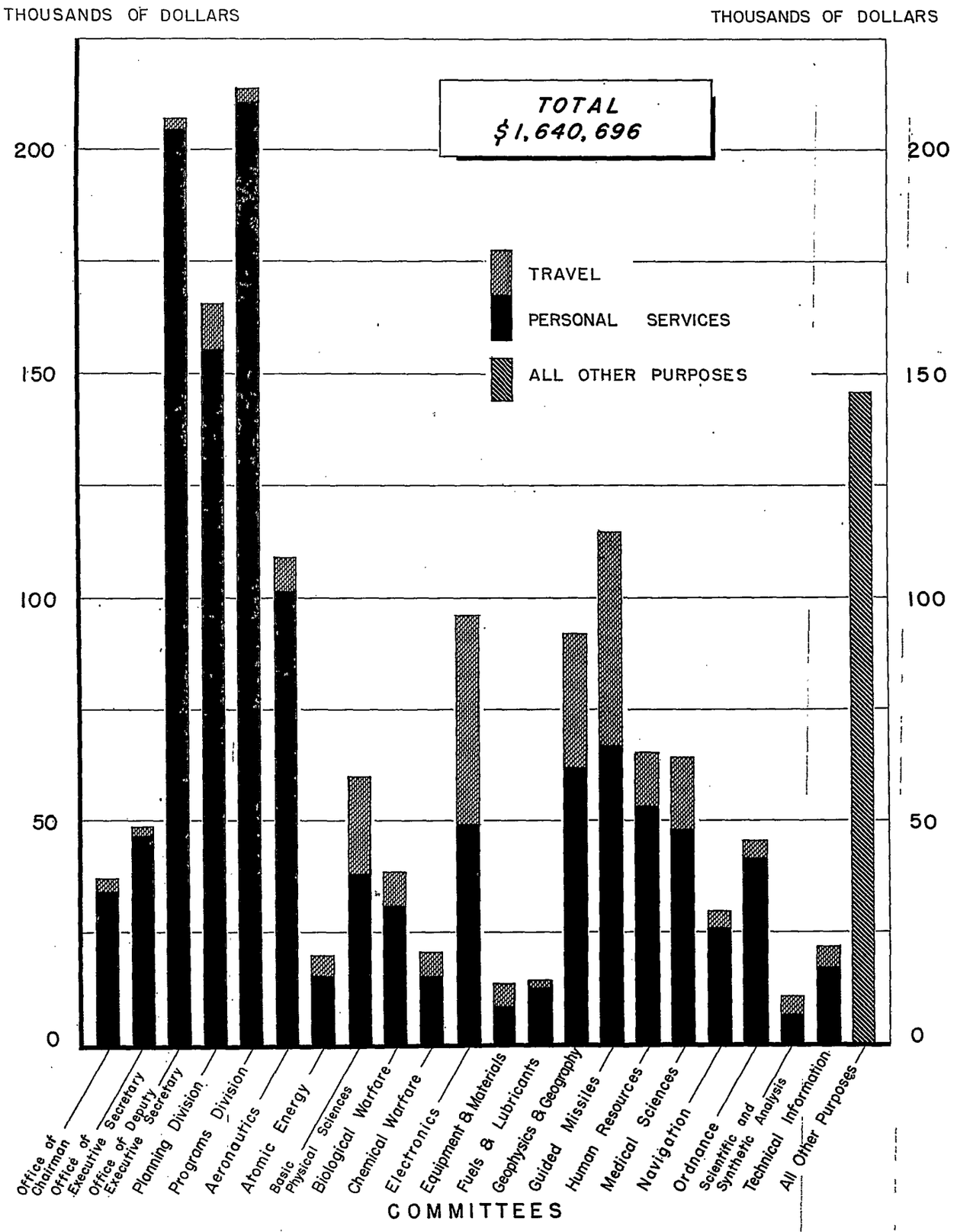
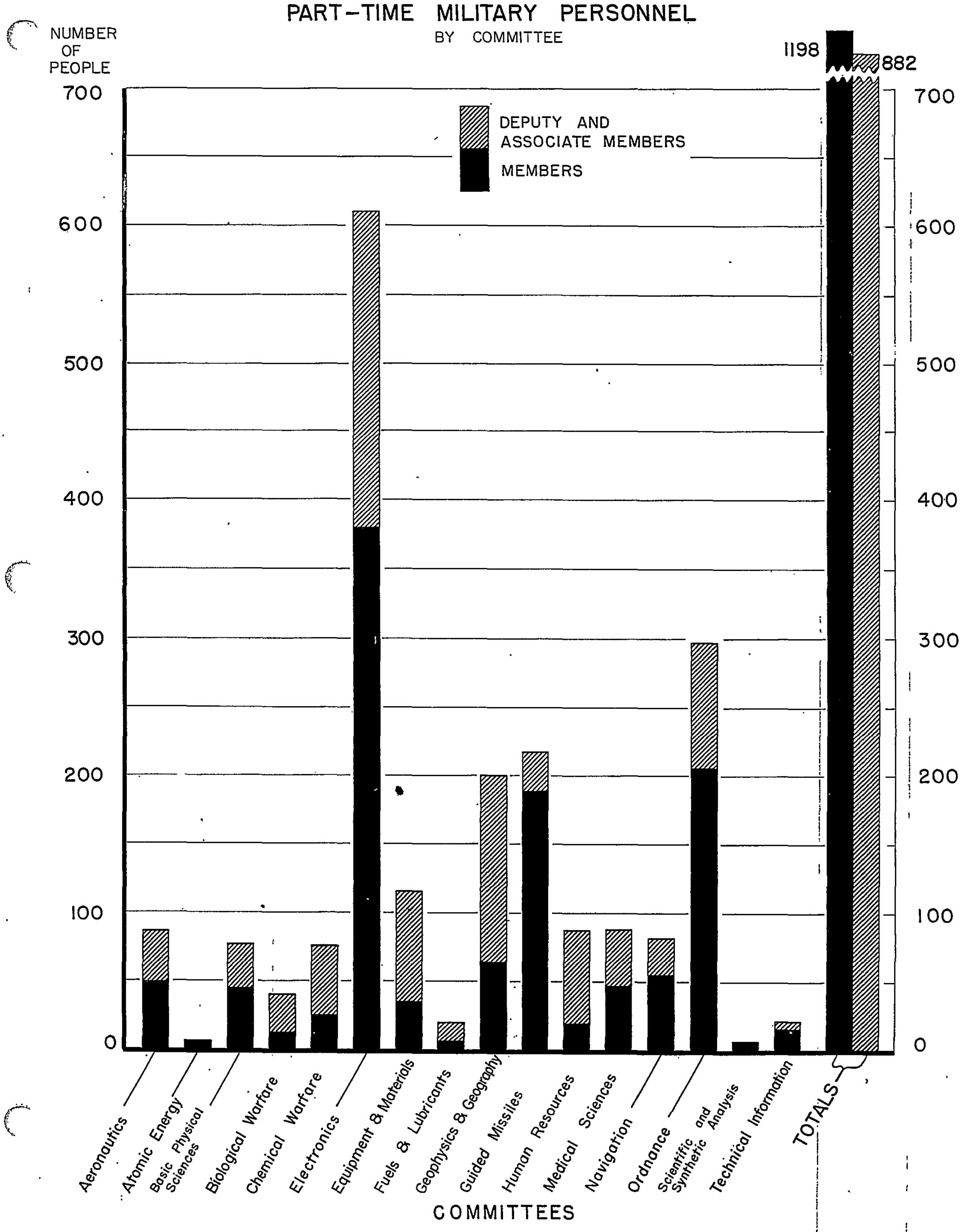


CHART 5

RESEARCH AND DEVELOPMENT BOARD

PART-TIME MILITARY PERSONNEL

BY COMMITTEE

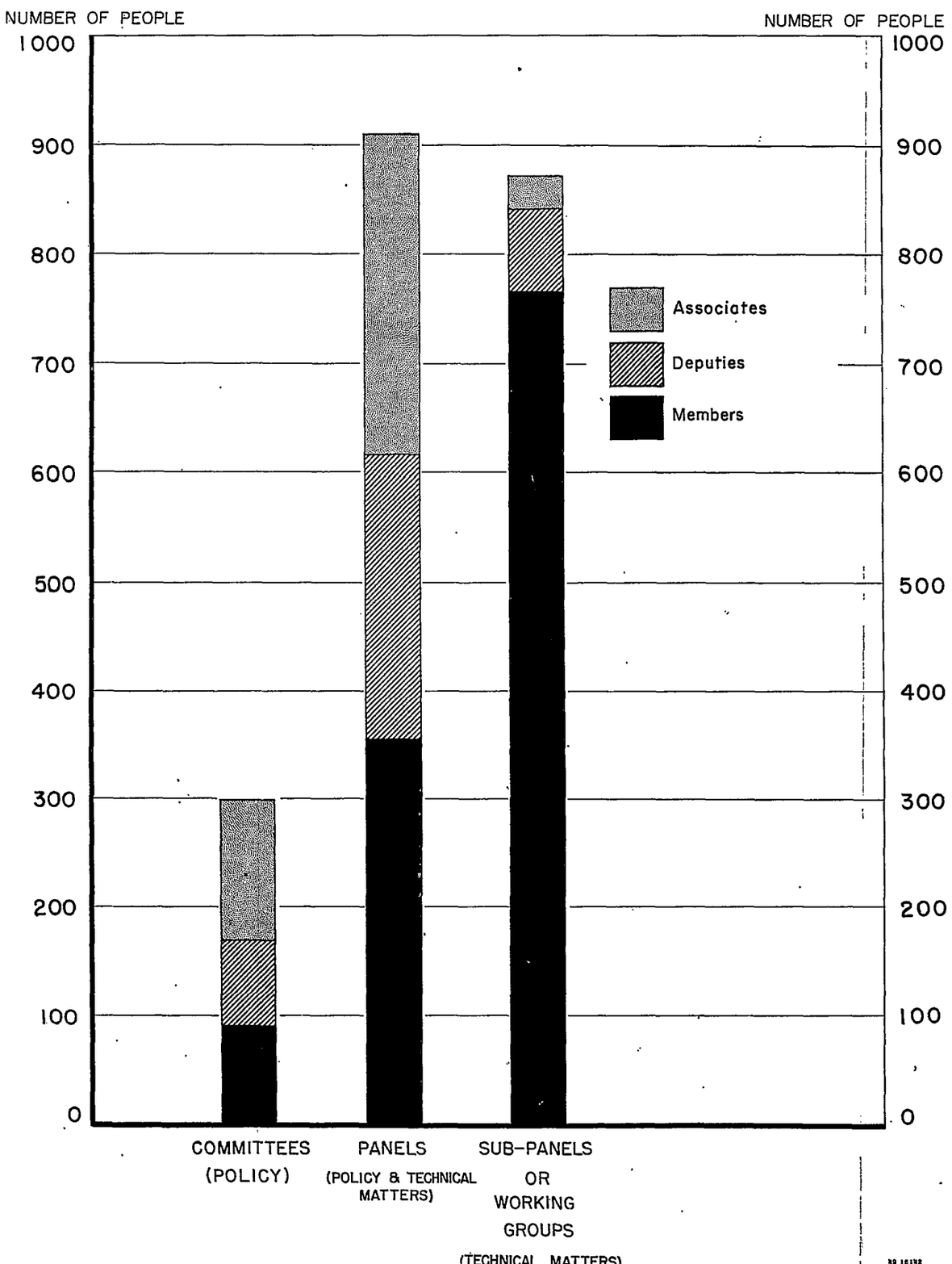


RESEARCH AND DEVELOPMENT BOARD

PART-TIME MILITARY PERSONNEL

BY TYPE OF ASSIGNMENT

CHART 6



RDB 228/6.1

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The Research and Development Board
Washington 25, D. C.

file
Don Control

PROPOSED ORGANIZATION
OF
TECHNICAL ADVISORY GROUPS
OF
THE RESEARCH AND DEVELOPMENT BOARD

21 September 1949

recd as Part
of Item 21 approved
RDB 7/25

CONFIDENTIAL

CONFIDENTIAL

...h and Development Board
...ngton 25, D. C.

File

CONFIDENTIAL

WEAPONS DIVISION

ADVISORY COUNCIL ON WEAPONS

Advisory Group on Guns

Field of Interest:
Development of all guns and turrets including small arms and small arms ammunition, catapults and missile launchers.

Advisory Group on Fire Control

Field of Interest:
Development of all complete fire control systems used in the control of guns, bombs, rockets and missiles.

Advisory Group on Ammunition and Explosives

Field of Interest:
Development of ammunition (except for small arms ammunition), and explosives of a molecular nature including bombs, land mines, rockets and missiles and propellants therefor, warheads and fuzes (except proximity fuzes).

Advisory Group on Proximity Fuzes

Field of Interest:
Development of all fuzes which function automatically as a result of proximity to a target or as a result of command from an external source except those employed in naval underwater ordnance.

Advisory Group on Underwater Ordnance

Field of Interest:
Development of ordnance items associated with underwater warfare including missiles for this purpose, except for missiles which are guided during the air portion of the trajectory.

Advisory Group on Biological Weapons

Field of Interest:
Research and development on the use of, and defense against, all biological agents, their toxic products, and chemicals used as plant growth regulators, as agents to produce death or casualties of man, animals and/or plants.

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15. NARA_RG273_Box1_NSC_Staff_1947-61.pdf

Original start page:	862	**Inserted note page:**	876	**Archive starts after note:**	877

Why it belongs in this release

Shows early NSC Top Secret control, CIA coordination, Intelligence Advisory Committee structure, and named personnel handling top-level classified material.

Complete release-note text from UAP 4

5. NARA_RG273_Box1_NSC_Staff_1947-61.pdf — NSC Top Secret control and CIA coordination.

This file is valuable because it shows the early National Security Council’s Top Secret control structure, including James S. Lay Jr. as Top Secret Control Officer and named alternates, plus NSC registry handling. It also shows CIA, State, Defense, Army, Navy, Air Force, and National Security Resources Board coordination through an Intelligence Advisory Committee proposed by the Director of Central Intelligence. Congress and NARA should use this document to reconstruct where Top Secret UFO/UAP-related material would have been logged if it reached NSC, CIA, Joint Intelligence Group, Air Force, Atomic Energy Commission, or National Security Resources Board channels. The follow-up should include NSC registry indexes, Top Secret receipt logs, IAC minutes, CIA liaison records, and any cross-references to “flying discs,” “unconventional aircraft,” “foreign technology,” “special projects,” “atomic energy intelligence,” or “air technical intelligence.”

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

SECURITY CONTROL Section, JIG

RESTRICTED

THE JOINT CHIEFS OF STAFF

June 9, 1948

Secretary
Security Control Section
Joint Intelligence Group
The Joint Chiefs of Staff

Dear Sir:

Pursuant to the request contained in your letter of June 7, 1948, the following are designated as Top Secret Control Officer and alternates for the National Security Council:

Top Secret Control Officer:

James S. Lay, Jr. - Assistant Executive Secretary

Alternate Top Secret Control Officers:

Marion W. Boggs
Ina Holtzscheiter
Edna H. McEnroe
Romelle M. Collins
Harry W. Beach
Edith D. Whitmire

SIDNEY W. SOUERS
Executive Secretary

FILE COPY

1. COORDINATOR, NSC STAFF — [illegible] 6/10
2. ASST. TO COORDINATOR
3. RESEARCH ASSISTANT
4. NSC REGISTRY

03611

JSL:IH

RESTRICTED

RESTRICTED

June 9, 1948

Secretary
Security Control Section
Joint Intelligence Group
The Joint Chiefs of Staff

Dear Sir:

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Edith D. Whitmire

SIDNEY W. SOUERS
Executive Secretary

FILE COPY

1. COORDINATOR, NSC STAFF
2. ASST. TO COORDINATOR
3. RESEARCH ASSISTANT
4. NSC REGISTRY

6/10

03611

JSL:IH

RESTRICTED

Security

September 23, 1947

MEMORANDUM FOR TOP SECRET CONTROL OFFICER, CIA

SUBJECT: Signature for Top Secret Material

Miss Ina Holtzscheiter is authorized to sign for Top Secret material addressed to the National Security Council. Her signature appears below:

_____

JAMES S. LAY, JR.

List of Personnel Detailed to NSC Staff
by Participating Departments and Agencies
(as of August 1, 1950)

Max W. Bishop - Coordinator of the NSC Staff and State Member of the NSC Staff

Prescott Childs - CIA Representative on the NSC Staff

Col. R. P. Fulcher - Alternate Air Force Adviser on the NSC Staff

Col. H. C. Johnson - Army Adviser on the NSC Staff

Cdr. W. G. Miller - Alternate Navy Adviser on the NSC Staff

L. L. Montague - Alternate CIA Representative on the NSC Staff

Capt. L. F. Pryce - Navy Adviser on the NSC Staff

Col. G. R. E. Shell - Defense Member of the NSC Staff

Nels W. Stalheim - NSRB Member of the NSC Staff

Lt. Col. F. L. Street - Alternate Defense Member of the NSC Staff

Col. P. E. Todd - Air Force Adviser on the NSC Staff

Lt. Col. F. R. Zierath - Alternate Army Adviser on the NSC Staff

Original of this list transmitted
to the Budget Office, CIA, at their
request, on August 2, 1950. IH

SIDNEY WILLIAM SOUERS

Sidney William Souers is now Executive Secretary of the National Security Council, which was created by the National Security Act of 1947 "to advise the President with respect to the integration of domestic, foreign and military policies relating to the national security ***." President Truman appointed Mr. Souers to this position on September 20, 1947.

Immediately prior to this appointment, Mr. Souers, in the capacity of consultant, recently completed a survey of intelligence requirements of the Atomic Energy Commission and proposed a program which has been adopted by the Commission and the National Intelligence Authority. He previously participated in the formulation of plans for the creating of the National Intelligence Authority and its implementing agency, the Central Intelligence Group, of which he was appointed the first Director. He served in this capacity until it was fully operative and a permanent Director was appointed.

Born in Dayton, Ohio, on March 30, 1892, the son of Edgar D. and Catherine (Rieker) Souers, he attended Purdue University in 1911-1912, and was graduated from Miami University, Oxford, Ohio, in 1914, with the degree of Bachelor of Arts.

In civilian life, prior to World War II, he was employed by the New Orleans Item 1914-16; Assistant to the President 1916-20, and President 1920-25, Mortgage & Securities Company, New Orleans; organizer and President First Joint Stock Land Bank, New Orleans, 1922-28; Piggly Wiggly Stores, Memphis, March 1925-October, 1926; Executive Vice President, Canal Bank & Trust Company, New Orleans, 1924-30; served as member New Orleans Port Authority 1927-30; Financial Vice President, Missouri State Life Insurance Company, St. Louis, Missouri, August 1930-August 1933; Vice President, General American Life Insurance Company, September 1933-January 1937; Executive Vice President January 1937-January 1941 (of above company); Member first Board of Directors, Aviation Corporation serving from 1929 to 1934; Director and Chairman, Finance Committee, National Linen Service Corporation, Atlanta, Georgia; Chairman, Board and Chairman, Finance Committee, Linen Service Corporation of Texas, Dallas, Texas; Director, Denver, Colorado, Joint Stock Land Bank; and a member of Life Underwriters Association, U.S. Naval Reserve Officers Association, Army and Navy Council of St. Louis, Navy League of the United States, and the Delta Kappa Epsilon fraternity.

He was appointed Lieutenant Commander in the U.S. Naval Reserve on April 29, 1929, and advanced to the rank of Rear Admiral on November 2, 1945, his date of rank December 18, 1943. He had service in the Naval Reserve, inactive status, from 1932 to 1940, as Intelligence Officer at St. Louis, Missouri, with responsibility for investigations, the development of the intelligence organization and public relations, and officer procurement.

Called to active duty on July 22, 1940, he served successively as Assistant Intelligence Officer of the Ninth Naval District, Great Lakes, Illinois, and as District Intelligence Officer of the Sixth Naval District, Charleston, South Carolina, and later

the Tenth Naval District, San Juan, Puerto Rico, with additional duty in the latter assignment as Intelligence Officer of the Caribbean Sea Frontier. On July 24, 1944, he became Assistant Director, Office of Naval Intelligence, Office of the Chief of Naval Operations, Navy Department, Washington, D. C. On November 8, 1945, he was designated Deputy Chief of Naval Intelligence, with the rank of Rear Admiral, and on January 23, 1946, he was appointed Director of Central Intelligence in the National Intelligence Authority. He was relieved of active duty on July 22, 1946.

For meritorious service throughout World War II and until December 1, 1945, he was awarded the Legion of Merit, and for performance of duty during August and September, 1945, he was commended by the Secretary of the Navy, and authorized to wear the Commendation Ribbon. The citation accompanying the Legion of Merit follows:

LEGION OF MERIT

> "For exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States as District Intelligence Officer of the Sixth and later the Tenth Naval District, and while attached to the Division of Naval Intelligence, Office of the Chief of Naval Operations, from the outbreak of the war until December 1, 1945. As District Intelligence Officer, Captain Souers worked tirelessly and resourcefully to gather and transmit valuable information for the planning and execution of countermeasures against enemy submarine warfare. Strengthening the position of Naval Intelligence in the post-war Navy, Captain Souers, as Head of the Planning Branch of the Division of Naval Intelligence, contributed to the organization of a central intelligence organization in cooperation with the Military Intelligence Organization, and his constant devotion to the discharge of his vast responsibilities was in keeping with the highest traditions of the United States Naval Service."

In addition to the Legion of Merit and the Commendation Ribbon, he is entitled to the American Defense Service Medal, the American Area Campaign Medal, and the World War II Victory Medal. He also has the Naval Reserve Medal (for ten years' meritorious service).

He is now Chairman of the Board and Finance Committee of the National Linen Service Corporation, Atlanta, Georgia; a partner in extensive farming and mercantile operations in Southern Missouri, and a Director of the General American Life Insurance Company of St. Louis, Missouri.

He and his wife, the former Sylvia Nettell, reside at 5841 Devonshire Avenue, St. Louis, Missouri. Their local address is the Wardman Park Hotel, Washington, D. C.

* * * * *

1-3

ADDRESS OFFICIAL COMMUNICATIONS TO
THE DIRECTOR OF
PSYCHOLOGICAL STRATEGY BOARD
WASHINGTON 25, D. C.

PSYCHOLOGICAL STRATEGY BOARD
WASHINGTON

December 28, 1951

Mr. James Lay
The White House
Washington, D. C.

Dear Jimmy:

Mr. C. Tracy Barnes, who succeeded General Cutler as the Psychological Strategy Board Staff member sitting with the Senior NSC staff, has been appointed Deputy Director of the Psychological Strategy Board.

Mr. George Morgan is now my Assistant Director for Special Projects, and I ask your consideration of him as an Adviser to the Senior NSC staff regarding the national psychological effort.

Sincerely,

Gordon Gray

Gordon Gray
Director

by C.T.B.

13649

1-3

DEPARTMENT OF STATE
THE COUNSELOR
WASHINGTON

December 21, 1951

Dear Jimmy:

With reference to my letters of July 12 and October 5, 1951, I should like to inform you that in connection with the NSC Staff activities of this Department, Mr. Walmsley should be considered my alternate on the Senior Staff. This does not affect, of course, the responsibilities of Mr. Walmsley and Mr. Schwartz as State Department Members of the NSC Staff.

Sincerely yours,

Charles E. Bohlen

Charles E. Bohlen

The Honorable
James S. Lay, Jr.,
Executive Secretary,
National Security Council.

13624

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Acting	Senior Treasury Member, NSC Staff (GLENDINNING)	1			
	Senior JCS Member, NSC Staff (WOOLDRIDGE)	1			
	Senior MSA Member, NSC Staff (ROBERTS)	1			
	Senior CIA Member, NSC Staff (DULLES)	1			
	Senior PSB Member, (BARNES) NSC Staff (~~CUTLER~~)	1			
	Director, Office of Foreign Military Affairs Department of Defense	1			
	Dir. Joint Staff, JCS	2			
	Deputy Chief of Staff for Plans, Army	1			
	Deputy Chief of Naval Ops. (Ops.) Navy	1			
	Deputy Chief of Staff (Ops.) Air Force	1			
	Asst. State Member NSC Staff (WALMSLEY)	2			
	Asst. Defense Member NSC Staff (WEBSTER)	1			
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~~Asst.~~ SR. ODM Member (MITCHELL) NSC Staff (GLASER)	1			
Navy Adviser NSC Staff (WEAKLEY)	1			
Air Force Adviser NSC Staff (TODD)	1			
Asst. to the Joint Secretaries (WYETH)	1			
Mr. Gleason	1			
Mr. Farley	1		Dest.	2-15-52
Mr. Boggs	1			
Mr. Coyne	1			
Mr. Johnson	1			
Miss Nicalo	1			
Miss Holtzscheiter	1			
Exec. Secy's Chrono File	1			
NSC Registry (P. F.)	1			
Disaster File	1			
NSC Files	X(2)	3 cys dest 3/19/54	Dest 2/7/55	ms
Route 1 cy to Mr. Souers ~~& Mr. Coyne~~	1			

TOTAL: 64

1/16/52

Authorized by: [signature]

Date: December 11, 1951

UNCLASSIFIED
(CLASSIFICATION)

1-3

ADDRESS OFFICIAL COMMUNICATIONS TO
THE DIRECTOR OF
PSYCHOLOGICAL STRATEGY BOARD
WASHINGTON 25, D. C.

PSYCHOLOGICAL STRATEGY BOARD
WASHINGTON

3 December 1951

Mr. James Lay
Executive Secretary
National Security Council
Washington 25, D. C.

Dear Jimmy:

Mr. Robert Cutler, who has been serving as our representative on the Senior Staff of the National Security Council, has left to return to Boston. I wish to designate Mr. C. Tracy Barnes, who is joining the staff of the Psychological Strategy Board as Assistant Director of Special Projects, our representative on the Senior Staff. I am sure you will find that he has the necessary qualifications.

Sincerely,

Gordon Gray
Director

13417

October 28, 1947

MEMORANDUM FOR THE NATIONAL SECURITY COUNCIL

The offices of the Executive Secretary and Staff of the National Security Council are located in the Old State Department Building, 17th Street and Pennsylvania Avenue, N. W. The Executive Secretary also has an office in the Pentagon Building, Room 3 E 736.

The telephone exchange is Executive 7491 and can be reached by all Government agencies through the Government switchboard (80) by asking for NATIONAL SECURITY COUNCIL. The Executive Secretary and Assistant Secretary also can be reached directly through the White House Exchange, National 1414, Extension 139. The telephone in the Pentagon Office of the Executive Secretary is Republic 6700 (National Defense), Extension 4351.

The regular mail address is:

National Security Council
Washington 25, D. C.

Mail being sent by courier should be addressed to:

National Security Council
Room 213
Old State Department Building
17th Street and Pennsylvania Avenue, N. W.
Washington, D. C.

The following directory of information is furnished for your convenience in contacting the Secretariat and Staff of the Council:

	Old State Department Building			Other Offices	
	Room	Phone EX 7491	Phone NA 1414	Room	Phone
Mr. Sidney W. Souers Executive Secretary	216	473, 474, 475	139	3 E 736* Pentagon	RE 6700 Ext. 435
Mr. James S. Lay, Jr. Assistant Secretary	216	473, 474, 475	139		
Mr. George H. Butler Staff Coordinator	224	476, 477, 478			

	Old State Department Building		Other Offices	
	Room	Phone EX 7491	Room	Phone
Mr. Henry S. Villard State Staff Member	222*	476, 477, 478	5152 New State	RE 5600 Ext. 2321
Lt. Col. T. W. Parker Army Staff Member	222*		3 E 791 Pentagon	RE 6700 Ext. 74974
Capt. B. L. Austin Navy Staff Member	222*		3062 Main Navy	RE 7400 Ext. 61723
Lt. Col. R. C. Hoflebower Air Force Staff Member	222*		3 E 119 Pentagon	RE 6700 Ext. 72445

It would be appreciated if the above information were given appropriate dissemination within each department or agency, and if the National Security Council were listed in the classified section of each departmental telephone directory.

SIDNEY W. SOUERS
Executive Secretary

* Occupied part-time only.

cc: Director of Central Intelligence

DEPARTMENT OF THE AIR FORCE
WASHINGTON

OFFICE OF THE SECRETARY

GHQ

1202

15 October 1947

MEMORANDUM FOR MR. SOUERS:

SUBJECT: National Security Council Staff

1. Reference your memorandum of 26 September 1947, Lt. Colonel Roy C. Heflebower, O-21112, has been nominated as Air Force member on the National Security Council Staff to replace Colonel T. C. Rogers who has been acting temporarily in that capacity.

2. For administrative purposes, Lt. Colonel Heflebower will be assigned to General Weyland's Directorate of Plans and Operations and placed on duty in your office. In accordance with discussion between you and General Weyland, an assistant will not be assigned at this time. The Chief of the Plans Division, Brigadier General William L. Ritchie, will furnish necessary guidance and assistance.

3. It is believed that Lt. Colonel Heflebower has the qualifications required for this position; however, if he does not meet with your entire satisfaction, every effort will be made to find a suitable candidate.

Stuart Symington

W. STUART SYMINGTON

cc: Secretary of Defense
General Spaatz
General Montgomery

RESTRICTED
SECURITY INFORMATION
(CLASSIFICATION)

3

AF FORM 112—PART I
APPROVED 1 JUNE 1948

AF558201

COUNTRY	REPORT NO.	(LEAVE BLANK)
USA		AF 558201

AIR INTELLIGENCE INFORMATION REPORT

SUBJECT
FLBOERPT

AREA REPORTED ON	FROM (Agency)
East St. Louis, Illinois	Wing Intelligence Officer Scott Air Force Base, Illinois

DATE OF REPORT	DATE OF INFORMATION	EVALUATION
21 May 53	17 May 1953	F-6

PREPARED BY (Officer)	SOURCE
Major James H. Webb	Mrs. Ted Randall

REFERENCES (*Control number, directive, previous report, etc., as applicable*)

Msg GC 308E, Hq 3310th Tech Trng Wg, Scott AFB, Illinois, 19 May 1953

SUMMARY: (*Enter concise summary of report. Give significance in final one-sentence paragraph. List inclosures at lower left. Begin text of report on AF Form 112—Part II.*)

A single unidentified, unconventional flying object was sighted and observed by Dennis Gwaltney, Age 14, Bill Gwaltney, Age 12, John Barrett, Age 12 and Ted Randall, Age 13. The object was described, by the boys, to Mrs. Ted Randall, 1725 N. 43rd Street, East St. Louis, Illinois, who notified this office of the sighting.

The object was described as being aluminum colored and disk shaped with a slightly raised dome on the top side. It appeared to have a dark almost black edge with silent exhausts on the underside both emitting smoke. The object appeared from the north approaching observers, hovered a few seconds, dipped toward observers and disappeared with great speed to the NE. Object appeared larger than conventional A/C frequently observed in this area. Although sky was cloudy object appeared in a clear space between cloud formation.

Severe thunder storms were recorded in area of sighting preceeding and following sighting. Scattered clouds at 3000' and 8000' with winds from S.W. at twenty knots and WSW at 45 knots respectively.

Intelligence and operations of the 85th Fighter Interceptor Squadron, Scott Air Force Base received no reports of unidentified A/C or unconventional objects and took no identification action during reported period.

A negative report has been received from the 798th AC&W Squadron in reference to unidentified A/C or unconventional flying objects.

The age and experience of the observers reporting this sighting has been considered although no definite conclusions can be arrived at by this office.

James H. Webb
JAMES H. WEBB
Major, USAF
Wing Intelligence Officer

_____ INCLS.

DISTRIBUTION BY ORIGINATOR
Director of Intelligence, Headquarters USAF, Washington 25, D.C.
Chief Air Technical Intelligence Center, ATTN: ATIAA-2c, Wright Patterson AFB, Ohio
Commanding General, Technical Training Air Force, Gulfport, Mississippi
Commanding General, Air Training Command, Scott Air Force Base, Illinois

RESTRICTED
SECURITY INFORMATION

11

THE SECRETARY OF STATE

WASHINGTON

~~TOP SECRET~~

April 4, 1949

MEMORANDUM FOR MR. SIDNEY W. SOUERS,
EXECUTIVE SECRETARY, NATIONAL SECURITY COUNCIL

Pursuant to NSC Action No. 198 and your memorandum dated March 23, 1949, the Department of State considers that the following are the basic issues raised by the Dulles-Jackson-Correa report:

1. That the Central Intelligence Agency is properly placed in the governmental structure under the National Security Council.

2. That the Intelligence Advisory Council is soundly conceived and that its present advisory relationship to the Director of Central Intelligence is correct, but that the IAC should participate more actively with the Director of Central Intelligence in the continuing coordination of intelligence activities and in the production of finished estimates.

   a. With respect to coordination of intelligence activities, the allocation of responsibilities among the agencies should be carried out under the forthright leadership of CIA.

   b. With respect to the production of estimates for the President and the National Security Council, CIA should utilize the facilities of the IAC members who should assume collective responsibility for them.

3. That in order to improve coordination in the overall intelligence and security field, the Director of the Federal Bureau of Investigation should be made a member of the IAC.

4. That secret

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~~TOP SECRET~~

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4. That secret operations should be integrated with secret intelligence and domestic exploitation of foreign intelligence in a single self-administered office within CIA, rather than being a separate office directly under the Director of Central Intelligence independent of but coordinated with other components of CIA.

5. That the Director of Central Intelligence should be a civilian and that the President should be invited to give his early consideration to a person of considerable stature and prominence, possessing the requisite qualifications of experience and willingness to serve.

James E. Webb

Under Secretary

~~CONFIDENTIAL~~

NATIONAL SECURITY COUNCIL
WASHINGTON

December 17, 1947

MEMORANDUM FOR THE PRESIDENT

The enclosed report on "Coordination of Foreign Information Measures" (NSC-4) has been approved by the National Security Council at its 4th Meeting.

The National Security Council recommends that you approve the conclusions contained therein, and direct that they be implemented by all appropriate Executive Departments and Agencies of the U. S. Government under the coordination of the Secretary of State.

SIDNEY W. SOUERS
Executive Secretary

Approved: Dec. 18, 1947.

HARRY S. TRUMAN

~~CONFIDENTIAL~~

CONFIDENTIAL

CENTRAL INTELLIGENCE GROUP
NEW WAR DEPARTMENT BUILDING
21st and VIRGINIA AVENUE, N. W.
WASHINGTON, D. C.

OFFICE OF THE DIRECTOR

27 June 1946

MEMORANDUM FOR: The Secretary of State
The Secretary of War
The Secretary of the Navy
The Personal Representative
of the President on N.I.A.

SUBJECT: Special Consultant to the
Director of Central Intelligence

This memorandum is to inform the National Intelligence Authority that Mr. George Frost Kennan, Foreign Service Officer, Class 1, has been designated as Special Consultant to the Director of Central Intelligence. It is anticipated that this arrangement will prove of great value to the Central Intelligence Group in the preparation of intelligence reports and estimates, particularly as concerns the USSR.

Mr. Kennan has just returned from Moscow, where he served as Charge d'Affaires for some time prior to Ambassador Smith's arrival. Mr. Kennan, a Princeton graduate, has been a Foreign Service Officer since 1926. He has had wide European experience, having served in Geneva, Hamburg, Berlin, Tallinn, Riga, Vienna, Praha, Lisbon, and for a number of years in Moscow. He was an American delegate to the European Advisory Commission in 1943, and his last assignment in Moscow began in May 1944. He is assigned to the Faculty of the National War College, but his services will be available in a consultative capacity to the Director of Central Intelligence.

It is believed that the advice and assistance of Mr. Kennan, based upon his long and distinguished career, will contribute immeasurably to the accuracy and adequacy of the intelligence reports prepared by the Central Intelligence Group. The availability of his first-hand knowledge of conditions and affairs in the USSR and neighboring Eastern and Central European nations, is of primary importance to the effective accomplishment of the national intelligence mission.

Hoyt S. Vandenberg

HOYT S. VANDENBERG
Lieutenant General, USA
Director of Central Intelligence

cc: Intelligence Advisory Board

CONFIDENTIAL

ENCLOSURE A ~~CONFIDENTIAL~~ COPY

CENTRAL INTELLIGENCE GROUP
2430 E Street, N. W.
Washington 25, D. C.

19 September 1947

MEMORANDUM FOR: The Secretary of State
The Secretary of Defense
The Secretary of the Army
The Secretary of the Navy
The Secretary of the Air Force
The Chairman, National Security Resources Board

SUBJECT: Appointment of an Intelligence Advisory Committee

1. The President's letter of 22 January 1946 established an Intelligence Advisory Board consisting of the heads, or their representatives, of the principal military and civilian intelligence agencies of the Government having functions related to the national security, as determined by the National Intelligence Authority, to advise the Director of Central Intelligence. The National Security Act of 1947 makes no specific provision for the continuance of the Intelligence Advisory Board nor for a successor. However, Section 303 (a) of the Act authorizes the Director of Central Intelligence (among others) to appoint such advisory committees as he may deem necessary in carrying out his functions and the functions of the Agency under his control (Central Intelligence Agency).

2. Recognizing the advantages to be derived from such an advisory group, it is the proposal of the Director of Central Intelligence to appoint an Intelligence Advisory Committee which will to all intents and purposes continue in existence the Intelligence Advisory Board established under the National Intelligence Authority by the President in his letter of 22 January 1946.

3. It is therefore recommended that the Secretary of State and the Secretaries of the Army, the Navy, and the Air Force (with the concurrence of the Secretary of Defense and the Chairman, National Security Resources Board) authorize the participation by appropriate members of their respective departments in the Intelligence Advisory Committee proposed by the Director of Central Intelligence.

4. If this proposal is approved, the Director of Central Intelligence will send the Appendix as an invitation to the officers designated by them and to the Intelligence Director of the Atomic Energy Commission.

/S/
R. H. HILLENKOETTER
Rear Admiral, USN
Director of Central Intelligence

Appendix:
Proposed Appointment of IAC

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~~SECRET~~

ER.0-1621

W.W.R.

CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

14 October 1948

MEMORANDUM FOR THE PRESIDENT

It now appears inevitable that General De Gaulle will return to power, possibly in succession to the Queuille Government, but more probably in succession to a transition Cabinet favorable to De Gaulle. France is now approaching that condition of chaos which De Gaulle has long thought to be the necessary setting for his return. Although the Queuille Government will probably be able to stem the current strike wave, its inability to halt inflation after an initial tactical victory will bring on further labor unrest. Rising inflation, combined with the already heavy tax burden of the French propertied classes (including the peasantry and lower middle class) will cause that sizeable group to become more dissatisfied. This dissatisfaction, added to that of labor, will make the position of the Queuille Government increasingly shaky.

De Gaulle's Rally of the French People (RPF) is certain to win a tactical position in the Council of the Republic (the French second chamber) in the late October elections for the Council. The Communists will return only an isolated minority to this body; the increased representation of the Right and Center will be organized by the newly-elected RPF members into a majority favorable to De Gaulle. Although usually of secondary importance, the Council will be able, following the reconvention of the National Assembly in November, to reinforce public demand that the Assembly dissolve itself and prepare the way for new elections with direct pressure upon the Assembly.

Although the lengthy process of installing a new regime would delay De Gaulle's inevitable return, his assumption of power could be legally hastened in the event of a grave domestic or international crisis. In such a situation, the President of France could ask De Gaulle to form a Cabinet, or a coalition sympathetic to De Gaulle could form an interim government pending his return.

In order to overcome a clumsy political and administrative mechanism, De Gaulle will probably be tempted upon his return to resort to dictatorial methods. The Communists will undoubtedly try to goad De Gaulle into taking extreme measures. However, the compromises which De Gaulle will have to make with political and labor

~~SECRET~~

26

CIA

leaders in order to insure their support, combined with the popular support he will then enjoy, will probably lead him to achieve his ends legally. De Gaulle's ability to retain popular support will probably enable him to achieve considerable success in relieving instability and defeatism in France. Although De Gaulle's intransigently nationalistic attitude will tend to make difficult his relations with the US and the nations of western Europe, this intransigence will be mitigated by his awareness of French dependence on the US for essential economic and military aid. De Gaulle's will to resist Soviet aggression, his desire for an effective western European union, and his determination to create a strong France capable of leadership will all further US security objectives in Europe.

E. K. WRIGHT
Brigadier General, USA
Acting Director of Central Intelligence

[redacted]

CENTRAL INTELLIGENCE GROUP
2430 E STREET NW.
WASHINGTON 25, D. C.

File

11 September 1947

MEMORANDUM FOR THE SECRETARY OF STATE
SECRETARY OF WAR
SECRETARY OF THE NAVY
PERSONAL REPRESENTATIVE OF THE PRESIDENT ON NIA

Subject: National Security Act of 1947

1. Upon the coming into effect of the National Security Act of 1947, the National Intelligence Authority automatically ceases to exist and the Central Intelligence Agency comes under the National Security Council. Inasmuch as no date has been set for a meeting of the National Security Council to carry on the work of the National Intelligence Authority, the following suggestions and recommendations are made:

a. At the first meeting of the National Security Council, it is recommended that all directives of the National Intelligence Authority and the Central Intelligence Group be continued in full force and effect until the National Security Council has had an opportunity to study the problem and to make amendments and changes that they may consider desirable.

b. In order that the National Security Council make an early approach to this problem, it is recommended that the Director of the Central Intelligence Agency be directed to submit, within sixty days, his proposal for National Security Council directives to bring former directives of the National Intelligence Authority and the Central Intelligence Group into line with the National Security Act of 1947.

c. In consideration of the size of the National Security Council, as compared to the National Intelligence Authority, it is recommended that a subcommittee be established to act similarly to the National Intelligence Authority to furnish the active direction of the Central Intelligence Agency. This subcommittee should be composed of a minimum number of members and, as a suggestion, could be either the Secretary of State and the Secretary of National Defense, or the Secretary of State, Secretary of National Defense, and the three Secretaries of Army, Navy and Air Force. Personally, I believe the first suggestion is better since the Secretary of State has equal representation with the military. If the second suggestion is followed, there may be some complaints from State that the military is overshadowing them.

[redacted]

~~CONFIDENTIAL~~

2. The Director of the Central Intelligence Group sat as a non-voting member of the National Intelligence Authority, and, while I believe it presumptuous and awkward on my part to suggest that he so sit with the National Security Council, still it would be of utmost assistance if he could attend all meetings of the National Security Council in some capacity, either as observer, counsel or advisor, in order to keep informed of what the thoughts of the National Security Council may be. In addition, by being present, the Director of the Central Intelligence Agency would also be available for such direct questions as may be propounded.

3. If you will indicate your approval or disapproval of the suggestions and recommendations above, I shall go ahead and have formal statements prepared to be furnished to the National Security Council at its first meeting.

R. H. HILLENKOETTER
Rear Admiral, USN
Director of Central Intelligence

Approved by Adm. Leahy 20 Sept. 1947

~~CONFIDENTIAL~~

16. NARA_CIG_Top_Secret_Swedish_Objects_1947-48.pdf

Original start page:	886	**Inserted note page:**	901	**Archive starts after note:**	902

Why it belongs in this release

Strongest direct anomalous-object record: Top Secret USAFE/CIG material, Swedish Air Intelligence, “unknown technology,” possible lake impact, naval salvage, and a discovered crater.

Complete release-note text from UAP 4

1. NARA_CIG_Top_Secret_Swedish_Objects_1947-48.pdf

This is the strongest public-release document in this batch. A Top Secret USAFE item from 4 November 1948 says recurring flying-saucer reports could not be disregarded and might require explanation “beyond the scope” of current intelligence thinking. It also reports that Swedish Air Intelligence had reliable technical observers who considered the phenomena possibly the product of a technology not attributable to any known culture on Earth, and it describes a case in which an object reportedly landed or crashed in a lake, followed by naval salvage operations and discovery of an uncharted crater.

Congress and NARA should request all USAFE, CIG/CIA, Swedish Air Intelligence, U.S. air attaché, State Department, naval salvage, hydrographic, and lake-survey records tied to this file, including the promised follow-up results from Sweden and any Neubiberg Air Base logs.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

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TOP SECRET

USAFE 14 TT 1524 TOP SECRET 4 Nov 1948

From OI OB

For some time we have been concerned by the recurring reports on flying saucers. They periodically continue to cop up; during the last week, one was observed hovering over Neubiberg Air Base for about thirty minutes. They have been reported by so many sources and from such a variety of places that we are convinced that they cannot be disregarded and must be explained on some basis which is perhaps slightly beyond the scope of our present intelligence thinking.

When officers of this Directorate recently visited the Swedish Air Intelligence Service. This question was put to the Swedes. Their answer was that some reliable and fully technically qualified people have reached the conclusion that "these phenomena are obviously the result of a high technical skill which cannot be credited to any presently known culture on earth." They are therefore assuming that these objects originate from some previously unknown or unidentified technology, possibly outside the earth.

One of these objects was observed by a Swedish technical expert near his home on the edge of a lake. The object crashed or landed in the lake and he carefully noted its azimuth from his point of observation. Swedish intelligence was sufficiently confident in his observation that a naval salvage team was sent to the lake. Operations were underway during the visit of USAFE officers. Divers had discovered a previously uncharted crater on the floor of the lake. No further information is available, but we have been promised knowledge of the results. In their opinion, the observation was reliable, and they believe that the depression on the floor of the lake, which did not appear on current hydrographic charts, was in fact caused by a flying saucer.

Although accepting this theory of the origin of these objects poses a whole new group of questions and puts much of our thinking in a changed light, we are inclined not to discredit entirely this somewhat spectacular theory, meantime keeping an open mind on the subject. What are your reactions?

T O P S E C R E T

(END OF USAFE ITEM 14)

TOP SECRET

[redacted]

OO-P-3

[redacted]

CENTRAL INTELLIGENCE GROUP

INTELLIGENCE REPORT

UNTRY: Denmark/Sweden/USSR/Greece/Spain

BJECT Flying Projectiles

IGIN As stated

DATE:

INFO. As stated

DIST. 9 April 1947

PAGES 4

SUPPLEMENT

S

[redacted]

TRIBUTION

X	X	X				X					
TATE	WAR	NAVY	JUSTICE	R & E	C & D	U					

IRCE: [redacted]

As reported by foreign broadcasts, technical information on rockets and guided missiles activities in Denmark is generally negligible. The following texts, however, do contain some limited data (mainly speculative) on the speed, dimensions and altitude of flying objects reportedly observed in Scandinavian countries and in other European countries from the middle of July to October, 1946. In compiling the available material, therefore, not only the Danish radio but other Scandinavian and European sources are cited.

"A strange object flying through the air was observed at noon today (July 13) by workmen in Stockholm. The object was round, and appeared to be rather small. It sent out a strong blue-green light, but no sound could be heard. It is reported from Hudiksvall that railway workers this morning saw an object a few meters long and with backward-sloping wings flying towards the north at a height of about 150 meters. They heard a sound resembling that of an outboard motor." (Stockholm, Swedish Home Service, July 13, 1946, 4 p.m. EST—L; FBIB Daily Report for July 15, 1946)

"A projectile, flying at a height of from 10 to 20 meters and at great speed from the southeast to northwest, has been observed at a place north of Uppsala, Sweden. When the projectile exploded, it sounded like three bangs following closely on each other, and the smoke which resulted covered an area of 4 or 5 kilometers." (Kalundborg, Danish Home Service, July 16, 1946, 5:30 a.m. EST —L;FBIB Daily Report for July 17, 1946)

"It is reported from Norway that the so-called 'ghost rockets' now appear to have reached the Stavanger area. According to a newspaper report, some Stavanger people observed an object which gave off a yellow-red light approaching from the southeast at a great height. The object was traveling at a very high speed, and disappeared towards the northwest." (Stockholm, Swedish Home Service, July 16, 1946, 1:00 p.m. EST —L; FBIB Daily Report for July 17, 1946)

[redacted]

APPROVED FOR RELEASE
Date 25 July 78

B.142

CLASSIFICATION

[redacted]

ARCHIVAL RECORD
PLEASE RETURN TO
AGENCY ARCHIVES [redacted]

"The so-called 'ghost rocket' has again been sighted near Sundsvall where today (July 18) three workers saw a cylinder-shaped, shiny object moving in the sky at an altitude of 200 to 300 meters, noiselessly and without any smoke exhaust. It was moving at first towards the west, but before disappearing, it had a northwesterly course." (Stockholm, Swedish Home Service, July 18, 1946, 1:30 p.m. EST —L; FBIB Daily Report for July 19, 1946.)

"A morning newspaper (unnamed) writes today that the mysterious projectiles that have been observed over Scandinavia cannot be dismissed as ghost planes. The paper writes further: 'Pending the results of the further investigations being made in Norrbotten — if there is anything left to investigate — it could be wished that the authorities make it known in a suitable way that we do not wish our country to become a target. Those who send out these projectiles apparently wish to know how far they can go and we very kindly give this information in the press, in telegrams, and reports from the different places. Perhaps we ought to stop this in order not to encourage any further traffic. If the sender-country did not receive any information from us, perhaps they would find it more advantageous to direct the fire to another place less thickly populated, and where it would be equally possible to follow the line of the projectiles. Such possibilities over the open sea exist if ships and planes are handy. International courtesy should demand a little more consideration, even if it would cost a little more in money and trouble, provided of course that the "X" country does not wish to give the practice as much publicity as possible in order to impress "Y" country or "Z" country. At the moment the publicity is a Swedish interest and the work is helped by finding out what it is all about. To a certain extent the attention paid to it by the press is a suitable introduction for a severe protest, which cannot be left out when there are results from the investigation.'" (Stockholm, Overseas Service in English, July 22, 12:40 p.m. EST —L; FBIB Daily Report for July 23, 1946)

"Yesterday a visitor from London saw a ring projectile. He told a newspaper it looked like a V-2 bomb. The visitor, a Mr. Harrison, served in England during the war and saw V-1 and V-2 bombs countless times. The Swedish Defense staff is, however, not making a statement on the matter for the time being." (Stockholm, Swedish Home Service, August 13, 1946 6:30 a.m. EST; FBIB Daily Report for August 13, 1946)

..."The experts have ascertained with certainty that the 11 centimeter-long object of unknown origin which was found does not come from any stratosphere projectile. The same applies to certain pieces of copper found. These have probably been lying on the ground for a long time... nothing has so far been revealed from which one can decide with certainty whether the light phenomena and so forth which have been observed come from...stratosphere projectiles..."(Stockholm, Swedish Home Service, August 14, 1946, 4:00 p.m. EST; FBIB Daily Report for August 15, 1946)

..."A flying object somewhat different from those observed previously, was seen this morning by four people working in a woodyard near one of the large lakes in central Norrland. It resembled a small airplane, and flew at an altitude of about 200 meters, making a hissing noise. It had a short body, a tail and two small wings. The object descended at colossal speed and crashed into the lake." (Stockholm, Swedish Home Service, August 14, 1946, 1:00 p.m. EST; FBIB Daily Report for August 15, 1946)

"In an editorial about the atratospheric bombs which have recently been seen over Sweden, SKAANSKA DAGBLADET says that it is the general assumption that they have a new kind of radio-directed weapon. It is suggested that the Russians have found incomplete German weapons about which there was so much talk in the last phases of the war, and that they are trying to perfect these weapons by experimenting with them over Swedish territory. SKAANSKA DAGBLADET continues: 'But a scientist who has seen one is of the opinion that they are meteors. Undoubtedly it will be established shortly which is correct. The Swedish authorities are making every effort to clear up the matter.' The newspaper is of the opinion that the theory of experimenting with weapons is the correct one. Two of the so-called stratospheric rockets were observed early this morning over (Storeby) near Koege. They came from the south and resembled cigars with flames...One of the rockets...at an altitude of about one kilometer and it was possible to follow its course northward. The rockets were seen by several people." (Kalundberg, Danish Home Service, August 16, 1946, 11:40 a.m. EST; FBIB Daily Report for August 19, 1946)

"Many people say that they saw stratospheric rockets over Oeresund last night. Two oblong, glowing objects moving from south to north with smoke coming out of their tails were seen at (Snekkesten)." (Kalundberg, Danish Home Service, August 18, 1946, 5:30 a.m. EST; FBIB Daily Report for August 19, 1946.)

"This morning a stratospheric projectile was observed over a town in southern Sweden which exploded with a loud bang when it met a hailstorm. Afterward a strong smell of gunpowder was noticed. The explosion was so strong that the houses shook. It was about 500 meters high. After the explosion what appeared to be a mist collected, and it was still to be observed after the hailstorm had passed. According to meteorological experts, who were approached by the Air Defense Division of the General Staff, a very probable explanation is that it was a tornado in connection with a very strong flash of lightning. The object which was believed to be seen might have been a so-called 'coil of cloud' from the tornado." (Stockholm, Swedish Home Service, August 16, 1946, 1:00 p.m. EST; FBIB Daily Report for August 19, 1946.)

"A report from Goeteborg say that a mysterious bright light and violent explosion thought to have come from a so-called stratospheric projectile, caused some anxiety at two farms in Central Sweden late on Friday evening (Aug. 16). The explosion occurred so near the buildings that it was at first feared that a barn had caught fire. The explosion was heard round about the farms and at some places a bright light resembling a meteor was seen shortly before the blast. Some observers say that they are convinced that the stratospheric projectile was an ordinary meteor." (Stockholm, Swedish Home Service, August 18, 1946, 6:40 a.m. EST; FBIB Daily Report for August 19, 1946.)

"Before the big autumn maneuvers of the Swedish Air Arm, the Air Arm has given some big exhibitions at Karlsborg. The main objective was to give the 1945 Defense Investigation Committee an idea of how the Air Arm works and what resources it has. At the same time, the Chief of the Air Arm, General Nordenskioeld, took the opportunity of inspecting his forces. A new weapon had its premiere: a rocket projectile which is shortly to be put into productions at Bofors. The guests were very much impressed by what they saw." (Stockholm, Swedish Home Service, August 21, 1946, 6:30 a.m. EST; FBIB Daily Report for August 22, 1946.)

"The NEW TIMES in its news section against 'Misinformation and Calumny' exposes the anti-Soviet campaign launched in Sweden in connection with the fabrication about the flight of mysterious rockets, the provocative rumors about the arrest of German children in Soviet-occupied Germany..." (Moscow, Soviet European Service, in English to the United Kingdom, September 4, 1946, 11:00 a.m. EST; FBIB Daily Report for September 5, 1946)

"During the past 2 days several aircraft of unknown nationality have been seen over Bornholm. During the same time ghost rockets have been observed over the western areas of Denmark." (Oslo, Norwegian Home Service, September 11, 1946)

"According to press dispatches from Patras, two rockets coming from the north were seen crossing the skies over the city on the night of Saturday to Sunday (September 14 - 15). (Athens, in French for "Friends of Greece Abroad", September 16, 1946, 3:30 p.m. EST; FBIB Daily Report for September 17, 1946)

"Tetuan — The CIFRA agency announced that during the nights of last Wednesday, Thursday and Friday, 'reddish-green balls of fire' passed over Tangiers and, linking them with similar fire balls which recently were reported over Sweden and France, the agency suggested in careful terms that they could be flying bombs." (Paris, AFP, in French Morse to Latin America and Canada, September 16, 1946, 11:35 a.m. EST; FBIB Daily Report for September 18, 1946.)

"Oviedo — A ball of luminous green light was seen to cross the sky in the early morning by a number of people. The ball had an appearance of what the press described as what a flying bomb looks like." (Valladolid, Spanish Home Service, September 19, 1946, 7:30 a.m. EST; FBIF Daily Report for September 20, 1946.)

17. NARA_UFO_Mt_Rainier_Arnold_1947.pdf

Original start page:	891	**Inserted note page:**	907	**Archive starts after note:**	908

Why it belongs in this release

The historical origin of the “flying saucer” era; official Air Force file, Kenneth Arnold, nine objects, high speed estimate, unidentified until 1962.

Complete release-note text from UAP 4

2. NARA_UFO_Mt_Rainier_Arnold_1947.pdf

This document is essential because it anchors the public history of the flying-saucer era. The file records Kenneth Arnold’s 24 June 1947 sighting near Mt. Rainier: a chain of nine objects, a speed estimate of 1,656.71 mph, a description that became the term “flying saucers,” and an Air Force status that remained unidentified until 1962, when it was later attributed to mirage conditions. Congress and NARA should recover the complete original case file, witness statements, aircraft and weather data, DC-4 corroboration leads, Project Sign/Grudge/Blue Book correspondence, and the 1962 reclassification analysis. The key question is whether the later “mirage” conclusion was an evidence-based finding or a retrospective debunking decision.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

24 JUN 47
62?

UFO SIGHTING
MT. RAINIER, WASHINGTON
24 June 1947

On 24 June 1947 at 1400 Mr. Kenneth Arnold took off from the Chehalis, Washington Airport in his personal plane and headed for Yakima, Washington. Mr. Arnold's trip was delayed for an hour in search of a large Marine transport that supposedly went down near or around the southwest side of Mt. Rainier. After take-off Mr. Arnold flew directly toward Mt. Rainier at an altitude of approximately 9,500 feet, which is the approximate elevation of the high plateau from which Mt. Rainier rises. He made one sweep of this high plateau to the westward, searching all of the various ridges for the Marine ship and flew to the west near the ridge side of the canyon where Ashford, Washington is located. Unable to see anything that looked like the lost plane, Mr. Arnold made a 360 degree turn to the right above the town of Mineral, starting again toward Mt. Rainier and climbing to an altitude of 9,200 feet.

Mr. Arnold reported that the air was so smooth that it was a real pleasure flying, and, as most pilots do when the air is smooth and they are at a higher altitude, he trimmed the aircraft and simply sat in his plane observing the sky and terrain.

Mr. Arnold reported that there was a DC-4 to his left and rear at approximately 14,000 feet. The sky was reported to be as clear as crystal. He hadn't flown more than two or three minutes on his course when a bright flash reflected on his airplane. He couldn't find where the reflection came from, but to the left and north of Mt. Rainier he did observe a chain of nine peculiar looking objects flying from north to south at approximately 9,500 feet. They were approaching Mt. Ranier very rapidly, and he assumed that they were jet aircraft. Every few seconds two or three of the objects would dip or change course slightly, just enough for the sun to strike them at an angle and reflect brightly. The objects being quite far away, he was unable to make out their shape or formation. As they approached Mt. Rainier he observed their outline quite clearly. Mr. Arnold stated that he found it very peculiar that he couldn't find their tails but assumed they were some type of jet aircraft. The objects were observed to pass the southern edge of Mt. Rainier flying directly south to southeast down the hog's back of a mountain range. The elevation of the objects was estimated to have varied approximately one thousand feet one way or another but remained very near the horizon, which would indicate that they were near the same elevation as the witness. Mr. Arnold stated that the objects flew like geese, in a rather diagonal chain like line as if they were linked together. They seemed to hold a definite direction but swerved in and out of the high mountain peaks. The witness estimated the distance between him and the objects to be approximately 25 miles. Using a Zeus fastener, or cowling tool, he estimated the size of the objects to be approximately two thirds that of a DC-4. He observed the UFOs passing a high snow covered ridge in between Mt. Rainier and Mt. Adams and reported that as the first object was passing the south crest of this ridge the last one was entering the northern crest of the ridge. Later measurement of length of this particular ridge revealed it was approximately five miles, so it was estimated that the chain of objects was five miles long. Mr. Arnold timed the objects between Mt. Rainier and Mt. Adams and determined they crossed this 47 miles in one minute and forty-two seconds. This is equivalent to 1656.71 miles per hour.

In a subsequent interview Mr. Arnold described the objects as appearing like saucers skipping on water. This description was shortened to "Flying Saucers" by newspaper reporters and resulted in the popular use of this term.

This case was carried in Air Force files as unidentified until 1962. At that time Air Force analysis of Arnold's report led to the conclusion that the objects of this sighting were due to a mirage. Mr. Arnold's statement concerning how smooth and crystal clear the air was is an indication of very stable conditions which are associated with inversions, and increase the refraction index of the atmosphere. That the reported objects remained very near the horizon further supports this conclusion.

JUN 47

CHECK-LIST - UNIDENTIFIED FLYING OBJECTS

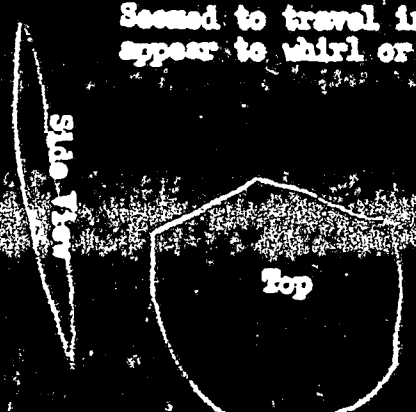
Incident # 17

1. Date 24th June 1947
2. Time 1500
3. Location Mt. Ranier, Washington
4. Name of observer Kenneth Arnold
5. Occupation of observer Dealer in fire control supplies holds private pilot's license
6. Address of observer Box 387, Boise, Idaho
7. Place of observation Near Minenhl, Washington
8. Number of objects 9
9. Distance of object from observer ~~approx~~ 20 to 25 miles
10. Time in sight 2-1/2 to 3 minutes
11. Altitude 9,500 ft
12. Speed ~~Approx~~ Approx 150 MPH
13. Direction of flight North to South at 170°
14. Tactics Horizontal flight
15. Sound N/S
16. Size Approximately that of DC-4 - 45 to 50 ft
17. Color mirror like
18. Shape Approximately circular
19. Odor detected N/S
20. Apparent construction N/S
21. Exhaust trails N/S
22. Weather conditions CAVU
23. Effect on clouds N/S
24. Sketches or photographs Drawings
25. Manner of disappearance N/S
26. Remarks: (over)

Pilot Kenneth Arnold was flying his plane at an altitude of approximately 9,200 feet. He trimmed out plane in direction of Yakima, Washington which was almost directly east of his position and sat in his plane observing the sky and the terrain. To the left was a DC-4 and to his rear approximately 15 miles distant there was a 14,000 ft elevation. The sky was clear as crystal. A bright flash suddenly reflected on the plane. Upon looking to the left and to the north of Mt. Rainer he observed a chain of 9 peculiar looking craft flying from north to south at approximately 9,500 ft elevation and going seemingly in a definite direction of about 170°. Thought at first they were jet aircraft but noticed that every few seconds 2 or 3 of them would dip or change their xxxxx course slightly just enough to cause the sun to strike them at an angle which reflected brightly on the plane. As they approached Mt. Rainier he could observe their outlines against the snow quite plainly, but couldn't find any tails. Clocked speed and found it to be approximately 150 MPH. Never before had he observed planes flying so close to mountain tops. They flew directly south to southeast down the hog's back of a mountain range. Pilot thought they were at approximately the same elevation as he was. They flew in rather diagonal chain-like line as if linked together and seemed to hold a definite direction but swerved in and out of the high mountain peaks. Distance which was almost at right angles seemed to be between 20 to 25 miles. Thought they were quite large to be observed at that distance even on a clear day. They seemed smaller that the DC-4 but he judged their span to be as wide as the furthest engines on each side of the fuselage of the DC-4 (45 to 50 ft). The chain seemed to be approximately five miles long.

NOTE: It was the opinion of the agent interviewing Mr. Arnold that he saw the "flying discs". In this regard agent further stated that if Mr. Arnold could write a report of such a character and did not see the objects he was in the wrong business and should be engaged in writing Buck Rogers fiction.

The attached is what Kenneth Arnold later produced. See "Fate" magazine article by Kenneth Arnold



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JUN 47

UNCLASSIFIED

June 17

By Kenneth Arnold

The following story of what I observed over the Cascade mountains, as impossible as it may seem, is positively true. I never asked nor wanted any notoriety for just accidently being in the right spot at the right time to observe what I did. I reported something that I know any pilot would have reported. I don't think that in any way my observation was due to any sensivity of eye sight or judgment than what is considered normal for any pilot.

On June 24th, Tuesday, 1947, I had finished my work for the Central Air Service at Chehalis, Washington, and at about two o'clock I took off from Chehalis, Washington, airport with the intention of going to Yakima, Washington. My trip was delayed for an hour to search for a large marine transport that supposedly went down near or around the southwest side of Mt. Rainier in the state of Washington and to date has never been found.

I flew directly toward Mt. Rainier afterreaching an altitude of about 9,500 feet, which is the approximate elevation of the high plateau from which Mt. Rainier rises. I had made one sweep of this high plateau to the westward, searching all of the various ridges for this marine ship and flew to the west down and near the ridge side of the canyon where Ashford, Washington, is located.

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Unable to see anything that looked like the lost ship, I made a 360 degree turn to the right and above the little city of Mineral, starting again toward Mt. Rainier. I climbed back up to an altitude of approximately 9,200 feet.

The air was so smooth that day that it was a real pleasure flying and, as most pilots do when the air is smooth and they are flying at a higher altitude, I trimmed out my airplane in the direction of Yakima, Washington, which was almost directly ~~west~~ East of my position and simply sat in my plane observing the sky and the terrain.

There was a DC-4 to the left and to the rear of me approximately fifteen miles distance, and I should judge, at 14,000 foot elevation.

The sky and air was as clear as crystal. I hadn't flown more than two or three minutes on my course when a bright flash reflected on my airplane. It startled me as I thought I was too close to some other aircraft. I looked every place in the sky and couldn't find where the reflection had come from until I looked to the left and the north of Mt. Rainier where I observed a chain of nine peculiar looking aircraft flying from north to south at approximately 9,500 foot elevation and going, seemingly, in a definite direction of about 170 degrees.

They were approaching Mt. Rainier very rapidly, and I merely assumed they were jet planes. Anyhow, I discovered that this was where the reflection had come from, as two or three of them every few seconds would dip or change their course

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slightly, just enough for the sun to strike them at an angle that reflected brightly on my plane.

These objects being quite far away, I was unable for a few seconds to make out their shape or their formation. Very shortly they approached Mt. Rainier, and I observed their outline against the snow quite plainly.

I thought it was very peculiar that I couldn't find their tails but assumed they were some type of jet plane. I was determined to clock their speed, as I had two definite points I could clock them by; the air was so clear that it was very easy to see objects and determine their approximate shape and size at almost fifty miles that day.

I remember distinctly that my sweep second hand on my eight day clock, which is located on my instrument panel, read one minute to 3 P.M. as the first object of this formation passed the southern edge of Mt. Rainier. I watched these objects with great interest as I had never before observed airplanes flying so close to the mountain tops, flying directly south to south-east down the hog's back of a mountain range. I would estimate their elevation could have varied a thousand feet one way or another up or down, but they were pretty much on the horizon to me which would indicate they were near the same elevation as I was.

They flew like many times I have observed geese to fly in a rather diagonal chain-like line as if they were linked together. They seemed to hold a definite direction but rather swerved in and out of the high mountain peaks. Their speed at the time

did not impress me particularly, because I knew that our army and air forces had planes that went very fast.

What kept bothering me as I watched them flip and flash in the sun right along their path was the fact that I couldn't make out any tail on them, and I am sure that any pilot would justify more than a second look at such a plane.

I observed them quite plainly, and I estimate my distance from them, which was almost at right angles, to be between twenty to twenty-five miles. I knew they must be very large to observe their shape at that distance, even on as clear a day as it was that Tuesday. In fact I compared a zeus fastener or cowling tool I had in my pocket with them - holding it up on them and holding it up on the DC-4 - that I could observe at quite a distance to my left, and they seemed smaller than the DC-4; but, I should judge their span would have been as wide as the furtherest engines on each side of the fuselage of the DC-4.

The more I observed these objects, the more upset I became, as I am accustomed and familiar with most all objects flying whether I am close to the ground or at higher altitudes. I observed the chain of these objects passing another high snow-covered ridge in between Mt. Rainier and Mt. Adams, and as the first one was passing the south crest of this ridge the last object was entering the northern crest of the ridge.

As I was flying in the direction of this particular ridge,

[redacted]

I measured it and found it to be approximately five miles so I could safely assume that the chain of these saucer like objects were at least five miles long. I could quite accurately determine their pathway due to the fact that there were several high peaks that were a little this side of them as well as higher peaks on the other side of their pathway.

As the last unit of this formation passed the southern-most high snow-covered crest of Mt. Adams, I looked at my sweep second hand and it showed that they had travelled the distance in one minute and forty-two seconds. Even at the time this timing did not upset me as I felt confident after I would land there would be some explanation of what I saw.

A number of news men and experts suggested that I might have been seeing reflections or even a mirage. This I know to be absolutely false, as I observed these objects not only through the glass of my airplane but turned my airplane sideways where I could open my window and observe them with a completely unobstructed view. with out sun glasses

Even though two minutes seems like a very short time to one on the ground, in the air in two minutes time a pilot can observe a great many things and anything within his sight of vision probably as many as fifty or sixty times.

I continued my search for the marine plane for another fifteen or twenty minutes and while searching for this marine plane, what I had just observed kept going through my mind. I became more disturbed, so after taking a last look at Tieton Reservoir I headed for Yakima.

[redacted]

[redacted]

UNCLASSIFIED

I might add that my complete observation of these objects, which I could even follow by their flashes as they passed Mt. Adams, was around two and one-half or three minutes -- although, by the time they reached Mt. Adams they were out of my range of vision as far as determining shape or form. Of course, when the sun reflected from one or two or three of these units, they appeared to be completely round; but, I am making a drawing to the best of my ability, which I am including, as to the shape I observed these objects to be as they passed the snow covered ridges as well as Mt. Rainier.

When these objects were flying approximately straight and level, they were just a black thin line and when they flipped was the only time I could get a judgment as to their size.

These objects were holding an almost constant elevation; they did not seem to be going up or to be coming down, such as would be the case of rockets or artillery shells. I am convinced in my own mind that they were some type of airplane, even though they didn't conform with the many aspects of the conventional type of planes that I know.

Although these objects have been reported by many other observers throughout the United States, there have been six or seven other accounts written by some of these observers that I can truthfully say must have observed the same thing that I did; particularly, the descriptions of the three Western Air Lines employees, the gentleman from Oklahoma City and the (Cedar City-Utah) (& pilot

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locomotive engineer in Illinois plus Capt Smith and co pilot Steven of United Air Lines.

~~Their~~ Some descriptions could not be very accurate taken from the ground unless these saucer-like disks were at quite a great height and there is a possibility that all of the people who observed peculiar objects could have seen the same thing I did; but, it would have been very difficult from the ground to observe these for more than four or five seconds, and there is always the possibility of atmospheric moisture and dust near the ground which could distort one's vision.

I have in my possession letters from all over the United States and people who profess that these objects have been observed over other portions of the world, principally Sweden, Bermuda, and California.

I would have given almost anything that day to have had a movie camera with a telephoto lens and from now on I will never be without one -- but, to continue further with my story. When I landed at the Yakima, Washington, airport I described what I had seen to my very good friend, Al Baxter, who listened patiently and was very courteous but in a joking way didn't believe me.

I did not accurately measure the distance between these two mountains until I landed at Pendleton, Oregon, that same day where I told a number of pilot friends of mine what I had observed and they did not scoff or laugh but suggested they might be guided missiles or something new. In fact several former Army pilots informed me that they had been briefed before going into combat overseas that they might see objects of similar shape and design as I described and assured me that I wasn't

dreaming or going crazy.

I quote Sonny Robinson, a former Army Air Forces pilot who is now operating dusting operations at Pendleton, Oregon, "What you observed, I am convinced, is some type of jet or rocket propelled ship that is in the process of being tested by our government or even it could possibly be by some foreign government".

Anyhow, the news that I had observed these spread very rapidly and before the night was over I was receiving telephone calls from all parts of the world; and, to date I have not received one telephone call or one letter of scoffing or disbelief. The only disbelief that I know of was what was printed in the papers.

I look at this whole ordeal as not something funny as some people have made it out to be. To me it is mighty serious and since I evidently did observe something that at least Mr. John Doe on the street corner or Pete Andrews on the ranch has never heard about, is no reason that it does not exist. Even though I openly invited an investigation by the Army and the FBI as to the authenticity of my story or a mental or a physical examination as to my capabilities, I have received no interest from these two important protective forces of our country; I will go so far as to assume that any report I gave to the United and Associated Press and over the r adio on two different occasions which apparently set the nation buzzing, if our Military Intelligence was not aware of what I observed, they would be the very first people that I could expect as visitors.

[redacted]

UNCLASSIFIED

I have received lots of requests from people who told me to make a lot of wild guesses. I have based what I have written here in this article on positive facts and as far as guessing what it was I observed, it is just as much a mystery to me as it is to the rest of the world.

My pilot's license is 333487. I fly a Callair airplane; it is a three-place single engine land ship that is designed and manufactured at Afton, Wyoming as an extremely high performance, high altitude airplane that was made for mountain work. The national certificate of my plane is 33355.

Kenneth Arnold
Box 387
Boise, Idaho.

traveling this way →

they seemed longer than wide their thickness was about 1/20 in of their width

Side View

traveling this way →

Mirror Bright

they did not appear to me to whirl or spin but seemed in fixed position traveling as I have made drawing.

Kenneth Arnold.

17

[redacted]

UNCLASSIFIED

18. NARA_WPAFB_ATIC_Green_Hornet_1953.pdf

Original start page:	903	**Inserted note page:**	920	**Archive starts after note:**	921

Why it belongs in this release

Shows ATIC’s special handling system and the existence of an Aerial Phenomena Section inside the Air Technical Intelligence Center structure.

Complete release-note text from UAP 4

3. NARA_WPAFB_ATIC_Green_Hornet_1953.pdf

This is a major organizational lead. The “Green Hornet” instruction created a special ATIC precedence for material of “exceptional importance,” reserved for the Commander, with hand-carry routing and work proceeding without regard to normal duty hours. The same ATIC organizational material identifies an Aerial Phenomena Section — ATIAE-5 within the Technical Analysis structure. Congress and NARA should demand the complete Green Hornet log series, commander routing files, action-agency records, ATIAE-5 files, ATIC semiannual histories, and any cross-references to UFOs, aerial phenomena, Project Blue Book, Foreign Technology Division, and Wright-Patterson document services. This is one of the cleanest pointers to a formal internal channel for priority aerial-phenomena work.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

Ti taken from General Order #3

ATIONAL SYMBOLS FOR THE AIR TECHNICAL INTELLIGENCE CENTER

NAME	SYMBOL
Office of the Commander	ATI
Assistant to the Commander	ATI
Scientific Advisor's Office	ATI
Inspector General's Office	ATII
Inspector's Branch	ATII-1
Internal Security Branch	ATII-2
Adjutant's Office	ATIG
Administrative Branch	ATIG-1
Mail Branch	ATIG-2
Records Branch	ATIG-3
Registered Documents Branch	ATIG-4
Policy and Management Office	ATIM
Contract Administrator	ATIM
Budget and Accounting Branch	ATIMC
Personnel Branch	ATIMP
Military Personnel Section	ATIMP-1
Civilian Personnel Section	ATIMP-2
Management Analysis Branch	ATIMM
Air Intelligence Office	ATIX
Research and Publications Branch	ATIXP
Briefing Branch	ATIXB
Technical Requirements Division	ATIR
Administrative Office	ATIR-1
Collection Planning Office	ATIR-2
Collection Control Branch	ATIRC
Requirements Section	ATIRC-1
Operations Section	ATIRC-2
ATL Program Branch	ATIRL
Processing Section	ATIRL-1
Foreign Activities Section	ATIRL-2
ATI Indoctrination Branch	ATIRT
Photographic Section	ATIRT-1
Training Administration Section	ATIRT-2
ATI Training Section	ATIRT-3
Technical Analysis Division	ATIA
Plans, Operations, and Administrative Office	ATIA-2
Technical Advisor's Office	ATIA-3
Aircraft and Propulsion Branch	ATIAA
Aircraft Section	ATIAA-2
Propulsion Section	ATIAA-3
Guided Missiles Section	ATIAA-4

Attachment No. 1 to ATICOI 20-2 — 1 Mar 54

11

NAME	SYMBOL
Technical Analysis Division (cont'd.)	
Electronics Branch	ATIAE
Radiation Section	ATIAE-2
Signal Analysis Section	ATIAE-3
Science and Components Section	ATIAE-4
Aerial Phenomena Section	ATIAE-5
Weapons and Industry Branch	ATIAW
Armament Section	ATIAW-2
Industry Section	ATIAW-3
Special Weapons Section	ATIAW-4
Equipment Section	ATIAW-5
Technical Services Division	ATIS
Administrative Office	ATIS-1
Plans and Operations Office	ATIS-2
Document Services Branch	ATISD
Document Processing Section	ATISD-1
Document Screening Section	ATISD-2
Reproduction and Graphic Services Section	ATISD-3
Materiel Services Branch	ATISE
Foreign Equipment Section	ATISE-1
ATI Supply Section	ATISE-2
Maintenance and Service Section	ATISE-3
Troop Commandant	ATITC
USAF Security Service Detachment	USAFSSO

ORGANIZATIONAL SYMBOLS FOR
THE AIR TECHNICAL INTELLIGENCE CENTER

Office of the Commander	AFOIN-4
Deputy Commander	AFOIN-4X
Scientific Advisor's Office	AFOIN-4X1
Office of the Executive	AFOIN-4X2
Office of the Adjutant	AFOIN-4X2a
Personnel and Management Office	AFOIN-4X2b
Office of the Comptroller	AFOIN-4X2c
Security Office	AFOIN-4X2d
Air Intelligence Office	AFOIN-4X3
Program Planning Office	AFOIN-4X4
Deputy for Acquisition	AFOIN-4A
Planning Division	AFOIN-4A1
Control Division	AFOIN-4A2
Deputy for Materiel Support	AFOIN-4B
Documentation Division	AFOIN-4B1
Material and Services Division	AFOIN-4B2
Deputy for ELINT	AFOIN-4C
Evaluation Division	AFOIN-4C1
Analysis Division	AFOIN-4C2
Projects Division	AFOIN-4C3
Operations and Training Division	AFOIN-4C4
Deputy for Engineering Support	AFOIN-4D
Engineering Analysis Division	AFOIN-4D1
Graphics Division	AFOIN-4D2
Deputy for Science and Components	AFOIN-4E
Electronics Division	AFOIN-4E1
Weapons and Industry Division	AFOIN-4E2
Propulsion Division	AFOIN-4E3
Air Sciences Division	AFOIN-4E4

Attachment No. 1 to ATICOI 20-2
(Supersedes Atch No. 1 to
ATICOI 20-2, dtd 7 Dec 54)

1 Aug 55

Deputy for Air Weapon Systems	AFOIN-4F
Estimates Division	AFOIN-4F1
Aircraft Division	AFOIN-4F2
Guided Missiles Division	AFOIN-4F3
Collation Division	AFOIN-4F4
Detachment #1 (ATIC)	
Hq Sqdn Section	AFOIN-4Y
USAF Security Service Detachment	USAFSSO

Attachment No. 1 to ATICOI 20-2
(Supersedes Atch No. 1 to
ATICOI 20-2, dtd 7 Dec 54)

1 Aug 55

AIR TECHNICAL INTELLIGENCE CENTER)
NUMBERED MEMORANDUM)
NO. 54-1)

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
1 JUNE 1954

GUIDE FOR PREPARATION OF SEMI-ANNUAL HISTORIES

Attachment No. 1 will be used on a test basis for preparation of the 1 July 1954 edition of the Air Technical Intelligence Center History. Following the trial period, the adequacy of this guide will be evaluated and decision made to its continuance on a permanent basis.

BY ORDER OF THE COMMANDER:

W. K. SARGENT
Major, USAF
Adjutant

OFFICIAL:

W. K. SARGENT
Major, USAF
Adjutant

1 Incl:
Atchmt. No. 1, (Tentative) Guide for Preparation of Semi-Annual Histories

DISTRIBUTION:
"A"

AIR TECHNICAL INTELLIGENCE CENTER)
OFFICE INSTRUCTION)
NO. 205-15)

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
30 JUNE 1953

SECURITY

VISITS TO BUILDING 89

1. PURPOSE. This office instruction establishes the procedures and assigns responsibility governing all personnel visiting that portion of Building 89 under the jurisdiction of ATISE-1.

2. DEFINITIONS. For purposes of this instruction the following definitions will apply:

a. Visitor. Any individual not assigned to ATIC who has occasion to pay an official call on the Foreign Equipment Section of the Air Technical Intelligence Center.

b. VIP. Visitors who by rank or position should be accorded special courtesies.

c. Group Visitors. Five or more visitors usually having a common interest.

d. Working Party Visitors. Visitors who are present on duty status and concerned with specific projects, usually of a maintenance or utility nature.

3. PROCEDURE:

a. All ATIC personnel who desire to visit Building 89 will first call the Foreign Equipment Section Office (ATISE-1), Extension 53116, in order that equipment to be viewed can be readied for inspection. NOTE: On their first visit, new employees of ATIC will be accompanied by personnel from their own work unit who are known to personnel of ATISE-1.

b. All visitors with the exception of working party visitors must clear through Building 263 and be accompanied by a representative from ATIC.

c. All visitors and escorts must report to the ATISE-1 Office (Building 89) and sign the register prior to entering the enclosed compound.

d. Access to Building 89 after normal duty hours may be obtained by contacting the W-P AFB Provost Marshal's Office, EWIPA, Ext. 59218.

4. RESPONSIBILITY:

a. Group visitors will be monitored and escorted by personnel of ATIST-2, Ext. 56294, or by personnel from the technical section having responsibility for evaluating the equipment in which the visitors are primarily interested.

Restricted

MCI

IDOI 205-7

Backup for MCO1 205-7 dated 28 Feb 51, Mimeograph Cy if published directive not available.

INTELLIGENCE DEPARTMENT)
OFFICE INSTRUCTION)
NO. 205-7)

INTELLIGENCE DEPARTMENT
HEADQUARTERS, AIR MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE
21 FEBRUARY 1951

Security | published 28 Feb - 1

LIMITED ACCESS AREAS

(This Instruction supersedes IDOI 200-1, 5 July 1950)

1. PURPOSE. The purpose of this Instruction is to establish specific responsibilities for certain limited access areas under the jurisdiction of the Intelligence Department.

2. GENERAL. Because of the nature of Intelligence Department operations, it has been necessary to limit access to certain areas in the Intelligence Department to a minimum number of specifically approved personnel.

3. DEFINITION. "Area Officer." The individual charged with responsibility for maintaining the security of specific Intelligence Department limited access areas.

4. RESPONSIBILITIES:

a. Area Officers will be designated by specific directive of the Chief, Intelligence Department.

b. Approval for entrance to limited access areas will be granted on an individual basis by the Chief, Intelligence Department.

c. Area Officers will maintain lists of individuals who have been appropriately authorized entrance to limited access areas.

d. Area Officers will institute the necessary measures to delete names of personnel, when appropriate, from lists of those authorized to enter limited access areas.

5. PROCEDURE. Division and office chiefs may request additions to the list by written request to the Area Officer who will determine whether such individuals have the necessary security clearances and meet the other established requirements. The Area Officer will then submit requests for such additions to the Chief, Intelligence Department for approval and disapproval.

Restricted

IDOI-205-7
-1/3

~~Restricted~~

HAROLD E. WATSON
Colonel, USAF
Chief, Intelligence Department

DISTRIBUTION
"A"

COORDINATION:

Mr. Ewry Ewry

Mr. Honaker

Col Dunn 7th 24 FEB 51

Col Watson

Presented to Staff Meeting
Recommendations of Divisions were incorporated where possible.

Restricted

Security information exhausted.

ROUTING AND RECORD SHEET

MATERIEL COMMAND

...ice correspondence ...ecutively. Use entire width of sheet, both sides.

Use authorized office symbols to designate addressor and addressee. Note warning signal at lower left of form. Remaining space is sufficient only for proper spacing of typewritten signature.

Place initials of dictator and typist, telephone number and location to right of signature. Separate comments by horizontal lines across page.

SUBJECT Comments Regarding Proposed Office Instruction 205-7, "Limited Access Areas"

TO MCIZXP FROM MCIM DATE 12 Feb 51 COMMENT NO. 1

✓ 1. It is recommended that the restricted areas, or limited access areas be so designated in this instruction, or that provision be made for such designation. *no - due to nature of material involved*

2. It is suggested that either the term "limited access areas" or "restricted areas" be used throughout the instruction. The terms are not synonymous. *OK.*

3. Have the restricted areas in question been so authorized and marked in accordance with WPAFB Regulation 205-14? *not applicable - entire Bldg is Restricted*

M C Edenfield

1 Incl
Intelligence Department Office Instruction No. 205-7, Feb 51

M. C. EDENFIELD
Lt Colonel, USAF
Chief, Security Policy Division
Intelligence Department

CT/jag
58291
Bldg 263B
Post B5

Upon removal of Inclosure (s) ... correspondence may be ... in accordance ... par 25e, AFR 205-1, ... Mar 49

DECLASSIFIED
Authority NND 947020
By CC NARA Date 1/23/06

WF-L-15 FEB 49 4 Mil 260M
AMC Form No. 5 (Rev 29 Jul 47)

(CONTINUE ON OTHER SIDE)

This form replaces AMC Form No. 10-3, which will be used until stocks on hand are exhausted.

3/3

AIR TECHNICAL INTELLIGENCE CENTER)
OFFICE INSTRUCTION)
NO. 11-28)

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
24 February 1954

ADMINISTRATIVE PRACTICES

GREEN HORNET MATERIAL

1. PURPOSE. To establish the "Green Hornet" precedence and outline the procedures for the administrative handling of material so designated.

2. POLICY. The "Green Hornet" precedence will be reserved for material the expeditious processing of which is of exceptional importance within the mission of the ATIC. The assignment of a "Green Hornet" precedence is reserved for the Commander, ATIC.

3. DEFINITIONS:

a. Material - for the purpose of this regulation will be construed to include correspondence, messages, documents, supplies, and equipment.

b. "Green Hornet"- an arbitrary term assigned to material to indicate its precedence for processing by ATIC.

4. PROCEDURE:

a. Material received in this Center by any agency, the content of which appears to be of sufficient importance to warrant possible "Green Hornet" treatment, will be immediately handcarried to the Commander's Office for decision.

b. The Commander will assign the responsibility of monitoring the material to the appropriate action agency.

c. The action agency will be responsible for alerting the coordinating agencies that a "Green Hornet" project is in being and that their assistance is required in certain specific aspects at a specific time.

d. The coordinating agencies will be responsible for seeing that qualified personnel are available to complete their portion of the project at the time specified by the action agency. Availability of these personnel to work on the project will take precedence over any other requirement.

e. Once initiated, work on a "Green Hornet" project will proceed without regard to normal duty hours.

the expeditious processing of which is of exceptional importance within the mission of the ATIC. The assignment of a "Green Hornet" precedence is reserved for the Commander, ATIC.

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d. The coordinating agencies will be responsible for seeing that qualified personnel are available to complete their portion of the project at the time specified by the action agency. Availability of these personnel to work on the project will take precedence over any other requirement.

e. Once initiated, work on a "Green Hornet" project will proceed without regard to normal duty hours.

19. NARA_Air_Technical_Intrlligence_WAPFB_1950-53.pdf

Original start page:	914	**Inserted note page:**	932	**Archive starts after note:**	933

Why it belongs in this release

Shows ATIC/Wright-Patterson technical exploitation with CIA/AFOIN links, Project NIMBUS/STORK, metallurgy, aircraft materials, and atomic-power-plant materials work.

Complete release-note text from UAP 4

4. NARA_Air_Technical_Intrlligence_WAPFB_1950-53.pdf

This file shows the technical exploitation machinery at Wright-Patterson. ATIC was working through Project NIMBUS, AFOIN, CIA ORR, CIA OSI, Project STORK, and a Metallurgical Assessment Panel on magnesium, aluminum, Soviet metallurgy, aircraft materials, and atomic-power-plant materials. Another page refers to chemical analysis and mechanical test results for aircraft-related material. Congress and NARA should reconstruct the full chain of custody for ATIC Project NIMBUS/STORK files, TIC-51664-A, metallurgy reports, contractor reports, sample-analysis records, and CIA/AFOIN correspondence. If anomalous debris or crash-retrieval materials were ever folded into ordinary “foreign technology” or “materials” channels, this is exactly the kind of file series where the trail could appear.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

TRANSMITTAL **RESTRICTED** AMC FORM 9—9 FEB 48
REPLACES AMC FORM 80-23A WHICH MAY BE USED

FROM: [redacted] DATE 3/12 HOUR [redacted] IDENTIFICATION NUMBER [redacted]

INCOMING		INTER-OFFICE			OUTGOING		COMPLETE FILE COPY		INCOMPL. FILE COPY		NO FILE COPY	

FROM: [redacted] TO: [redacted]

REG. NO.

DESCRIPTION, DATES, AND SUBJECT: [redacted]

ENCLOSURES: 5

TO: (OFFICE SYMBOL)	COPY NO.	REC'D BY (FULL SIGNATURE)	DATE REC'D	HOUR
1 [redacted]	2			
TO: 2	COPY NO.	REC'D BY	DATE REC'D	HOUR
TO: 3	COPY NO.	REC'D BY	DATE REC'D	HOUR
TO: 4	COPY NO.	REC'D BY	DATE REC'D	HOUR

RESTRICTED ☆ G.P.O. 1950-896119

COMMANDER AIR TECHNICAL INTELLIGENCE CENTER 1911002 AUG 53
WRIGHT-PATTERSON AIR FORCE BASE OHIO

ROUTINE

CENTRAL INTELLIGENCE AGENCY
2430 E STREET, N. W.
WASHINGTON 25, D. C.

WA9784 SECRET

FROM: AFOIN-ATIRC TO ASHCRAFT FOR MOUNTAIN FROM GARLAND BY HOLDWARD

REURMSG WA9784

Reur Message WA9784. ATIC knows chemical analysis. Please furnish mechanical test results. Cite TIC-5166-A.

FOIA(b)(6) USAF [redacted] Lt Colonel, USAF
Actg Chief, Technical Requirements Division
Air Technical Intelligence Center

COORDINATION:

ATIRC1 [redacted] Date

ATIRC [redacted] Date

ATIAU3 [redacted] Date

T53-9925 A #2

1 1 0

Mr. J. O. Anderson/wjc

ATIRC1 55101 20 AUG 1953

ROBERT C. BROWN, MAJOR, USAF
ADJUTANT

~~CONFIDENTIAL~~

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

DATE 28 July 1953
SECTION Industry
BRANCH Weapons and Industry
DIVISION Technical Analysis

PROJECT NUMBERS 30022 & 30055

TRAVEL ORDER NO. 000678

SUBJECT: Travel to D/I and CIA (U)
on 22 & 23 July 1953

A. PURPOSE:

1. To hold conference with AFOIN-2 and AFOIN-3 personnel with regard to ATIC Studies 102-AE-53/1-34 (Magnesium) and 102-AE-52/3-34 (Aluminum).

2. To discuss interim report on materials applications with AFOIN-3 personnel and ORR Office of CIA, since it had been verbally reported to the writer by [redacted] of ATIA that dissatisfaction had been expressed with this report which was forwarded from ATIC 10 June 1953.

3. To discuss the joint program between AFOIN and ATIC covering materials for atomic power plants and to deliver ATIC curve showing Soviet capability to produce pure cathode nickel.

4. To complete ATIC staff work with OSI-CIA Office in conjunction with the Metallurgical Assessment Panel.

FOIA(b) (6) USAF

B. FACTUAL DATA:

5. Conference with AFOIN personnel on ATIC Studies 102-AE-53/1-34 (Magnesium) and 102-AE-52/3-34 (Aluminum). [redacted] of Stork accompanied the writer.

Persons interviewed:

Mr. [redacted] - AFOIN-2
Mr. - AFOIN-3
Mr. - "
Mr. - "

a. ATIC Study No. 102-AE-53/1-34 (Magnesium) was discussed first. Objection had been voiced by [redacted] of AFOIN-3 on 10 June 1953 that this report should not be published as submitted to the D/I for the following reasons:

(1) Intelligence information available does not justify the present assignment of either capacity or production to the Makhach Kala Plant.

(2) The study suggests that the Soviets are not using the electrolysis of carnallite process since it was not mentioned by author Belyaev.

~~CONFIDENTIAL~~
SECURITY INFORMATION

~~CONFIDENTIAL~~

FOIA(b)(6) USAF

(3) The information gained from the more knowledgeable German prisoners of war who worked at Solikamsk would bear out the contention that the electrolysis of carnallite process is being used.

b. In answer to these objections the writer brought out the following:

(1) That the production figures obtained from Targets Report 518-71367 would be deleted.

(2) That the Soviets would not likely employ the electrolysis of carnallite for the following reasons:

(a) Economic limitations imposed by impoverishment of the electrolyte in magnesium.

(b) The strict requirements governing the purity of the raw materials.

(c) The necessity of purifying the recovered potassium chloride as pointed out in the report, page 4, on authority of Beck, reference 7 in the Bibliography. Dr. Beck's statements regarding the difficulties of producing magnesium through the electrolysis of carnallite were made in his book, "Magnesium and seine Leierurigen" published in Germany, 1940, and later republished in England, 1943. This paragraph in Beck's treatise was read to the personnel attending the conference. The technical aspects and the producibility of magnesium using the electrolysis of carnallite were discussed in more detail between Mr. [redacted] and [redacted] of Stork.

c. [redacted] statement in letter to ATIC on 10 June 1953 that information gained from the more knowledgeable German prisoners of war who worked at Solikamsk would bear out the contention that the electrolysis of carnallite process is used had been interpreted by ATIC to be based on information contained in Wringer Reports. This information was requested from [redacted] It was brought out by [redacted] that he did not obtain his information from Wringer Reports but from Dr. [redacted] German Magnesium Expert, Magnesium Kontor, 22 C Knapsack Bei Köln.

d. As a result of the additional information elicited from this conference, the first paragraph on page 5 of the magnesium study will be changed to read "Owing to the difficulties imposed by this process (electrolysis of carnallite), it is assumed that the Soviets have experienced similar difficulties with the process and have subsequently discarded it in favor of the electrolysis of anhydrous magnesium chloride. However, the possibility that the Soviets could be using the electrolysis of carnallite to a limited extent should not be precluded, since electrolysis of carnallite was being used at the Solikamsk plant as late as 1948." Everyone present agreed to this change.

~~CONFIDENTIAL~~

6. The aluminum report, ATIC Study 102-AE-52/3-34, was the next subject of discussion.

a. This report was approved by the D/I and AFOIN-3 in May 1953. However, unofficial objections were subsequently voiced by [redacted] of AFOIN-3 and transmitted verbally to the Center by [redacted] who stated that much of the report appeared to be copied from Target Information Sheets and, if this were not the case, the Study represented a duplication of effort. [redacted] on 27 May, during a visit of the writer to AFOIN-3, had written the following criticism in an informal note, "As I recall the ATIC aluminum study, the objection is not that they failed to give credit to AFOIN, but that much of the study duplicated our own efforts (TIS's), thereby lowering its value."

b. Complete investigation of the facts by ATIC Metallurgical Group revealed the following facts which were stated by the writer:

(1) The production figures taken from Target Information Sheets had been condensed to 19 pages of tables and text, making a total of less than 1/7 of the entire report. This information is necessary to complement the technical data contained in the report and to demonstrate that research and development capabilities have been put to practical use, i.e., production-wise.

c. It was brought out by [redacted] and the writer that the report was being published as submitted and that [redacted] Chief Metallurgists of the [redacted] reviewed the report at the request of ATIC and had offered only praise for this effort, which we feel adds credence to the Study. It was also brought out by the writer that ATIC is not engaged in the Targets Division's mission but desires only to utilize a limited amount of Targets' information to demonstrate the pragmatic results of Soviet research and development and that such does not, in our opinion, constitute duplication of effort.

7. The curve prepared by ATIC depicting the Soviet capability to produce nickel free cobalt was transmitted personally to [redacted] who had requested this curve during the visit of [redacted] and the writer on 13 July 1953. This curve which is based on the examination of cathode nickel found in electronic tubes depicts the decrease in cobalt contents from 0.8 percent in tubes manufactured in 1947 to .001 percent cobalt in tubes manufactured in 1951 and early 1952. [redacted] agreed with the writer that while this progress is significant from the standpoint that it reveals Soviet capability to conserve cobalt, it is far more significant from the standpoint that it shows the Soviet capability to purify cathode nickel suitable for use in the construction materials to be used in atomic power plants.

8. The proposed program to be conducted jointly between AFOIN and ATIC was discussed. This includes: FOIA(b) (6) USAF

a. An overt literature survey of the Soviet efforts.

b. A coalition of abstracts to ascertain personalities (metallurgists) engaged in the Soviet atomic energy program.

c. An investigation of metals systems such as pure nickel, zirconium, vanadium base alloys, etc.

d. Tie-in with the Metallurgical Assessment Panel.

e. Investigation of synthetic graphite. FOIA(b)(6) USAF

9. [redacted] of ATIC, upon return from AFOIN-3 and CIA-ORR, had relayed to the writer that both AFOIN and CIA-ORR were dissatisfied with ATIC interim report dated 10 June 1953 covering materials applications regarding Soviet airframes. This was discussed with the following personnel: [redacted] and Haywor th, who expressed dissatisfaction with the report because the AMPR weights listed in the table do not agree with those listed in the Characteristic and Performance Handbook of March 1952. It was explained by the writer that AMPR weights are the responsibility of Aircraft Branch and not the responsibility of the Weapons and Industry Branch. [redacted] had expressed this dissatisfaction regarding AMPR weights to [redacted] on 9 July 1953.

10. The AMPR weights listed were the only item of the report to which objection was raised. [redacted] who had also expressed dissappointment in the report, was not concerned with the AMPR weights, but accepted them as being correct. [redacted] principal complaint was that the steel weights reported were not itemized by composition, i.e. 1010, 2330, etc. It was explained by the writer that when [redacted] made verbal request at ATIC (on which notes were taken) on 22 May 1953 this had not been stipulated and that, further, time did not allow for such compilation between the date requested and 10 June, the deadline date set for the report (which we thought was understood by [redacted] It was further explained by the writer that Soviet steel alloying practice utilizes the cromansil type of steel (1% Cr, 1% Mn, 1% Si, Ni 1.2-1.8%, plus .001 boron with medium carbon contents) for low steel alloy applications. This composition was designed to employ alloying constituents readily available to the USSR with the possible exception of nickel. Further, an additive alloying breakdown would be of little consequence because of susceptibility to major error in calculation of Soviet materials requirements of the various critical materials needed to sustain an aircraft production schedule.

11. It was explained that more detail would be contained in the final report which should be completed by [redacted] approximately 1 October 1953. The progress on this project will be checked prior to [redacted] visit to ATIC, 29 July 1953.

12. CIA-OSI

[redacted]

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA
FOIA(b)(6) USAF

~~CONFIDENTIAL~~

a. It was explained by [redacted] that owing to budgetary limitations, CIA had been compelled to dispense with the consulting services of [redacted] beginning 1 July 1953. Since [redacted] in conjunction with the writer, had been carrying out CIA and ATIC's program with the Metallurgical Assessment Panel, this completed staff work and metallurgical consultation with the various members will have to be carried on at least by the Metallurgy Group of ATIC.

b. The writer on his visit to New York on 15 and 16 July reported to [redacted] that both [redacted] had run out of work and that arrangements were being made to send a number of Soviet publications covering Soviet metallurgical research in steels and high temperature alloys to these panel members [redacted]

c. The work of the Metallurgical Assessment Panel has produced considerable technical intelligence information. This panel consists of qualified metallurgists who read the Soviet overt literature, prepare digests and evaluations to eliminate the long, arduous process of translating these articles word for word. Better accuracy has also been obtained through this method, in addition to speeding up the work, since many of the articles heretofore translated word-for-word style cannot be relied upon because of translator's errors in supplying the correct technical terminology. Further, overall viewpoints being evolved by these high level metallurgists are proving to be most useful.

C. CONCLUSIONS:

13. The conferences regarding ATIC Studies 102-AE-53/1-34 (Magnesium) and 102-AE-52/3-34 (Aluminum) were beneficial in that:

a. More information was obtained with regard to the magnesium study and that

b. the unofficial claims of copy work and duplication of effort were clarified.

14. Dissatisfaction with the materials applications interim report was apparently due to misunderstandings on the part of AFOIN-3 with regard to AMPR weights and the scope to be covered on the part of [redacted] This latter problem is the result of a verbal request.

15. The technical intelligence mission with regard to atomic energy will be augmented through cooperation with [redacted] of AFOIN.

D. RECOMMENDATIONS:

16. That future requirements placed on ATIC personnel be submitted in writing by all agencies concerned before acceptance by ATIC, particularly ATIC Project 30055 covering Soviet materials applications.

PREPARED BY:

[redacted]

FOIA(b)(5) USAF

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DATE: 21 Jul 53

21 Jul 53

(U) Foreign Status of Air Weapons' Metallurgy

To determine the present and future R&D capabilities of the USSR, principal Satellites, and [redacted] Countries with respect to the metallurgy of air-weapons, using the status of U.S. metallurgical R&D as the basis for comparison; and publish studies on same.

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FOIA(b)(1) USAF

1. Establishment of foreign metallurgical capabilities constitutes a major factor in estimating the overall foreign capabilities to wage air warfare.

2. Owing to the important contribution that the science of metallurgy offers in fulfilling the mission of ATIC, a Project Stork Proposal, PPS 149, has been initiated outlining the program to be implemented. A copy of PPS 149 is attached hereto which presents full details of this program of work.

3. This project is initiated for the purpose of monitoring the program outlined which is a continuation of Project 30022 with the Satellites and [redacted] countries added.

5. The security classification of the studies listed below will probably be Secret.

Project Stork
PPS-149

[redacted]

ATIAW-3 53167
ATIAW 66332

SECURITY INFORMATION

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T53-5490-B

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ACQUISITION

C

1 Acquisition will be accomplished on a continuing basis using the same methods employed for Project 30022. The procedure to be followed will consist of: screening, elimination, and selection of pertinent material from Intelligence Reports and the foreign overt metallurgical literature. The time spent by the project monitor in analysis of Intelligence information will be charged to Project 9998.

2. With regard to the overt metallurgical literature of the USSR, a large portion of this literature will be submitted to the Metallurgical Assessment Panel (composed of Metallurgists who read Russian) which will review the contents, prepare digests, and evaluations. This work will be accomplished in conjunction with [redacted] [redacted] Travel to New York via Washington to complete ATIC staff work will require 12 trips over a period of two years. 288 30 Jun 58

INTERPRETATION

D

3 Project monitor will maintain close liaison with contractor prior to receipt of each report. 24 trips to Columbus, Ohio and return will be required. Estimated manhours 288

4 Contractor's interim reports will be due as follows:

a. Satellite countries. Required manhours for review 24 1 Dec 53
b. [redacted] countries. Required manhours for review 24 15 Dec 53
c. Summary of new information collected on USSR Required manhours used for review 48 30 Apr 54

5 Contractor's completed reports will be due as follows:

a. Satellite countries. Required manhours for review 32 15 Jul 54
b. [redacted] countries. Required manhours for review 40 15 Jan 55
c. Completed revisions of the following ATIC basic studies on the USSR:

102-AE-52/3-34
102-AE-53/1-34
102-AE-53/2-34
102-AE-53/3-34
102-AE-53/4-34
102-AE-53/5-34
102-AE-53/6-34

Required manhours for review 200 30 Jun 55

Additional planning of manhours and dates for coordination and distribution will be accomplished at a later date at which time more realistic estimates can be made.

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FOIA(b)(6) USAF

~~SECRET~~
AUTH: CO, ATIC
BY: [redacted]
DATE: 8 May 53

ATIA [redacted] ATIAW/53167

(U) Foreign Status of Air Weapons' Metallurgy

It is proposed that Stork determine the present and future R&D capabilities of the Satellites, Western European countries, and the USSR with respect to air weapons' metallurgy, using U. S. metallurgical R&D as a standard basis of comparison.

a. Definition of the problem.

Metallurgical research and development capabilities to support an aircraft and guided missiles program are to be estimated for the countries listed below with regard to each nation's present and future state of the art with the latter to be covered by five and ten year predictions from the dates of publication of the reports listed under item "e".

Determination of the status of R&D in air-weapons' metallurgy is to be made for the following countries:

(1) Principal Satellites
East Zone of Germany
Czechoslovakia
[redacted]
Hungary
[redacted]
Poland

FOIA(b)(1) USAF

2 Incls
1. Chart I
Metallurgical Capabilities
2. Chart II
Metal Systems

153-5490

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6.

(2) [redacted]

FOIA (b) (1) USAF

(3) USSR - revision of basic studies.

*See item c(1)(a)

b. Approach to the problem.

Owing to the broadness and complexities of the problem to be solved, the approach to be employed must be confined to one of selecting those technical characteristics, namely, the types and phases of R&D that are sufficient to depict the effective nature of the whole structure under study.

Determination of the foreign status in each of the selected areas, compared with the U.S., will provide a means to evaluate relative capability. For example, the ability of any nation to manufacture a suitable turbine bucket of proper design and material would also indicate capability to accomplish the same feat for other jet-engine components. This method of attack when applied to the USSR and Satellites (or to other governments that will not furnish exchange information) has still another advantage in that these selected characteristics, when viewed collectively from the standpoint of technical level and rate change, will provide indicators of capabilities as well as reflect the general nature of emphasis being placed on the types of air-weapons for both now and in the future. A series of tests, for example, to determine whether a material can withstand hot fuming nitric acid would indicate intended use of such material in rocket applications. This is based on the premise that the USSR is a controlled entity with R&D planning being directed from a central source toward specific objectives in a balanced manner.

The fundamental areas for this approach have been established by reviewing the principal aims and objectives that appear to guide the research efforts of most nations in the field of air-weapons' metallurgy. These objectives are primarily improved metals that can be made and fabricated economically to meet the requirements of present and future designs through attainment of:

(1) Higher allowable operating temperatures in high-temperature alloys and development of alloys requiring less critical materials;

(2) Development of suitable aircraft quality steels with higher strength. (250,000 psi) with less critical alloying constituents;

(3) Higher strength aluminum and magnesium alloys of 90,000 to 100,000 and 60,000 psi respectively that are not readily susceptible to corrosion, notch-sensitivity, fatigue, and appreciable loss of strength at temperatures of 400-500°F.

[redacted] INFORMATION

T53-5490

6. (cont'd)

(4) Titanium alloys produced at moderate cost and suitable for use in aircraft applications;

(5) Improved economical methods in process metallurgy and fabrication that will in turn provide the required mechanical properties of metals to serve in the applications selected.

The study of foreign R&D in physical metallurgy, process metallurgy, and fabrication field to determine the present and future state of the art appears to be consistent with this type of approach, which is limited to investigations of the following metals systems:1/

(1) High temperature alloys

(a) Nickel base
(b) Cobalt base
(c) Molybdenum base
(d) Chromium base
(e) Powder metallurgy products
(f) Heat resistant coatings, diffused coatings, etc.
(g) Other systems that might be under investigation.

(2) High strength-to-weight ratio metals for aircraft

(a) Aircraft quality steels

1. Stainless (austenitic)
2. Low alloy compositions for aircraft structure

(b) Aluminum and its alloys
(c) Magnesium and its alloys
(d) Titanium and its alloys - (all information R&D, production and economic)

1/ These systems represent significant areas of R&D sampling. It is very probable that R&D activities will not be found in all of these systems, and for this reason lack of information in certain areas, e.g., chromium and molybdenum base alloys, will not necessarily be considered as a gap.

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6. (Cont'd)

Owing to the paucity of information on foreign efforts in the field of titanium, all available R&D, and data covering the amounts of the pure metal produced are to be reported since this type of coverage will complement and confirm technical trends that might be indicated through the study of R&D.

With respect to the other metals systems listed above, the following types of foreign R&D most worthy of investigation are listed in their order of importance:

(1) R&D in physical metallurgy

(a) Basic or fundamental investigations covering alloy theory, phase diagrams, metallography, study of single crystals, elasticity, plasticity, deformation, solid state reactions, the nature of alloys in liquid state -- in general, the basic nature of metallurgical phenomena to sound the keynote on future developments.

(b) Applied R&D
Tests and description of new testing methods, alloy duplication, and general problems pertinent to present usage. Also included would be actual laboratory examinations and evaluations of metals in foreign aircraft and aircraft equipment to determine the status of applied R&D.

(2) Significant R&D in process metallurgy, i.e., smelting, casting, heat-treating, diffusion processes, and forging. (Welding is to be covered in a separate study, except for titanium.) Heat-treating and diffusion processes listed here refer to new methods and manufacture rather than physical metallurgy.

(3) Significant R&D or trends in fabrication of aircraft metals for example new methods of extrusion, continuous rolling of magnesium, methods to prevent flaking of steels, etc, which can enhance production and the overall capabilities, as well as mechanical and physical properties of metals.

The general outline of this approach is presented in Charts I and II.

6. (Cont'd)

FOIA(b)(1) USAF

c. Sources and collection of data

(1) The sources of data for this project are to include:

(a) Intelligence documents to be furnished by AFIC including re-ports prepared by ARTC metallurgy group on [redacted]

(b) Evaluated information elicited by Stork from laboratory examinations of metals samples furnished by ATIC;

(c) Foreign overt metallurgical literature available from ATIC and in Stork library;

(d) Foreign metallurgists who might visit Stork;

(e) Metallurgists either migrating or returning from abroad. If any Stork personnel have knowledge of metallurgist's returning from abroad who might be able to contribute significant information to these studies, the ARTC metallurgy group is to be notified. Debriefing arrangements [redacted] initiated by the Weapons and Industry Branch, Technical Analysis Division of ATIC.

(2) The collection of data for the three groups of countries listed is to run concurrently with efforts to be directed toward establishing metallurgical R&D capabilities with respect to air-weapons. This in turn will also satisfy the requirements of ARTC which is interested in developments in advance over those in the U.S.

4. Reports

(1) The following are to be incorporated in all reports except where indicated in accordance with the objectives listed in Chart II:

A. Research and development

1. Government Metallurgical Research and Development Structure

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

SECURITY INFORMATION

6. (Cont'd)

a. Court of Academics
b. Court of Political Supervision
c. Republic's Academies

2. Educational Systems

a. Universities
b. Factories
c. Academies & Professional Societies

3. Research and Development Facilities

a. Government Facilities and Laboratories
b. Factory Facilities
c. Academy Facilities
d. Projects

4. Personalities

a. Level of quality
b. Who's who, location, accomplishments, etc.

5. Names of technical publications reporting metallurgical R&D[1]

6. Analysis of metallurgical research and development capability

B. Fabrication

1. New developments in fabrication techniques

a. Rolling
b. Forging
c. Extruding
d. Welding
e. Casting
f. Forming

[1] See references (a) (c)

6. (Cont'd)

c. Present and future capabilities (discussion and curve)[2]

(2) References

(a) Literature tables and cards.
The overt metallurgical literature of the countries listed is to be studied and evaluated as was accomplished in FTS-020. However, in the case of the USSR, the relative frequency and difference in the rate of research activities are to be indicated and depicted in table form to indicate the trend in research activity as was accomplished in the second progress report of FTS-020 dated 15 December 1951 which lists the numbers of papers received by periods under four categories: texts, methods, general theory, and problems. The rate of research activity in turn reflects to a degree the nature and behavior and possible intent of the USSR as a whole, as well as technical trends, and since this type of information records the pulse, so to speak, of the Soviet metallurgical research activities, this table is to be brought up to date and forwarded to AMIC no later than 15 August 1953. The second date of revision will be 15 April 1954, with the third revision to be incorporated in the R&D and summary study to be revised.

In revising this table consideration is to be given to enchancing its reliability as an indicator of Soviet activity. For example, frequency of occurance of articles in the same periodical including any new publications might be one means of increasing reliability. (The inference has been drawn that the increased number of articles displayed by the table was caused by increased collection activity.) At best this technique represents a rough rule of thumb, but owing to the interest shown, revision should be accomplished. However, revision is not to be over-emphasized.

The significant findings in the Soviet literature should be recorded and evaluated on TIXY cards and forwarded to AMIC at regular intervals in order to maintain a continuous flow of information to the Center.

[2]See References (2)(b)

6. (Cont'd)

(b) In addition to the discussions and conclusions drawn in the reports, present and future capabilities are to be depicted graphically to establish indices of the rate of change or adaptability of the various R&D structures. These curves are to have a starting point several years prior to the present and extend into the future for five and ten year periods using U.S. curves as standard bases of comparison. This will indicate the areas of R&D emphasis, which in turn will show behavior and intent. Such curves are to be incorporated in all final reports depicting each country's status starting with 1942 as the zero point. Progress is to be reflected from this point to the present and then extended firmly five years into the future. The second five year period, which is to be added to make a total of ten years prediction should be shown with broken lines (dots, dashes, etc.) because of the number of variables, e.g., political changes affecting the overall picture. Extrapolations are to be tempered by the R&D examined and qualified in the text. The following curves are to be plotted:

1. Progress in allowable operating temperatures in high temperature alloys.

2. Progress of increasing the strength of low alloy aircraft quality steels.

3. Progress of increasing strengths of suitable aluminum alloys.

4. Progress of increasing strengths of suitable magnesium alloys.

5. Progress in production of titanium alloys.

2. Report due dates

The need for a continuous flow of information as outlined above is urgent to ATIC in satisfying the requirements placed on this Center by other Government agencies. Therefore, in addition to the literature activity tables due on 15 August 1953 and 15 April 1954 and the TIIF cards reporting and evaluating significant metallurgical research items, Stark is to furnish two interim reports on the

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6. (Cont'd)

Satellite and [redacted] countries. Following is a list of reports to be submitted and the latest possible dates for coordination copies to arrive at ATIC:

(1) 1 December 1953, interim report on satellite countries.

(2) 15 December 1953, interim report on [redacted]

(3) 30 April 1954, summary of new information collected on the USSR.

(4) 15 July 1954, completed study on Satellite countries.

(5) 15 January 1955, completed study on [redacted]

(6) 30 June 1955, completed revisions of the following ATIC basic studies on the USSR:

102-AE-53/3-54
102-AE-53/1-54
102-AE-51/2-54
102-AE-53/3-54
102-AE-53/4-54
102-AE-53/5-54
102-AE-53/6-54

The due dates for the coordination copy of the reports listed above are suggested only and will be subject to change on mutual agreement between Stark and ATIC prior to 1 August 1953.

Cut-off dates for information to be included in the final reports will be established 120 days prior to the dates that each report is due at ATIC for co-ordination.

[redacted]
Acting Chief, Weapons and Industry Branch
Technical Analysis Division
Air Technical Intelligence Center

FOIA(b) (5) USAF

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COORDINATION

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ATIAW-3/[redacted]/tls
53167/B263/P44D

In reply refer to
FOIN/ATIAW-3

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16 JUN 1953

SUBJECT: Transmittal of Correspondence (U)

THRU: Directorate of Intelligence
Headquarters USAF
ATTN: AFOIN-1B
Washington 25, D. C.

Declassified Authority: 27211
By: Dorothy Johnson Date: 07-02-2014

TO: Central Intelligence Agency
Headquarters USAF
ATTN: OSI, [redacted]
Washington 25, D. C.

FOIA(b)(6) USAF

1. Pursuant to the agreement between Messrs. [redacted] of the Office of Scientific Intelligence, CIA, an [redacted]

2. A copy of the documents listed will be made available to your organization upon your request.

FOR THE COMMANDING GENERAL

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

[redacted]
1st. Lt., USAF
Asst. Adjutant

2 Incls
1. List of docus
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2. Cy of PFS
T53-5490

If inclosure 1 & 2 are withdrawn (or not attached), the classification of this correspondence will be downgraded to Conf. in accordance with paragraph 25E, AFR205-1.

Documents

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OFFICIAL FILE COPY

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T53-5490-A

AMC Form 8 (Rev 17 May 50) Superseded AMC Form 8, Rev 1 Apr 48, which will be used. Air Force-WPAFB-L-23 JUL 52" 3600M

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AUTH: CO, ATIC
BY: [redacted]
DATE: 10 Jan 97

FOIA(b)(1) USAF

FOIA(b)(6) USAF

LIST OF DOCUMENTS RELATIVE TO SOVIET TITANIUM ACTIVITIES

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

SUBJECT	ORIGINAL NUMBER	ATIC NO.	NAD NO.	DATE
[redacted]		62029		1952
		56602		1952
			65632	1950
Titanium Metal Production. [redacted]	ATI-810-53	117127		1953
Titanium Metal Research	ATI-584-53	115866		1949
[redacted]		56602		1952
		90390		1952
Developments in the Field of Titanium and Other Rare Light Metals in [redacted]	Hq EC RST 86-49		48959	1949
[redacted]			62025	1950
Welding Electrode Production [redacted]	USAFE/Ltr 12 Mar 51		81384	1951
Interview Report		116167		
[redacted]			65632	1950
		ATI NO. 8577	AF NO. 325640	1951
USSR Titanium Activities	AA/IR-282-51		80393	1951

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LIST OF DOCUMENTS (CONTD)

SUBJECT	ORIGINAL NUMBER	ATIC NO.	NAD NO.	DATE
World Wide Status of Titanium	Memo dtd 14 Aug 52, No 52-10	76353		1952
[redacted]		31741		1951
Titanium Developments	Hq-USAFE/Rpt- 23 Nov 49		51486	1949
Activities in Light Metal Research at [redacted]	ATI-195-51	ATI NO. 6536		1951
USFA Special Biweekly Report No. 143, Part III	USFA Spec. Biweekly Rept. 143, 11 May 51		86364	1951
Report on Academy of Sciences of USSR for 1950	ATI-212-51	ATI NO. 12845		1951
[redacted]		ATI NO. 6591	AF NO. 930034	1951
Raw Material Shortages in the Soviet Zone	HQ-EC/R-408-50		67777	1950
Titanium Activities (Revised)			44164	1950
Titanium Research at the Electro-Chemical Combine [redacted]	ATI/230-52	50901-A		1952
Study of Production Conditions of Titanium Carbide		NO. 2611		

FOIA(b)(1) CIA/USAF
FOIA(b)(3) - 50 USC 403g - CIA

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AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
OHIO

DATE 18 May 1953
SECTION Industry
BRANCH Weapons and Industry
DIVISION Technical Analysis

PROJECT 30022, 9993, & 9974

TRAVEL ORDER NUMBER 0000458

SUBJECT: Travel to [redacted] and [redacted]

A. PURPOSE:

1. a. To submit a VK-1 turbine bucket and make arrangements for laboratory tests and evaluation [redacted]

b. Obtain information on Soviet R&D in stainless steels, [redacted]

c. Complete ATIC staff work with [redacted] in conjunction with the Metallurgical Assessment Panel.

2. Review progress of ATIC [redacted] projects in conjunction with [redacted] and the Metallurgical Assessment Panel.

3. Review progress of ATIC work, deliver Charpy test bars and discuss the next series of tests relative to notch sensitivity properties of Soviet croman-sil steel.

4. [redacted]

B. FACTUAL DATA:

1. [redacted]

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA
FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF
FOIA(b)(6) USAF

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FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF

FOIA(b)(6) USAF

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

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FOIA(b)(6) USAF

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FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

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FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF

FOIA(b)(6) USAF

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods

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FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF

FOIA(b)(6) USAF

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods

C. CONCLUSION:

1. ATIC evaluation of the Soviet state of the art in steel metallurgy have been confirmed by [redacted]

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2. A more realistic monitoring of ATIC projects in the field of semi-conductors should result from the information obtained from [redacted]

D. RECOMMENDATIONS: None

PREPARED BY

[redacted]

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FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods

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[redacted] 8 Dec 52

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE

PROJECT NUMBERS: 9982, 30022, 30042, and 30050

DATE: 8 Dec 52,
SECTION: Materials and Methods
BRANCH: Associated Equipment
DIVISION: Technical Analysis

TRAVEL ORDER NUMBER: 0001230

SUBJECT: Travel to [redacted]

FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF
FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA CIA

FOIA(b)(1) USAF

A. PURPOSE

1. Review contractor's progress on ATIC precision equipment industry.

2. Check availability of Soviet machine tools [redacted]

3. Make arrangements for translations and evaluations of Soviet metallurgical literature dealing with basic research.

4. Obtain evaluation on a new lead-silicon alloy [redacted]

5. Discuss and make arrangements for tests relative to notch-sensitive properties of Soviet chromansil aircraft steel.

6. Attend ASME meeting on heavy press program for light metals.

B. FACTUAL DATA

FOIA(b)(6) USAF

1. [redacted]

Persons interviewed:

[redacted]

2. Project No. 30050, "Soviet Capabilities in Aircraft Instrument Manufacturing", was discussed [redacted]

3. [redacted] stated that there were several new features in the Soviet instruments that would be useful [redacted] UNCODED and it was their intention to adopt them. Although they are doing this work gratis they have had one engineer on this project full time and another working four hours

FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF

NW#:27211 DocId:338527

a day since August. They expect to have more details for ATIC within the next three weeks. [redacted] apparently have full understanding of the objectives desired by ATIC and are so enthusiastic and pleased with the results obtained from this project that they are progressing a month ahead of schedule.

4. [redacted]

Foreign machine tools [redacted] were examined. They are inferior to their U. S. counterparts. [redacted] stated that Soviet machine tools are not available for export. They did have some Czechoslovakian machinery ordered, but their agents cannot obtain export permits.

5. [redacted] FOIA(b)(6) USAF

Person interviewed: [redacted]

6. Visit to [redacted] was made [redacted] Clark of C.I.A. [redacted] who translates Russian, has just completed a study of a number of Soviet technical papers on which he will prepare digests and evaluations for ATIC and C.I.A.

7. Most of the papers reviewed by Dr. Krivobak are on high-temperature metallurgy and stainless steels. Of interest is the Soviet research on stainless steels containing amounts of boron up to 0.1 per cent for the purpose of grain refinement. Boron can be added to low alloy steels in the amounts of .001 to .003 per cents to increase hardenability; this is now practiced in the U. S. and other countries, but experience has shown that additions of more than .004 per cent cause segregation. Additions of 0.1 per cent to austenitic stainless steels for grain refinement represent a new approach. The Soviet photomicrographs show considerable grain refinement when 0.1 per cent boron is added to AISI type 310 (25 Cr + 20 Ni). [redacted] and the writer are of the opinion that laboratory evaluation of this Soviet research should be made.

8. [redacted] who emigrated to the U. S. from Russia, was educated at MIT and Harvard. He has willingly donated his services to ATIC, stating that he would not accept "a red cent for a patriotic duty." He requested that ATIC continue to supply him with Russian metallurgical literature on which digests and evaluations are desired. His work will be continued at no cost to the government.

9. [redacted]

Person interviewed: [redacted]

10. [redacted] who is American-born, translates Russian very fluently. To date she has contributed a number of valuable digests to.

T52-19711

C.I.A. and ATIC that have been used in status of metallurgy project, 30022. Inasmuch as she had previously stated to [redacted] Clark that she desired a contract directly with the Air Force and would not accept a subcontract through another organization, the writer made inquiry as to her terms and the amount of hours she could devote to ATIC work. An estimate of 1,000 man hours per year at $3.00 per hour was made by [redacted]. This will include (1) complete review of the Russian literature furnished by ATIC; (2) preparation of a digest, and (3) evaluation of the Soviet work using U.S. and U.K. R&D as a standard basis of comparison.

11. If this kind of contract is negotiated, it should result in increased efficiency and considerable savings to ATIC because more articles can be reviewed and evaluated with elimination of the word-for-word system by a translator who cannot evaluate and who oftentimes supplies the wrong technical terms. It will also save time for ATIC metallurgists who will neither have to read a whole Russian article nor spend undue time in collateral reading in order to evaluate the Soviet efforts.

12. [redacted]

Person interviewed: [redacted] FOIA(b)(6) USAF

13. Arrangements were made by Dr. Frances Clark of C.I.A. for evaluation of a [redacted] technical paper and sample of a new lead-silicon alloy claimed to be twice as strong as ordinary lead. [redacted] are especially equipped and well qualified in lead metallurgy, and will make no charge to ATIC for this evaluation.

14. Columbia University.

Person interviewed: [redacted]

15. [redacted] professor of metallurgy and head of the metallurgy department, is known to be an outstanding authority on transition temperatures and notch-sensitivity of metals. Since the writer is not fully satisfied with the conclusions of Stork engineers with regard to notch-sensitivity in the cromansil types of steel (principal Soviet aircraft steel), arrangements were made with [redacted] to do a study on this steel. Samples will be forwarded for laboratory evaluation at no cost to ATIC.

16. Heavy Press Meeting, [redacted] FOIA(b)(1) USAF

Since knowledge of the [redacted],000, 15,000 ton hydraulic presses, as well as the 12,500-ton extrusion presses was introduced initially by ATIC in 1945-46, [redacted] represented ATIC at the [redacted] session covering the Air Force heavy press program. The chief advantages of such presses (listed by ATIC in 1946) are:

a. Highly increased production.

b. Conservation of both time and materials in that machinery is eliminated as well as the problem of short die life; and

c. Better properties in the material and longer life of the component part, which are necessary to facilitate longer range and increased pay loads.

17. The following papers were presented in order:

a. 'Requirements For Large, Light Metal Forgings and Extrusions in the Aircraft Industry - by [redacted] This paper discussed the aircraft industry requirements for large forgings and extrusions and supported these requirements by analyzing the effect of the trend in performance on aircraft structure, function, and production. The paper confirmed that large integral structural components satisfy these trends better than a continuation of conventional "bits and pieces" structure. It further concludes that large forgings and extrusions are the most economical methods to produce integral type structure. In addition, detail requirements of large forgings and extrusions relative to physical properties, tolerances and refinements werepresented. Statistical studies were also presented to indicate the high potential use of large forgings and extrusions.

b. The Design and Construction of Large Forging and Extrusion Presses For Light Metals - by [redacted] This paper sketched the history of forging and summarized the problems in design of such equipment. Equations dealing with the correct analytical approach were then presented covering the work of Karman and Nadai, who, with the author of the paper, evolved a mathematical relationship between pressure required to forge (or press) and the basic yield stress of the material. These equations were presented along with those covering design of the equipment.

c. Metallurgy and Production of Suitable Aluminum Alloy Ingots For Large Forgings and Extrusions - by [redacted] The sizes of 14S, 24S, and 75S aluminum alloy ingots needed for the USAF large press program were estimated and compared to the size of ingots cast in current production. The direct-chill process was selected for development of the casting of large ingot. Quality required, metallurgical factors involved, equipment used, casting variables were discussed. Experimental results in casting 14S aluminum alloy ingot weighing up to 12,000 pounds were presented. An opinion was expressed on the future production of large aluminum alloy ingot for use in extrusion and forging presses up to 25,000 and 50,000 tons capacity, respectively, in which it was stated that production of such ingots is possible.

d. Large Forging Press Operations and Production Problems - by [redacted] Examples of forging design prob-

lems and progress were shown and discussed, illustrating recent advancements in the production of forgings with thin webs, smaller fillet and corner radii, and closer tolerances. Advances in manufacturing techniques were described, including new processing methods and equipment. Factors affecting procurement time and costs were then presented.

e. Large Extrusion Press Operation and Production Problems - by [redacted] of America. This paper brought out that giant presses now under construction or planned in this country will enlarge by several fold the size of light metal shapes and tubes that may be extruded. The operation of the new presses will present many production problems, both predicted and unpredicted, but at the same time will permit the extrusion of large or intricate shapes which lead to economy and versatility in aircraft construction. A review of operating techniques and problems associated with present large extrusion presses called attention to some of the expected problems, emphasizing the increased scope of the extrusion process to provide metal shapes designed for the utmost usefulness.

FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods

C. CONCLUSIONS

1. Since the USSR and satellites still refuse to export machine tools to western countries, it is indicative that they lack sufficient quantities of such equipment to satisfy their own requirements.

2. Soviet instrument manufacturing techniques are not as a whole equal to those in the U.S.; however, in a few cases Soviet methods excel those presently utilized in the U.S.

3. Both time and funds will be conserved in procuring evaluated digests of Soviet metallurgical literature from qualified metallurgists. This practice to date has proved to be considerably more efficient from the standpoint of quantity and quality than conventional translations. This will also reduce expenses of ATIC, both at the Center and at Stork.

4. Laboratory evaluations of materials [redacted] at no cost to the government will be beneficial to ATIC, since both Columbia and Bell have the specialists required for plotting transition temperatures and evaluating lead samples, respectively.

5. The Air Force large press program appears to have made remarkable progress since its date of inception. While 50,000 ton hydraulic presses seem practical, it is the opinion of the writers that a press of 75,000 tons capacity would not be feasible at the present because of the apparent lack of aircraft components that would require such pressures to forge. Since it is an established fact that the Soviets have moved the 30,000 ton hydraulic press from Bitterfeld, Germany, to the USSR, and are very likely to use this press in the production of aircraft parts, the Air Force press program should be followed by ATIC to establish parameters for a standard basis of comparison; this seems especially logical in view

of the fact that ATIC originally introduced and evaluated the use of such equipment.

D. RECOMMENDATIONS

1. That a contract be given to [redacted] to prepare digests and evaluations of the Soviet metallurgical literature.

2. That ATIC make laboratory evaluation of the Soviet use of boron in stainless steels.

FOIA(b)(6) USAF

PREPARED BY:

[redacted]

[redacted]

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T52-19711

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SECRET
AUTH: CG ATIC LWA

DATE: 6 May 1952

AIR TECHNICAL INTELLIGENCE CENTER
HEADQUARTERS, USAF

FOIA(b)(6) USAF
FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods
FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA CIA

May, 1952

SECTION: Materials & Methods
BRANCH: Associated Equipment
DIVISION: Technical Analysis

PROJECT NUMBER: 30022

TRAVEL ORDER NO: 0000533

SUBJECT: Travel to: (1) [redacted]

A. PURPOSE:

1 and 2. To discuss the possibility of review of Soviet metallurgical literature with Russian-speaking U. S. metallurgists.

[redacted]
FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

F. FACTUAL DATA:

1. It has been felt for some time that adequate evaluation of Soviet metallurgical literature can best be made by qualified metallurgists who have a fluent knowledge of scientific Russian. With this purpose in mind, [redacted] and the writer are attempting to build up a supply of such personnel and interest them in reviewing Soviet metallurgical literature. [redacted]

a. [redacted]

b. [redacted]

c. [redacted]

d. [redacted]

e. [redacted]

T52-10417

NW#:27211 DocId:3385288 SECRET SECURITY INFORMATION

Incl #1

4. Visit to [redacted] Washington, D. C.

On 28 April, 1952, the writer visited [redacted] at the above agency. The purpose of the visit was to obtain general guidance information in the field of metallurgical R&D in [redacted] China, and [redacted] This information is to be used in a short background summary of available [redacted] information and is to be sent to the ATLOs in the respective countries for guidance in obtaining further [redacted] information. This procedure for MIS studies was explained to [redacted] and was received favorably. A recent survey of the availability of Soviet metallurgical literature made [redacted] and the Library of Congress was given to the writer. [redacted], it is considered important that all the Soviet metallurgical literature be carefully reviewed. The above survey will be coordinated with Project Stork. A general collection requirement will be set to obtain all Soviet metallurgical literature not available in the United States at present.

[redacted]

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Time did not permit a review of the Soviet metallurgical translations available [redacted]. A list of these translations will be requested through ATIC's Document Services Section.

[redacted]

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T52-10417

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CO, ATIC

BY: [redacted]

31 Mar 52

(Secret) "USSR Research Capabilities in The Solid State of Physics

ATIAE
(No Reply Required)

ATIAS

31 Mar 52

FOIA(b)(6) USAF [redacted]

1. [redacted] comments 1 & 2 to DF dated 15 February 1952, subject "Preparation of USSR Physics Report", from ATIAE to ATIA; and subsequent discussions with personnel of the Electronics Section. As a result of these discussions, contributions of ATIAS in rough draft form entitled "USSR Research Capabilities in the Solid State of Physics" is forwarded herewith for transmittal to D/I to satisfy their requirements.

2. The subject matter has been narrowed to basic research in physical metallurgy which is in accordance with agreement reached in conference between [redacted]

3. The contribution of ATIAS to RU-101 will include Soviet research in solid state physics of metals as applied to the development of improved aircraft materials. All of the attached information is expected to be included in ATIAS contribution to RU-101, (Project 30022) in September 1952.

1 Incl
"Rpt, USSR Research Capabilities in the Solid State of Physics"

[redacted]
Actg Chief, Associated Equip Section
Technical Analysis Division
Air Technical Intelligence Center

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

Declassified Authority: 27211
By: Dorothy Johnson Date:
07-07-2014

ATIAS FILE
30022
FILE NUMBER
[redacted]
INITIALS
31 Mar 52
DATE

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T52-6569A -2

SECURITY INFORMATION

NW#:27211 DocId:338531

SECRET

CO, ATIC
BY: H. E. Martin
3 Mar 1952

AIR TECHNICAL INTELLIGENCE CENTER
HEADQUARTERS, USAF

DATE: 3 March 1952
BRANCH: Materials and Methods
SECTION: Associated Equipment
DIVISION: Technical Analysis

PROJECT NUMBERS: 9982, 30022

TRAVEL ORDER NUMBER: 0000215

SUBJECT: Travel to C.I.A., Hq. USAF Air Targets Division, and Annual Meeting of the American Institute of Mining and Metallurgical Engineers.

A. PURPOSE:

1. Visits to C.I.A. and Air Targets Division, Washington, D. C., were made in order:

(a) To make a direct comparison of Air Targets' plant file to the [redacted] and then extract any information pertinent to the study of Soviet Aircraft Metallurgy (Project 30022 and PPS 20, Project Stork) which has not been reviewed by ATIC. Information on light alloy and high temperature alloy fabrication, and metallurgical research institutions was sought. Conferences were also to be held with C.I.A. personnel to determine if any such work had been performed by C.I.A. The most complete file was to be chosen for review. Due to the expected magnitude of the job, two engineers from Project Stork participated in the part of the visit which involved the extraction of data.

(b) To find out whether a list of metal fabricating equipment exported to Russia is available.

2. Visit to a part of the annual meeting of the American Institute of Mining and Metallurgical Engineers was made to attend symposiums on uncommon metals and on powder metallurgy.

B. FACTUAL DATA:

3. C.I.A. AND AIR TARGETS DIVISION

(a) The writer visited C.I.A. on 20 February 1952. Prior arrangements called for a conference between the writer and [redacted] O.R.R. Due to the recent death of [redacted] initial discussions were held with [redacted] his successor. [redacted] stated that his Section, which has the responsibility for aluminum, magnesium, titanium, copper, zinc, tin and lesser non-ferrous metals, has produced [redacted] toward analyzing fabricating capabilities and equipment of the Soviets in the aluminum or magnesium industries; however, he has recently been assigned to this problem. He further stated that his Section has

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not been able to go through the [redacted] to make a plant analysis, and that he has not compared it to the Air Targets plant file.

(b) [redacted] O.R.R., was not available on 20 February; a discussion with him was held during the return visit of the writer [redacted] on 26 February. The Ferrous Branch is concerned with the iron, manganese, chromium, nickel, molybdenum, vanadium, tungsten and cobalt industries. [redacted] gave the writer a report on the most recent estimates of the raw material supply of the above metals. He showed the writer a rough draft of his thoughts on Soviet steel fabrication capabilities: ATIC will receive a copy of the report as soon as it is finalized. The [redacted] has not yet made a plant analysis from the [redacted] nor has it made a comparison of the [redacted] to the Air Targets file.

(c) Subsequent to the talk with [redacted] on the 20th, a talk with [redacted] of O.R.R., confirmed the fact that due to their recent loss, the [redacted] was in no position to give information on Soviet light alloy fabrication. It was thought, however, that [redacted] f I/Air may be of some assistance.

(d) The writer met [redacted] and mutual responsibilities were discussed. [redacted] introduced [redacted] a member of his staff, who is at present analyzing the Soviet aluminum fabricating industry between the pig and the finished part stages. As this work was initiated only two months ago, no reports are available. [redacted] is using the [redacted] for this work and has been intending to make a comparison of it with the Air Targets file. [redacted] and the writer proceeded to the [redacted] to review several of the aluminum fabricating plant folders. The writer catalogued two plant folders selected at random, with the intention of comparing the documents in the [redacted] with the documents available in the Air Targets file on the identical plant. As the writer was going to complete this comparison at Air Targets on 25 February, arrangements were made for a return visit of the writer on 26 February to discuss the results of the comparison with [redacted] During this time [redacted] had the [redacted] Index reproduced for ATIC on the categories of nonferrous resources and fabricating facilities, heavy metal-working equipment plants, aircraft plants, and research and development facilities. [redacted]

(e) The writer met briefly with [redacted] to supply them with additional information on powder metallurgy. This was in reference to C.I.A. Project RU-91. During this meeting [redacted] mentioned that a meeting of intelligence agency metallurgists would not be feasible because of lack of cooperation from the Army and Navy; this meeting would have been equivalent to a meeting of the RU-101 committee. A symposium on metallurgy attended on a broader scale would not be advisable, either, according to [redacted] due to uncertainties on which he did not give details. All of the above was in reference to discussions held by the writer and [redacted] on 12-13 February 1952, which are reported on in the Trip Report by A. Strasser, 26 February 1952.

T52-5638

(f) No persons contacted [redacted] know of one single report or source which lists metal fabricating equipment exported to Russia.

4. On 25 February 1952, [redacted] of Project Stork, and the writer visited the Metals and Equipment Branch of the Air Targets Division. [redacted] visited for the first day only and [redacted] stayed on to do the abstracting of the files. [redacted] Chief of the M. and E. Branch, gave a description of the filing method for their plant file and arranged for working space which could be used by Stork and ATIC representatives. Stork representatives and the writer reviewed the documents in the plant folder previously catalogued by the writer at the [redacted] One Air Targets folder, which had seven documents in its [redacted] equivalent, contained all but one of the seven documents. The second folder contained approximately 50 documents common to both files; 33 additional documents were in the [redacted] folder which were not in the Air Targets folder, and 16 additional documents were in the Air Targets folder which were not in the [redacted] folder. The [redacted] folder contained Air Force documents not available in the Air Targets folder, and the Air Targets folder contained [redacted] documents not available in the Industrial Register folder. Due to the fact that the review of only one of the files is a large task, it was suggested by the writer that only the Air Targets file be reviewed, that abstracts be made by plant as the information is obtained and that each abstract be completely referenced. If at some future date time permits a comparison of the Air Targets extracts with the [redacted] such a check will be made. Copies of these rough extracts should be typed and sent to ATIC; ATIC will also furnish these rough copies to Air Targets to assist in the projects underway at this agency.

5. (a) [redacted] and the writer had determined previously (Trip Report by [redacted] Visit to Project Stork, 26 February 1952) that the following categories of plants will be reviewed:

Category 11		Light Metal Ores (aluminum, magnesium).
Category 12-0		Non-Ferrous Metal Ores and Concentrates, except Light Metals and Fissionable Materials.
	12-4	Nickel.
	12-7	Tungsten.
	12-9	Molybdenum, Chromium, Vanadium, Beryllium, Cerium, Cesium, Cobalt, Columbium, Indium, Tantalum.
Category 21-0		Light Metals and Light Metal Alloys.
	21-1)	Alumina and primary aluminum nickel would not be
	21-2)	reviewed due to a recent Air Targets survey of this
	)	field.
	21-5	Rolled, drawn, stamped and extruded aluminum shapes.
	21-6	Cast aluminum shapes.
	21-7	Magnesium metal.
	21-8	Rolled, drawn, stamped, cast, and extruded magnesium shapes.

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

Category	22-0	Non-Ferrous metals and alloys except light metals and fissionable materials, general or unspecified.
	22-2	Nickel.
	22-9	Molybdenum, Chromium, Vanadium, Beryllium, Cerium, Cobalt, Columbium, Indium, Tantalum, Tungsten.
Category	23-7	Iron and Steel Castings.
	23-8	Steel Forgings.
	23-9	Special Alloy Steels.
Category	31-2	Heavy Metal Forming Equipment.
	31-3	Welding Equipment.
	31-4	Testing and Measuring Machines.
Category	40	Technological r. & d. facilities concerned with metallurgy.

(b) It was also determined then that the following general classes of information would be extracted from the documents:

Technical processes used for refining of the metals.
Types and sizes of metal products manufactured (sheet, rod, forgings, etc.).
Type of metal fabricating equipment used.
Types of metals fabricated.
Metallurgical research and development facilities, personalities and projects.

FOIA(b)(6) USAF

(c) [redacted] and the writer each extracted approximately three folders. The extracts were then discussed until the writer felt that [redacted] had a full understanding of the type of information ATIC desired to obtain from these files. It was noted that Air Targets did not keep files on Category 40-Research and Development Institutions, and that this category would have to be reviewed in the [redacted] ATIC, was contacted and requested to arrange for clearance for [redacted] A visit was arranged for the next day.

(d) A discussion concerning availability of information on metal fabricating equipment exported to Russia was held between the writer and [redacted] of the M. and E. Section. [redacted] suggested that [redacted] Commerce Department, Office of International Trade, Washington, D. C., Sterling 9200, Extension 3643, be contacted. [redacted] was not available during the writer's stay in Washington.

6. (a) On 26 February, after a very brief visit to Air Targets, [redacted] and the writer visited the [redacted] to review the Research and Development Institutions files as they pertained to metallurgy. An abundance of information was noted on initial sampling. It was decided that [redacted] stay [redacted] and finish abstracting Category 40 before returning to Air Targets.

(b) A short meeting was held between [redacted] the

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA
FOIA(b)(6) USAF

writer, and, very briefly, [redacted] to discuss the comparison made between the two plant files.

(c) The writer suggested that if the task of abstracting prove too great for one person, [redacted] who should suggest Stork personnel to ATIC who could take over the work where [redacted] left off. ATIC will then arrange for clearance of these personnel. [redacted] requested that no more than one person from Stork be at Air Targets at a time; however, it will be possible to have a new Stork engineer going to Air Targets indoctrinated by [redacted] before [redacted] leaves.

7. On February 21 1952 the writer attended the following papers given on the last day of the annual A.I.M.M.E. meeting in New York, N. Y.:

(a) Vacuum Reduction of Some Metallic Oxides Using Zirconium, by [redacted]

(b) Induction Melting of Reactive Metals Without Refractory Containers, by [redacted].

(c) Malleable Arc Melted Chromium Metal, by [redacted]

(d) Discovery, Occurrence, Concentration, Extraction and Chemical Properties of Rhenium, by [redacted]

(e) Cemented Carbide Combinations, by J. W. Graham of Kemametal, Inc.

FOIA(b)(1) USAF

C. CONCLUSIONS:

1. Abstraction of information from the files of Air Targets [redacted] pertinent to the Status of Soviet Aircraft Metallurgy is proceeding satisfactorily.

2. A request to obtain information on metal fabricating equipment exported to the Soviets will be initiated.

PREPARED BY:

[redacted]

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TT 98
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AMC ITEM 11 /CONFIDENTIAL/
FROM A A STRASSER ATIC/ATIAS
TO AFOIN WASHDC

MESSAGE PLEASE TRANSMIT FOLLOWING MESSAGE
TO [redacted]
HAS PREPARED LIST OF SOVIET METALLURGICAL PAPERS TO [redacted]
BE EVALUATED. VISIT OF [redacted] WITH [redacted]
[redacted]
SECTION REQUESTED. FURTHER CONFERENCE
WITH RUSSIAN-SPEAKING USA METALLURGISTS
SUGGESTED TO DISCUSS PRESENT AND FURURE EVALUATION OF SOVIET
RESEARCH PAPERS. REQUEST YOU REPLY
CONVENIENT DATES AND PLACES BY TELEPHONE IF
FEASIBLE..

END ITEM 11 /CONFIDENTIAL//

File 300.22

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FOIA(b)(6) USAF

60,ASTIC
BY: [redacted]
18 Apr 52

ATIAS/NP/lln

IN REPLY REFER TO:
AFOIN-ATIAS

18 APR 1952

SUBJECT: (Unclass) ATIC Contribution to Project RU-101

THRU: Director of Intelligence
Headquarters USAF
ATTN: Evaluation Division
[redacted] AFOIN-V/EC
Washington 25, D. C.

TO: Central Intelligence Agency
[redacted]

1. This letter is being forwarded to your office to confirm previous verbal indications made by personnel of this Center in discussion with your personnel that ATIC will be unable to contribute to your project [redacted] in a completely finalized form by the desired date, 2 July 1952.

2. A study on "The Status of Soviet Aircraft Metallurgy" is currently under way at this Center on Project 30022. However, coordination copies of the preliminary draft will not be available until approximately 25 September 1952, with probable publication of the finalized study some time between 1 December 1952 and 1 January 1953.

[redacted]
Colonel, USAF
Commanding

ATIAS File Cy

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

ATIAS FILE
30022
FILE NUMBER
NP-ln 4/18/52
INITIALS DATE

T52-6067

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FOIA (b) (6) USAF

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PRODUCTION ITEM		PRODUCTION RATE		BACKLOG THIS MONTH	PRODUCTION COSTS	
NOMENCLATURE	MEAS	YEARLY AVERAGE	THIS MONTH		YEARLY AVERAGE	THIS MONTH

ESTIMATED & ACTUAL COSTS (INDIRECT & DIRECT)			PHASE I		PHASE II		PHASE III		PHASE IV		TOTAL COST	
			M. HRS	DOLLARS	M HRS	DOLLARS	M/HRS	DOLLARS	M/HRS	DOLLARS	M/HRS	DOLLARS
INDIRECT	UN LABOR	A										1377
INDIRECT	MAT'LS. EQUIP. ETC.	A										
INDIRECT	MISCELLANEOUS	A										
INDIRECT	TOTAL	A										1377
DIRECT	LABOR – CIVILIAN	E			1,118	2,601					1,118	2,601
DIRECT	LABOR – CIVILIAN	A	4	10	483	1372	5	7	7	21	499	1410
DIRECT	LABOR – MILITARY	E										
DIRECT	LABOR – MILITARY	A	2	6	8	24					10	30
DIRECT	TEMPORARY DUTY TRAVEL	E				180						180
DIRECT	TEMPORARY DUTY TRAVEL	A				178						178
DIRECT	TRANSPORTATION OF THINGS	E										
DIRECT	TRANSPORTATION OF THINGS	A										
DIRECT	MATERIAL	E										
DIRECT	MATERIAL	A										
DIRECT	EQUIPMENT	E										
DIRECT	EQUIPMENT	A										
DIRECT	CONTRACTUAL SERVICES	E				40,000						40,000
DIRECT	CONTRACTUAL SERVICES	A										
DIRECT	TOTAL	E			1,118	42,781					1,118	42,781
DIRECT	TOTAL	A	6	16	491	1574	5	7	7	21	509	1618
GRAND TOTAL ACTUAL COSTS												2995

REMARKS:

NW#:27211 DocId:338532

(Rev 4 Sep 51)

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Supersedes AMC Form 15A, 28 Nov

SECURITY INFORMATION

AIR TECHNICAL INTELLIGENCE CENTER
HEADQUARTERS, USAF

DATE: 19 February 1952
BRANCH: Materials and Methods
SECTION: Associated Equipment
DIVISION: Technical Analysis

PROJECT NUMBERS: 9982 and 30022

TRAVEL ORDER NUMBER: 00093

SUBJECT: Travel to C.I.A. and AFOIN/TR, Washington, D. C., on 31 January 1952.

FOIA(b)(6) USAF

A. PURPOSE:

To find out what information is available [redacted] on metal processing plants.

B. FACTUAL DATA:

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

[redacted]

2. [redacted] in charge of the ferrous branch, and [redacted] in charge of the non-ferrous branch of the M. and E. Division AFOIN/TR were visited next. The chief of the M. and E. Division, [redacted] was also contacted briefly.

3. The purpose of this division is to examine the basic metal producing industries from a target point of view. [redacted] is reviewing the steel industry. [redacted] has just completed an evaluation of the Soviet basic aluminum industry and is now evaluating the Soviet basic copper industry. The interest of the M. and E. Division lies in the basic smelting industry rather than the ore resources or fabrication industry because the smelting industry offers a more economical air target. [redacted] suggested two books as good references for the mineral industry: "Minerals in World Affairs" by Lovering (Prentice Hall, 1943) and "Russia's Soviet Economy" by H. Schwartz (Prentice Hall, 1950).

FOIA(b)(1) USAF

4. [redacted] stated that a file exists at Air Targets which files all documents pertinent to specific foreign plants in a pouch for the particular plant. [redacted] When asked what the difference was between this file and [redacted] stated that the Air Targets file is probably more up to date and does not contain the many [redacted] A discussion with Mr. Sebring brought out the fact that Target Information Sheets are periodically prepared on each plant. These sheets are a compilation and evaluation of all the available information on each plant. ATIA53 will request to be put on the distribution list for T.I.S.'s in its sphere of interest. Due to the limited manpower available, only two T.I.S.'s are produced by the division each week. [redacted] saw no objections to an ATIC contractor reviewing files of interest to ATIC. Arrangements are being made to do this the week of February 25.

5. Information pertaining to metallurgy obtained at [redacted] on 1 February, ALCOA on 4 February, and [redacted] on 5 February will be included in the trip report of [redacted]

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PREPARED BY:

[redacted]

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ITEM NO.	ITEM NOT ON TIME	STATUS OF ITEM	NEW COMPLETION DATE
		ATIAS ATIAS 19 Feb 52	

Trip Report No. 00053, project No. 9982 and No. 30022, subject, "Trip to [redacted] and AFOIN-TA, Washington, D. C., on 31 January 1952" is forwarded for your information.

FOIA (b) (1) USAF

ATIA ATIAS 19 Feb 52 COMMENT #2

The visits t[redacted]nd Air Targets Division outlined in this trip report were made for the purpose of determining the quantity and quality of available intelligence information in the industrial files of the above organizations.

Cursory examination of these files indicated that it would be to the benefit of this Center to have Project Stork personnel make more thorough and detailed examination of this material in the near future in connection with the ATIC project on the status of the USSR aircraft metallurgy.

[redacted]

ATIAS Cm't #3

APPROVED

FOIA (b) (6) USAF

NW#: 27211 DocId: 338532

Secret

ROUTING AND RECORD SHEET

AIR MATERIEL COMMAND

SECRET
AUTH: CG, AMC
INITIALS: C.L. BROOKE
DATE 31 Oct 50

Use this form for inter-office correspondence within headquarters.

Number all comments consecutively.

Use entire width of sheet, both sides.

Use authorized office symbols to designate addressor and addressee.

Note warning signal at lower left of form. Remaining space is sufficient only for proper spacing of typewritten signature.

Place initials of dictator and typist, telephone number and location at right of signature.

Separate comments by horizontal lines across page.

SUBJECT Request for Information on Outstanding Soviet Metallurgists

TO MCIAXS ATTN: [redacted] FROM MCISXF DATE NOV 1950 COMMENT NO. 1

1. In compliance with your request dated 27 February 1950, inclosed is a summary of the information available on the more important known Soviet Metallurgists and a listing of Soviet Metallurgical Institutes and Laboratories.

2. This office and other sources in the Washington area have not been able to respond specifically to your request, i.e. to name ten outstanding scientists in the various fields of metallurgy. This failure is occasioned by the limited amount of information upon which judgment could be based. The list of known Soviet Metallurgists must be considered fragmentary and the information pertaining to them would discourage comparative assessment.

3. The inclosed summaries of results are forwarded in the hope that, although they do not provide the estimates desired, they will be of more intelligence value to your project.

[redacted]

C.L. Brough
Capt. USAF

for Major, USAF
Chief, Foreign Operations Sec.
Collection Services Div.
Intelligence Department

WJM/elm
65322
B. 263C
C-26

FOIA(b) (6) USAF

13 Incls
1. Summary on Soviet Metallurgists 50S-111650-1
2. Biographic Rpt on AKIMOV 50S-107064-1
3. Biographic Rpt on KISTYAKOVSKIY 50S-107071-1
4. Biographic Rpt on ALEKSANDROV 50S-107067-1
5. Biographic Rpt on BARDIN 50S-107066-1
6. Biographic Rpt on BOCHVAR 50S-107065-1
7. Biographic Rpt on GUSTSOV 50S-107068-1
8. Biographic Rpt on IL'IN 50S-107069-1
9. Biographic Rpt on IZGARYSHEV 50S-107070-1
10. Biographic Rpt on KORNI 50S-107647-1
11. Biographic Rpt on PAVLOV 50S-107646-1
12. Biographic Rpt on URAZOV 50S-107645-1

[redacted]

Declassified Authority: 27211
By: Dorothy Johnson Date: 07-16-2014

FOIA(b) (1) CIA
FOIA(b) (3) - 50 USC 403g - CIA

1950 NOV 8 09 53

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50S-114165

WF-L-31 OCT 49 4,652M
AMC Form No. 5 (Rev 29 Jul 47)

(CONTINUE ON OTHER SIDE)

This form replaces AMC Form No. 10-3, which will be used until stocks on hand are exhausted.

MATERIALS TRAINING PROGRAM FOR INDUSTRIAL SPECIALIST ATLO

The following program is proposed for the orientation and training of industrial specialist ATLOs. The program is designed to cover a period of two months or 320 hours.

Hours Allotted	Subjects
8	A. Air Technical Objectives of Materials Group. 1. Critical factors covered. 2. Supporting essential elements. 3. Discussion.
	B. Function of Materials Group. 1. Evaluate and analyze technical Intelligence information on critical foreign materials and techniques. 2. Prepare Intelligence studies indicating technical capabilities of foreign countries in materials specialties. 3. Provide technical information to Industrial Planning on foreign developments in materials.
8	C. Materials Work Program. 1. Review established program of the Materials Group. 2. Discussion.
8	D. Review products of Materials Group. 1. AMC Conference Items. 2. Daily Briefs. 3. AID Articles.
8	E. Importance of ATLO Program. 1. Responsibility of analyst to ATLO. 2. Responsibility of ATLO to analyst.

FOIA(b)(3) - 50 USC 403-1(i)(1) - Sources and methods USAF

Hours Allotted	Subjects
	3. Preparation of AFOIR-6s.
	4. Exchange of Information.
4	F. General Office Routine.
	1. Receipt of technical Intelligence documents.
	2. Routing of documents.
	3. Filing of information.
	4. Library.
	5. Liaison with other Intelligence Agencies.
20	G. Review of Technical Intelligence Information.
	1. Review of Form 75s.
16	H. Visit to Materials Laboratory of Engineering Division.
	1. Discussion with members of the Materials Laboratory as to important techniques of interest to the USAF.
120	[redacted]
120	J. Assignment of Intelligence Project.
	1. Review and evaluate available information.
	2. Analyze information.
	3. Prepare report.
8	K. Recapitulation of Previous Discussions and Future Plans.

Inclosure # 5, report "B" Aluminum alloy, found by SOURCE on scrap heap in the jet aircraft factory #31 TBILISI. SOURCE stated that this same teal was stored in one storehouse of the factory. Russians told him that it was an alloy of nickel, copper, chromium and silicone and was delivered from the U.S. because they were not able to manufacture that kind of metal. SOURCE saw metal ranging in thickness from 0.5 millimeters to 2.5 centimeters.

Report 003090 - 8 - 920 B

Jakob ROSHSIER

#1 50S-1110585 CIA

Inclosure # 5, report "B". Aluminum alloy, found by SOURCE on scrp heap in the jet aircraft factory # 31 TBIL-31. SOURCE stated that this same metal was stored in a storehouse of the factory. Russians told to him that it was an alloy of nickel, copper, chromium and silicone and was delivered from the U.S. because they were not able to manufacture that kind of metal. SOURCE saw this metal ranging in thickness from 0.3 millimeters to 2.5 centimeters.

Report 003090 - 8 - 920 - B

Jakob BOZHSLER

~~SECRET~~

~~Secret~~

BLAGOWESTOW, P. K. NUMBER 9025974

According to information dated March 1949, P. K. Blagowestow, an engineer, is the Chief of a Soviet research office at Leipzig (Leibnitzstrasse) which also maintains a Soviet laboratory at Bitterfeld. The purpose of this office is to evaluate the scientific results of German Aluminum Research, particularly the results of the Laboratory for Light Metals Development utilizing tests of the German Institute of Aeronautics. 1/

1/ S-2 BMP, R-551-49, Germany (Soviet Zone), 25 April 1949, C-3, Secret.

BLOKHIN, Nikolai Aleksandrovich NUMBER 9028460

Nikolai Aleksandrovich Blokhin, Chief of "Glavspetsstal" (Main Administration of Special Steel Production) and ten others were awarded Stalin Prize, 1st Class, in 1949, for the development of a technology of production of a heat-resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

BOBKOV (Colonel) NUMBER 9901532

Colonel Bobkov was sent to Hungary in 1945 for the purpose of removing the fixtures at Donautaler Tonerde Industrie, a concern which had been taken over by the Soviets. At one time he served as the Soviet representative on the Allied Control Commission in Hungary. He later became Director General of Donautaler Tonerde Ungarisch Sowjet Bauxite Aluminum A. G. His address in Budapest is Budapest V, Nador, U, 30-23. 1/

1/ IAC Agency Report, 8 July 1949, ~~Secret~~ Control/US Officials Only.

FOIA(b) (1) CIA
FOIA(b) (3) - 50 USC 403g - CIA

BODROV NUMBER 0901348

[redacted] Bodrov, at that time the chief of the Metallurgical Laboratory at the Stalin Automobile Works in Moscow [redacted]

1/ [redacted]

NW#:27211 DocId:338533 ~~Secret~~

Frel. #1

~~Secret~~

BOGOLYUBOV, Vladimir Aleksandrovich NUMBER 9023459

Vladimir Aleksandrovich Bogolyubov, Chief of a Central Scientific Research Institute (TSNII) Laboratory, and ten others were awarded a Stalin Prize, 1st Class in 1949, for the development of a technology of production of a heat resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

CHEKMAREV, Aleksandr Petrovich NUMBER 9027836

In 1948 the Soviet Metallurgist, Aleksandr Petrovich Chekmarev, was reported to be a professor at the I. V. Stalin Metallurgical Institute in Dnepropetrovsk, Ukrainian SSR. It has also been reported that he was awarded a Stalin Prize Third Class in 1948 for his work in the development of an improved method of cold rolling structural sheet steel. 1/

1/ IAC Agency Report, 13 July 1949, ~~Secret~~ Control/US Officials Only.

CHERNIAKOV NUMBER 9906658

It was reported in 1949 that Russia was stockpiling tin, primarily for herself and her satellites, as well as to prevent the U. S. and Western nations from doing the same; and that there are several Soviet organizations in existence for the sole purpose of buying tin. It was further stated in the same report that the tin production of central China is controlled directly by Moscow and that nine teams of Soviet experts directed by Professor Cherniakov were sent to China in 1948 with the mission of assuming immediate control over the mines captured from the Nationalists. 1/

1/ WDGS Rpt. R-327-49, MA Belgium, D-6, 5 July 49, ~~Confidential~~

CHIZHEVSKY, Nikolai Prokopievich NUMBER 7007259

Nikolai Prokopevich Chizhevsky, a specialist in metallurgy, was elected as a Member of the Academy of Sciences of the USSR in 1939. His publications include articles on the iron-nitrogen system, on gases in steel, on steel smelting in a vacuum, and coking of non-coking coal. Chizhevsky is the recipient of the Laureate of the Stalin Prize and the Order of Red Banner of Labor. He was born 9 April 1873, in Kazan, RSFSR. 1/

1/ [illegible] Academy of Sciences of the USSR", July 1945.

~~Secret~~

~~Secret~~

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

CHIZHIKOV, David Mikhailovich NUMBER 7015864

David Mikhailovich Chizhikov, a metallurgist who was elected Corresponding Member of the Academy of Sciences of the USSR in 1939, has written articles on chlorination or ores, rectification of metals, and electrothermics. A recipient of the Laureate of the Stalin Prize, Chizhikov is also a member of the All-Union Scientific Engineering-Technical Society of Non-Ferrous Metallurgy. He was born 17 November 1885, in Priluki, Ukrainian SSR. 1/

1/ USSR Publication "Corresponding Members of the Academy of Sciences of the USSR", July 1945.

CHUB, C. NUMBER 9027285

[redacted] Chub was employed in a large steel works at Zaporozhe near the Dnieperstroy Dam in the Ukraine until the German occupation of the region. Upon evacuation he became affiliated with the Metallurgical Combine at Kuznetsk in the Urals where he was in charge of a laboratory. His work was principally in the field of laboratory control and heat treatment of steel. Chub [redacted] pected to work in the Metallurgical Works of Dnieprospetsstal' (Dnieper Special Steels) in Zaporozhe where partial or full construction had apparently taken place. 1/

1/ [redacted]

DOBATKIN, Vladimir Ivanovich NUMBER 9028288

Vladimir Ivanovich Dobatkin and five others were reported to have been awarded a Stalin Prize Third Class in 1949 for their work in the development and introduction into industry of a new high-tensile alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret.~~

FRIDLYANDER, Iosif Naumovich NUMBER 9028298

Iosif Naumovich Fridlyander, who was reported as the head of the Laboratory of the All-Union Institute of Aviation Materials in April 1948, was awarded a Stalin Prize Third Class in 1949 for his work in the development and introduction into industry of a new high-tensile alloy. 1/

NW#:27211 DocId:338533

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

Secret

~~Secret~~

GABRIELYAN, David, Ivanov NUMBER 7006671

David Ivanov Gabrielyan, Vice Director of the Cental Scientific Research Institute of Ferrous Metallurgy and the recipient of the Laureate of Stalin Prize and the Leader in the All-Union Society of Metallurgists Prize, 1/ was reported to have conducted work on alloys with high initial and maximum permeability at the above mentioned institute, during the years 1941-1945. 2/ According to an announcement in Zarya Vostoka, No. 149, 27 July 1948, Gabrielyan was scheduled to read a report at a conference of the Scientific Engineering and Technical Society of Georgian Metallurgists to be held during the first half of September 1948. 3/

[redacted]

GAZAROV NUMBER 9036286

Gazarov, Dean of the Faculty of Mechanics at the Yerevan Polytechnical Institute, wrote an article entitled "Elimination of Corrosion by substituting Stone or Slag for Metal in Various Branches of Industry, especially in the Chemical Industry", which appeared in the 15 February 1949 issue of the Armenian newspaper Kommunist. 1/

1/ Kommunist (Armenia), 15 February 1949.

GOLIKOV NUMBER 9906971

Golikov, Martzimov and Sokolov were members of the Soviet Purchasing Commission known as the "Bolshoi Trio" (Big Three) who visited various U. S. plants in 1945. 1/

1/ [redacted]

GORBASEV, N. I. NUMBER 9907087

N. I. Gorbasev, is reported to be an expert in the flat sheet rolling of steel. 1/

1/ [redacted]

~~Secret~~

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FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

GOLUBEV, A. I.

A. I. Golubev, Member of the All-Union Institute of Aviation Materials, is the author of an article, "Intercrystalline Corrosion of Aluminum Alloys, II. Al-Zn-Mg, which appeared in Zhurnal Fizicheskov Khimii, Vol. XXIII, No. 9, 1949. 1/

1/ [redacted]

GUROVICH, Evgeni Isayevich

Evgeni Isayevich Gurovich, Candidate of Chemical Sciences, is affiliated with the Institute of General and Inorganic Chemistry imani Kurnakov of the Academy of Sciences of the USSR, as Head of the Corrosion Laboratory, which was established in 1947. The following references to papers on corrosion, by E. I. Gurovich, of the Institute of Physical Chemistry, were found in Chemical Abstracts: 1/

Films on Metals (1937)
Resistance to Corrosion of Iron and Steel (1938)
Formation of Corrosion Centres on Metals (1938)
Corrdibility of Zn-Mg (1941)
Action of Iodine Vapour on Metals (1942)
Hydrogen Evolution as a Measure of Corrosion (1943)
Corrosion of Alloys (1943)
Linseed Filter Cake Extract as an Inhibitor of Corrosion of Iron and Steel (1946)

1/ IAC Agency Report, February 1950, Secret.

KARVAUKHOV, Mikhail Mikhailovich NUMBER 9000246

Mikhail Mikhailovich Karvaukhov, a Doctor of Philosophy, who was elected Corresponding Member of the Academy of Sciences of the USSR in 1939 and who is also a Member of the Iron and Steel Institute of England, is a metallurgist specializing in steel alloys and steel smelting. He is reported to be a recipient of the Laureate of the Stalin Prize. 1/ 2/ Karvaukhov was born 14 March 1892 in Chkalov Oblast' (formerly Orenburgh Oblast'). 1/

1/ USSR Publication "Corresponding Members of the Academy of Sciences of the USSR" July 1945.
2/ IAC Agency Report, 7 April 1949, Secret.

~~Secret~~

50S-1116.50-1

~~Secret~~

KISHKIN, Sergei Timofeyevich NUMBER 9028458

Sergei Timofeyevich Kishkin, Professor at the All-Union Institute of Aviation Materials, is a metallurgist specializing in heat resistant alloys. Kishkin received a Stalin Prize, 1st Class, in 1949, for the development of technology of production of a heat resistant alloy. 1/ A partial list of his publications includes the following: "The Nature of the Sensitivity of Highly Stable Alloys to Concentrations of Stresses", written in collaboration with S. Z. Bokshteyn, and which appeared in Reports of the Academy of Sciences of the USSR, 1947, Vol 58, No. 4, pp 583-86; and "Plasticity and Hardening of Steel and the Problem of Alloying", also written in collaboration with S. A. Bokshteyn, and which appeared in Reports of the Academy of Sciences of the USSR, 1947 Vol 58, No. 5, pp. 795-98. 2/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.
2/ STAL', No. 3, 1948, p. 284.

KORESHKOV, Mikhail Egorovich NUMBER 9028399

Mikhail Egorovich Koreshkov, a Plant Director and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology of producing a heat resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

KULTYGIN, Vasili Semenovich NUMBER 9028439

Vasili Semenovich Kultygin and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology of producing a heat resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

KUTAYTSEVA, Yekaterina Ivanovna NUMBER 9028229

Yekaterina Ivanovna Kutaytseva, an engineer at the All-Union Institute of Aviation Materials, and five others were awarded a Stalin Prize, 3rd Class, in 1949, for their work in developing and introducing into industry a new high tensile alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

Secret

~~Secret~~

KUZMIN, Anatoliy Nikolayevich NUMBER 0004408

Anatoliy Nikolayevich Kuzmin was appointed Minister of the Metallurgical Industry of the USSR in June 1949, after having served as Deputy Minister of the Same Ministry since July 1948. Kuzmin has been a Deputy of the UKRAINIAN SSR Supreme Soviet since his election in the Zaporozhe Oblast in February 1947. During 1947 or 1948 he was reported to be director of the Zaporozhe Steel Works. Kuzmin was a member of the Heavy Industrial Equipment Section of the Soviet Purchasing Commission in New York from 1945 to 1947 or 1948, 1/ during which time he visited a U. S. steel company. 2/ At the time of this visit, in 1947, Kuzmin was reported to be familiar with the USSR's postwar problem of mineral raw materials, particularly the supply of manganese ore. 2/ 3/

1/ IAC Agency Report, 15 September 1949, Restricted.
2/ CIA 00-E-9658-49, 4 November 1949, F-2, Confidential/US Officials Only.
3/ CIA 00-E-9565-49, 3 November 1949, F-2, Confidential/US Officials Only.

LEBEDKOV, Aleksandr Alekseyevich NUMBER 9028154

Aleksandr Alekseyevich Lebedkov and eight others were awarded a Stalin Prize, 1st Class, in 1949, for development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Martin process. 1/ Lebedkov is an engineer with the Serp and Molot Works located at No. 11 Zastava Ilicha (formerly known as Rogozhskaya Zastava) between Entuziastov Chaussee and Zolotorozhski Val. in the west suburbs of Moscow. 1/ 2/

1/ CIA FDD Translation No. 35/49, 6 June 1949, Secret.
2/ IAC Agency Report, 15 September 1949, ~~Secret.~~

LEYKIN, Veniamin Yefimovich NUMBER 9028461

Veniamin Yefimovich Leykin, an engineer with Glavspetsstal' (Main Administration of Special Steel), and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology and producing of a heat resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret.~~

 ~~Secret~~

~~Secret~~

LIVSHITS, Boris G. NUMBER 7007273

In 1947 Boris G. Livshits was reported to be affiliated with the All-Union Scientific Research Institute of Aircraft Materials. 1/ From 1937 to 1941 he was working at the Central Factory Laboratory of The Auto and Tractor Electrical Equipment Plant in Moscow, during which time his outstanding contribution concerned the influence of composition and heat treatment on the magnetic properties of iron-nickel-aluminum alloys (in collaboration with Gringauz). From 1941 to 1945 his principal contribution concerned iron-nickel-cobalt-aluminum alloys with high residual induction figures and coercive force (in collaboration with Zaymovskiy. 2/

1/
2/

MAMENT'YEV, Aleksandr Grigoryevich NUMBER 9028158

Aleksandr Grigoryevich Mament'yev and eight others were awarded a Stalin Prize, 1st Class, in 1949, for the development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Marten process. 1/ Mament'yev is an engineer with the Serp and molot Works located at No. 11 Zastava Ilicha (formerly known as Rogozhskaya Zastava) between Entuziastov Chaussee and Zolotorozhski Val. in the west suburbs of Moscow. 1/ 2/

1/ CIA FDD Translation no. 35/49, 6 June 1949, Secret
2/ IAC Agency Report 15 September 1949, ~~Secret.~~

MARMORSHTEIN, Lev Veniaminovich NUMBER 9028192

Lev Veniaminovich Marmorshtein and eight others were awarded a Stalin Prize, 1st Class, in 1949, for the development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Marten process. 1/ Marmorshtein is Chief Engineer with the Serp and Molot Works located at No. 11 Zastava Ilicha (Formerly known as Rogozhskava Zastava) between Entuziastov Chaussee and Zolotorozhski Val. in the West suburbs of Moscow. 1/ 2/

1/ CIA FDD Translation No. 35/49, 6 June 1949, Secret
2/ IAC Agency Report, 15 September 1949, ~~Secret.~~

 Secret

~~Secret~~

MARTZIMOV NUMBER 9907084

Martzimov, Golikov and Sokolov were members of the Soviet Purchasing Commission known as the "Bolshoi Trio" (Big Three) who visited various U. S. plants in 1945. Martzimov was reported to be an expert on electric steel furnaces. 1/

1/ FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

MIKELSON, Andrei Martynovich NUMBER 9028243

Andrei Martynovich Mikelson and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology of producing a heat resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

MOZGOVOV, Nikolai Illarionovich NUMBER 9028463

Nikolai Illarionovich Mozgovov, Laboratory Chief of the Central Scientific Research Institute of Ferrous Metallurgy, and eight others were awarded a Stalin Prize, 1st Class, in 1949, for the development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Martin process. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

NARYSHKIN, Ivan M. NUMBER 9907094

Ivan M. Naryshkin is described as an outstanding steel expert who was formerly associated with the Zaporozhe Plant in the Ukrainian SSR. In September 1945 he headed a group of Soviet iron and steel experts in the U. S. and spent considerable time at a US copper company which was making alloy steels for the USSR at that time. 1/

1/ [redacted]

~~Secret~~

~~Secret~~ UNCODED

NECHKIN NUMBER 9040769

In 1947 Nechkin an iron and steel engineer, headed a group of Soviet blast furnace experts which visited a large U. S. steel company. [redacted] this group of experts were well informed in their field. [redacted]

1/ CIA OO-B-9564-49, 10 November 1949, F-2 ~~Confidential~~/US Officials

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

NEKRASOV, [redacted]

Nekrasov, who in 1947 was reported to be Manager of the Makeevka Steel Plant located in the Ukrainian SSR, visited a large U. S. steel company in 1947. He was familian with the mineral raw materials problems of the USSR, especially manganese. 1/

1/ [redacted]

NESTEROV, Timofey Vasilevich NUMBER 9028244

Timofey Vasilevich Nesterov and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology of producing a heat-resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

PAVLOV, Sergey Yefimovich NUMBER 9028228

Sergey Yefimovich Pavlov, who in 1948, was reported as an engineer with the All-Union Institute of Aviation Materials, and five others were awarded a Stalin Prize, Third Class, in 1949, for developing and introducing into industry a new high-tensile alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

 ~~Secret~~

~~Secret~~

PETROV, Dmitri Andreyevich NUMBER 9901657

Dmitri Andreyevich Petrov, Doctor of Technical Sciences and Head of the Laboratory of Light Alloys at the Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR, is described as an able scientist and a loyal colleague, one of whose special interests appears to be the production of porous metals by dissolution of one constituent of a binary alloy. 1/ During the summer of 1947 the above-mentioned Institute was ordered to initiate a new program of work concerned with chemical combinations of uranium; the laboratory of Light Alloys, under the direction of Petrov, was to experiment on preparations of porous membrances(Partitions) for the separation of isotopes by the diffusion method. 2/ Petrov and G. S. Berg are the authors of a literature survey of United States, British, German, and Russian work on solid solutions of copper and magnesium in aluminum, the foundation of uranium type alloys. 3/ Other publications by Petrov include the following: 1/

"Al-Mg-Cu Alloys" (in collaboration with G. G. Urazov), J. Phys. Chem., 1946, Vol 20.

"Lattice Constants of Zn-Al Solid Solutions at High Temperatures" in collaboration with T. A. Badayeva), Vestnik Akademii Nauk, 1947, No. 4.

"Primary Crystallization of alloys" (in collaboration with A. A. Bukhanova), Izvestia Academii Nauk, Chem Ser., 1949, No. 4.

"Structure of Cu Skeletal Catalysts" (in collaboration with L. M. Kefeli and S. L. Lelchuck) Doklady, 1948, Vol. 57.

1/ IAC Agency Report. February 1950. Secret.
2/ [redacted]
3/ IA London, R-1073-49, USSR, 6 June 1949, A-1 Unclassified.

PRIDANTSEV, Mikhail Vasilyevich NUMBER 9028278

Mikhail Vasilyevich Pridantsev, Doctor of Technical Sciences, and ten others were awarded a Stalin Prize, 1st Class, in 1949, for developing a technology of producing a heat-resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

 ~~Secret~~

505-11/4.50-1

~~Secret~~

Rostartchuk, Aleksandr Alekseyevich NUMBER 9016888

Aleksandr Alekseyevich Rostartchuk, who [redacted] is the top raw materials expert in the USSR, was assigned as Director of Imports of Raw Materials for the Soviet Purchasing Commission during World War II and was in charge of problems pertaining to steel, brass, copper, rubber, etc. 1/ Prior to this, in 1940, Rostartchuk was in the U. S. as a Soviet representative to purchase Oil well equipment. 2/ It was reported that he was in charge of the Industrial Raw Materials Import Assocation in 1949. 1/

Rostartchuk was born in Kiev and educated at the Kiev Poyltechnical Institute, reputedly the best institute of its kind in the USSR. 1/ He entered the Massachusetts Institute of Technology in his sophomore year, he listed Kharkov as his home, he graduated from M.I.T. in 1934 with a degree in Mining Engineering and Metallurgy. 3/

[redacted] Rostartchuk was stationed in the United States for eight or nine years and, as a consequence, thinks like an American. 1/

1/
2/ [redacted]
3/ M.I.T. Technique.

SAVITSKIY, E. M.

E. M. Savitskiy, Candidate of Technical Sciences, is Head of the Laboratory for Testing Strength of Materials at the Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR. The following are among his publications: 1/

"Plasticity of Intermetallic Phases", Doklady, 1948, Vol. 62.
"Mechanical Properties of Al-Mg Alloys" (in collaboration with M. A. Tylkina) Doklady, 1949, Vol 63.
"Plasticity of Al and Its Alloys".
"Effect of Al and Zn on Rolling Properties of Mg" (in collaboration with S. I. Gubkin) J. Tech. Phys., 1949, Vol 18.
"Mechanical properties of Mg. Zn. Alloys" (in collaboration with V. V. Baroni, Doklady, 1949, Vol 64. 1/

1/ IAC Agency Report, February 1950, ~~Secret~~.

~~Secret~~

SOKOLOV NUMBER 9907090

Sokolov, Martzimov and Golikov, members of the Soviet Purchasing Commission known as the "Bolshoi Trio" (Big Three), visited various U. S. Plants in 1945. 1/

1/ [redacted]

STARK, Boris Viktorovich NUMBER 7013090

Boris Viktorovich Stark, a Corresponding Member of the Academy or Sciences of the USSR since 1943 and also a Member of the Iron and Steel Institute in England, is a metallurgy specialist who works in the field of physico-chemical transformations in the process of steel production. Stark was born 30 November 1883 in Leningrad, Russia. 1/ The following are among the articles published by Stark:

"The Most Important Features of Ferrous Metallurgy". 2/
"Criticism of the Works of Marshall and Chipman on the Question of the Activity of Carbon and oxygen in Liquid Steel". 3/

1/ USSR Publication "Corresponding Members of the Academy of Sciences of the USSR", July 1945.
2/ Problems of Ferrous Metallurgy, Collection XXIII, Moscow, 1946.
3/ STAL', No. 9, 1948.

TRUBIN, Konstantin Georgiyevich NUMBER 0909010

Konstantin Georgiyevich Trubin, Professor at the Moscow Steel Institute imeni I. V. Stalin, and eight others were awarded a Stalin Prize, 1st Class, in 1949, for the development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Marten process. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

TUNKOV, Vladimir Pavlovich NUMBER 9026157

Vladimir Pavlovich Tunkov, and eight others were awarded a Stalin Prize, 1st class, 1949, for development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Marten process. 1/ Tunkov is an engineer with the Serp and Molot Works located at No. 11 Zastava Ilicha (formerly known as Rogozhskaya Zastava) between Entuziastov Chaussee and Zolotorozhski Val. in the west suburbs of Moscow. 1/2/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~
2/ IAC Agency Report, 19 September 1949, ~~Secret~~

~~Secret~~

~~Secret~~

VINOGRAD, Mariya Ippolitovna NUMBER 9028245

Mariya Ippolitovna Vinograd and ten others were awarded a Stalin Prize, 1st Class, in 1949, for devloping a technology of producing a heat-resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret.~~

VLADIMIROV, A. B. NUMBER 9035699

A. S. Vladimirov, a graduate metallurgical engineer with a doctorate from the University of Leningrad, was a member of the Soviet Government Purchasing Commission when, in April 1946 , he visited a leading U. S. matal tubing company specializing in the cold drawing of fine, small tubing in making metals. During his visit Vladimirov evinced great interest in the entire facilites of the plant and went into considerable detail in the needle tube testing. [redacted] to t

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Vladimirov spoke English fluently and had apparently been in the U. S. for several years. 1/

1/ [redacted]

VOLOVIK, BORIS, YEFIMOVICH NUMBER 9028293

Boris Yefimovich Volovik, a professor at the Moscow Higher Technical School imeni N. W. Bauman, and five others were awarded a Stalin Prize, Third Class, in 1949, for developing and introducing into industry a new high-tensile alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret.~~

VORONOV, Savvatiy Mikhailovich NUMBER 9028294

Savvatiy Mikhailovich Voronov, Professor at the Moscow Aviation Technology Institute, and five others were awarded a Stalin Prize, Third Class, in 1949, for developing and introducing into industry a new high-tensile alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~

~~Secret~~

~~Secret~~

ZUYEV, Mikhail Illarionovich NUMBER 9023395

Mikhail Illarionovich Zuyev and ten others were awarded a Stalin Prize, 1st Class in 1949, for developing a technology of producing a heat-resistant alloy. 1/

1/ CIA FDD Translation No. 35/49, 6 June 1949, ~~Secret~~.

ZUYEV, T. NUMBER 9027476

T. Zuyev, head of an electric steel melt shop of the Elektrostal Works located about forty miles from Moscow, visited a U. S. roller bearing company in August 1946. [redacted] his shop in the Elektrostal Works produces nickel chromium, nickel molybdenum, and nickel-chromium molybdenum alloy steel types. Upon leaving the U. S. Zuyev was scheduled to return to his position at the Elektrostal Works. 1/

1/ [redacted]

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FOIA(b)(3) - 50 USC 403g - CIA

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FOIA(b)(3) - 50 USC 403g - CIA

FOIA(b)(1) CIA

FOIA(b)(3) - 50 USC 403g - CIA

(6) Central Scientific Research Institute of Non-Ferrous Metals
10 Pyzhevsky p., Moscow, USSR.

(7) Central Scientific Research Institute of Rare and Semi-Rare Metals
7/17 Zubovskaya Ulitsa, Moscow, USSR.

(8) Dneprodzerzhinsk Metallurgical Institute
16 Prospect Pelina, Dnepropetrovsk Region, Dneprodzerzhinsk, Ukrainian SSR.

(9) Institute of Steel of the Order of Labor Red Banner imeni I.V. Stalin
6 Bolshaya Kaluzhskaya, Moscow, USSR.

(10) Magnitogorsk Mining and Metallurgical Institute
Magnitogorsk, RSFSR.

(11) Metallurgical Institute imeni I.V. Stalin
2 Lagernaya Ulitsa, Dnepropetrovsk, Ukrainian SSR.

(12) Mining and Metallurgical Institute
Magnitogorsk, RSFSR.

(13) Moscow Institute of Non-Ferrous Metals and Gold
3 Krymsky Val, Moscow, USSR.

(14) Moscow Metallurgical Institute
1 Prolomny per., 2-y, Moscow, USSR.

(15) Nizhny-Tagil Industrial Institute
2 Uralskaya Ulitsa, Nizhny-Tagil, USSR.

(16) Scientific Research Bureau for Protection of Metals from Corrosion
6 Nogina Pl., 2-y Podiezd, Moscow, USSR.

(17) Siberian Metallurgical Institute imeni Ordzhonikidze
Stalinsk, Kemerovsky Region, RSFSR.

(18) "Sickle and "Hammer" Plant Petallurgical Institute
1 Prolomny pr., Prolomny zast.

(19) Ural Institute of Ferrous Metals
Shenkmana Ulitsa, Dom 19, Dv. 5, Sverdlovsk, RSFSR.

(20) Uralsk Industrial Institute imeni Kirov
Vtuzgorodok, Sverdlovsk, RSFSR.

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: PAVLOV, Mikhail Aleksandrovich

Present Position: (See Below)

Location: Moscow, USSR (1948)

Gen. Occupation: Metallurgist

Education: Mining Engineering, Petersburg Mining Institute (1885)

Honors: Hero of Socialist Labor; Order of Lenin (3 times); Order of Labor Red Banner; Stalin Prize 1st Class (2 times); Sickle and Hammer Gold Medal.

Case No.
Date: 18 October 1950

Nationality: Russian

Birthdate: 22 January 1863
Birthplace: Lenkoran, Azerbaidzhan
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliation:

Career:

1900	-	--	Chair of Metallurgy of Iron, Ekaterinoslavskiy Higher Mining School.
1904	-	date	Chair of Metallurgy of Iron, Leningrad Polytechnical Institute (formerly Petersburg Polytechnical Institute).
1910	-	1916	Editor, Journal of Russian Metallurgical Society.
1925	-	1929	Editor, Journal of Russian Metallurgical Society.
1927	-	1932	Corresponding Member, Academy of Sciences of the USSR.
1930	-	1938	Editor, Soviet Metallurgy.
1932	-	date	Member, Academy of Sciences of the USSR.
1935	-	1938	Editor, News of Foreign Metallurgy.
--	-	--	Member, Iron and Steel Institute, England.
--	-	--	Head, Institute of Metals.
--	-	--	Member, Moscow Steel Institute.

Mikhail Aleksandrovich Pavlov, one of the leading authorities in the USSR on ferrous metallurgy, 1/ was last reported in 1948 as the recipient of a Stalin Prize 1st Class for his work, Metallurgy of Pig Iron, Vol. II of which was published in 1945 and Vol. III in 1947. 2/

Upon graduating from the Petersburg Mining Institute in 1885 Pavlov spent the following fifteen years working in the Urals and in South Russia. He was principally occupied with the blast furnace process, a field in which his persistent efforts and indefatigable research activities have brought him renown and numerous awards. Much of the success for the development and reconstruction of Soviet metallurgy has been attributed to Pavlov. In the course of a long and varied career Pavlov has written many articles and books, principally in the field of blast furnace processes. 3/

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PAVLOV, Mikhail Aleksandrovich

During 28 and 29 October 1947 the Department of Technical Sciences of the Academy of Sciences held a session dedicated to the Thirtieth Anniversary of the Great October Socialist Revolution. Among the reports presented at this session was one by Pavlov on "The Development of Metallurgy as a Science in the Thirty Years of Soviet Rule", in which he recounted the increase in the number of students, the improvements in teaching, and the large number of periodicals introduced since the Revolution. In addition Pavlov underscored the Soviet Union's inexhaustible resources and the ever-increasing number of engineer-metallurgists and machine-building works capable of producing complex and modern factory equipment. Pavlov also evinced considerable interst in the endeavors by Soviet metallurgists to solve the problem of introducing an oxygen-enriched air blast into blast-furnace and steel-smelting production. 4/

1/ [redacted]
2/
3/ Stal', No. 2, 1948.
4/ [redacted]

FOIA(b)(1) CIA
FOIA(b)(3) - 50 USC 403g - CIA

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: KORNILOV, Ivan Ivanovich

Present Position: Director, Laboratory of Ferrous Alloys of the Institute of General & Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR.

Location: Spasoglinishchevsky pereulok, No. 8, Flat 8, Moscow, RSFSR

Gen. Occupation: Metallurgical Chemist

Education:

Honors:

Case No.
Date: 18 October 1950

Nationality: Russian

Birthdate: 1905
Birthplace:
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Ivan Ivanovich Kornilov was last reported in February 1950 as Director of the Laboratory of Ferrous Alloys at the Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR. 1/

When the Chief Directorate in charge of atomic research in the USSR compelled Chernyayev, Director of the Institute of General and Inorganic Chemistry imeni Kurnakov (the Institute is located at 31 Bolshaya Kaluzhskaya Ulitsa, Moscow, in a building shared with the Institute of Physical Chemistry) to initiate a new program of uranium research in the middle of 1947, one of the Institute's laboratories which changed its program was the Laboratory of Ferrous Alloys directed by Professor Ivan Ivanovich Kornilov. 2/

Kornilov has frequently visited the Electrostal' plants (located approximately fifty kilometers from Moscow in the direction of Gorki) from which he obtained a new specimen of high grade steel which could be used at high temperatures. It is believed that certain shops of the Electrostal' plants were converted to the production of anti-corrosive alloys. 2/

Kornilov is an able scientist, liked by his staff and associates. Although a Party Member, he manifests little interest in politics. Books ordered by him from England are addressed to Spasoglinshchevsky Pereulok, No. 8, Flat 8, Moscow. 1/

A partial list of his publications includes the following: 1/

"Velocity of Reactions in Solid Solutions" (with E.A. Kremlayeva), Izvestiye Akademii Nauk, Chem. Ser., No. 1, 1945.
"System Cr-Mn" (with A.I. Tatyanchikova), Izvestiye Akademii Nauk, Chem. Ser., No. 1, 1945.

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Enclosure # 12

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KORNILOV, Ivan Ivanovich

"Oxidation of Fe-Cr-Al Alloys" (with A.I. Shpikelman), Doklady, Vol. 53, 1946.
"Oxidation of Fe-Cr-Ni-Mn Alloys" (with A.T. Durnov and L.I. Pryakhina, from IOMKH and VIAM), Doklady, Vol. 58, 1947.
"Solubility of Elements in Iron", Izvestiya Akademii Nauk, Chem. Ser., 1948, p. 364.
"Heat-refractory Alloys", J. Tech. Phys., Vol. 18, 1948 and Doklady, Vol. 67, 1949.
"Strength of Alloys", Vol. 67, 1949, Doklady

1/ IAC Agency Report, February 1950, Secret
2/ [redacted]

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: KISTYAKOVSKIY, Vladimir Aleksandrovich

Present Position: (See Below)

Location: Moscow, USSR (1948)

Gen. Occupation: Physical Chemist

Education:

Honors:

Case No.
Date: 18 October 1950

Nationality: Russian

Birthdate: 12 October 1865
Birthplace: Kiev, Ukraine
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliation:

Career:

1924	-	1929	Corresponding Member, Academy of Sciences of the USSR.
1929	-	date	Member, Academy of Sciences of the USSR.
--	-	date	Member of Editorial Committee, Journal of Physical Chemistry, Moscow.
--	-	date	Member of Editorial Committee, Journal of General Chemistry, Moscow.
--	-	--	Member, Societe de Chimie Physique, Paris
--	-	--	Member, Electro-Chemical Society, New York.
--	-	date	Head of Laboratory, Colloido-Electro-Chemical Institute of the Academy of Sciences of the USSR.
--	-	--	Honorary Member, Academy of Sciences of the Ukrainian SSR.

Vladimir Aleksandrovich Kistyakovskiy, a physical chemist who was last reported in 1948 as a member of the Editorial Committee of the Journal of Physical Chemistry, 1/ is known for his works in the field of corrosion of metals and metoelectric phenomena. 2/
Photograph not available.

1/ USFA Biweekly Report No. 74, 17 September 1948, ID 493743, Secret.
2/ USSR Publication, "Academy of Sciences of the USSR", July 1945.

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NW#:27211 DocId:338533 ~~SECRET~~
Inclosure #3

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ATI
BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: ALEKSANDROV, Semon Petrovich

Present Position: Professor, Moscow Institute for Non-ferrous Metals and Gold (c 1946)

Location: Apt. 10, 8 Roskovi Street, Moscow, RSFSR (1946)

Gen. Occupation: Metallurgical Engineer

Education: Mining Institute of Leningrad (1922)

Honors: Stalin Prize

Date: 17 October 1950

Birthdate: 12 February 1891
Birthplace: Shakhty, Rostovskaya Oblast, RSFSR
Nationality: Russian

Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Since 1914 Semon Petrovich Aleksandrov has been engaged in geological and mining research in Central Asia; he also has conducted work in the field of non-ferrous metallurgy. In pursuance of the practical aspect of his work he has spent some time in Turkestan, the Altai Mountain country, the Yenissei taiga, the Transbaikal region, the Ural Mountains, and in the Soviet Far East. His theoretical work brought him membership in the Radium Institute of Leningrad where he served from 1922 until 1930, at which time he became Professor at the Moscow Mining Academy. When the Moscow Mining Academy was subsequently divided into six new and independent institutes, Aleksandrov was made Professor at the Moscow Institute of Non-ferrous Metallurgy and Gold. In 1928-29 he visited the United States to study American methods of mining and milling rare metals. 1/ A student of ore dressing methods, Aleksandrov has worked on the extraction of strategic metals and is the author of some sixty articles on mineral dressing. 2/

During World War II Aleksandrov worked in the field of strategic war materials and metals and received three decorations from the Soviet Government for his war-time services. 1/

A Soviet observer at the Bikini Atom Bomb Tests, Aleksandrov replaced professor Skobeltsyn as the Soviet member of the Scientific and Technical Committee of the United Nations Atomic Energy Commission. 3/ While serving on the United Nations Atomic Energy Commission he submitted a proposal to control atomic energy at the source through a world-wide report on uranium deposits. 4/ It was reported that during his membership on this Commission Aleksandrov at times appeared to be under considerable strain as a result of conflicts between his own personal convictions and the instructions from his Delegation. 5/

The Russian language newspaper, Novoye Russkoye Slovo, which is published in New York, quotes a Soviet expatriate, K. Alekseev, as stating that Aleksandrov was closely associated with the MVD and, at one time, was chief administrator of GULAG (Main Administration of Forced Labor Camps). It was Alekseev's contention that Aleksandrov was serving the MVD in questions concerning atomic information. 6/

Enclosure #4

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ALEKSANDROV, Semon Petrovich

In the second of a series of articles which appeared in the Stockholm newspaper, Aftonbladet, Admiral Ellis M. Zacharias stated that the USSR's success in creating an atom bomb was attributable not so much to scientific work as it was to the extensive Soviet espionage activity was Professor Semen P. Aleksandrov who was reportedly selected by Stalin to obtain information on the atom bomb. Again according to Admiral Zacharias, Aleksandrov coordinated these espionage activities from Glen Cove, Long Island, where the Soviet U. N. Delegation had its headquarters. 7/

Besides witnessing the Bikini atom bomb tests, aleksandrov also visited the cyclotron at Berkeley, California, with his colleague, M. G. Meschcryakov. 8/

In an interview with an American newspaper reporter in July 1946, Aleksandrov urged for a better understanding between the United States and the USSR, principally through cheaper travel rates between the two countries, facilitation in the granting of visas, and a general cultural and technical exchange between the two countries. In proposing freer communication between the United States and the USSR, Aleksandrov stated that emphasis should be placed on the truth of the peoples of both countries, and not propoganda. 9/

One report states that Aleksandrov's son, Matislav Semenovich Aleksandrov, a radio engineer, studied at Columbia University in 1947 through arrangements made by the U. S. Delegation to the U. N. 5/

1/ United Nations Press Release, 30 October 1946
2/ [redacted]
3/ New York Times, 4 September 1946.
4/ New York Times, 22 October 1946.
5/ IAC Agency Files, 31 January 1947, Confidential
6/ Novoye Russkoye Slovo, New York, 15 January 1947.
7/ NA, Stockholm, 2 November 1949, MAR-8-7-49, B-2, Restricted.
8/ New York Times, 14 August 1946.
9/ IAC Agency Files, 18 July 1946.

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ATI
BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: BARDIN, Ivan Pavlovich

DATE: 17 October 1950

Present Position: (See Below)

Birthplace: Shirokii Ustup, Saratov Oblast, RSFSR

Location: Moscow, USSR (1949)

Birthdate: 13 November 1883

Gen. Occupation: Metallurgist

Nationality: Russian

Education:

Race: White
Sex: Male

Honors: Laureate of the Stalin Prize; Order of Lenin Stalin Prize 1st Class; Hero of Socialist labor; Sickle and Hammer; Gold Medal.

Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Career:

1932	-	date	Member, Academy of Sciences of the USSR.
1932	-	date	Director, Institute of Metallurgy, Department of Technical Sciences of the Academy of Sciences of the USSR.
--	-	--	Vice-President, Academy of Sciences of the USSR.
--	-	--	Member, Presidium of the Academy of Sciences of the USSR.
--	-	--	Academic Secretary, Department of Technical Sciences of the Academy of Sciences of the USSR.
--	-	--	Chairman, Urals Branch of the Academy of Sciences of the USSR.
--	-	--	Deputy Commissar, Iron and Steel Industry of the USSR.
--	-	--	Member, Iron and Steel Institute of the Soviet Union.
--	-	--	Director, Baykov Metallurgical Institute.
--	-	--	Chief Editor, Zavodskaya Laboratoriya.
--	-	--	Member, National Geographic Society, USA.
--	-	--	Member, American Railway Engineering Association.
--	-	--	Member, American Society of Testing Materials.
1947	-	--	Arrived in Leningrad to assume leadership of the Leningrad-Murmask expedition which for two years had been studying and exploring the possibilities for a future metallurgical base in the Northwest. (Sept)
1949	-	--	Started direction of a new process in casting steel at the Moscow factory, "Serp I Molot". (January)
1949	-	--	Together with nineteen other outstanding scientists, signed a paper condemning warmongering and urging the convocation of a World Congress of Supporters of Peace. (December)

Ivan Pavlovich Bardin, one of the leading metallurgists in the USSR and Vice-President of the Academy of Sciences of the USSR, 1/ was last reported in 1949 as the Director of the Baykov Metallurgical Institute. 2/ As Vice-president of the Academy of Sciences of the Ussr, Bardin acts as deputy to the president and is in charge in his absence. In addition he has general control over the operations of the Council

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BARDIN, Ivan Pavlovich

for the study of Industrial Potential, Acadstroy (Academy Construction), Techsnab (Technological Supplies), Section for Sources of Materials, Commission for Scientific and Technical Supplies, and the Commission for Planning the Re-construction of the City of Moscow. 1/

With the inception of the first Five Year Plan, Bardin was placed in charge of the construction of a huge iron and steel plant in the Kuznetsk Basin; as the result of his work there he is generally referred to as the builder of the Kuznetsk Basin. During World War II he was very active in the Commission of the Academy of Sciences for the mobilization of the resources of the Urals, Western Siberia, and Kazakhstan. 3/

A leader in the USSR's technical policy in ferrous metallurgy, 4/ he is considered to be the best Soviet authority on open hearth steel ovens and foundries. 5/ In 1948 Bardin directed research which culminated in the technological development and introduction of the use of oxygen to intensify the open-hearth process in the metallurgical industry, for which he and eight others were awarded a Stalin Prize, 1st Class. 6/

1/ [redacted]
2/ Literaturnaya Gazeta, No. 4, 12 January 1949.
3/ Thirty Years of the Soviet State, Calendar 1917-1947, Foreign Languages Publishing House, Moscow, 1947.
4/ [redacted]
5/ USFA Special Bi-weekly Report No. 88, 1 April 1949, Confidential.
6/ CIA FDD Translation No. 35/49, 6 June 1949, Secret.

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: GUDTSOV, Nikolai Timofeevich

Case No.
Date: 17 October 1950

Present Position:

Nationality: Russian

Location: Zheliabova Street 14, Leningrad 88 & (1950) M. Nikitskaia 29, Moscow, 69

Birthdate: 13 November 1885
Birthplace: Meschovsk, Smolensk Oblast', RSFSR

Gen. Occupation: Metallurgist

Race: White
Sex: Male
Marital Status:
Name of Spouse:

Education:

Honors: Laureate of the Stalin Prize

Children:

Political Affiliations:

Career:

1939 - date	Member, Dept. of Technical Sciences of the Academy of Sciences of the USSR (Jan.)
---- - date	Member, Leningrad Politechnical Institute.
---- - date	Member, Moscow Metallurgical Institute.
---- - --	Member, American Society of Metals.
---- - --	Member, Iron and Steel Institute, England.
---- - --	Member, Institute of Metals, England.

Nikolai Timofeevich Gudtsov, a renowned Soviet metallurgist, was last reported in May 1950 as being affiliated with the Leningrad Politechnical Institute and the Moscow Metallurgical Institute. 1/ He also maintains a permanent connection with the Stalin Automobile Factory, giving lectures on the hardness of steel and the methods of estimating its quality. 2/

Much of Gudtsov's work has been in the field of physical metallography of steel; 3/ in addition to a theory of alloying steel, he has also developed new types of special steel and an excellent method of heat treating them. 4/

According to Zarya Vostoka, No. 149, 27 July 1948, Gudtsov was to read a report at a meeting of the Scientific Engineering and Technical Society of Georgian Metallurgists which was scheduled to take place the first half of September 1948. 5/

It has been reported that Gudtsov is not a party member. 1/

The following are among his publications:
"Basic Tasks of Theoretical Metallurgy" 6/
"On the Influence of Niobium on the Properties of High-speed Steel with a Low Wolfram Content" 7/
"Works of A.A. Baykov in the Field of Metallography" 8/
"Pig Iron, Steel, Rolled Iron" 9/

Photograph not available.

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GUDTSOV, Nikolai Timofeevich

1/ [redacted]
2/ Literaturnaya Gazeta, No. 4, 1949.
3/ USSR Publication, "Academy of Sciences of the USSR", July 1945.
4/ 1950 God Kalendar-Spravochnik. Moscow. 1950.
5/ [redacted]
6/ Problems of Ferrous Metallurgy, Collection XXIII, Moscow, 1946.
7/ Izvestiya Akademii Nauk SSSR, otdeleniya tekhn. nauk, 1947, No. 12, pp. 1683-1703.
8/ Stal', (P. 477), No. 5, 1948.
9/ Tekhnika molodezhi, 1948, No. 3, pp. 1-4

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URAZOV, Georgiy Grigoryevich

The following are among his publications:

"The System Al-Cu-Mg" (with D.A. Petrov), J. Phys. Chem., 1946, Vol. 20.
"Ni and Cu Skeletal Catalysts" (with L.M. Kefeli and S.L. Lelchuk), Doklady, 1947, Vol. 55.
"Physico-Chemical Analysis", Vestnik Akademii Nauk, 1947, No. 11. 1/
"Investigation of the Physico-Chemical Nature of Silicate-Nickel Minerals and the Process of Their Calcination and Reduction" (with D.P. Bogatsky), Doklady, Vol. 50, Moscow, 1947.
"Physico-Chemical Investigation of Oxidized Iron-Nickel Ore" (with D.P. Bogatsky), Doklady, Vol. 56, Moscow, 1947. 2/
"Stannic and Stannous Chlorides" (with I.S. Morosov and A.A. Zabelin), USSR Patent 64,401 issued 23 February 1945.
"Dezincing Lead by the Chlorine Method" (with F.M. Loskitov and V.S. Lovchikov), Tsvetnye Metaly, Vol. 19, No. 6, 1946. 3/

1/ IAC Agency Report, February 1950, Secret.
2/ Guide to Russian Science, Periodical Lit., Vol. 1, No. 2, 10 May 1948, Unclassified.
3/ [redacted]

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FOIA(b)(3) - 50 USC 403g - CIA

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: URAZOV, Georgiy Grigoryevich

Present Position: Director of Section of Physico-Chemical Analysis, Institute of General & Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR (1950)

Location: Moscow, USSR (1950)

Gen. Occupation: General & Inorganic Chemist

Education:

Honors: Laureate of the Mendeleyev Prize (1914)
Prize of the Committee of the Supreme Soviet of National Economy (1927)

Case No.
Date: 17 October 1950

Nationality: Russian

Birthdate: 18 January 1884
Birthplace: Shatov, North Caucasian Kray
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliation:

Career:

1939	-	date	Corresponding Member, Academy of Sciences of the USSR.
1945	-	1949	Member, Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR.
1946	-	--	Head of Chair of Metallurgy of Heavy and Non-ferrous Metals, Moscow Institute of Non-ferrous Metals and Gold.
1947	-	--	Head of Chair, Moscow Institute of Fine Chemical Technology imeni Lomonosov.
1949	-	date	Director of Section of Physico-Chemical Analysis, Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR.
--	-	--	Member, British Institute of Metals.
--	-	--	Member, All-Union Chemical Society imeni D.I. Mendeleyev.
--	-	--	Member, All-Union Scientific Technical Society of Non-ferrous Metals.

When last reported, in February 1950, Georgiy Grigoryevich Urazov was Director of the Section of Physico-Chemical Analysis at the Institute of General and Inorganic Chemistry imeni Kurnakov of the Academy of Sciences of the USSR (the Institute is located at 31 Bolshaya Kaluzhskaya Ulitsa, Moscow, in a building shared with the Institute of Physical Chemistry). Although his competence as a scientist has been questioned by one source, the same source expressed the opinion that, should the General and Inorganic Chemistry, now comprised of the Section of Physico-Chemical Analysis and the Section of Coordination Complexes, be divided into two independent institutes, Urazov would be appointed director of the Institute (now Section) of Physico-Chemical Analysis. 1/

It has been reported that Urazov is not a Party member and manifests no interest in politics. 1/

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ATI
BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: AKIMOV, Georgii Vlaimirovich

Present Position: See Below

Location: Moscow Russia (1949)

Gen. Occupation: Physical Chemist

Education:

Honors: Distinguished Scientistof the RSFSR; Stalin Prize, Second Class.

Date: 16 October 1950

Birthdate: 23 April 1901
Birthplace: Moscow, Russia

Nationality: Russian

Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

1939 - — Corresponding Member, Academy of Sciences of the USSR.
— - — Member, American Society for Metals.
— - — Member, Faraday Society of London, England.
— - — Head, Colloido-Electrotechnical Institute Laboratory.
— - — Member, Physics of Metals Laboratory of the Institute of Aviation metals.
C.1946 - Chief of Laboratory of Physics of Metals, All-Union Research Institute of Aircraft Materials.
1949 - Director, Physical Chemistry Institute, Division of Chemical Science, Academy of Sciences of the USSR.

Georgii Vlaimirovich Akimov is a physical chemist specializing in the field of metals and corrosion of metals, 1/ particularly nonferrous metallurgy and alloys. 2/ Although he is reported to be forty-nine years of age, 1/ one source refers to him as an amazingly energetic old man who accomplishes his varied and trying duties with great skill. 2/

Photograph Available.

1/ USSR Publication, "Corresponding Members of the Academy of Sciences of the USSR", July 1945.
2/ Dept. of Army, U.S.F.A. SEWR #71, 6 August 1948. Secret.

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Inclusure # 2.

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ATI
BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: BOCHVAR, Andrey Anatolyevich

Present Position: (See Below)

Location: Moscow, USSR (1947)

Gen. Occupation: Metallurgist

Education:

Honors: Laureate of the Stalin Prize.

Date: 16 October 1950

Birthdate: 8 August 1902
Birthplace: Moscow, Russia

Nationality: Russian

Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Career:

1939	-	date	Corresponding Member; Academy of Sciences of the USSR.
--	-	--	Member, American Institute of Mining and Metallurgical Engineers.
--	-	date	Professor, Moscow Institute for Non-ferrous Metals and Gold.
--	-	--	Head, Section of Metal study of Non-ferrous Metals at the Institute of Metallurgy of the Academy of Sciences of the USSR.
--	-	--	Consultant, All-Union Institute of Aviation Materials.
1947	-	date	Member, Scientific Methods Council of the Ministry of Higher Education USSR. (4 Nov)

Andrey Anatolyevich Bochvar, a leading Soviet metallurgist in the field of machine building, 1/ was last reported in 1947 as a Professor with the Moscow Institute for Non-ferrous Metals and Gold and as a consultant to the All-Union Institute of Aviation Materials. Bochvar is the author of more than 100 scientific publications, 2/ including outstanding studies of light casting alloys used today in machine building. He developed a theory of casting properties of a series of alloys, as well as the mechanical and thermal processes of hardening them. 3/

Photograph not available.

1/ USSR Publication, "Corresponding Members of the Academy of Sciences of the USSR", July 1945.

2/ [redacted]

3/ Russko-Angliyskiy Politekhnicheskiy Slovar', Moscow, 1948.

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: IL'IN, Grigoriy Markelovich

Present Position: Director, Serp i Molot Iron and Steel Works (1949)

Location: Moscow, USSR (1949)

Gen Occupation: Metallurgist

Education:

Honors: Stalin Prize, 1st Class

Case No.
Date: 16 October 1950

Nationality: Russian

Birthdate:
Birthplace:
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Grigoriy Markelovich Il'in, Director of the Serp i Molot Iron and Steel Works located at No. 11 Zastava Ilicha (formerly known as Rogozhskaya Zastava) between Entuziastov Chaussee and Zolotorozhskd Val. in the west suburbs of Moscow, 1/ was awarded a Stalin Prize, 1st Class, in 1949, for development of technology and introduction into the metallurgical industry of the use of oxygen for intensification of the Marten process. 2/

In 1921, after the Revolution in which he served as a member of the Red Army, Il'in came to work at the above-mentioned plant as a common laborer doing repair jobs on open hearth furnaces. From this job he gradually advanced to the position of Plant Director in which capacity he has acquired the reputation of an excellent administrator and an organizer of the Stakhanovite Movement. 1/

In 1938 Il'in was elected Deputy to the Supreme Soviet of RSFSR. 1/
Photograph available.

1/ USAF Treasure Island Report No. 20438, 15 September 1949, Secret.
2/ CIA FDD Translation No. 35/49, Secret. 6 June 1949

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BIOGRAPHIC REGISTER
Intelligence Department
AMC

Name: IZGARYSHEV, Nikolay Alekseyevich

Present Position: Professor, Moscow Chemical Technology Institute imeni D.I. Mendeleyev (1949)

Location: Moscow, USSR (1949)

Gen. Occupation: Physical and Inorganic Chemist

Education:

Honors: Stalin Prize, Third Class

Case No.
Date: 16 October 1950

Nationality: Russian

Birthdate: 16 November 1884
Birthplace: Moscow, Russia
Race: White
Sex: Male
Marital Status:
Name of Spouse:

Children:

Political Affiliations:

Career:

1939	-	date	Corresponding Member, Academy of Sciences of the USSR.
--	-	date	Professor, Moscow Chemical Technology Institute imeni D.I. Mendeleyev.
--	-	--	Member of Editorial Committee, Journal of General Chemistry.
--	-	--	Member, Institute of Physical Chemistry, Academy of Sciences of the USSR.

Nikolay Alekseyevich Izgaryshev, was last reported in 1949 as a Professor at the Moscow Chemical Technology Institute imeni D.I. Mendeleyev. 1/ A physical and inorganic chemist working in the fields of theory of electrodes and electrolysis, colloidal chemistry, and problems of corrosion, Izgaryshev in 1949 was awarded a Stalin Prize Third Class for his research in electrode processes and for the development of electrolytic methods of obtaining powders from metals. 1/
Photograph not available.

1/ FDD Translation No. 35/49, 6 June 1949, Secret.
2/ USSR Publication, "Corresponding Members of the Academy of Sciences of the USSR", July 1945.

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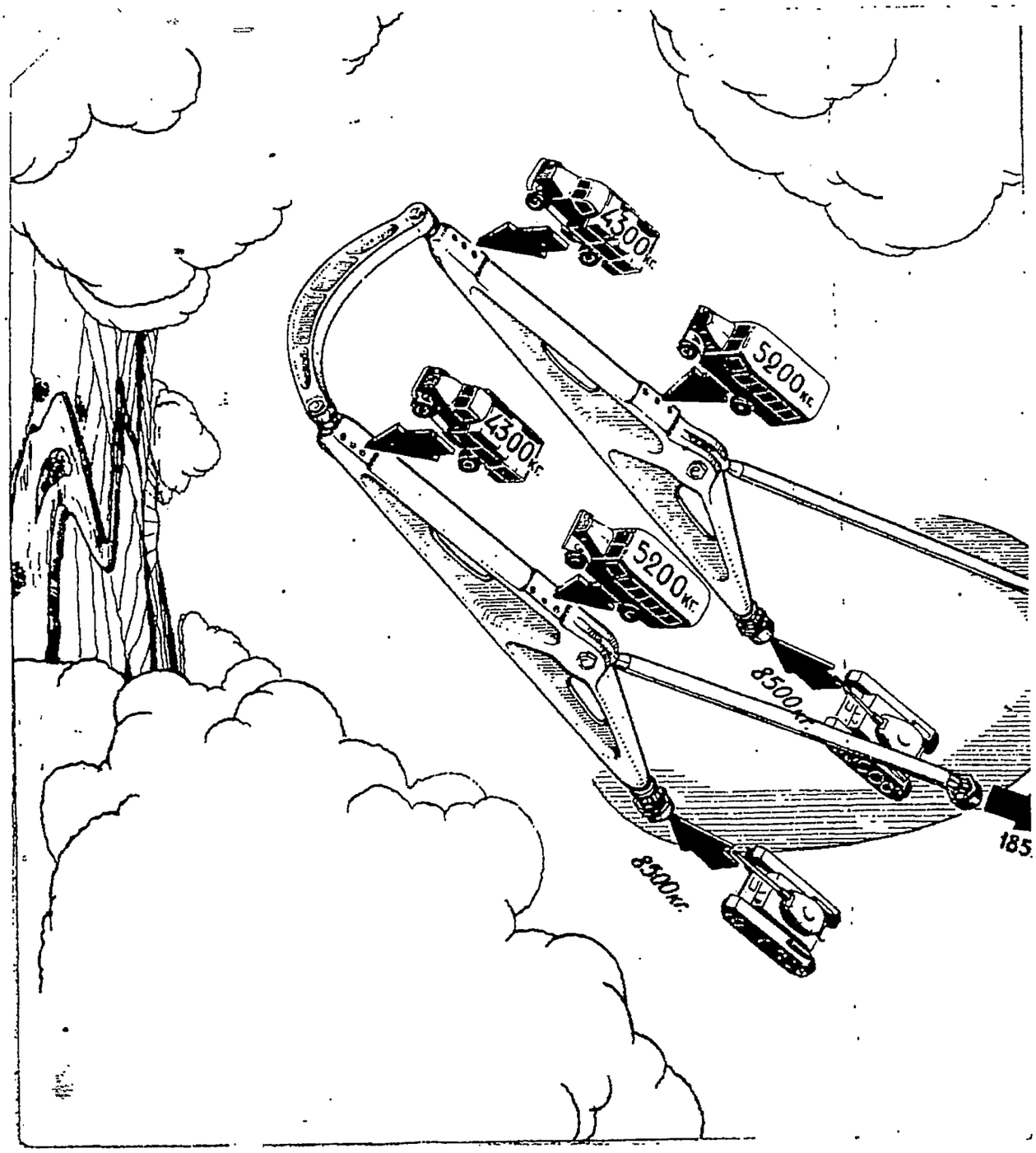
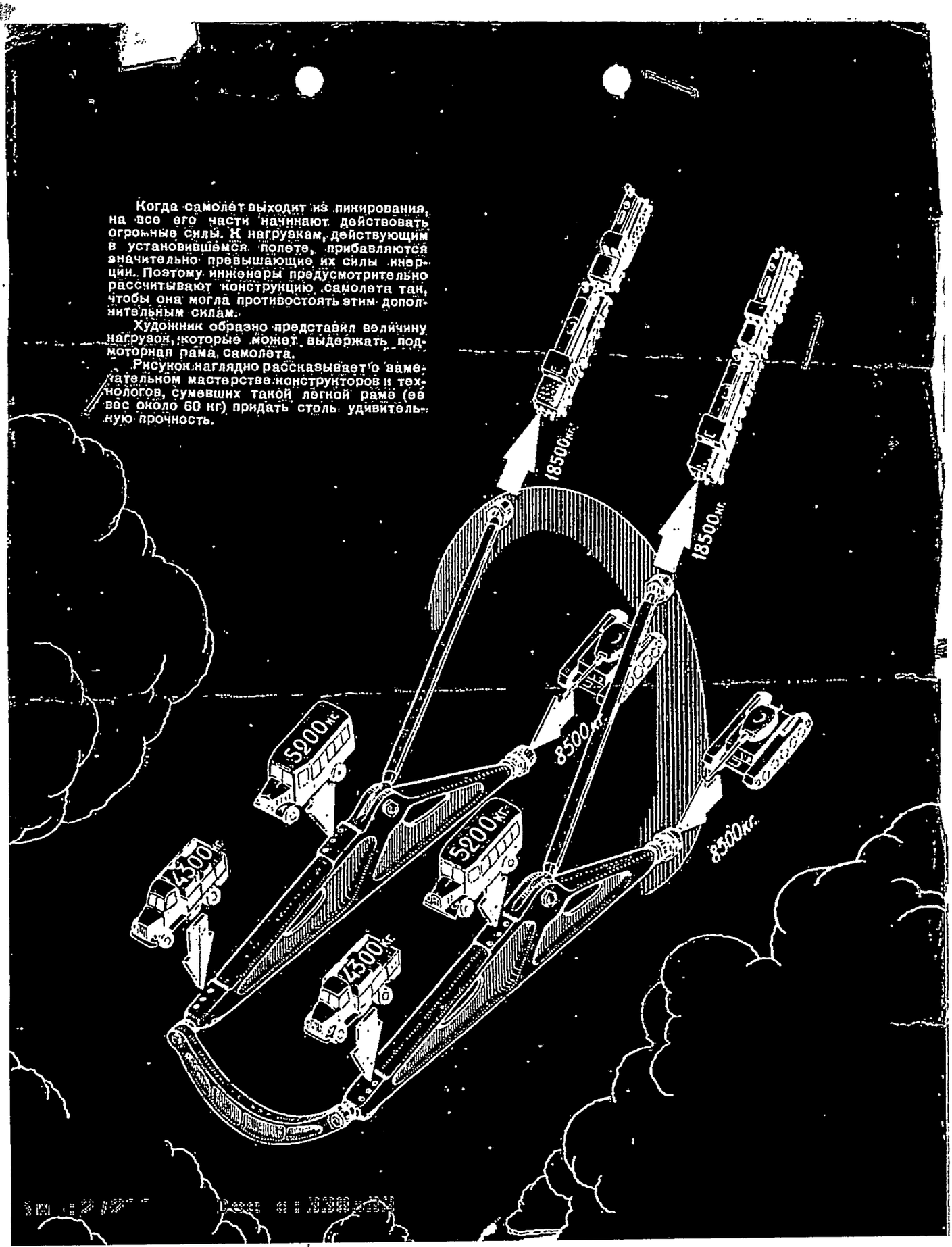




Когда самолет выходит из пикирования, на все его части начинают действовать огромные силы. К нагрузкам, действующим в установившемся полете, прибавляются значительно превышающие их силы инерции. Поэтому инженеры предусмотрительно рассчитывают конструкцию самолета так, чтобы она могла противостоять этим дополнительным силам.

Художник образно представил величину нагрузок, которые может выдержать подмоторная рама самолета.

Рисунок наглядно рассказывает о замечательном мастерстве конструкторов и технологов, сумевших такой легкой раме (ее вес около 60 кг) придать столь удивительную прочность.

20. NARA_AFOSI_Security_Violations_1982.pdf

Original start page:	1004	**Inserted note page:**	1023	**Archive starts after note:**	1024

Why it belongs in this release

Not UFO-specific, but it shows how special-access, Restricted Data, aircraft-crash, leak, media, and compromise investigations were controlled. Useful for explaining how a cover-up could be protected.

Complete release-note text from UAP 4

5. NARA_AFOSI_Security_Violations_1982.pdf

This is not an early UFO document, but it is valuable for explaining the mechanics of concealment. The AFOSI regulation states that AFOSI becomes involved in known or probable espionage, deliberate compromise, compromise of special-access programs, Restricted Data, Formerly Restricted Data, Atomic Energy Act violations, and referrals to other agencies. It also discusses unauthorized disclosures to public media, leak investigations, and the need to avoid increasing compromise or inadvertently confirming classified material. Congress and NARA should request all AFOSI security-violation, leak, aircraft-crash, special-access, Restricted Data, and public-media investigations involving UFO/UAP, unidentified aerial phenomena, crash retrieval, foreign technology, Wright-Patterson, Area 51, DOE/AEC, contractors, and SAP/CAP compartments.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

SOMI-01 PROPOSAL

JUL 82
SJF

DEPARTMENT OF THE AIR FORCE
Hq Air Force Office of Special Investigations
Bolling AFB DC 20332

AFOSI REGULATION 124-88

6 July 1982

Special Investigations

SECURITY VIOLATIONS INVESTIGATIONS

This regulation provides background information, guidance, and procedures for investigating security violations (AFOSI case type 65). All records created as a result of activities set forth in this regulation are subject to the provisions of the Privacy Act, 5 USC, 552a.

This is one of a series of new regulations which, in combination, will replace AFOSIM 124-4, dated 10 Aug 72. It supersedes specific portions of that manual as stated below. Some portions of the manual apply to more than one case type and cannot be eliminated yet. Wherever that occurs, this regulation takes precedence with regard to security violations cases.

Supersedes Chapter 9 and Chapter 12 Section E of AFOSIM 124-4 dated 10 Aug 72.
No. of Printed Pages: 16
OPR: (IVO) Mr. Theodore E. Tuck, Jr.,
Approved by: Col Richard F. Law
Distribution: B

~~FOR OFFICIAL USE ONLY~~

1. COMMAND RESPONSIBILITY FOR INVESTIGATION. AFR 205-1 is the Air Force's primary document regarding information security. Chapter VI of AFR 205-1:

a. Defines four types of security incidents: security deviation, inadvertent access, probably compromise, compromise.

b. Places responsibility for investigating security incidents directly upon command.

c. Describes the differences between preliminary inquiries and formal investigations.

d. Explains when command should call on AFOSI for help.

e. Specifies that AFOSI investigations supplement but do not substitute for commmand investigations.

f. Provides decision logic (Table 6-1) on required actions in various situations.

2. AFOSI INVOLVEMENT.

a. Table 6-1, AFR 205-1, states that AFOSI will be called on in cases of known or probable espionage, deliberate compromise, compromise of special access programs, Restricted Data, or Formerly Restricted Data; or suspected criminal violation of the Atomic Energy Act of 1954. AFOSI also investigates willful attempts to gain access and matters which need special investigative techniques beyond command capability. Lastly, AFOSI is the Air Force point-of-contact in situations which require referral to other agencies. The prime objectives of command investigations are to identify cause factors and plan corrective actions. Our objectives, in those matters we are called on to investigate, are to determine precisely what happened in the incident, who did it, and the current status of the affected material.

b. We do not have the people, the resources, or the mission to become directly involved in every command-investigated security incident. However, we can offer advisory assistance to command appointed investigating officers. We can advise them how to proceed, how to recognize situations that require our involvement, and how to avoid errors which could predujice further efforts.

3. RESOLVING DIFFERENCES BETWEEN AFOSI AND COMMAND. Command understanding of the foregoing should be created through liaison at the local level. Refer difference of opinion over investigative responsibility which cannot be resolved locally to HQ AFOSI/IVO before initiating any investigation. Such referrals should be by message, or telephone with backup message, to avoid delays.

4. REFERRALS TO OTHER AGENCIES: Certain security violations must be referred to other agencies:

a. FBI. Criminal violations by civilians involving disclosure, handling, or storage of classified material must be referred to the FBI. So must incidents which involve compromise to uncleared, non-DoD affiliated civilians. Ordinarily, referral will be made by the local detachment except for leaks to the news media. For leaks, referral is made by DoD General Counsel. Frequently, the FBI will decline investigation in favor of a DoD agency. Under the Atomic Energy Act of 1954 as amended (42 USC 2271 (b)), criminal violations of the Atomic Energy Act are investigated by the FBI regardless of the civilian or military status of those involved. For this purpose, material designated Formerly Restricted Data is treated as Restricted Data. Non-criminal violations of this Act are not referred.

b.POSTAL INSPECTOR. Postal Service has investigative jurisdiction over incidents involving classified material while it is in their custody. Local AFOSI units should refer information on such incidents to the Postal Inspector servicing their area.

5. TYPES OF SECURITY INCIDENTS. Subparagraphs a through d discuss the four categories of security incidents identified in AFR 205-1. The remaining subparagraphs discuss some particular types of incidents which fall into one or another of the four categories.

a. COMPROMISE. The disclosure of classified information to persons who are not authorized access to it. Note that a compromise can occur even though there was no intent to cause the disclosure.

b. PROBABLE COMPROMISE. Incidents in which it is reasonable to suspect that unauthorized persons had access to classified information.

c. INADVERTENT ACCESS. An incident in which the person who had unintentional access was previously the subject of a favorable personnel security investigation. This means that the individual would at least be eligible for some level of clearance. It does not necessarily mean that the person has a clearance or is eligible for the level of clearance or special access required for the information. Knowing that the person's trustworthiness has been established does not lessen the severity of the actions which caused the disclosure. It simply lessens the probability of serious damage resulting. It is important to learn if an inadvertent disclosure has become a compromise because the first person has made further disclosures.

d. SECURITY DEVIATION. An incident that involves the misuse or improper handling of classified material, but does not fall in the previous three categories.

e. CARELESS HANDLING. The failure of someone responsible for classified material to follow proper procedures for storage, transmission, or destruction. It may be due to lack of knowledge of procedures or an intentional circumvention of procedures to save time or trouble. Most careless handling is administrative and should be investigated by command. In rare, unusually complex situations, AFOSI may be needed to identify the perpetrators and to provide enough facts for command to take remedial action. Such investigations should be limited to the particular incident.

They must not be allowed to expand to a full scale inspection or survey of the command's security procedures.

f. MAIL IRREGULARITIES. Usually package damage due to improper packing or rough handling. Normally, investigation can be limited to tracing the route of the package, determining when damage was first noted, and interviewing anyone who may have had access to the contents. For periods when the package was in Postal Service channels, AFOSI will monitor the Postal Inspectors. Command can ordinarily cover periods when the package was under military control.

g. UNAUTHORIZED DISCLOSURES TO PUBLIC MEDIA. Release of classified material to the newspaper, periodical, or broadcasting media without prior permission and/or declassification action. This sub-type is particularly important because DoD Directives 5210.50 (to be implemented) sets forth special requirements which affect investigations. In part, they are that:

(1) The Deputy Under Secretary of Defense (Policy) (DUSD (P)) will coordinate initiation and conduct of any investigation which involves more than one DoD component.

(2) DUSD(P) will serve as the point-of-contact for DoD on cases referred to or from other federal agencies.

(3) Each DoD component will designate a senior official responsible for coordinating initial reports of unauthorized disclosures with Public Affairs officials and the OPR for the information. Together they will determine:

(a) If the information has previously been released officially and if not, its current classification.

(b) If investigation within the DoD component is appropriate.

(c) If investigation outside the DoD component should be recommended.

DoD Directive 5210.50 applies whether the identity of the unauthorized releaser is known or not known. Command should normally be able to handle cases of known releasers without help from AFOSI. Cases where the release was surreptitious by someone unknown are a special category known as leaks. Leaks may involve AFOSI heavily, both in the formal investigation, if requested, and in obtaining preliminary data for officials designated under DOD 5210.50. REQUESTS FOR INVESTIGATION OR ASSISTANCE ARE SPOT REPORTABLE TO HQ AFOSI/IVO.

The prime objective of a leak case is to learn who in the Air Force is responsible for the leak or if anyone in the Air Force knows how the media acquired the information. It is not necessary for the media to have already published or broadcast the material before a leak may be investigated. Sometimes, AFOSI becomes aware that certain specific documents are in media hands even though no public dissemination has been made.

A major concern in leak cases is to avoid lending credence to the compromised material. Often the greatest harm comes from confirming that the U.S. has certain intelligence, technologies, or policies. In the absence of official confirmation, publicized material can be damaging but must still be classed as speculation. Sometimes, the very existence of an official investigation provides the confirmation. This problem may be a determining factor in deciding whether an investigation should be undertaken.

Note →

Leak cases can be quite intricate. They are complicated further by lack of access to the most obvious source of a solution - the media itself. MEDIA PERSONNEL WILL NOT BE INTERVIEWED WITHOUT HQ AFOSI/IVO APPROVAL. Attachment 1 provides a list of steps to be taken in leak cases or in helping command respond to unauthorized disclosure situations.

h. DESERTION. Desertion investigations are mentioned here because they do not have a case type of their own. Most desertion investigations are run as CI Special Inquiries (case type b5. Some, however, are run as Security Violations (case type b5 if there is reason to suspect a violation in connection with the desertion. This usually occurs when a command inventory at the deserter's duty section discovers that classified information has been tampered with or is missing. Specific guidance is contained in AFOSIR 124-89, Desertion Investigations.

i. AUTOMATED DATA PROCESSING EQUIPMENT (ADPE). ADPE includes computers, computer terminals, microprocessors, word processors, and related equipment such as remote terminals, printers, and their interconnecting telecommunication networks. It can present unique problems from the b5 case point of view because of the high and constantly changing technology surrounding it. We are not concerned here with physical security or with design integrity. We are concerned with known or suspected incidents such as: deliberate attempts to access, deliberate or accidental, from such terminals; and compromise or subjection to compromise caused by circumvention of security procedures related to any ADPE. Aside from hositle intelligence services, the nature and technology of ADPE holds a fascination for those who view penetration as an intellectual challenge.

(1) Because of the technolgoy involved, agents confronted with such situations should seek expert assistance. Local sources would include appropriately cleared computer programmers, operators, and communications personnel. ADP Single Managers have responsibility for assuring that the equipment was in secure environments. However, they are located at MAJCOM level because ownership of ADPE rests at that level. Thus, while they have access to technical security data and test results, they may not be readily available for consultation. Data Processing Installation (DPI) personnel should be consulted regarding possible violations resulting from questionable operating practices or environments. Local DPIs may also have access to other helpful information. Any case involving ADPE should be forwarded to AFOSI/IVOSP for consultation with AFOSI/IMF. IMF can assist in providing current technical information. Suggestions on specific investigative techniques and on-site TDY assistance by specially trained agents are also available through the Regional Computer Crime Investigators (RCCI) (see AFOSIR 124-58).

(2) Other techniques to consider:

b5 + b7E

j. AIRCRAFT CRASHES. Major crashes of both military and civilian aircraft sometimes result in possible compromise of classified material. The material may be carried as registered mail, by passengers or official couriers, or may be component parts of the aircraft. After the rescue of survivors, the speedy recovery of any classified material which may have been aboard is one of the most important tasks connected with the aftermath of such an accident. Frequently, AFOSI is the first Air Force organization to learn an aircraft accident may have subjected classified material to compromise. Whenever an AFOSI unit is so informed, the person in charge will notify the nearest Air Force commander, express AFOSI's willingness to assist in the recovery of classified material, and furnish a Spot Report to AFOSI/IVO. When AFOSI assistance is requested by command, the results of participation in the recovery operation will be included in an ROI.

k. CONTRACTOR SECURITY VIOLATIONS. There are very few circumstances under which AFOSI investigates security incidents which occur among defense contractors. Determining when these conditions exist can be rather complicated. DOD 5220.22-R "Industrial Security Regulation" (ISR) is the governing directive for the Industrial Security Program. ISR, Sections I and V should be referred to whenever possible AFOSI involvement is under consideration.

(1) Basically, DIS administers the program for all User Agencies. The definition of User Agencies includes the Air Force and all of its activities. For purposes of this program DIS has geographic jurisdiction over the 50 States, District of Columbia, Puerto Rico, U.S. possessions, and U.S. trust territories. Regional DIS Directors of Industrial Security are designated as Cognizant Security Offices (CSO) for all contractor "facilities" within their areas whether located on or off of military installations. Thus, DIS CSOs have primary investigative jurisdiction over contractor security violations with the following exceptions:

(a) Outside the above areas, on-installation contractor operations are never designated "facilities". Thus jurisdiction rests with the Commander or Head of the User Agency installation.

(b) Within the above areas, a Commander or Head of a User Agency installation may elect not to designate an operation as a "facility". Thus investigative jurisdiction is automatically retained.

(c) A Commander or Head of a User Agency installation may designate a "facility" but elect to retain and perform certain functions including investigations. Such elections must be made to the CSO in writing.

The ISR also instructs CSOs to request professional investigative support from the services when special techniques are required or when RESTRICTED DATA or FORMERLY RESTRICTED DATA is involved and a criminal violation of the Atomic Energy Act is suspected. Remember, in the latter case, the matter must be referred to the FBI. (See para 4a above).

(2) Security incidents in industry may involve additional considerations. They may have started as industrial espionage: one company seeking proprietary information of another. Such actions aimed at stealing another company's secrets can result in a security violation or compromise. They also may be the result of real espionage designed to appear either as industrial espionage or as a plain violation, if discovered. Nothing in this regulation is intended to reduce any mission responsibilities of IVOE or IVF. In general terms, however, AFOSI units which receive allegations of security incidents in industry should refer them to the appropriate DIS Director of Industrial Security. This should be done directly if no military installation is involved or through the commander of the affected installation.

6. TECHNIQUES. The following are some special applications and some special restrictions of certain investigative techniques in connection with security violations. They are not all inclusive nor a reiteration of methods in general use.

a. DAMAGE ASSESSMENTS. When classified information is known or thought to be compromised, the OPR for the material should make a damage assessment. Ordinarily, it is command's responsibility to tell the OPRs of situations requiring damage assessments; as a courtesy, AFOSI should remind command of this responsibility. Occasionally, damage assessments may be needed as part of an AFOSI case. In those instances, the assessment should not just parrot the AFR 205-1 levels of "grave", "serious", and "identifiable damage" related to the levels of classification. Assessments should be brief summaries of the specific operational areas, intelligence sources, plans, etc. that will be harmed under a worst case scenario that the material reaches hostile intelligence. They should also be an estimate of how much planning would have to be reaccomplished to neutralize the damage and a statement of how much damage may already be neutralized by changes already in effect. It is usually best to request assessments through command by a letter outlining the above points. In summary, AFOSI does not conduct damage assessments; however, it can report the results of command assessments in an ROI.

b. SPECIAL ACCESSES FOR AFOSI PERSONNEL. All AFOSI agents and nearly all AFOSI support personnel hold Top Secret clearances. Those few who do not have current Top Secret clearances are eligible for them based on their Special Background Investigations. Some of the most serious security violations involve sensitive projects, systems, plans, or intelligence which require project clearances or special accesses. If time, TDY

constraints, and the severity of the situation permit, it may be possible to arrange for personnel with the required accesses to handle the case. Otherwise, it may be necessary to advise the requesting command that emergency accesses will have to be granted. Occasionally, agents have special access material thrust upon them by the person reporting the incident. They should accept and safeguard the material, then arrange to be debriefed (i.e., inadvertent disclosure statement) by the appropriate officials later. Everyone processing the case must have the required access in order to avoid creating another violation.

c. INCREASING COMPROMISE. Security violations investigations can require a large number of interviews. Many of these may have to be with members of the public who have no clearances or with military members who are not part of the project and have no need-to-know. Agents in these situations must be particularly careful not to increase the compromise by disclosing additional information or by unnecessarily confirming the compromised material.

d. SEARCHES. Physical searches in counterintelligence matters are governed by DoD 5240.1-R. Basically, unconsented searches within the U.S. and of U.S. persons and their property abroad are severely restricted. Only the FBI can do the former, and only the Attorney General can authorize the latter. Districts which require unconsented searches should forward their requests to HQ AFOSI/IVO for referral to the FBI or the Attorney General through DoD/GC. There is an exception to the above rules: Searches may be authorized pursuant to the UCMJ or MCM when probable cause has been established that a crime has been committed. The whole matter of searches is subject to change and should be coordinated closely with local JA and HQ AFOSI for current policy. Searches by consent are authorized and can be a valuable tool.

e. SUBJECT INTERVIEWS. In general, subjects and suspects in security violations investigations may be interviewed under the authority of the district commander without prior approval from HQ AFOSI. The exceptions which require headquarters approval are any interviews involving polygraph immunity, or non-advisement of rights. These are discussed below.

f.

b5

g. IMMUNITY. Under Chapter XII paragraph 68h of the Manual for Courts Martial, commanders with the authority to order a general court-martial may also grant immunity from military trial. Thus, grants of immunity from trial under the UCMJ are solely a command responsibility and not that of AFOSI. There are some offenses where both military and federal civilian authority have concurrent jurisdiction (See AFR 124-12).

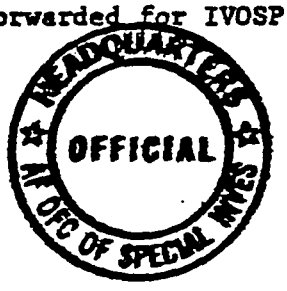
Violations of rules or laws concerning classified information are among these. These offenses may be tried in courts-martial and/or civilian US District Courts. While appropriate military commanders can grant immunity from military trial, only the US Attorney General or others designated by law may grant immunity from trial in a US District Court. Thus, DoD Directive 1355.1 and AFM 111-1 require that any proposal to grant immunity in security violations cases, among others, must be forwarded to the DoD General Counsel for coordination with DoJ. This is to be handled through legal channels between the local SJA and HQ USAF/JA. AFOSI agents will not be a party to or participate in the negotiation or offer of a grant of immunity. However, they should understand the process because of its impact on investigative proceedings and because the agent may be the first one approached on the subject. Attachment 2 is a decision table on handling various situations where immunity may be a factor. AFOSI agents will not conduct any interview under a grant of immunity unless they have received a written copy of the grant, and in cases covered by this regulation, approval from HQ AFOSI/IVO. Only AFOSI/CC can approve an exception to this rule.

h. INTERVIEWS WITHOUT RIGHTS ADVISEMENTS. Interviewing a subject or suspect without an advisement of rights can sometimes create "de facto" immunity. This is because of the difficulty in using the results of interview against the person after it is obtained in this fashion. Therefore, AFOSI policy in security violations cases requires that proposals to forego advisements of rights must be coordinated in advance with HQ IVO. Refer also to AFOSIR 124-82 for required procedures.

i. COMPULSORY RETURN OF CLASSIFIED MATERIAL. Title 18 U.S.C. Section 793 paras d and e both contain language making it an offense for someone to willfully retain classified material and to fail to deliver it on demand to an officer or employee of the United States who is authorized to receive it. In some cases where persons are known to be holding classified material in an unauthorized fashion, it may be possible to cause them to return it by presenting them a formal demand letter referring to the provisions of the statute. Both the use of this technique and the language of the demand should be thoroughly coordinated with the local SJA. Sometimes an agent might be the best party to receive the material. In other cases, it may be better to use some other authorized representative of the Air Force to make the direct contact. At other times, it might be best to use the FBI or not to use this technique at all because the potential harm might outweigh the good.

7. SPECIAL REPORTING REQUIREMENTS. AFOSIR 124-17 spells out the requirements for submitting Spot Reports. These include any incidents of known or suspected compromise of especially sensitive information and any incident which may generate extensive publicity or intense high-level interest. In addition to cases which meet the general requirements, all 34 matters which involve leaks or possible compromise of Crypto, SCI, SIOP-ESI, or sensitive intelligence methods or sources will be spot reported. Once the spot report has been sent, the case comes under HQ AFOSI review, so copies of all reports and correspondence should be sent to IVOSP as published. Immunity matters ordinarily develop after a case is

well in progress and would not normally be spot reportable. However, they immediately become of high-level interest and will require continuing headquarters review. They should be reported to IVO as set forth in Attachment 2, and copies of all material should be forwarded to IVOSP. Because of the high technology involved, all cases involving ADPE should be forwarded for IVOSP review with IMF as stated in para 5i(1).



RICHARD S. BEYEA, JR., Colonel, USAF
Commander

LYNN R. PRIER, Major, USAF
Director of Administration

ESSENTIAL ELEMENTS OF LEAK INVESTIGATIONS

1. A thorough leak inquiry includes all of the following steps. Responsibility for some rests with command, for others with officials designated under DoD 5210.50 (when implemented), and for others with the investigative agencies. AFOSI may be called upon to assist other officials in completing their portions.:

a. If the material has been published or broadcast, obtain a copy or a transcript. Specify the date it was made public. Identify the article or broadcast and parent media.

b. Attempt to identify specific DoD documents which are the direct source documents of the publicized material. Obtain copies of all compromised documents known to be in media hands whether they have been publicized or not.

c. Specify exactly which statements in the article, transcript, or leaked document are classified. Determine the current level of classification of each statement, and whether the statement was properly classified at the presumed time of the leak.

d. Determine the OPR, classification authority, and basic source document for each classified statement in the leaked documents. It may be necessary to obtain copies of the basic source documents, especially in referrals to non-DoD agencies.

e. Obtain damage assessments for all compromised statements in the leaked documents including statements which have not yet been publicized.

f. Determine the accuracy of the publicized version of all statements believed to be classified.

g. Determine if any of the classified statements have previously been officially released through Public Affairs, Freedom of Information, or Privacy Act channels, etc.

h. Determine whether permission to publish the material has ever been sought or granted.

i. Obtain the results of any inquiries already conducted by other offices or agencies.

j. Assess the possibility that there was no real disclosure. Material which appears classified may actually be in the public domain. It may also result from a knowledgeable reporter assembling unclassified data or speculating on applications of published policies or scientific research.

k. Establish the approximate date and method of disclosure from its date and nature of appearance in the media.

1. b5 + b7E

m. Interview everyone who attended briefings or who had access to documents, knew their contents, or knew of their existence. Determine if they have any knowledge indicating who caused the disclosure or how it may have occurred.

n. Ascertain Air Force willingness to declassify any of the information for possible use in court.

o. Coordinate with Department of Justice concerning investigation/prosecution of civilians. (Function of DUSD/P).

p. If DOJ cedes jurisdiction and poses no objection, interview non-DoD civilians who may be involved. DO NOT INTERVIEW MEDIA PERSONNEL WITHOUT PRIOR APPROVAL FROM HQ AFOSI/IVO.

2. b5

21. NSC_UFOS_Walter_B_Smith_1952.pdf

Original start page:	1017	**Inserted note page:**	1037	**Archive starts after note:**	1038

Why it belongs in this release

Direct CIA/NSC UFO national-security document; mentions ATIC, Battelle, unexplained cases, air-warning vulnerability, mass psychology, and need for coordinated research.

Complete release-note text from UAP 4

1. NSC_UFOS_Walter_B_Smith_1952.pdf

This is the strongest document in the batch because it explicitly frames UFOs as a national-security issue beyond the Air Force alone. Walter B. Smith’s proposed NSC memorandum states that since 1947 approximately 2,300 official reports had been received and about 20% remained unexplained; the internal OSI memorandum says ATIC at Wright-Patterson had only three officers and two secretaries, had arranged for Battelle Memorial Institute to machine-index official reports, and that the UFO problem involved both psychological danger and air-warning vulnerability. Congress and NARA should demand the full CIA/OSI file, the draft NSC directive, the Battelle contract records, ATIC case-index system, Psychological Strategy Board materials, MIT/Project Lincoln correspondence, and any National Intelligence Estimate on flying saucers.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

ER - 3 - 2809

MEMORANDUM TO: The Executive Secretary
National Security Council

SUBJECT: Unidentified Flying Objects (Flying Saucers)

1. The Central Intelligence Agency has reviewed the current situation concerning unidentified flying objects which have caused extensive speculation in the press and have been the subject of concern to Government organizations. The Air Force, within the limitations of manpower which could be devoted to the subject, has thus far carried the full responsibility for investigating and analyzing individual reports of sightings. Since 1947, approximately 2000 official reports of sightings have been received and, of these, about 20% are as yet unexplained.

2. It is my view that this situation has possible implications for our national security which transcend the interests of a single service. A broader, coordinated effort should be initiated to develop a firm scientific understanding of the several phenomena which apparently are involved in these reports, and to assure ourselves that the incidents will not hamper our present efforts in the Cold War or confuse our early warning system in case of an attack.

3. I therefore recommend that this Agency and the agencies of the Department of Defense be directed to formulate and carry out a program of intelligence and research activities required to solve the problem of instant positive identification of unidentified flying objects. A draft of an appropriate directive is attached.

Walter B. Smith
Director

Enclosure

[redacted]

SEP 24 1952

MEMORANDUM FOR: Director of Central Intelligence

THROUGH : Deputy Director (Intelligence)

SUBJECT : Flying Saucers

1. Recently an inquiry was conducted by the Office of Scientific Intelligence to determine whether there are national security implications in the problem of "unidentified flying objects," i.e., flying saucers; whether adequate study and research is currently being directed to this problem in its relation to such national security implications; and what further investigation and research should be instituted, by whom, and under what aegis.

2. It was found that the only unit of Government currently studying the problem is the Directorate of Intelligence, USAF, which has charged the Air Technical Intelligence Center (ATIC) with responsibility for investigating the reports of sightings. At ATIC there is a group of three officers and two secretaries to which come, through official channels, all reports of sightings. This group conducts investigation of the reports, consulting as required with other Air Force and civilian technical personnel. A world-wide reporting system has been instituted and major Air Force Bases have been ordered to make interceptions of unidentified flying objects. The research is being conducted on a case basis and is designed to provide a satisfactory explanation of each individual sighting. ATIC has concluded an arrangement with Battelle Memorial Institute for the latter to establish a machine indexing system for official reports of sightings.

3. Since 1947, ATIC has received approximately 1500 official reports of sightings plus an enormous volume of letters, phone calls, and press reports. During July 1952 alone, official reports totaled 250. Of the 1500 reports, Air Force carries 20 percent as unexplained and of those received from January through July 1952 it carries 28 percent unexplained.

4. In its inquiry into this problem, a team from CIA's Office of Scientific Intelligence consulted with a representative of Air Force Special Studies Group; discussed the problem with those in charge of the Air Force Project at Wright-Patterson Air Force Base; reviewed a considerable volume of intelligence reports; checked the Soviet press and broadcast indices; and conferred with three CIA consultants, who have broad knowledge of the technical areas concerned.

[redacted]

5. It was found that the ATIC study is probably valid if the purpose is limited to a case-by-case explanation. However, that study does not solve the more fundamental aspects of the problem. These aspects are to determine definitely the nature of the various phenomena which are causing these sightings, and to discover means by which these causes, and their visual or electronic effects, may be identified immediately. The CIA consultants stated that these solutions would probably be found on the margins or just beyond the frontiers of our present knowledge in the fields of atmospheric, ionospheric, and extraterrestrial phenomena, with the added possibility that the present dispersal of nuclear waste products might also be a factor. They recommended that a study group be formed to perform three functions:

a. analyze and systematize the factors which constitute the fundamental problem;

b. determine the fields of fundamental science which must be investigated in order to reach an understanding of the phenomena involved; and

c. make recommendations for the initiation of appropriate research.

Dr. Julius A. Stratton, Vice President of the Massachusetts Institute of Technology, has indicated to CIA that such a group could be constituted at that Institute. Similarly, Project Lincoln, the Air Force's air defense project at MIT, could be charged with some of these responsibilities.

6. The flying saucer situation contains two elements of danger which, in a situation of international tension, have national security implications. These are:

a. Psychological - With world-wide sightings reported, it was found that, up to the time of the investigation, there had been in the Soviet press no report or comment, even satirical, on flying saucers, though Gromyko had made one humorous mention of the subject. With a State-controlled press, this could result only from an official policy decision. The question, therefore, arises as to whether or not these sightings:

(1) could be controlled,

(2) could be predicted, and

(3) could be used from a psychological warfare point of view, either offensively or defensively.

The public concern with the phenomena, which is reflected both in the United States press and in the pressure of inquiry upon the Air Force, indicates that a fair proportion of our population is mentally conditioned to the acceptance of the incredible. In this fact lies the potential for the touching-off of mass hysteria and panic.

b. Air Vulnerability - The United States Air Warning System will undoubtedly always depend upon a combination of radar screening and visual observation. The U.S.S.R. is credited with the present capability of delivering an air attack against the United States, yet at any given moment now, there may be current a dozen official unidentified sightings plus many unofficial ones. At any moment of attack, we are now in a position where we cannot, on an instant basis, distinguish hardware from phantom, and as tension mounts we will run the increasing risk of false alerts and the even greater danger of falsely identifying the real as phantom.

7. Both of these problems are primarily operational in nature but each contains readily apparent intelligence factors.

8. From an operational point of view, three actions are required:

a. Immediate steps should be taken to improve identification of both visual and electronic phantom so that, in the event of an attack, instant and positive identification of enemy planes or missiles can be made.

b. A study should be instituted to determine what, if any, utilization could be made of these phenomena by United States psychological warfare planners and what, if any, defenses should be planned in anticipation of Soviet attempts to utilize them.

c. In order to minimize risk of panic, a national policy should be established as to what should be told the public regarding the phenomena.

9. Other intelligence problems which require determination are:

a. The present level of Soviet knowledge regarding these phenomena.

b. Possible Soviet intentions and capabilities to utilize these phenomena to the detriment of United States security interests.

c. The reasons for silence in the Soviet press regarding flying saucers.

10. Additional research, differing in character and emphasis from that presently being performed by Air Force, will be required to meet the specific needs of both operations and intelligence. Intelligence responsibilities in this field as regards both collection and analysis can be discharged with maximum effectiveness only after much more is known regarding the exact nature of these phenomena.

11. I consider this problem to be of such importance that it should be brought to the attention of the National Security Council, in order that a community-wide coordinated effort towards its solution may be initiated.

E. MARSHALL CHADWELL
Assistant Director
Scientific Intelligence

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Dr. Machle, OSI

DATE: 15 March 1949

FROM : Dr. Stone, OSI

SUBJECT: Flying Saucers

1. A rapid perusal of your documents leaves one confused and inclined to supineness.

2. The following considerations seem not to have been included in the survey:

a. No suggestion is noted that there is a possibility that many of the objects may be "free" meteorological sounding balloons.

b. If a tame "flying saucer" is to be involved, it is extremely unlikely that they be found over the U. S. because:

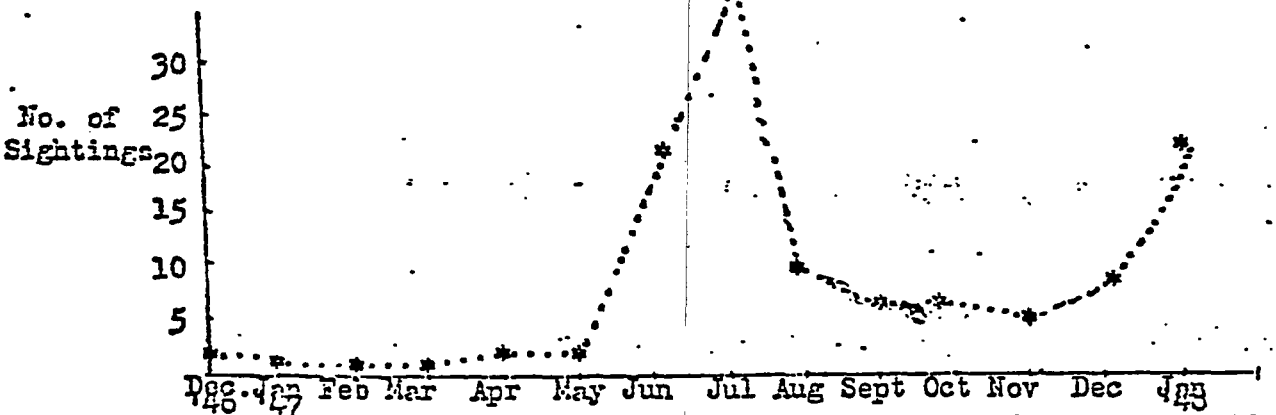
(1) U.S. developments would be closely coordinated with USAF or commercial designers.

(2) Foreign aircraft development would hardly be tested at such a range from home areas, even if fuel could be supplied

(3) Guided aircraft at a range of several thousand miles are beyond any known capabilities, including ours.

c. What is the psychological probability that any object seen briefly against "zero" background will be circular, or oval, in appearance?

d. Has any one commented on the curious time distribution of the observations? Note chart below:



Is there any midsummer madness involved? Are asteroids prominent in that season? Etc., etc.

[redacted]

3-5093

DEC 2 1952

MEMORANDUM FOR: Director of Central Intelligence

THRU : Deputy Director for Intelligence

SUBJECT : Unidentified Flying Objects

1. On 20 August, the DCI, after a briefing by OSI on the above subject, directed the preparation of an NSCID for submission to the Council stating the need for investigation and directing agencies concerned to cooperate in such investigations.

2. In attempting to draft such a directive and the supporting staff studies, it became apparent to DD/I, Acting AD/SI and AD/IC that the problem was largely a research and development problem, and it was decided by DD/I to attempt to initiate action through R&DB. A conference was held between DI/USAF, Chairman of R&DB, DD/I, Acting AD/SI and AD/IC at which time it was decided that Dr. Whitman, Chairman of R&DB, would investigate the possibility of undertaking research and development studies through Air Force agencies.

3. On approximately 6 November, we were advised by Chairman, R&DB, that inquiries in the Air Staff did not disclose "undue concern" over this matter, but that it had been referred to the Air Defense Command for consideration. No further word has been received from R&DB.

4. Recent reports reaching CIA indicated that further action was desirable and another briefing by the cognizant A-2 and ATIC personnel was held on 25 November. At this time, the reports of incidents convince us that there is something going on that must have immediate attention. The details of some of these incidents have been discussed by AD/SI with DDCI. Sightings of unexplained objects at great altitudes and travelling at high speeds in the vicinity of major U.S. defense installations are of such nature that they are not attributable to natural phenomena or known types of aerial vehicles.

5. OSI is proceeding to the establishment of a consulting group of sufficient competence and stature to review this matter and convince the responsible authorities in the community that immediate research and development on this subject must be undertaken. This can be done expeditiously under the aegis of CENIS.

[redacted]

6. Attached hereto is a draft memorandum to the NSC and a simple draft NSC Directive establishing this matter as a priority project throughout the intelligence and the defense research and development community.

H. MARSHALL CHADWELL
Assistant Director
Scientific Intelligence

Attachments:
Draft memo to NSC with
draft Directive

[redacted]

DRAFT

NATIONAL SECURITY COUNCIL DIRECTIVE

SUBJECT: Unidentified flying objects

Pursuant to the provisions of Section 102 of the National Security Act of 1947 and for the purposes annunciated in Paragraphs d and e thereof, the National Security Council hereby authorizes and directs that:

1. The Director of Central Intelligence shall formulate and carry out a program of intelligence and research activities as required to solve the problem of instant positive identification of unidentified flying objects.

2. Upon call of the Director of Central Intelligence, Government departments and agencies shall provide assistance in this program of intelligence and research to the extent of their capacity provided, however, that the DCI shall avoid duplication of activities presently directed toward the solution of this problem.

3. This effort shall be coordinated with the military services and the Research and Development Board of the Department of Defense, with the Psychological Strategy Board and other Governmental agencies as appropriate.

4. The Director of Central Intelligence shall disseminate information concerning the program of intelligence and research activities in this field to the various departments and agencies which have authorized interest therein.

[redacted]

[redacted]

MEMORANDUM FOR: Deputy Director (Intelligence)

THROUGH : Assistant Director, Intelligence Coordination

SUBJECT : Approval in Principle—External Research Project Concerned with Unidentified Flying Objects

REFERENCE : CIA Regulation 110-5-3, A, (1), (b)
CIA Regulation 50-17, 17, C

1. It is proposed that an external research project be established so that the available evidence on Unidentified Flying Objects can be analyzed and evaluated by an Ad Hoc Panel of top-level scientists in order to recommend what further action should be taken toward solution of this problem.

2. The proposed project is an important part of the effort of this office to improve intelligence relating to Unidentified Flying Objects and would materially assist the O/SI Task Force which has been working on this problem in cooperation with the Air Force at the request of the DCI since 20 August 1952.

3. It is anticipated that the proposed project would be established through CEMIS and would utilize their facilities to obtain the services of the personnel required for the panel. Discussions have been held on this matter with Dr. Max Millikan, Director of CEMIS, who has indicated his approval.

4. The proposed project would cost approximately $5,000 which is the amount estimated to be necessary to pay for the expenses of the Panel members (travel, per diem etc.) and the administrative overhead cost for CEMIS.

5. The proposed project would not duplicate any known CIA activity.

6. The proposed project will not duplicate any known Department of Defense efforts. U. S. Air Force personnel will participate in meetings with the Panel.

7. Classification of the proposed project would be SECRET.

[redacted]

[redacted]

8. It is requested that approval in principle be given for the proposed project so that preliminary negotiations may be undertaken. In due course, the project will be submitted for final approval.

H. MARSHALL CHADWELL
Assistant Director
Scientific Intelligence

CONCURRENCES:

Signature: _____ Date: _____
Assistant Director
Intelligence Coordination

ACTION BY APPROVING AUTHORITY:

Approved (disapproved) in principle.

Signature: _____ Date: _____
Deputy Director (Intelligence)

[redacted]

14 October 1952

MEMORANDUM FOR RECORD

SUBJECT: Flying Saucers Problem

1. At an informal discussion between DD/I, AD/IC, and Acting AD/SI, it was agreed that the saucer problem should be attacked by getting together the responsible individuals in the community to work out a program of research and intelligence which can then be implemented by them directly. The agreed program can then be forwarded to the DCI and possibly the Secretary of Defense and the balance of the National Security Council as an established program rather than waiting for a great deal of formal, high level paper pushing before taking action.

2. DD/I directed Acting AD/SI to contact Dr. Whitman and Gen. Samford to arrange an appropriate time at which this problem can be reviewed. Acting AD/SI to call on Dr. Whitman and review the background of our study before the meeting.

3. Subsequently, Acting AD/SI was advised that the most convenient days for this meeting would be Monday or Tuesday, 20 or 21 October. Those present would be:

Dr. Walter G. Whitman, Chairman, NSB
Gen. John A. Samford, Director of Intelligence, USAF
Mr. Loftus E. Becker, DD/I
Mr. James Q. Reber, AD/IC

plus others deemed appropriate by the principals.

RALPH L. CLARK

CC: Chief, Opns/SI - 1
Chief, SAD/SI - 1
Chief, Prod/SI - 1

22 Aug request
4 14 1

[redacted]

OCT 2 1952

MEMORANDUM TO: Director of Central Intelligence

THROUGH: Deputy Director (Intelligence)

FROM: Assistant Director, Office of Scientific Intelligence

SUBJECT: Flying Saucers

1. PROBLEM—To determine: (a) Whether or not there are national security implications in the problem of "unidentified flying objects"; (b) whether or not adequate study and research is currently being directed to this problem in its relation to such national security implications; and (c) what further investigation and research should be instituted, by whom, and under what aegis.

2. FACTS AND DISCUSSION—OSI has investigated the work currently being performed on "flying saucers" and found that the Air Technical Intelligence Center, DI, USAF, Wright-Patterson Air Force Base, is the only group devoting appreciable effort and study to this subject, that ATIC is concentrating on a case-by-case explanation of each report, and that this effort is not adequate to correlate, evaluate, and resolve the situation on an overall basis. The current problem is discussed in detail in TAB A.

3. CONCLUSIONS—"Flying saucers" pose two elements of danger which have national security implications. The first involves mass psychological considerations and the second concerns the vulnerability of the United States to air attack. Both factors are amplified in TAB A.

4. ACTION RECOMMENDED—(a) That the Director of Central Intelligence advise the National Security Council of the implications of the "flying saucer" problem and request that research be initiated. TAB B is a draft memorandum to the NSC, for the DCI's signature. (b) That the DCI discuss this subject with the Psychological Strategy Board. A memorandum to the Director, Psychological Strategy Board, is attached for signature as TAB C. (c) That CIA, with the cooperation of PSB and other interested departments and agencies, develop and recommend for adoption by the NSC a

[redacted]

policy of public information which will minimize concern and possible panic resulting from the numerous sightings of unidentified objects.

H. MARSHALL CHADWELL
Assistant Director
Scientific Intelligence

ANNEXES:

TAB A—Memorandum to DCI, through DDI, Subject: Flying Saucers.
TAB B—Letter to National Security Council with enclosure.
TAB C—Memo to Director, Psychological Strategy Board with enclosure.

CONCURRENCES:

Date: _____

LOFTUS E. BECKER
Deputy Director/Intelligence

ACTION BY APPROVING AUTHORITY:

Date: _____

Approved (disapproved):

WALTER B. SMITH
Director

#715 (16)

[redacted]

NATIONAL SECURITY COUNCIL INTELLIGENCE DIRECTIVE

SUBJECT: Unidentified flying objects

Pursuant to the provisions of Section 102 of the National Security Act of 1947 and for the purposes annunciated in Paragraphs d and e thereof, the National Security Council hereby authorizes and directs that:

1. The Director of Central Intelligence shall formulate and carry out a program of intelligence and research activities required to solve the problem of instant positive identification of unidentified flying objects.

2. This effort shall be coordinated with the military services and the Research and Development Board of the Department of Defense, with the Psychological Strategy Board and other Governmental agencies as appropriate.

3. Upon call of the Director of Central Intelligence, Government departments and agencies shall provide assistance in this program of intelligence and research to the extent of their capacity provided, however, that the DCI shall avoid duplication of activities presently directed toward the solution of this problem.

4. The Director of Central Intelligence shall disseminate information concerning the program of intelligence and research activities in this field to the various departments and agencies which have authorized interest therein.

[redacted] ER - 3 - 2808

MEMORANDUM TO: The Executive Secretary
National Security Council

SUBJECT: Unidentified Flying Objects (Flying Saucers)

1. The Central Intelligence Agency has reviewed the current situation concerning unidentified flying objects which have caused extensive speculation in the press and have been the subject of concern to Government organizations. The Air Force, within the limitations of manpower which could be devoted to the subject, has thus far carried the full responsibility for investigating and analyzing individual reports of sightings. Since 1947, approximately 2000 official reports of sightings have been received and, of these, about 20% are as yet unexplained.

2. It is my view that this situation has possible implications for our national security which transcend the interests of a single service. A broader, coordinated effort should be initiated to develop a firm scientific understanding of the several phenomena which apparently are involved in these reports, and to assure ourselves that the incidents will not hamper our present efforts in the Cold War or confuse our early warning system in case of an attack.

3. I therefore recommend that this Agency and the agencies of the Department of Defence be directed to formulate and carry out a program of intelligence and research activities required to solve the problem of instant positive identification of unidentified flying objects. A draft of an appropriate directive is attached.

Walter B. Smith
Director

Inclosure

[redacted]

[redacted]

ER - 3 - 2809

CENTRAL INTELLIGENCE AGENCY

WASHINGTON 25, D. C.

1951

OFFICE OF THE DIRECTOR

MEMORANDUM TO: Director, Psychological Strategy Board

SUBJECT: Flying Saucers

1. I am today transmitting to the National Security Council a proposal (TAB A) in which it is concluded that the problems connected with unidentified flying objects appear to have implications for psychological warfare as well as for intelligence and operations.

2. The background for this view is presented in some detail in TAB B.

3. I suggest that we discuss at an early board meeting the possible offensive or defensive utilization of these phenomena for psychological warfare purposes.

Walter B. Smith
Director

Enclosure

[redacted]

[redacted]

13 October 1952

MEMORANDUM FOR: Deputy Director (Intelligence)

SUBJECT: Flying Saucers

1. Flying unidentified objects (Flying Saucers) have been the subject of Air Force observation and analysis because of the possibility that such objects might conceivably be an attack on the U.S. If they are not, it is conceivable that the enemy might take advantage of the confusion created by the ~~[redacted]~~ Flying Saucers to use at his convenience some air weapon against the United States.

2. Thus far Defense Department conducted research in this area has been confined to the effort by A-2 through ATIC with the result that an explanation has been provided on all but 20 per cent of the total 1500 reported sightings of Flying Saucers.

3. Determination of the scientific capabilities of the USSR to create and control Flying Saucers as a weapon against the United States is a primary concern of the CIA/OSI. Its review of existing information does not lead to the conclusion that the saucers are USSR created or controlled. It is the view of OSI that collection of intelligence information on the capabilities of the USSR to produce, launch, and control Flying Saucers and the analysis of such data as might be collected cannot be very effective until there is adequate fundamental scientific research launched to clarify the nature and causes of Flying Saucers and to devise means whereby they might be instantly identified.

4. The major scientific intelligence problems in respect to Saucers are:

a. What is the present level of Soviet knowledge regarding these phenomena?

b. What are possible Soviet capabilities to utilize these phenomena to the detriment of US security interests?

c. What effect do flying saucers have on our warning system.

[redacted]

[redacted]

5. Conclusions:

a. The instigation of fundamental scientific research is the primary responsibility of the Defense Department.

b. The DCI, after IAC, should dispatch to Secretary Lovett along the lines of the attached. The cover sheet explaining to the IAC why the proposed letter is submitted is also attached. (We should discuss this draft & the idea with A-2 before IAC) Tentatively: The U.

c. It is far too early in view of the present state of our knowledge regarding Flying Saucers for psychological warfare planners to start planning how the United States might use U.S. Flying Saucers against the enemy.

d. When intelligence has submitted the National Estimate on Flying Saucers there will be the time and basis for a public policy to reduce or restrain mass hysteria.

James Q. Reber

JAMES Q. REBER
Assistant Director
Intelligence Coordination

[redacted]

[redacted]

FYC

14 October 1952

MEMORANDUM FOR RECORD

SUBJECT: Flying Saucers Problem

1. At an informal discussion between DD/I, AD/IC, and Acting AD/SI, it was agreed that the saucer problem should be attacked by getting together the responsible individuals in the community to work out a program of research and intelligence which can then be implemented by them directly. The agreed program can then be forwarded to the DCI and possibly the Secretary of Defense and the balance of the National Security Council as an established program rather than waiting for a great deal of formal, high level paper pushing before taking action.

2. DD/I directed Acting AD/SI to contact Dr. Whitman and Gen. Samford to arrange an appropriate time at which this problem can be reviewed. Acting AD/SI to call on Dr. Whitman and review the background of our study before the meeting.

3. Subsequently, Acting AD/SI was advised that the most convenient days for this meeting would be Monday or Tuesday, 20 or 21 October. Those present would be:

Dr. Walter G. Whitman, Chairman, RDB
Gen. John A. Samford, Director of Intelligence, USAF
Mr. Loftus E. Becker, DD/I
Mr. James Q. Reber, AD/IC

plus others deemed appropriate by the principals.

RALPH L. CLARK

CC: Chief, Opns/SI - 1
Chief, SAB/SI - 1
Chief, Prod/SI - 1

25

[redacted]

[redacted]

3 December 1952

MEMORANDUM FOR RECORD

SUBJECT: Flying Saucers

1. At 1100 yesterday morning I met with Dr. Julius A. Stratton, Executive Vice President and Provost of Massachusetts Institute of Technology and Dr. Max Millikan, Director of CENIS. I briefed them on the various new reports of sightings including the Limestone Base Case, the Florida Scout Master, the Utah Motion Pictures, etc. I also brought Dr. Stratton up to date on developments which had occurred since our previous discussion of the subject in August. Dr. Stratton reiterated his earlier position that this is a subject which must be investigated and he said that probably the best means of getting a thoroughly competent review of the problem would be through Project LINCOLN. He said, however, that in view of the delicate position in relation to Air Force, as a result of the "Summer Study Report", any acceptance of this project by LINCOLN must be based on Air Force concurrence or on an independent proposal from one of the other services. He said that Alfred Hill would be the best man to head the group. Assuming that it might prove impractical to place the Project at LINCOLN, we explored other possibilities including Princeton and Cal Tech. Dr. Stratton felt very strongly that Cal Tech would be the better of the two in view of the presence there of Robertson, Lauritson, Spitzer (on temporary duty from Princeton), Millikan's brother and others. Dr. Stratton asked particularly that we keep him informed of the progress that we make in having this problem investigated as he is personally very interested as well as fully aware of the potential danger and implications of the situation.

2. Following the meeting with Drs. Stratton and Millikan, I had lunch at the Faculty Club with Lloyd Berkner and Jerrold Zacharias and briefed them on the recent cases and our feelings regarding their implications. Berkner, while apparently not interested in taking a personal part, felt strongly that the saucer problem should be thoroughly investigated from a scientific point of view. Zacharias did not appear to be greatly interested in the problem and made only one suggestion, i.e. that Shirley Quimby of Columbia University be brought into the picture. Quimby took his physics degree at the same time as Zacharias; is now at Columbia University, having during the war been a Navy scientist working on ASW. Zacharias suggested Quimby because the latter is probably the most expert man in the country on magic and general chicanery.

3. My conclusion from these conversations is that it will probably be necessary to secure the full backing of DCI in order that a scientific review of this problem may be laid on. Without this backing, it would probably be impossible to secure the Air Force cooperation which would be necessary, particularly in the matter of availability of reports, etc.

[redacted]

P. G. STRONG

OSI/PGS:bxd

Orig - Subje
1 - Chron
1 - Dail

NAVED FORM NO. 64

SECRET
SECURITY INFORMATION

Office Memorandum • UNITED STATES GOVERNMENT

TO : DAD/SI

DATE: 9 December 1952

FROM : H. U. Graham

63

SUBJECT: FCC Monitoring and Flying Saucers.

1. In accordance with your request, I interviewed Mr. Irving Weston of the Field Engineering and Monitoring Division of the FCC to determine whether the Commission at present has any knowledge of unexplained radio signals which might possibly be connected with unidentified flying saucers. His answer was no.

2. Unless such signals were reasonably persistent or were causing interference to established services, it is unlikely that they would be intercepted, or if intercepted, the subject of inquiry. This is because the stations are, in general, involved in special assignments and have a minimum of time for general cruising of the spectrum.

3. The Commission has operating 12 full time monitoring stations and 6 part time monitoring stations. Two (2) of the stations are in Alaska and one (1) in Hawaii. Because of the short range of frequencies above 30 mc/s., monitoring between 30 and about 200 mc/s. is confined pretty much to transmitters in the immediate vicinity. Most of the monitoring stations have equipment for higher frequencies, including the AN/APR-4 receiver, but make little use thereof. VHF monitoring is done to some extent by traveling inspectors with automobile receivers. It seemed likely using the example of the concerted effort to identify the first diathermy signals back in 1935 and the more recent efforts which preceded the explanation of the VHF "bursts", that any persistent occurrences of radio signals that might come from flying saucers, if below 30 mc/s., would soon be the object of considerable interest at the FCC and elsewhere.

4. The FCC maintains a file in the Briggs Building of all reported intercepts of all its monitoring stations by frequency and by call letters extending back three or four years. This file is particularly valuable in the recognition of new signals which may be reported. Information tabulated includes frequency, call letters, type of emission, service, monitoring station reporting, and an intercept supporting the identification.

5. Classification of the discussion was considered Secret.

H. U. Graham

H. U. GRAHAM

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[redacted]

DEC 2 1952

MEMORANDUM FOR: Director of Central Intelligence

THRU : Deputy Director for Intelligence

SUBJECT : Unidentified Flying Objects

1. On 20 August, the DCI, after a briefing by OSI on the above subject, directed the preparation of an NSCID for submission to the Council stating the need for investigation and directing agencies concerned to cooperate in such investigations.

2. In attempting to draft such a directive and the supporting staff studies, it became apparent to DD/I, Acting AD/SI and AD/IC that the problem was largely a research and development problem, and it was decided by DD/I to attempt to initiate action through R&DB. A conference was held between DI/USAF, Chairman of R&DB, DD/I, Acting AD/SI and AD/IC at which time it was decided that Dr. Whitman, Chairman of R&DB, would investigate the possibility of undertaking research and development studies through Air Force agencies.

3. On approximately 6 November, we were advised by Chairman, R&DB, that inquiries in the Air Staff did not disclose "undue concern" over this matter, but that it had been referred to the Air Defense Command for consideration. No further word has been received from R&DB.

4. Recent reports reaching CIA indicated that further action was desirable and another briefing by the cognizant A-2 and ATIC personnel was held on 25 November. At this time, the reports of incidents convince us that there is something going on that must have immediate attention. The details of some of these incidents have been discussed by AD/SI with DDCI. Sightings of unexplained objects at great altitudes and travelling at high speeds in the vicinity of major U.S. defense installations are of such nature that they are not attributable to natural phenomena or known types of aerial vehicles.

5. OSI is proceeding to the establishment of a consulting group of sufficient competence and stature to review this matter and convince the responsible authorities in the community that immediate research and development on this subject must be undertaken. This can be done expeditiously under the aegis of CANIS.

[redacted]

6. Attached hereto is a draft memorandum to the NSC and a simple draft NSC Directive establishing this matter as a priority project throughout the intelligence and the defense research and development community.

[H. M. Chadwell] B-3

[H. MARSHALL CHADWELL]
Assistant Director
Scientific Intelligence

Attachments:
Draft memo to NSC with
draft Directive

Distribution:
Orig. & 1 - forward
1 - DD/I
2 - AD/SI

[Mr. Walter Pforzheimer] B-3

Office of General Counsel

Assistant Director/Scientific Intelligence

Draft Reply to Senator Johnson's letter

4 May 1954

Attached, in accordance with your request, is a suggested draft reply to Senator Johnson's letter of 19 April 1954.

[H. MARSHALL CHADWELL] B-3

Attach: Draft

SI/JJ:ms (4 May 54)
Distribution:
1 & 1 Fwd
2 OAD/SI
1 P&E/SI
1 Ops/SI

S-E-C-R-E-T
Security Information
IAC-M-90
4 December 1952

INTELLIGENCE ADVISORY COMMITTEE

Minutes of Meeting held in Director's Conference Room, Administration Building Central Intelligence Agency, on 4 December 1952

Acting Deputy Director (Intelligence)
Central Intelligence Agency
Mr. Robert Amory, Jr.

MEMBERS PRESENT

Mr. W. Park Armstrong, Jr., Special Assistant, Intelligence Department of State
Brigadier General John M. Willems, acting for Assistant Chief of Staff, G-2, Department of the Army
Rear Admiral Carl F. Espe, Director of Naval Intelligence, Department of the Navy
Major General John A. Samford, Director of Intelligence, Headquarters, United States Air Force
Dr. Walter F. Colby, Director of Intelligence, Atomic Energy Commission
Brigadier General Edward H. Porter, Deputy Director for Intelligence, The Joint Staff
Mr. Meffert W. Kuhrtz, acting for Assistant to the Director, Federal Bureau of Investigation

ALSO PRESENT

Dr. Sherman Kent, Central Intelligence Agency
Dr. H. Marshall Chadwell, Central Intelligence Agency
Mr. Paul Borel, Central Intelligence Agency
Mr. Ludwell L. Montague, Central Intelligence Agency
Mr. Philip Strong, Central Intelligence Agency
Mr. Joseph W. Smith, Central Intelligence Agency
Mr. William C. Trueheart, Department of State
Mr. Miron Burgin, Department of State
Lieutenant Colonel T. C. Anderson, Department of the Army
Lieutenant Colonel Edgar H. Thomson, Jr., Department of the Army
Colonel John J. Morrow, United States Air Force
Colonel Jack E. Thomas, United States Air Force
Lieutenant Colonel Thomas J. Grant, United States Air Force
Colonel S. M. Lansing, The Joint Staff
Captain John A. Holbrook, USN, The Joint Staff

Richard D. Drain
Acting Secretary

Not relevant

Approval of Minutes

1. Action: The minutes of the last meeting, 1 December 1952 (IAC-M-89), were approved.

Conditions and Trends in Latin America Affecting U. S. Security (NIE-70)

2. Action: Approved with minor modifications.

Unidentified Flying Objects

3. Action: The Director of Central Intelligence will:

a. Enlist the services of selected scientists to review and appraise the available evidence in the light of pertinent scientific theories.

b. Draft and circulate to the IAC a proposed NSCID, which would signify IAC concern in the subject and authorize coordination with appropriate non-IAC departments and agencies.

4. Discussion: The acting Chairman, Mr. Amory, presented to the committee the DCI's request that this subject be informally discussed. Dr. Chadwell briefly reviewed the evidence and peripheral considerations, and noted that most of the available evidence is processed by ATIC. General Samford offered his full cooperation. It was recognized that the problem is best approached if directly related to specific problems of intelligence and defense. It was thought desirable that the action noted above under "a" be undertaken immediately, with consideration of a proposed NSCID to depend in some measure on the results achieved by the scientists' studies.

[redacted]

FACTS BEARING ON THE PROBLEM:

1. Since 1947, there have been about 1500 official reports of sightings plus an enormous volume of letters, phone calls and press reports. During this July alone, official reports totaled 250. Of the 1500, Air Force carries 20% as unexplained and of those received since the first of this year, 28% unexplained.

2. The administrative unit now handling the Air Force inquiry on these phenomena is a small section headed by an Air Force Reserve Captain, E. J. Ruppelt, assisted by two lieutenants and two secretaries at Air Technical Intelligence Center, Wright Field. It is from this small group that the controling collection directive to the entire Air Force originated and it is to this small group that the flood of reports on flying saucers comes for collation and analysis.

3. Research and analysis at this time is limited almost exclusively to the

DRAFT

NSC

SUBJECT: Unidentified flying objects.

1. The National Security Council has recognized as a national security problem our present limited capabilities in making prompt positive visual or mechanical identification of flying objects. The problem is recognized also as one which bears directly upon both offensive and defensive capabilities of the armed forces; as one of concern to operations as well as to intelligence; and as one having possible implications for psychological warfare.

2. As the nature of the problem is such that a centrally administered inquiry rather than a divided effort offers the best promise of progress, the Director, Research and Development Board is charged with the responsibility of administering in this field a program of research which meets the specifications of Secretary of Defense and as regards operational requirements; of the Director of Central Intelligence, as regards the intelligence requirements and of Director, Psychological Strategy Board, as regards psychological warfare implications.

[CIA]

DRAFT LETTER

FROM: DCI

TO : Secretary of Defense

SUBJECT: Intelligence interest in a study of unidentified flying objects.

1. Recently CIA's Office of Scientific Intelligence made an inquiry into the possible intelligence implications of this subject. We concluded that while the operational problem of improvement in identification of "phantoms" was of first priority because of the need to make instant and positive identification of enemy rockets or planes, the solution of intelligence problems are of sufficient importance to justify vigorous support by this Agency of an organized attack on the problem.

2. In our inquiry three of our men consulted with a representative of Air Force Special Projects group; discussed the problem with those in charge of the Air Force Project at Wright field; reviewed a considerable volume of intelligence reports; checked the Soviet press and broadcast indices; and conferred with three of our consultants at MIT, all leaders in their scientific fields.

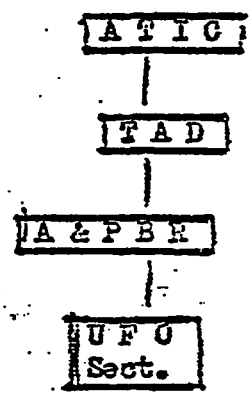
3. The present small scale inquiry at ATIC, which thus far has been able to use the case history approach, examining each incident carefully to determine whether it can be explained or whether it must be put into the unidentified category, we considered a perfectly valid procedure but one that might [holds][out] little promise in opening up explanations regarding the nature of those

[redacted]

PRESENT STATUS OF THE INQUIRY

Mr. Strong has discussed with you some of the general features of this problem, and now I should like to describe briefly how the Air Force has organized its study of reports on unidentified flying objects and outline its methods.

The administrative unit now handling the Air Force inquiry on these phenomena is the Unidentified Flying Objects Section of the Aircraft Propulsion Branch of the Technical Analysis Division of Air Technical Intelligence Center, Wright Field.



This small section is headed by an Air Force Reserve Captain, E. J. Ruppelt, assisted by two lieutenants and two secretaries. It is from this small group that the controling collection directive to the entire Air Force originated and it is to this small group that the flood of reports on unidentified flying objects comes for collation and analysis.

The strength and position of this central administrative group clearly indicates a low level of support, and, presumably, serious reservations in the Air Force regarding the value of extensive inquiry into the subject. Paradoxicall

[redacted]

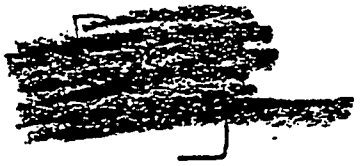
this central effort at ATIC is maintained on a minimal basis while there is concurrently ordered a world-wide reporting system and an interception program which may expend hundreds of man hours and thousands of dollars.

The methods used by Air Force are now in the process of change but the conclusions and explanations given to the public are based on the process I am going to describe.

Research and analysis at this time is limited almost exclusively to the case history method. Reports, which are limited in their coverage to ten broad elements of information, are received from the field, mainly through the Air-intelligence reporting system, though also to a limited extent from the other services and from the Department of State.

These reports come to the Unidentified Objects Section where each one is examined separately to determine whether it is explainable as "misinterpretations of a known object", or whether it must be classed as "unexplained" and subject to further investigation.

In this sorting process, the reports are first examined in the light of established and readily available facts such as known balloon tracks or aircraft flights. The report may then be referred to an Air Force Base or to the Office



of Special Investigation for direct interrogation of the reporter. Also, in some cases the reports are referred to technical or scientific specialists for interpretation. It should be borne in mind that this is all on an individual case basis.

There has been no systematic or extensive use of other standard methods of processing data. It is true that there have been a few attempts to examine some of the broader questions that have been raised by these reports. ATIC has, for example, laboriously gone through the accumulation of "unexplained" US report one by one, to plot them on a map. These plots show a high incidence of reported cases near atomic installations and Strategic Air Command bases but this might be expected because of the greater number of alert observers in such places. Actually, a number of accepted research techniques that should be used in any effort to gain a sound understanding of these phenomena, have not been employed.

There is, of course, some doubt regarding the extent and kind of effort required for the future. The Air Force has not yet found any great cause for concern. Captain Ruppelt remarked that, as the problem seems to be of more concern to operations than to intelligence, it might appropriately be moved out of intelligence to some operational command. [Within the last two weeks, he

has tried, unsuccessfully, to hand the baby to Air Defense Command.)

Of the essential processes that might be used if Air Force considered the inquiry worth a full blown effort, we could list the following:

Research objectives should be defined in detail in relation to the questionnaire. The questions asked in the present collection directive are admitted to be inadequate even for the limited case-history approach. Further, the answers are not processed in such a way as to easily permit the determination of the lines of research and analysis that should be followed.

As there has been no preliminary determination of areas of most profitable research, there is no way at this time by which to isolate the important elements in each of the problem areas. No studies have been made, for example, to establish categories of the objects reported by shape, size, color, etc. or to show such things as shortest, longest and average duration of sightings of objects of various kinds.

These deficiencies have conspired against making cross-comparisons. There have been no studies, for example, that would compare certain weather conditions with the appearance of certain colors of lights.

There are a number of standard analytical processes that might be used if this problem should be considered ~~Air Force the inquiry~~ worth a full blown effort. It might define in detail the research objectives to be used in relation to the questionnaire.

After the areas of most profitable research had been determined, a logical next step would be to isolate the important elements in each problem area.

A third step would be to set up means by which to make a number useful cross-comparisons. Finally, ~~Fourth~~, trend studies as well as area studies could be made.

Finally, there might be an objective study on the attributes of available data.

In summary, the limited central administrative support given to the project by Air Force, coupled with the extremely limited scope of the analytical work done thus far, has placed a strict ceiling on the kind of interpretations that can be made from material now available.

[redacted]

Trend studies as well as area studies could be made. There is now no picture of how the various phenomena may have formed patterns, either as regards aggregation or dispersal over specific periods of time.

Finally, there might be an objective study on the attributes of available data. Thus far, reports themselves (not factors present within these reports) are only classed "explainable" or "not explained". It is not known to what extent, or where, elements of consistency may extend through both the collection of "explainable" and "not explained" reports.

Also, there is no means by which to sort out valid elements from otherwise "unreliable" reports, nor is there a means by which to sort out invalid elements from otherwise accurate reports. An illustration of a consequence of this limitation would be the probable unhappy fate of a valid report on what was actually an ionized cloud, when observed on a well established balloon track. It would, in all probability be classed "explainable" as a balloon. The relegation of this report to the "explained" category would take any valid elements present in the report out of the reach of later analysis.

In summary, the limited central administrative support given to the project by Air Force, coupled with the extremely limited scope of the analytical work

[redacted]

done thus far, leads us to believe that any broad conclusions presently drawn can be accepted only with caution.

As to the future, a limited amount of improvement may be accomplished. A revised questionnaire, now being designed by Air Force and Battele experts will give more detail to each case-history. We have heard informally, though, that many objects are not reported in Korea because of the burden of required paper-work. A longer questionnaire would make pilots even more reluctant to report their sightings. Also, many cross comparisons will be possible if present plans to use punch cards are carried out. In addition, improvements may be expected if Air Force follows through on its present plan to establish an advisory board of top level scientists. Further, the current plan to place emphasis on using instrumentation such as refraction grid cameras and new type Schmidt telescopes, will yield more usable facts. The absence thus far, however, of a well planned and properly guided research program makes it appear that it may be some time in the future before we can expect complete explanations of many of these phenomena.

For the next part of our presentation, Mr. Durant will discuss some of the factors that have been found, or may be involved, in these reports.

3-6279

JAN 9 1953

MEMORANDUM FOR: Director of Central Intelligence

THROUGH : Deputy Director (Intelligence)

FROM : Assistant Director, Scientific Intelligence

SUBJECT : Consultants for Advisory Panel on Unidentified Flying Objects

1. PROBLEM

To obtain the services of Dr. Luis W. Alvarez and Dr. Thornton Page as ad hoc consultants to the O/SI Advisory Panel on "Unidentified Flying Objects", scheduled to convene 14 January 1953.

2. ASSUMPTIONS

It is assumed that Dr. Alvarez and Dr. Page will accept employment as consultants.

3. FACTS BEARING ON THE PROBLEM

a. Item 3 of the Minutes of IAC Meeting, 4 December 1952, states that: "The (Agency) will enlist the services of selected scientists to review and appraise the available evidence (of "unidentified flying objects")...."

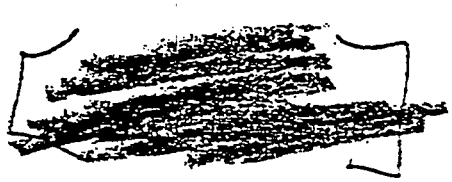
b. Dr. Luis W. Alvarez is an outstanding scientist in the fields of radar operation, characteristics and anomalies.

c. Dr. Thornton W. Page is a particularly competent astronomer and astrophysicist. Moreover, he has given considerable thought to the subject of "unidentified flying objects".

4. DISCUSSION

a. Every effort has been made to consider the most competent scientists whose dispositions are suitable to this complex study. It is believed that the above men would be eminently satisfactory for the task.

b. A check of the Consultants' Registry disclosed that consultants presently employed by CIA either did not have the proper qualifications or were currently unavailable.



[redacted]

c. At this time it is desired to utilize the services of these men in this advisory panel only rather than process them as regular CIA consultants.

d. The rate of compensation is expected to be $50.00 per day for each consultant.

e. Approval of use of these men on matters through SECRET has been obtained from I&SO.

5. CONCLUSION

It is concluded that Dr. Alvarez and Dr. Page are particularly well suited to serve on the O/SI Advisory Panel on "Unidentified Flying Objects".

6. ACTION RECOMMENDED

That permission be granted to approach Dr. Luis W. Alvarez and Dr. Thornton W. Page with regard to service as ad hoc consultants on the subject of "unidentified flying objects" and to initiate the necessary personnel action.

H Marshall Chadwell
H. MARSHALL CHADWELL

B-3

APPROVAL RECOMMENDED:

Signature: Walter B. Smith [signature] 9 Jan 53
Deputy Director (Intelligence) — Date

ACTION BY APPROVING AUTHORITY:

Approved (~~disapproved~~). subject to security clearance.

Signature: [signature] JAN 20 1953
Director ~~or Deputy Director~~ — Date

1 - subject - Flying Saucers ✓
1 - chrono -
1 - daily reading + file SCP
1 - extra

Dist.
Orig + 4 - [illegible]
1 - AD/SI
3 - [illegible]/SI

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[redacted]

22. Top_Secret_NSC_Brief_President_Black_Book_1952.pdf

Original start page:	1056	**Inserted note page:**	1077	**Archive starts after note:**	1078

Why it belongs in this release

Top Secret presidential briefing cover sheet for a “Five year UFO Study,” prepared by CIA intelligence leadership and based on ATIC files.

Complete release-note text from UAP 4

2. Top_Secret_NSC_Brief_President_Black_Book_1952.pdf

This one-page document is powerful because it appears to place the UFO issue directly into a Top Secret presidential national-security briefing channel. It identifies the subject as a “Five year UFO Study,” prepared by Robert Amory Jr. and H. Marshall Chadwell, in concurrence with the Intelligence Advisory Committee, and states that the purpose was to present a history of the phenomenon documented in ATIC intelligence files. Congress and NARA should locate the missing body of the briefing, all Weekly Black Book attachments, Intelligence Advisory Committee concurrence papers, DCI briefing logs, Presidential Daily/Weekly briefing records, and ATIC source files used to prepare the study.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

T O P S E C R E T
Security Information

18 December 1952

NATIONAL SECURITY BRIEFING FOR:		The President
FROM	:	General Walter B. Smith, Director, Central Intelligence Agency
BREIFING OFFICER	:	Director, Central Intelligence Agency
SUBJECT	:	Five year UFO Study
PREPARED BY	:	Robert Amory, Jr., Deputy Director, Intelligence H. Marshall Chadwell, Director, Scientific Intelligence
IN CONCURANCE WITH	:	Intelligence Advisory Committee

PURPOSE

The purpose of this special Weekly Black Book briefing is to present:

a. A brief history of the phenomenon as it is documented in the intelligence files of the Air Technical Intelligence Center.

T O P S E C R E T
Security Information

23. WPAFB_UFO_Program_1958_NARA-PBB86-155.pdf

Original start page:	1057	**Inserted note page:**	1079	**Archive starts after note:**	1080

Why it belongs in this release

Direct Wright-Patterson UFO program document; shows trained investigators, rapid field response, AFR 200-2 authority, and transport support for UFO investigations.

Complete release-note text from UAP 4

3. WPAFB_UFO_Program_1958_NARA-PBB86-155.pdf

This is one of the cleanest operational documents because it shows that Wright-Patterson was formally charged under AFR 200-2 with scientifically and technically analyzing all UFO reports and conducting field investigations where necessary. The memo states that shortcomings in past investigations required a group of 18–20 specially trained and equipped ATIC investigators, held in reserve and moved into the field on short notice. It also discusses aircraft and crew support for delivery and pickup of investigators, including a project nicknamed “Horse Fly.” Congress and NARA should locate the ATIC investigator roster, training materials, field deployment logs, Horse Fly transport records, AFR 200-2 implementation files, and all case files marked for “particular public or scientific interest.”

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

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UNCLASSIFIED

17 December 1958

Classification Cancelled
(or changed to ____)
Auth:
By
Date

SUBJECT: (U) UFO Program

TO: Commander
ATTN: Brig. General Howe
Wright Patterson Air Force Base
Ohio

1. In accordance with the provisions of AFR 200-2 dated 5 February 1958, Subject: Unidentified Flying Objects, this Center is charged with scientifically and technically analyzing and evaluating all reports of UFO's. Additionally we are allowed to make such primary and supplementary field investigations as are necessary to establish the facts from which an adequate analysis and evaluation can be made.

2. Certain shortcomings in investigative endeavors during the past year have made it necessary to establish a group of some 18-20 specially trained and equipped investigators from personnel resources presently available to ATIC. These people will be held in ready reserve and moved into the field on fairly short notice to assist in, or conduct, investigation of those sightings of particular public or scientific interest.

3. Due to the difficulty in rapidly reaching certain USAF facilities by commercial means, and stringent limitations which have been imposed on TDY travel funds this year, I find it necessary to seek out those other possible means of transport which would offer some possibility in support of the UFO investigative program.

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[redacted]

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Specifically we would like to make maximum use of CRT aircraft and crews for delivery and pick up of an occasional 1-2 investigators to Air Force installations in the ZI. Under AFR 200-2 the AF installation nearest the point of UFO sighting will provide further support required from there.

4. Past experience has shown that the bulk of our most critical sightings have taken place in the Northeast portion of the United States. It is envisioned that a maximum of 50 delivery and pick up flights would occur during any given year or roughly four per month. Distances should normally not exceed 6-800 miles each way.

5. We have tentatively established a project nick-named "Horse Fly" which will have to do with movement of investigators to and from points of interest. That nick-name would be used in any request for military CRT aircraft associated with UFO investigations.

6. With your concurrence I would like very much to have Colonel L. T. Glaser of our Air Science Division brief you further on the needs of our UFO program. This we will do at your convenience. After such a briefing I would be interested in knowing your views relative to amount and priority of support we may expect to obtain through the local CRT media.

CHARLES B. DOUGHER
Major General, USAF
Commander

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UNCLASSIFIED

[redacted]

COPY

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27 January 1956

Commander
Air Technical Intelligence Center
Wright-Patterson Air Force Base, Ohio
ATTN: Captain C. A. Hardin, AFOIN

Dear Sir:

While I was head of the Psychology Branch, Aero Medical Laboratory, I reviewed some of the interview data from sightings of unidentified aerial objects and prepared a report giving some psychological interpretations of these reports. Subsequently, about two years ago I served as a consultant to an Air Force contractor in connection with the preparation of a questionnaire to be used in collecting data on project "Bluebird." In connection with this project I was interested in analyzing some of the questionnaire results and I have a letter from this contractor stating that "The Air Force has given us permission to release to you the set of 345 IBM cards provided you agree not to publish any results of your studies without their permission." The IBM cards contain summary questionnaire data.

I would now like to analyze some of these data further and compare my results with those contained in the recently released report on this topic. The purpose of the present letter is to request you to write a letter to the contractor, attention Mr. Verne Ellsey or Mr. Gus Simpson, authorizing them to (a) permit me to examine their copy of the unclassified report recently released of this study, and (b) to discuss the data with me.

I would also appreciate receiving from you a blank copy of the questionnaire, since I did not keep a copy when it was being prepared.

I expect sometime in the near future to prepare a short scientific article, suitable for publication in Science magazine, which I will submit to Air Force Public Relations for clearance. The article will follow the general nature of the anonymous report that appeared in the 1950 issue of Air Force magazine, which article was based on the earlier report that I wrote while at the Aero Medical Laboratory. In other words, it will be an attempt to explain, for a scientific audience, how natural phenomena could lead to the kinds of reports commonly given by people who fail to identify some unusual object or light in the sky.

In support of this request I submit that I am Professor of Psychology and Director of the Aviation Psychology Laboratory, The Ohio State University. I am also a member of the Air Force Scientific Advisory Board, and of the NACA Committee on Flight Safety.

Sincerely yours,
/s/ Paul M. Fitts
Paul M. Fitts

COPY

INCL #3

HISTORY OF PROJECT

Following the Kenneth Arnold sighting on 24 June 1947, wide news coverage of public reports of "flying discs or saucers" created sufficient concern at high military echelons to authorize AMC to conduct a preliminary investigation into these reports. Early correspondence indicates that U. S. Military Leaders were concerned that the objects reported were an aircraft configuration more advanced than those possessed by the United States Armed Forces. A letter, 23 September 1947, from Lt. General Twining of AMC to the Commanding General of the Army Air Forces, expressed the opinion that there was sufficient substance in the reports to warrant a detailed study.

On 30 December 1947, a letter from the Chief of Staff directed AMC to,... "set up a project whose purpose was to collect, collate, evaluate and distribute to interested Government Agencies and contractors all information concerning UFO sightings and phenomena in the atmosphere which can be construed to be of concern to the National Security. . ."

The Technical Intelligence Division of AMC issued Hq AMC Technical Instruction No 2185, 11 February 1948, and the project was inaugurated with a code name of "SIGN." The code name "SIGN" was changed to the code name "GRUDGE" on 16 December 1948. A report released in February 1949 covering analysis of the first 273 incidents concluded that, while no definite and conclusive evidence existed, evaluation of reports of unidentified objects was a necessary activity of Military Intelligence Agencies.

After the Project "SIGN" Report, work continued along the same lines and a Project "GRUDGE" Report was published and released in August 1949 by AMC. This report contained analysis of 244 cases and concluded that Unidentified Flying Objects reports resulted from: a) misinterpretation of conventional objects, b) mass hysteria or "War Nerves", c) hoaxes and/or d) Psychopathological persons. Based upon these conclusions AMC recommended that investigation and study of this type of report be reduced in scope. Major portions of this work were performed under contract by Ohio State University, Professor Hynek (Present Consultant to AF on Project Blue Book), The Rand Corporation, Dr. G. Valley, Dr. Paul Fitts, Air Weather Service, 3610th Electronic Section and the U. S. Weather Bureau.

Following publication of the "GRUDGE" Report, the Air Force continued to investigate sightings, inasmuch as it is an Air Force responsibility to identify and analyze Aerial Phenomena that could possibly be a menace to the United States. Much of the Scientific and Technical work during 1950 and 1951 centered around Project "Twinkle" and the Green Fireball studies of Dr. LaPaz in the Southwestern United States. Project "Twinkle" Final Report was completed on 27 December 1951. During December 1951 Colonel Kirkland and Lt. Ruppelt made a visit to a private industrial firm to discuss the feasability of a scientific study from the data collected since the program's inception. Thus, Project Blue Book's Special Report #14 came into being.

24. Blount-Evans.pdf

Original start page:	1061	**Inserted note page:**	1084	**Archive starts after note:**	1085

Why it belongs in this release

Shows classified aeromedical/psychological analysis of UFO reports, a newer Top Secret report in process, and a contemporaneous crash rumor.

Complete release-note text from UAP 4

4. Blount-Evans.pdf

This document is important because it shows UFOs being studied not only as sightings, but as a psychological and aeromedical problem inside Air Force medical research channels. Lt. Col. Robert H. Blount sent MIT physicist Robley D. Evans a restricted report on the “Psychological Analysis of Reports of Unidentified Aerial Objects,” noting it had originally been Confidential and that a newer report was being published and would be classified Top Secret. He also wrote that a flying saucer was rumored to have crashed in Mexico, though the details were “somewhat bizarre.” Congress and NARA should recover the original psychological-analysis report, the later Top Secret report, Aero Medical Laboratory files at Wright Field, Surgeon General correspondence, and all Mexico crash-related communications.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

RESTRICTED

10 March 1950

Dr. Robley D. Evans
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Evans:

Inclosed you will find a Memorandum Report on the Psychological Analysis of Reports of Unidentified Aerial Objects, which was prepared by one of our psychologists at the Aero Medical Laboratory at Wright Field. As you will note, this report is almost a year old and was originally classified "confidential". However, the classification has recently been changed to "restricted", therefore, this report is for your information only.

I have also received information that a new report is in the process of being published and will be classified "top secret". I regret to say that I do not know what this latest report contains, however, I will attempt to get a copy as soon as it is published.

It has recently been rumored that one of these so-called flying saucers crashed in Mexico; however, the details are somewhat bizarre at this moment. When you have finished with the inclosed report, will you please return it to this office.

With best regards.

Sincerely,

ROBERT H. BLOUNT
Lt. Colonel, USAF (MC)
Chief, Medical Research Division
Office of the Surgeon General

1 Incl:
Subj Report

MCREXD-694-18D
28 Apr 49

RESTRICTED

Hood Hill

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF PHYSICS

CAMBRIDGE 39, MASSACHUSETTS

March 24, 1950

Col. Robert H. Blount
Chief, Medical Research Div.
Office of the Surgeon General
Department of the Air Force
Washington 25, D. C.

Dear Col. Blount:

Many thanks for your letter of 10 March 1950 and the memorandum report on Psychological Analysis of Reports of Unidentified Aerial Objects, which I have read with great interest and which I am returning to you as requested. I hope we will have an opportunity of discussing the newer report the next time we see each other.

With best regards.

Cordially yours,

Robley D. Evans

Robley D. Evans
Professor of Physics

RDE:s
Enclosure

Good Will

HEADQUARTERS UNITED STATES AIR FORCE

ROUTING SLIP

STITUTE OF TECHNOLOGY

TO:

1. OFFICE: CSG-13	DATE
ATTENTION: Col Blount	
2. OFFICE	DATE
ATTENTION	
3. OFFICE	DATE
ATTENTION	

FOR: FOLLOWING ACTION(S) AS CHECKED

	COORDINATION		NOTE AND RETURN		INFORMATION
	NECESSARY ACTION		RECOMMENDATION		FILE
	SEE OR PHONE ME		APPROVAL		SIGNATURE

COMMENT

Dr. Fitts Report on Flying Saucers - Other contacts with AMC to get a complete report. Copies now being printed.

FROM:

OFFICE	ROOM NO.
INDIVIDUAL: H. Will	PHONE

AF HQ Form 12
10 Nov 47

16—56400-1 U. S. GOVERNMENT PRINTING OFFICE

25. MIB FBI Document 1967.pdf

Original start page:	1064	**Inserted note page:**	1088	**Archive starts after note:**	1089

Why it belongs in this release

Highly unusual Men-in-Black/physical-evidence-theft lead; should be released with strong provenance caveats.

Complete release-note text from UAP 4

5. MIB FBI Document 1967.pdf

This is a high-risk but potentially high-impact public-release item. The document describes “M.I.B.” as “Men in Black,” refers to an “unknown entity” interfacing with UFO witnesses and theft of physical evidence such as photographs, EM residuum, and “angel-hair,” and states that these subjects posed as federal officials including FBI, AFOSI, CIA, and NSA while not operating under U.S. government authority. Because the document is unusual and could be challenged, Congress and NARA should first authenticate its provenance, FBI file number, routing, and dissemination history, then search FBI, AFOSI, CIA, NSA, postal-inspection, and local law-enforcement files for witness-intimidation, impersonation, and missing physical-evidence reports.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.

REPORTING OFFICE	OFFICE OF ORIGIN	DATE	INVESTIGATIVE PERIOD
[redacted]	[redacted]	11/27/67	11/13/67 - 11/24/67

TITLE OF CASE CHANGED

UNSUBS; A.

VICTIMS

REPORT MADE BY: [redacted]

TYPED BY: ay

CHARACTER OF CASE

CR

Priority k-40
to all pertinent districts

M.I.B.

ACRONYM BREAKDOWN: Men. In. Black.

AS PER OPS order [redacted] originating Director's office, M.I.B. refers to "unknown entity" interfacement with UFO witnesses and subsequent theft of same/said "physical evidence" ([redacted]), photographs, EM residuum, angel-hair, etc.. Subject "Men in Black" typically pose as Federal Officials (this office, AFOSI, CIA, NSA, etc.). (Subject does not--REPEAT--does not operate under aegis of U.S. government.)

ACCOMPLISHMENTS CLAIMED NONE						ACQUIT-TALS	CASE HAS BEEN:
CONVIC.	AUTO.	FUG.	FINES	SAVINGS	RECOVERIES		PENDING OVER ONE YEAR ☐ YES ☑ NO
							PENDING PROSECUTION OVER SIX MONTHS ☐ YES ☑ NO

APPROVED CBB SPECIAL AGENT IN CHARGE

COPIES MADE:

2 - Bureau
1 - USA, [redacted]
1 - [redacted] (44-865)

DO NOT WRITE IN SPACES BELOW

7 80 [illegible]

OCT 30

DEC 75

14 NOV 30 1967

Dissemination Record of Attached Report

Agency			
Request Recd.			
Date Fwd.	11/2		
How Fwd.			
By			

Notations

[redacted]

STAT [illegible]

57 DEC 13 1967

26. NARA_JR&D_Board_Security_Regulations.pdf

Original start page:	1065	Inserted note page:	1090	Archive starts after note:	1091

Why it belongs in this release

Shows the formal 1947 secrecy architecture for classified R&D information, including Top Secret handling, log numbers, oaths, reproduction control, and distribution limits.

Complete release-note text from UAP 4

6. NARA_JR&D_Board_Security_Regulations.pdf

This document does not mention UFOs, but it is valuable because it explains how a scientific R&D secret could be controlled in 1947, the same year the modern saucer era began. The Joint Research and Development Board regulations governed production, dissemination, distribution, and handling of classified information; they included oaths of secrecy, obligations after leaving the board, Top Secret log numbers, reproduction controls, classified waste destruction, document stowage, limited distribution, and exchange-of-information rules. Congress and NARA should use this as a roadmap for tracing how any crash-retrieval or reverse-engineering files would have been logged, copied, transmitted, downgraded, destroyed, or compartmented within JRDB/RDB, OSRD successor bodies, Air Materiel Command, and contractor channels.

Source: UAP 4 - Archives Release Notes(2).docx. This note page was inserted immediately before the archive file.