

# LEADERS OF THE NRO



**VOLUME II: 1993-2001**

Directors, Deputy Directors, Staff Directors, Program Directors,  
Chiefs of Staff, Directorate and Office Managers

SECOND REVISED EDITION



# **LEADERS OF THE NATIONAL RECONNAISSANCE OFFICE:**

**DIRECTORS, DEPUTY DIRECTORS, STAFF DIRECTORS,  
PROGRAM DIRECTORS, CHIEFS OF STAFF,  
DIRECTORATE AND OFFICE MANAGERS**

**Volume II: 1993-2001**

Second Revised Edition

Dr. Clayton Laurie  
and  
Michael J. Suk



**CENTER FOR THE STUDY OF  
NATIONAL RECONNAISSANCE**

JULY 2019



# CENTER FOR THE STUDY OF NATIONAL RECONNAISSANCE

**The Center for the Study of National Reconnaissance (CSNR)** is an independent National Reconnaissance Office (NRO) research body reporting to the Director/Business Plans and Operations Directorate, NRO. The CSNR's primary objective is to advance national reconnaissance and make available to NRO leadership the analytic framework and historical context to make effective policy and programmatic decisions. The CSNR accomplishes its mission by promoting the study, dialogue, and understanding of the discipline, practice, and history of national reconnaissance. The CSNR studies the past, analyzes the present, and searches for lessons for the future.

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## FOREWORD TO SECOND EDITION

In May 2002, the National Reconnaissance Office (NRO) History Office published *Leaders of the National Reconnaissance Office, 1961-2001*. This important work quickly became a vital reference tool for learning about the NRO's formation and organization as well as for providing background information on its leadership. Updating and republishing *Leaders of the National Reconnaissance Office* became the responsibility of the Center for the Study of National Reconnaissance (CSNR) after the history program joined the CSNR in 2005. This updated reference work is now in three parts with Volume I covering leaders from 1961 to 1992, Volume II covering leaders from 1993 to 2001, and a planned third volume that will cover leaders from 2002 to the time of publication. The volumes provide updated information from the first edition. The first volume ends in 1992 because in that year the NRO underwent its most significant reorganization to date—abolishing the “alphabetic” Programs A, B, and C (NRO cancelled Program D in 1974) in favor of functional directorates (IMINT, COMM, and SIGINT). In that same year, NRO leadership proposed collocating all component offices into a single headquarters building in Chantilly, Virginia. The second volume ends in 2001 with the September 11th terrorist attacks. The last volume will include NRO leaders since the war on terrorism began.

Like its predecessor volume, this updated multi-volume publication will be helpful for people seeking information on NRO Directors and Deputy Directors and principal NRO Directorate and Office heads and program managers before and during their NRO tenures. We look to these reworked volumes as the authoritative source of information on tours of service, awards, and accomplishments of the people who created and sustained the National Reconnaissance Program since its 1961 creation. Produced in unclassified form, we will make these volumes of the newer *Leaders of the National Reconnaissance Office* available to the public. In this way, we expect that their utility will extend far beyond the NRO and the intelligence and defense communities.

In his foreword to the first edition, then-Director of the National Reconnaissance Office Peter B. Teets described the importance of strong leadership to the success of the organization:

*Today, throughout the world, the National Reconnaissance Office is recognized as the undisputed leader in space-based satellite reconnaissance. [I]t is gratifying to publicly acknowledge those individuals whose dedication, talents, and leadership shaped this organization into one of the nation's greatest national security and intelligence assets.*

*Since its inception, the National Reconnaissance Office has attracted the top minds of the U.S. Intelligence Community, the Department of Defense, private industry, and the academic-scientific community. Its mission brought together leaders of a quality rarely found elsewhere during the latter half of the twentieth century, as the following pages ably demonstrate. United by common goals and motivated by a single-minded sense of patriotism and professionalism, NRO's leaders represent an unusual array of national origins and races, and social, educational, and occupational backgrounds. Together they forged a new multi-agency intelligence [and defense] team that produced remarkable results. The achievements of the National Reconnaissance Office in large measure are a tribute to the vision and dedication of these men and women; they made what many deemed impossible just fifty years ago into routine operations today.*

*Under such leaders, supported by several thousand dedicated, hardworking personnel, the NRO has successfully and proudly lived up to its motto: Freedom's Sentinel in Space: One Team, Revolutionizing Global Reconnaissance.*

Mr. Teets words still ring true in commending the leadership of the NRO and recommending that all who work in the discipline of national reconnaissance learn from the leaders who went before them. This publication is one resource for doing so.

*Robert A. McDonald, Ph.D.  
Director, CSNR/Emeritus  
National Reconnaissance Office*



## PREFACE TO SECOND EDITION

**D**r. Clayton Laurie authored the first edition of *Leaders of the National Reconnaissance Office*, which was published in May 2002. Subsequently, Dr. Laurie left the NRO and later returned as the NRO's Chief Historian. He then took up efforts to revise the publication including restructuring it into three planned volumes.

The first volume contains information on the leaders of the NRO who served in the organization from its founding in 1961 to its major reorganization in 1992. The second volume contains information about the leaders of the newly reorganized NRO in 1993 through 2001 when the Intelligence Community initiated consequential structural changes in the wake of the terrorist attacks in the United States on September 11th of that year. The Center for the Study of National Reconnaissance, which now has responsibility for the project, will publish a third volume with background on leaders of the NRO since 2001.

As with the original publication, biographical information in the revised volumes came from information held in NRO directorates and offices, official military biographies, and open-source compendiums, as well as from NRO and other government records. When possible, each person included in the volumes received as copy of his or her biography for review. Unlike the original volume, the revised biographies conclude with the individual's NRO service.

As with the original *Leaders of the National Reconnaissance Office*, many individuals have contributed to the revised volumes. In addition to Dr. Laurie, those individuals include former deputy NRO historian David Waltrop; visiting senior historian Dr. Donald P. Steury; and former CSNR staff members Mrs. Faye Grubbs, Mr. Matt Doering, Ms. Cathy A. McConville, and Ms. Frances Lawson who provided editorial and research assistance. Additionally, Mr. Charles Glover, CSNR's information and data presentation analyst, developed the revised layout and presentation of the material. Finally, Dr. Robert A. McDonald, director of the CSNR, provided ongoing support for this project and for the larger NRO history program.

*Michael J. Suk  
Chief, Historical Documentation and Research  
Center for the Study of National Reconnaissance  
National Reconnaissance Office*



## PREFACE TO FIRST EDITION

**B**etween 1953 and late 1961 the administrations of Dwight D. Eisenhower and John F. Kennedy undertook a series of initiatives to protect the nation against surprise atomic attack by the Soviet Union. These initiatives resulted in creation of the National Reconnaissance Program (NRP) and the National Reconnaissance Office to manage it on 6 September 1961.

A unique hybrid organization, the NRO brought together the foremost intellects from the Central Intelligence Agency, the Department of Defense, the military services, private industry, and the American academic-scientific community to solve the technical challenges of overhead reconnaissance. The individuals who came to the National Reconnaissance Office shared a mission of securing, through overflight of “denied areas,” intelligence on potential adversaries that posed a threat to the United States, and the vision and belief that space represented a new frontier exploitable to this end through advanced technology.

Within a few years of its creation, the National Reconnaissance Office achieved its original mission and vision to a degree far beyond the expectations of its founders and early leadership. The NRO provided the nation’s command authorities with unparalleled global information supremacy. Not since the Manhattan District [Project] created the atomic bomb during the Second World War has an organization accomplished such groundbreaking technological feats in the national security interests of the United States so thoroughly, so effectively, or so quickly.

The success of any organization or endeavor ultimately depends on its leadership, and the National Reconnaissance Office has fortunately attracted leaders of a quality rarely found elsewhere. Indeed, the National Reconnaissance Office and its mission have always attracted an extraordinary group of highly gifted individuals. Long before the terms joint command and control, institutional flexibility, diversity, streamlined management, and public and private sector partnerships entered the lexicon and became philosophical dictums in American government, business, and industry, the leaders of the NRO had institutionalized and practiced them all for decades. Together they forged a new multi-organizational team and adopted a decentralized form of management that produced, in technical sophistication and capability, remarkable overhead satellite reconnaissance systems unequalled elsewhere in the world. These achievements in large measure are a product of, and a tribute to, the vision and dedication of the organization’s leaders.

The majority of the men and women who created, directed, and managed the National Reconnaissance Program through the years have worked in anonymity, without official acknowledgement or public recognition. Yet their unswerving dedication to an intelligence mission and to the national security of the United States, and their commitment to innovation and excellence, contributed significantly to maintaining the peace and protecting the nation from foreign threats. In recognition of their contributions, the Office of the Historian has prepared these brief biographies of the directors, deputy directors, program directors, staff directors, chiefs of staff, and directorate and office managers of the National Reconnaissance Office. This collection provides a comprehensive biographical survey of the NRO’s leaders and their dates of service—a source of information and perhaps inspiration for members of the National Reconnaissance Office, the U.S. Intelligence Community, the Department of Defense, and the public at large.

This reference book was not a solitary effort. First, the author thanks all of those included here, and the members of their staffs, who reviewed, edited, or supplemented various drafts of the biographies. Without their contributions, this monograph would be neither as accurate nor as comprehensive. The author also wishes to thank Matt Doering, who used his computer skills to create and lay out the present work. Equally important, Cathy A. McConville, former NRO History Staff secretary, completed an extraordinary amount of correspondence and administrative tasks associated with this monograph. The author also thanks those in the NRO’s Visual Design Center, in the Intelligence Community, and the Department of Defense, who took time from their busy schedules to answer numerous inquiries, provide photographs, and otherwise make important contributions to this final work. Special appreciation goes to former NRO Deputy Director Jimmie

D. Hill and to Mrs. Sharilyn Watts, who provided unique firsthand information on this organization and its past leadership. Special thanks also go to R. Cargill Hall, the NRO Historian, whose editorial review much improved the final work.

The following biographies are listed alphabetically by last name. Military ranks, government positions, and other titles shown are those held at the time of NRO service and do not necessarily represent those held at the time of retirement from active duty or in subsequent military or government service. The text of each biography describes these various military assignments and government offices held in chronological order before and during NRO service. Individuals who served temporarily as interim leaders are included in the chronological listing with their dates of service and with the designation "Acting" in parentheses behind their names. Unless subsequently assigned permanently to that position, or to another NRO leadership position, their biographies and photographs do not appear in this edition.

The men and women listed in this work are, or were, the leaders of primary offices appearing on NRO organization charts following establishment in 1961. Leaders of subcomponents of the NRO director's staff, of NRO staff offices, or of sub-elements of the larger offices and directorates, are not included in this edition unless that component previously existed as primary office.

Biographical information came from a variety of sources. For most NRO leaders, at least those serving since the collocation of all NRO elements in 1996, the bulk of the data and photographs came from official National Reconnaissance Office biographies. U.S. Air Force, U.S. Navy, and U.S. Army offices handling public affairs provided official biographies for most past and present uniformed NRO leaders. Additional information and photographs came from the Library of Congress in Washington, D.C., the National Archives and Records Administration in College Park, Maryland, including various editions of the U.S. military service academy alumni registers, from *Who's Who* and *Who Was Who*, *Who's Who in Science and Technology*, *Current Biography*, etc., and, in some cases, the obituary listings of *The New York Times* and *The Washington Post*. In all cases, the history staff edited biographical sketches for stylistic consistency. When and where possible, individual subjects reviewed and edited their biographical sketches before publication. Final products reflect their contributions. When additional information becomes available, or when positions change, updated editions of this monograph will appear. As always, the author accepts responsibility for any errors that may remain.

*Clayton D. Laurie, Ph.D.  
Deputy Chief Historian  
Office of the Historian  
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Chantilly, Virginia  
1 May 2002*

## INTRODUCTION

**B**etween 1993 and 2001, from the National Reconnaissance Office's (NRO's) creation of functional directorates to the start of the Global War on Terror, the NRO underwent an organizational transformation that fundamentally altered its operations. When President Harry S. Truman authorized America's first strategic reconnaissance overflights of "denied areas" in the late 1940s, he sought information otherwise unobtainable by traditional espionage. The Soviet Union's detonation of an atomic device in August 1949 revealed America's vulnerability to surprise atomic attack. By 1954, fears of a potential superpower bomber gap had emerged, followed by concerns—attributable to the Soviet's launch of Sputnik 1 on 4 October 1957—of an even more dangerous missile gap. President Dwight D. Eisenhower expanded Truman's overflight efforts to include high-altitude reconnaissance balloons, specialized aircraft, and earth-orbiting satellites. During his administrations and the Kennedy administration that followed, government and private industry created revolutionary systems such as the U-2, A-12, and SR-71 aircraft; the Poppy and Grab signals collection satellites; and the Corona and Gambit imagery satellites that laid the foundation for future U.S. reconnaissance activities. On 6 September 1961, the Department of Defense and Central Intelligence Agency jointly established the National Reconnaissance Program (NRP), managed by the National Reconnaissance Office, to consolidate military and civilian reconnaissance efforts. Created in utmost secrecy at the height of the Cold War, the NRO gave U.S. leaders vital information on the capabilities and intentions of the nation's enemies and potential adversaries.

The collapse of the Soviet Union in December 1991, ending over four decades of superpower hostility, dramatically modified the world's national security posture. As the threat of global nuclear confrontation subsided, the NRO's reconnaissance systems shifted focus from collecting against traditional fixed targets—missiles, bombers, airfields, radars, submarine ports—to smaller, more diffuse, and less visible threats. Smaller wars, regional conflicts, weapons proliferation, terrorism, and providing humanitarian assistance became the nation's primary national security concerns. As NRO decision makers began adjusting the nation's security apparatus to meet these new challenges, post-combat analysis of the 1990-1991 Persian Gulf War highlighted the need for greater support to the military—a new customer for NRO products. At this same time, new nontraditional customers appeared, to include urban planners, law enforcement, and the scientific community—the latter interested in space-based monitoring of deforestation, the Arctic ice caps, and other environmental phenomena. Faced with shrinking post-Cold War budgets, a growing customer base, and greater public and government scrutiny of its mission and budget, the NRO found itself doing more with less in a still uncertain national security environment.

Responding to these world events, as well as to internal calls for change, National Reconnaissance Office leaders, in conjunction with their Department of Defense and Intelligence Community partners, implemented sweeping changes to give NRO greater flexibility to meet customer needs and adapt to changing threats. The greatest of these reforms—under consideration since the 1980s—abolished NRO's "alphabetic" programs. Created on 23 July 1962, the alphabetic programs divided NRP management between the principal organizations previously responsible for individually developed reconnaissance systems: the Air Force operated Program A, the Central Intelligence Agency operated Program B, and the Navy operated Program C. Until 1974, the NRO operated Program D for the U-2, A-12, and SR-71 reconnaissance aircraft. Although one National Reconnaissance Office existed, each individual alphabetic program operated quasi-independently at different locations around the country.

However, by the 1980s, it had become clear that this structure raised some organizational challenges. The programs often feuded among themselves and engaged in duplicative research and development projects. In 1987, Director NRO (DNRO) Edward C. Aldridge, Jr. established a senior NRO advisory group to assess NRO operations. Although the group sharply criticized the debilitating competition between NRO's alphabetic programs, then-Deputy Director of Central Intelligence (DDCI) Robert M. Gates rejected calls to restructure the organization along functional lines. Two years later, in July 1989, the Geiger-Kelly Study (named for its chair, retired Rear Admiral Robert K. Geiger, USN, and principal deputy, Barry Kelly) concluded that the NRO needed an integrated approach to systems development. The first formal, large-

scale effort at NRO reorganization, the Geiger-Kelly team included members from other Department of Defense and Intelligence Community organizations. Their most important recommendations were the creation of a Plans and Analysis organization to coordinate NRO projects, and a deputy director for military support to undertake liaison activities with the military. NRO implemented both proposals, but Programs A, B, and C remained. In 1992, following a Director of Central Intelligence (DCI) task force on NRO management, chaired by former Lockheed CEO Robert A. Fuhrman, NRO leadership decided to disband the alphabetic programs and adopt a “one NRO” view.

On 31 December 1992, NRO officially replaced Programs A, B, and C with three, and later four, functional directorates to be collocated at NRO’s new headquarters in Chantilly, Virginia. The Signals Intelligence (SIGINT) Systems Acquisition and Operations Directorate acquired and operated electronic, communications, and telemetry-collecting satellites. SIGINT Directorate satellites intercepted foreign communications and weapons testing information and provided that data to the National Security Agency (NSA), the Defense Intelligence Agency (DIA), and other organizations for interpretation and dissemination. The Imagery Intelligence (IMINT) Systems Acquisition and Operations Directorate acquired and operated imagery satellites. Initially, the CIA’s National Photographic Interpretation Center (NPIC) analyzed the images these satellites produced and provided them to the appropriate users in the military, other federal agencies, and certain civilian organizations. Those functions transferred to the National Imagery and Mapping Agency [renamed the National Geospatial-Intelligence Agency (NGA) on 24 November 2003] after its establishment on 1 October 1996.

The Communications (COMM) Systems Acquisition and Operations Directorate supervised NRO’s information technology and communications systems, and oversaw security for both space-based and ground-based communications, providing secure, near real-time, global communications for the military, the Intelligence Community, and other government users. In March 1997, the NRO established its fourth directorate, the Advanced Systems and Technology (AS&T) Directorate, to oversee research and development into new satellite reconnaissance technologies. The AS&T Directorate was responsible for creating the next generation of reconnaissance systems, finding new ways of using expertise, and advancing space science. Designed to be innovative, and sometimes high-risk, AS&T projects sought out new industrial methods, while searching for new mission partners from the military and the Intelligence Community that could benefit NRO systems.

Creating functional directorates, and locating them in one headquarters, largely alleviated the costly duplication and inter-service disputes between the Air Force, CIA, and Navy reconnaissance programs that had plagued the older alphabetic programs.

To supervise the collocation of NRO offices and personnel, the NRO created the Office of Management Services and Operations (MS&O). Led by Roger C. Marsh, its first director, MS&O oversaw construction of the Westfields headquarters facility, which for the first time in its history centralized all major NRO elements in one complex. Following collocation, the National Reconnaissance Office functioned more efficiently internally and externally with its mission partners—NSA, CIA, NIMA/NGA—and other government organizations. To maintain the headquarters compound, MS&O provided for the physical operation and security of the NRO buildings and grounds. However, as MS&O grew, it took on more areas vital to the workforce. By 2001, it was responsible for environmental safety, contracting, logistics, employee assistance programs, records and property management, material movement, medical and travel services, video production and visual design, corporate training, and community outreach.

To meet new post-Cold War threats, the National Reconnaissance Office created several new offices to provide policy guidance, liaison, and timely intelligence support to the Federal Government and military services. On 28 August 1992, NRO created the Operational Support Office (OSO) to monitor and assess the operational status of NRO satellites and ensure that military and national customers received the systems tools and information they needed. The Operational Support Office expanded its activities to maintain daily contact with national, military, civil, and law enforcement customers through worldwide liaison and theater support representatives. These representatives increasingly helped regional commanders and warfighters



integrate NRO satellite capabilities into their operations and tactics. In May 2001, the Operational Support Office came under the authority of the Office of the Deputy Director of Military Support, where it served almost exclusively military intelligence needs.

In the mid-1990s, the National Reconnaissance Office established its chief of staff position and three deputy director-level offices to enhance the organization's ability to meet expanding customer needs in a more efficient and cost-effective manner: the Office of the Deputy Director for National Support (DDNS), the Office of Resource Oversight and Management (ROM), and the Office of the Deputy Director for Military Support, mentioned above and described more fully in Volume I.

Established on 15 October 1995, the Office of Resource Oversight and Management served as NRO's focal point for all financial, budgetary, programmatic, and legislative matters. The need for such a centralized office became apparent after the reorganization and collocation of the NRO programs into functional directorates exposed serious flaws in financial accounting and management used previously in the alphabetic programs. In the early 1990s, for example, the "forward funding" and Westfield's construction controversies demonstrated the need for the NRO to more effectively account for its financial resources and inform Congress about NRO activities. Responding to these issues, ROM strengthened NRO's internal resource management functions, improved budgetary control, and enhanced external interactions with Congress and its constituent intelligence and financial committees. By 2001, ROM developed a comprehensive financial accounting, contracting, and disbursement system, as well as a single comptroller's office and a common database to support program management. ROM was responsible for frequent audits and reviews of major programs for subsequent reporting to Congress and other federal agencies. The Resource Oversight and Management office played a major role in the NRO's relationship with Congress and handled legislative liaison, as well as preparation of the annual budget and executing funding initiatives for NRO systems.

In October 1996, the National Reconnaissance Office established the Office of the Deputy Director for National Support to provide support to non-military, non-intelligence domestic or national customers. The DDNS supported non-military customers such as the Department of State, Department of Agriculture, and Department of Transportation. It developed close relationships with the National Oceanographic and Atmospheric Agency (NOAA), National Aeronautics and Space Administration (NASA), Federal Aviation Administration (FAA), and Federal Emergency Management Agency (FEMA). It provided satellite imagery, defined policies, established liaison, and provided guidance on NRO capabilities and information support to various federal agencies, environmental offices, and law enforcement. The Office of the Deputy Director for National Support developed the framework and policies necessary to provide to national customers information and data relating to natural and environmental disasters, crop assessments, habitat and wetlands mapping and study, and narcotics and arms trafficking, among many other functions and services.

On 9 December 1998, the Office of Plans and Analysis became the Office of Architectures, Assessments, and Acquisition. This office underwent a second reorganization in February 2000 to become the Corporate Operations Office (COO). Responsible for implementing NRO's strategic direction, COO worked with the NRO chief systems engineer to maintain an effective corporate decision-making environment. The COO director also had responsibilities as NRO's chief information officer. On 6 July 2001, the NRO Office of Corporate Systems Engineering and the Corporate Operations Office became the office of the Deputy Director for System Engineering (DDSE). This new office included the NRO Strategic Planning Office, the Office of the Chief Information Officer, and the NRO Analysis Center. The DDSE tailored information on demand to customers worldwide. According to former NRO Director Keith R. Hall, this office also had as one of its main challenges the need to "bridge the gap between thinking strategically and acting tactically," as well as "to focus on the NRO strategic thrust and to make our vision more explicit."

After NRO abolished its alphabetic programs in favor of functional directorates in December 1992, the NRO Launch Program Office fell under the SIGINT and later COMM Directorates, only to be separated again as the Office of Space Launch in July 1996. On 1 July 1998, the Office of Space Launch truly became an "office," when its director became the NRO mission director, ending the traditional practice of having the senior Air Force officer at the NRO fill the launch director role. On 6 October 2000, the Office

of Space Launch fell under the Corporate Operations Office, where it continued to serve as the focal point for integrating all NRO launch activities. On 4 September 2001, when NRO abolished the Corporate Operations Office and apportioned its constituent elements throughout the NRO, an independent Office of Space Launch stood up, with its leader serving as mission director reporting directly to the DNRO.

The period between 1993 and 2001 witnessed unprecedented changes in NRO's organization and management. The NRO replaced Programs A, B, and C with four functional directorates (IMINT, SIGINT, COMM, and AS&T). Moreover, it streamlined decision making; made enormous strides toward adapting to the post-Cold War national security environment; created organizations to meet the needs of new military, non-military, and non-intelligence customers; and improved resource management controls. As the NRO confronts the national security challenges of the 21st century, the organization remains at the forefront of joint intelligence operations and information sharing.

*Revised by  
James D. Outzen, Ph.D.  
Director, Center for the Study of National Reconnaissance  
National Reconnaissance Office*

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**MAJOR GENERAL  
JAMES B. ARMOR, JR., USAF**



**DIRECTOR OF SIGINT SYSTEMS ACQUISITION  
& OPERATIONS DIRECTORATE**

**11 JUNE 2001-15 APRIL 2005**

James Burton Armor, Jr. was born on 25 September 1950 in Oklahoma City, Oklahoma. On 27 May 1973, he received his second lieutenant's commission in the U.S. Air Force through the Air Force Reserve Officer Training Corps at Lehigh University in Bethlehem, Pennsylvania, where he also earned two Bachelor of Science degrees, with honors, in psychology and electrical engineering. His first Air Force assignment, from September 1973 until August 1976, was as a deputy missile combat crew commander. He then served as senior wing instructor with the 381st Strategic Missile Wing at McConnell Air Force Base in Kansas. In December 1977, Armor earned a Master of Science in Electrical Engineering, with a subspecialty in electro-optics, from the Air Force Institute of Technology at Wright-Patterson Air Force Base in Ohio. He then became chief of the Laser Signal Intelligence Branch, Foreign Technology Division, at Wright-Patterson Air Force Base, where he served as a laser signal intelligence analyst until 1981. Following completion of the program management course at the Defense Systems Management College at Fort Belvoir, Virginia, then-Major Armor was assigned to the Air Force Office of Special Projects (OSP) at Los Angeles Air Force Station in California, with the title of assistant deputy for mission integration.

In November 1986, Armor returned to Washington, D.C., where he served until July 1989 as deputy division chief for special technology operations, Office of the Deputy Chief of Staff for Plans and Operations at U.S. Air Force headquarters. He went back to the Pentagon after a year as a senior research fellow at the National War College and served as deputy chief of the Space Communications Division, Directorate of Space and Strategic Defense Initiative Programs, Office of the Assistant Secretary of the Air Force for Acquisition.

In mid-1992, then-Colonel Armor returned to California to serve as deputy program director of the Advanced Systems Program Office and then as director of the Defense Dissemination Program Office (DDPO), Space and Missile Systems Center, at Los Angeles Air Force Base. In July 1996, after assisting with transition of the DDPO to the newly created National Imagery and Mapping Agency, Armor became system program director of the NAVSTAR Global Positioning System (GPS) Joint Program Office at Space and Missile Systems Center in Los Angeles. As director of this multi-billion-dollar GPS program, he was responsible for acquiring advanced replacement satellites for the 24-satellite constellation, as well as upgrading ground control stations, multi-service GPS receivers, and support equipment. He also managed the exploding worldwide civilian use of GPS for the Department of Defense. In October 1999, Colonel Armor assumed the position of vice commander at Warner Robins Air Logistics Center at Robins Air Force Base, one of the Air Force's five air logistics centers and Georgia's largest industrial complex. Here he was responsible for depot maintenance and worldwide logistics support of most Air Force transport aircraft, F-15 fighters, helicopters, air-to-air missiles, surface motor vehicles, and high-technology airborne electronics.

On 1 January 2000, the Air Force promoted Colonel Armor to brigadier general. After 18 months at Robins Air Force Base, he became director of the Signals Intelligence Systems Acquisition and Operations Directorate at the National Reconnaissance Office in Chantilly, Virginia. He officially assumed these duties on 11 June 2001 and served in that capacity until 15 April 2005. He was promoted to Major General on 1 September 2004.

Major General Armor earned the Missileman Badge, the Master Space Badge, and the Senior Acquisition Badge. In addition to his university degrees, Armor completed the National Security Management Course, as well as studies at Squadron Officer's School and the Air Command and Staff College. Among his military awards and decorations are the Defense Meritorious Service Medal, the Meritorious Service Medal with three oak leaf clusters, the Air Force Outstanding Unit Award, and the Air Force Organizational Excellence Award with three oak leaf clusters.



**BRIGADIER GENERAL  
DAVID E. BAKER, USAF**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
8 JANUARY 1996-11 SEPTEMBER 1997**



David Earle "Bull" Baker was born on 30 September 1946 in West Stewartstown, New Hampshire. He attended Hofstra University in New York, where he obtained a Bachelor of Business Administration degree in 1968. Following graduation, and his commissioning as a second lieutenant in the Air Force on 15 May 1969, Baker completed pilot training at Webb Air Force Base in Texas between June 1969 and June 1970. He then flew as an EC-121 pilot with Detachment 1 of the 552nd Airborne Early Warning and Control Wing at McCoy Air Force Base in Florida before undergoing AT-33 combat crew training at Cannon Air Force Base in New Mexico.

Deploying overseas in support of the American war effort in Southeast Asia in January 1972, Captain Baker served as an O-2A forward air controller assigned to the 21st Tactical Air Support Squadron based at Tan Son Nhut Air Base in Saigon, Republic of South Vietnam. During this service, Baker's aircraft was shot down by a surface-to-air missile over Cambodia during his 50th combat mission on 27 June 1972. Baker was a prisoner-of-war until the conclusion of the American combat involvement in Southeast Asia in February 1973. He was the only Air Force prisoner repatriated from Cambodia.

On returning to the United States, Baker attended Squadron Officer School and earned a Master of Science in Business Administration at the University of Hawaii in Honolulu. Following this, Baker spent the next five years, from September 1974 until September 1979, as a T-38 instructor pilot with the 97th Flying Training Squadron before becoming a flight commander, then assistant section commander, and then chief of standardization and evaluation with the 82nd Flying Training Wing at Williams Air Force Base in Arizona. During this time he also attended the Air Command and Staff College, completing his studies there in 1978.

Again deploying overseas, Major Baker spent four years as an F-15 fighter pilot, as a cadre instructor in the F-15C, and as assistant operations officer and chief of the F-15 Standardization and Evaluation Program with the 32nd Tactical Fighter Squadron at Camp New Amsterdam in the Netherlands. Following this tour, between January 1983 and December 1986 Lieutenant Colonel Baker attended the Armed Forces Staff College in Norfolk, Virginia, before spending the next three years as international program manager for Africa and later as chief of international programs for Egypt at U.S. Air Force headquarters in Washington, D.C.

Returning to work with the F-15, Baker spent four years after December 1986 as an instructor pilot, and later as assistant deputy commander for operations of the 405th Tactical Training Wing at Luke Air Force Base in Arizona. In January 1991, then-Colonel Baker began eight months combat service as deputy commander for operations of a composite fighter wing, consisting of the 4th Tactical Fighter Wing (Provisional) and the 4404th Tactical Fighter Wing (Provisional) in Al Kharj, Saudi Arabia, during Operation Desert Storm. Baker flew 20 combat missions over Iraq in the F-15E during this time; he was the only repatriated Vietnam-era prisoner of war to fly combat missions during the Gulf War.

After attending the National Defense College of Canada at Kingston, Ontario, Baker served two years, between August 1992 and September 1994, as director of operations, plans, and programs at the Air National Guard Bureau at U.S. Air Force headquarters in Washington, D.C. Following this assignment and his promotion to the rank of brigadier general in October 1994, Baker served as vice director of the Operational Plans and Interoperability Directorate, J-7, with the Joint Staff in Washington. There, he was accountable to the director in providing assistance to the chairman, Joint Chiefs of Staff, by increasing warfighting capabilities of the combat commands through improvements in interoperability of the services in all aspects of joint doctrine, tactics, and techniques and procedures. Concurrently, Baker served as deputy director for military education for the Joint Staff.

From 8 January 1996 until 11 September 1997, in his last active duty assignment, Brigadier General Baker served as deputy director for military support at the National Reconnaissance Office. He retired on 1 October 1997.

During his career, Brigadier General Baker logged more than 4,000 flying hours in the EC-121, AT-33, O-2A, T-38, and F-15 A/C/E aircraft. Among his numerous awards and decorations are the National Intelligence Distinguished Service Medal, the Defense Distinguished Service Medal, the Defense Superior Service Medal, the Legion of Merit, the Distinguished Flying Cross with oak leaf cluster, the Bronze Star with "V" device and oak leaf cluster, the Purple Heart, the Meritorious Service Medal with three oak leaf clusters, the Army Commendation Medal, the Air Medal with four oak leaf clusters, the Prisoner of War Medal, the Vietnam Service Medal with two service stars, the Southwest Asia Service Medal with two service stars, the Republic of South Vietnam Cross of Gallantry with bronze star, and the Kuwait Liberation Medal. He died on 29 January 2009.



**COLONEL  
WALLACE A. BEAUCHAMP III, USAF**



**DIRECTOR, OFFICE OF SPACE LAUNCH  
1 JULY 1998-15 JULY 1999**

**B**orn at Fort Belvoir, Virginia on 5 October 1949, Wallace Adrian "Pat" Beauchamp III received a Bachelor of Arts degree in psychology from Millsaps College and received a second lieutenant's commission in the Air Force following completion of Officer Training School in October 1973. Between 1973 and 1975, he underwent pilot and pilot instructor training at Columbus Air Force Base, Mississippi and stayed on at that base as a T-38 flight-training instructor until October 1978. He was then assigned to Hickam Air Force Base, Hawaii, where he was an HH-53 recovery pilot. From October 1978 until July 1983 Beauchamp served as air operations officer and orchestrated a multi-service effort to recover a malfunctioning satellite. Secretary of the Air Force Vern Orr commended him on an innovative approach that prevented the loss of a space capsule. During this time he earned a Master of Science in Education, Counseling, and Guidance from Mississippi State University in 1980 and completed Squadron Officer School.

From September 1983 until August 1985, Beauchamp served at the Los Angeles Air Force Base, California, as manager of Space Transportation System (STS) Utilization Planning. He was responsible for managing STS utilization planning activities for the deputy of the Mission Integration Management Support Office. In 1985 and 1986, he attended the Air Command and Staff College at Maxwell Air Force Base, Alabama, before beginning his first tour of duty with the Office of Special Projects as a launch vehicle integration manager. Here he was responsible for development of alternative systems to launch small Department of Defense payloads. From June 1987 through June 1989, Beauchamp remained at the Special Projects Office as deputy director for expendable launch vehicle integration. He devised and implemented a new launch manifesting system for the Titan IV Program that reduced planning time and saved federal tax dollars. He also prepared a Titan IV recovery plan for the Solid Rocket Motor Upgrade Program that eliminated 12 months from a two-year projected delivery slip.

Colonel Beauchamp moved from Los Angeles to Washington, D.C., in July 1989 to become deputy for launch vehicles at the Pentagon. In this position, he served as the principal liaison on launch issues between the assistant secretary of the Air Force for space, NASA, Congress, and other government agencies. He was the lead in resolving major issues ranging from launch base security upgrades to conducting a top-to-bottom Congressional review of the Titan IV and solid rocket motor upgrade developments.

Following completion of coursework at the Defense Systems Management College in August 1992, Beauchamp returned to the Los Angeles Air Force Base and the Office of Special Projects as deputy director, and then director, of launch integration and operations. Significant accomplishments included membership on the Space Launch Modernization Study Team, where he chaired the Requirements Panel. In July 1996, he became deputy director, and then director, of the Launch Program Office, where he identified ways to reduce expenses of the Titan IV Program; defined day-of-launch roles and responsibilities between different agencies; and became focal point for the evolved expendable launch vehicle program. On 1 July 1998, Colonel Beauchamp became director of the Office of Space Launch at the National Reconnaissance Office, serving in that position until 15 July 1999.

Among Colonel Beauchamp's awards and decorations are the Defense Superior Service Medal, the Defense Meritorious Service Medal with two oak leaf clusters, the Air Force Meritorious Service Medal, three Air Force Commendation Medals, one Air Force Achievement Medal, and the National Defense Service Medal with one oak leaf cluster.



**CAPTAIN  
JOHN M. BROWNELL, USN**



**DIRECTOR, OPERATIONAL SUPPORT OFFICE  
19 AUGUST 2000-1 JUNE 2002**

John Michael Brownell was born on 10 August 1954 in Walla Walla, Washington. He entered the U.S. Naval Academy in 1972 and graduated with merit in 1976 with a Bachelor of Science in Systems Engineering. Designated a naval flight officer in June 1978, Brownell's first operational assignment was with Oceanographic Research Squadron 8, then located at the Patuxent River Naval Air Station in Maryland, where he served until May 1981. Going overseas, Brownell next served with Fleet Air Reconnaissance Squadron 2 at the Rota Naval Air Station in Spain until May 1984. Following graduation in June 1986 from the Naval Postgraduate School in Monterey, California, where he received a Master of Science degree, with distinction, in systems engineering, he was assigned as electronic warfare officer with Tactical Electronic Warfare Squadron 34 at Point Mugu Naval Air Station in California. He then served as operations officer of Fleet Air Reconnaissance Squadron 2 in Spain for two more years between June 1988 and May 1990. Continuing with his professional education, then-Commander Brownell completed a Master of Arts in National Military Affairs at the Naval War College in June 1991.

Following his attendance at the Naval War College, Brownell spent 1991 and 1992 serving as executive officer of Tactical Electronic Warfare Squadron 35 at the Whidbey Island Naval Air Station in Washington. Upon that command's decommissioning in June 1993, he became executive and commanding officer of Fleet Air Reconnaissance Squadron 1 at the Agana Naval Air Station in Guam, and then at Whidbey Island Naval Air Station when that unit relocated in December 1994. Between July 1995 and July 1996, Brownell served as executive officer of the Whidbey Island Naval Air Station.

In August 1996, Commander Brownell served as the chief of the Capabilities Division, Deputy Director for Operations (Information Operations), Joint Staff, J-39, in Washington, D.C. Promoted to the rank of captain in December 1998, he transferred to the National Reconnaissance Office in August 1999 as chair of the Navy-NRO Coordination Group. On 19 August 2000, he assumed duties as the director of the Operational Support Office at the NRO, where he served until 1 June 2002.

Captain Brownell accumulated over 4,500 flight hours in various types of electronic attack, signals intelligence reconnaissance, and oceanographic research aircraft. During his career he served as a mission commander, electronic warfare strike lead, senior electronic warfare evaluator, and electronic countermeasures officer. He is a member of the Association of Old Crows, and a life member of the Association of Naval Aviation and U.S. Naval Academy Alumni Association. He also serves as secretary of the National Capital Area Scholastic Rowing Association, and is a U.S. Rowing judge and referee. Among his military awards and decorations are the Distinguished Service Medal, two awards of the Meritorious Service Medal, and various campaign, service, and unit awards.



**MR. JULIAN CABALLERO, JR.**



**DIRECTOR OF PROGRAM B**

**28 AUGUST 1989-31 DECEMBER 1992**

**DIRECTOR OF IMINT SYSTEMS ACQUISITION  
& OPERATIONS DIRECTORATE**

**1 JANUARY 1993-3 OCTOBER 1993**



**J**ulian Caballero, Jr. was born on 15 September 1930 in Harlingen, Texas. Following his high school graduation in 1948, he worked for two years as a radio technician in Texas. He entered the U.S. Army in January 1951 and served in the Federal Republic of Germany as a non-commissioned officer, radio operator, and technician until December 1952. Melpar Incorporated, a Virginia-based electronic research and development firm, employed Caballero the next year as a project engineer and technical assistant to the aerospace program manager. During his time with Melpar between 1953 and 1965, he worked in a series of research and development, engineering, and supervisory positions while engaged in the study and development of electronic reconnaissance and countermeasure systems. He was manager of the electronic warfare laboratories at Melpar when he resigned to join the Central Intelligence Agency in March 1965. His initial assignment with the CIA was as a signals intelligence officer with the Office of Special Projects (the later Office of Development and Engineering).

Caballero left the agency in 1967 to serve as vice president of Applied Systems Tech Incorporated, in Vienna, Virginia, but rejoined the CIA in April 1968 as chief of the Systems Requirements Division. A self-educated expert in electronic and signals intelligence systems, Caballero became director of the Special Program Group in November 1978. He served as deputy director and then director of the Office of Development and Engineering, Directorate of Science and Technology, from 8 March 1982 to 3 October 1993.

Caballero served as director of the National Reconnaissance Office Program B between 28 August 1989 and 31 December 1992, the last agency member to hold that post before it was abolished in favor of the functional directorates. The day following abolition of the old Program B, on 1 January 1993, Caballero became the first director of the Imagery Intelligence Systems Acquisition and Operations Directorate at the NRO and remained in that position until 3 October 1993. While at the NRO, he directed the development and operation of new imagery and signals intelligence technical collection systems and assisted in establishing a responsive and flexible imagery system that served the needs of several U.S. intelligence agencies.

During nearly 30 years of government service, Mr. Caballero received the Distinguished Intelligence Medal, the Intelligence Medal of Merit, two CIA Meritorious Unit Citations, the Department of Defense Distinguished Civilian Service Medal, the NASA Distinguished Service Medal, and the National Security Agency Distinguished Service Medal. He died on 5 August 2011.



**CAPTAIN BRUCE N. COBURN, USN**



**DIRECTOR, OPERATIONAL SUPPORT OFFICE**  
**1 AUGUST 1995-8 DECEMBER 1996**



**B**ruce Norman Coburn was born in Savannah, Georgia on 27 January 1948. He enlisted in the U.S. Navy in October 1968. Selected for the Naval Enlisted Scientific Education Program in 1971, he attended the University of Louisville in Kentucky, where he earned a Bachelor of Science in Engineering and an ensign's commission upon graduation in May 1974. He completed aviation training at the Naval Air Station in Pensacola, Florida, receiving his naval aviator wings in February 1975.

Coburn served with Fleet Air Reconnaissance Squadron 1 in Agana, Guam between May 1976 and February 1978 as senior electronic warfare evaluator and mission commander. Following this tour, he attended the Naval Postgraduate School in Monterey, California, where he earned a Master of Science in Systems Technology in April 1980. He next served with the Naval Electronics Systems Command in Washington, D.C., between May 1980 and June 1982, where he was attached to the Special Program Office of the Navy Space Project Directorate. Coburn then served as maintenance officer with Fleet Air Reconnaissance Squadron 2 in Rota, Spain between June 1982 and July 1985, before returning to Washington, D.C., where he worked for the assistant commander for space technology at the Naval Space and Warfare Systems Command. Coburn reported again to Fleet Air Reconnaissance Squadron 1 in January 1989, and served as the executive officer of that unit prior to assuming command of that squadron in June 1990. Afterward, he attended the Defense Systems Management College, between July and December 1991, en route to assignment at the Systems Application Project Office of the Navy Space Technology Program.

Captain Coburn became deputy director of the Operational Support Office at the National Reconnaissance Office upon its establishment on 28 August 1992. Three years later, on 1 August 1995, he assumed the position of director of the NRO OSO, serving until 8 December 1996. Captain Coburn retired from the U.S. Navy in March 1997.

In addition to his university degrees, Captain Coburn graduated from the Armed Forces Staff College in December 1985. Among his awards and decorations are the Meritorious Service Medal with one gold star, the Navy Commendation Medal, the Navy Achievement Medal, the Navy Expeditionary Medal, the Good Conduct Medal, the National Defense Service Medal, and the Humanitarian Service Medal. He also wears the Meritorious Unit Citation, Battle "E," and the Sea Service ribbons.



**MR. THOMAS W. CONROY**



DEPUTY DIRECTOR FOR NATIONAL SUPPORT  
**16 NOVEMBER 1998-9 MARCH 2001**

**T**homas Ward Conroy was born in Orange, New Jersey on 26 September 1944. Raised in Buffalo, New York, he received Bachelor of Science and Master of Science degrees in electrical engineering at the University of Maryland, College Park, in 1966 and 1971, respectively. During and following his education, Conroy worked in private industry at TRACOR, Defense Electronics Incorporated, B-K Dynamics, and Telcom Incorporated.

Conroy joined the Central Intelligence Agency in August 1968 and served in the Directorate of Science and Technology until December 1993. Initially assigned to its Office of Research and Development, he managed technical developments involving ultra-small lithography semiconductors, the use of radioisotopes in research, custom-integrated circuits, and special-purpose electronic systems. In 1976, he joined the Office of Development and Engineering to direct the development of wide-bandwidth recorders. He later helped develop, test, deploy, and operate special-purpose collection systems, and subsequently became deputy director, SIGINT Program Group, where he assisted in the development, launch, and operation of a significantly enhanced satellite collection system. In 1986, Conroy became director, Data Communication Group, to manage the continued acquisition, launch, and operation of a critical national satellite constellation.

Beginning in May 1991, Conroy served as deputy director, Office of Special Projects and helped guide the development, deployment, and operation of signals intelligence collection systems. During 1993, he played a leading role in the creation of the Office of Technical Collection, formed from the merger of the Office of Special Projects and the Office of SIGINT Operations within the Central Intelligence Agency. In December 1993, he served as the deputy chief of the Technology Management Office, Directorate of Operations. In June 1994, Conroy became deputy director of the Office of Scientific and Weapons Research in the Directorate of Intelligence, where he supervised the production of all-source intelligence assessments of foreign weapons systems and their technical infrastructures. In 1997 he became deputy director of the newly established Office of Transnational Issues, a CIA organization that combined the missions, personnel, and budgets of his former office and those of the Transnational Security and Technology Issues Office. On 12 October 1998, Conroy was named deputy director for national support at the National Reconnaissance Office, a position in which he served until his retirement on 9 March 2001.

Mr. Conroy received the Intelligence Commendation Medal, the Intelligence Medal of Merit, and a Senior Intelligence Service Distinguished Officer Award. He has served on, or has led, numerous task forces relating to data communications systems within the Intelligence Community, including investigations of related counterintelligence issues. In 1990, Conroy was elected to the board of directors for the Northwest Federal Credit Union, one of the largest credit unions in the country. He has continued volunteer service in that position and served as chairman of the board from 1995 until 2000.



**MRS. MARY M. CORRADO**



DEPUTY DIRECTOR FOR  
RESOURCE OVERSIGHT & MANAGEMENT  
**12 JANUARY 1998-4 OCTOBER 1999**

**M**ary Margaret Corrado was born in Philadelphia, Pennsylvania on 8 December 1948. She received a Bachelor of Science in Accounting from George Mason University in Fairfax, Virginia in May 1983. A baseball enthusiast, Mrs. Corrado began her professional career as a staff member of the Philadelphia Phillies baseball team. There she worked in the public relations office, handling fan mail and publishing daily statistics for the media. She then transferred to the Phillies' comptroller's office, working on payroll and expense accounts. Moving to Washington, D.C., in May 1969, she remained affiliated with baseball, having been hired by the Washington Senators. In Washington, she also supported the Senators' minor league baseball teams and handled publicity for baseball legend Ted Williams. When the Senators baseball team moved to Texas in 1970, Mrs. Corrado joined the Central Intelligence Agency as a secretary in the Office of Communications. She held similar positions in the Office of Legislative Counsel and the Office of the Comptroller before becoming community relations coordinator in the newly established Office of Equal Employment Opportunity in 1976.

In 1978, Corrado's long career in the budget field resumed when she became a budget analyst in the Office of the Comptroller. Between 1983 and 1985 she served as a budget officer on the Evaluation and Plans Staff in the Directorate of Operations, where she was primarily responsible for review, evaluation, and tracking of covert action programs including National Security Council proposals. In 1985, she took on responsibility for all aspects of budget planning, formulation, and execution across all programs in the Directorate of Science and Technology. In 1987, she served as deputy chief of the Science and Technology Group prior to becoming its chief in 1989. Then, in October 1990, she became chief of the Resource Management Group, Technology Management, in the Central Intelligence Agency Directorate of Operations.

In October 1991, she joined the Office of Special Projects (OSP) as executive officer and became the director of management and plans in August 1993 when the OSP merged with the Office of SIGINT Operations to become the Office of Technical Collection. In this position, she was responsible for all administrative services, as well as the formulation and execution of budget submissions and related inquiries by Congress and the Intelligence Community. Her next position was as the deputy comptroller for resource management at the CIA.

Corrado became associate deputy director for Resource Oversight and Management at the National Reconnaissance Office in December 1996. On 12 January 1998, she became deputy director of Resource Oversight and Management at NRO, a position she held until 4 October 1999.

For her significant contributions to resource management at the CIA and at the NRO, Corrado received numerous awards including a Meritorious Officer Stipend, a Meritorious Unit Citation, and the NRO Gold Medal of Distinguished Service.



**BRIGADIER GENERAL  
THOMAS F. CRAWFORD, USAF**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
15 JUNE 1999-5 DECEMBER 2000**



**T**homas Fletcher Crawford was born in Roswell, New Mexico on 30 June 1949. He earned an associates degree at the New Mexico Military Institute in 1970 and a Bachelor of Arts in Management and Finance at New Mexico State University in Las Cruces in 1972. Crawford received a second lieutenant's commission on 23 May 1972 through the Air Force Reserve Officer Training Corps at New Mexico State University. Following graduation, he completed pilot training at Laughlin Air Force Base in Texas, earning his wings in May 1973.

His first assignment in the Air Force, lasting nearly two years, was as an F-111F pilot with the 390th Tactical Fighter Squadron at Mountain Home Air Force Base in Idaho. From March 1975 until June 1977 he continued service as an F-111A pilot with the 429th Tactical Fighter Squadron at Nellis Air Force Base in Nevada, while also completing Squadron Officer School. An accomplished pilot, Crawford spent the period from June 1977 until November 1981 as an F-111A instructor pilot, weapons and tactics officer, fighter weapons instructor, and flight commander with the 390th Tactical Fighter Squadron at Mountain Home Air Force Base. During this time, he completed the Fighter Weapons Instructor Course and studies at the Air Command and Staff College. In 1981, Crawford served at the 4450th Tactical Group at Nellis Air Force Base, Nevada, where he flew the F-117A and A-7D.

In June 1984, then-Major Crawford began a four-year assignment as a special projects officer with the Air Staff at U.S. Air Force headquarters in Washington, D.C. In June 1988, he resumed duties with F-111F squadrons, first as a instructor pilot and chief of weapons and tactics with the 48th Tactical Fighter Wing, and then as operations officer and commander of the 494th Tactical Fighter Squadron at the Royal Air Force base at Lakenheath, England. Between August 1990 and March 1991, then-Lieutenant Colonel Crawford commanded Detachment 1 of the 48th Tactical Fighter Wing before serving as assistant deputy commander for operations of that same unit when it deployed for combat service in Operations Desert Shield and Desert Storm. Remaining overseas following the Gulf War, Crawford served for two years between June 1991 and June 1993 as chief of the Special Weapons Section, and as military assistant to the Supreme Allied Commander Europe, at Supreme Headquarters Allied Powers Europe, in Mons, Belgium.

On returning to the United States in 1993, Colonel Crawford completed a one-year course of studies at the Air War College at Maxwell Air Force Base in Alabama and then earned a Master of Science in Computer Information Systems at Boston University. Between June 1994 and June 1996, he served as an A-10 pilot and director of combat operations, then deputy commander, and finally commander, of the 607th Air Operations Group at Osan Air Base, Republic of South Korea. Subsequently, between July 1996 and May 1997, Crawford served as inspector general at Pacific Air Force headquarters at Hickam Air Force Base in Hawaii. From May 1997 until May 1999 Crawford commanded the 354th Fighter Wing at Eielson Air Force Base in Alaska. The 354th Fighter Wing flew the A-10/OA-10 and F-16 aircraft equipped with the low altitude navigation and targeting infrared system.

On 1 July 1998, the Air Force promoted Crawford to brigadier general, and in June of the following year appointed him deputy director for operations, National Support Systems, J-35, with the Joint Staff in Washington, D.C., also serving as deputy director for military support at the National Reconnaissance Office. Brigadier General Crawford served in this position at the NRO between 15 June 1999 and 5 December 2000. Deputy Director Crawford was the principal ensuring national intelligence support to the Department of Defense.

A command pilot with over 3,000 flying hours, Brigadier General Crawford has flown the F-111A, F-111D, F-111F, the A-7D, the F-117A "Nighthawk," and A-10/OA-10 aircraft. Among his military awards and decorations are the Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with oak leaf cluster, the Distinguished Flying Cross with oak leaf cluster, the Meritorious Service Medal with three oak leaf clusters, the Air Medal with oak leaf cluster, the Aerial Achievement Medal, the Air Force Commendation Medal, the Combat Readiness Medal with two oak leaf clusters, the National Defense Service Medal with service star, the Southwest Asia Service Medal with two service stars, and the Kuwait Liberation Medal.



**REAR ADMIRAL  
JOSEPH J. DANTONE, JR., USN**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
7 APRIL 1994-7 JANUARY 1996**



**B**orn in Baltimore, Maryland on 6 August 1942, Joseph John Dantone, Jr. entered the U.S. Naval Academy in July 1960 and graduated with the class of 1964 with a Bachelor of Science in Naval Engineering. Commissioned as an ensign, he immediately began flight training at the Naval Air Station in Pensacola, Florida and became a naval aviator on 24 September 1965.

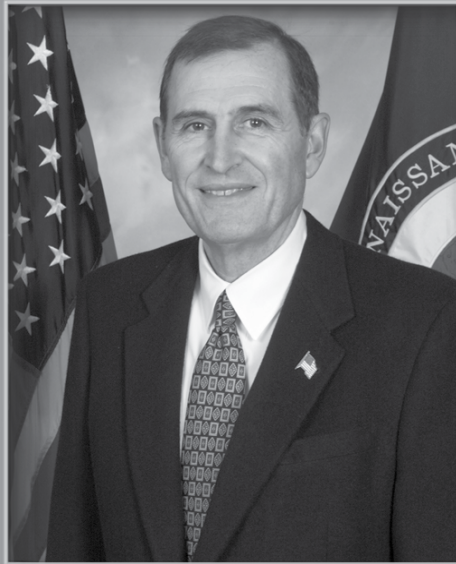
Following the completion of fleet replacement squadron training in May 1966, then-Lieutenant (j.g.) Dantone reported to Fighter Squadron 84, where he flew the F-4 Phantom during Mediterranean Sea deployments aboard the aircraft carrier USS *Independence*. In March 1967, he served with Fighter Squadron 161, where he made two Western Pacific combat deployments aboard the aircraft carrier USS *Coral Sea* and flew more than 150 combat missions in Southeast Asia in support of U.S. Armed Forces then deployed in the Republic of South Vietnam.

In August 1969, Dantone reported to the U.S. Naval Postgraduate School in Monterey, California, where he earned Master of Science degrees in aeronautical engineering and management. He joined the F-14 fleet introduction cadre at the U.S. Naval Air Station in Miramar, California in June 1973. In this position, he became a "plank owner" when Fighter Squadron 1 emerged as the U.S. Navy's first F-14 squadron. During this tour he deployed with the squadron once again to the Western Pacific and Indian Ocean aboard the USS *Enterprise*, where he flew fighter cover during the evacuation of Saigon prior to the final collapse of the Republic of South Vietnam in April 1975.

In May 1976, Dantone reported to the Naval Air Systems Command as the F-14 Tomcat program assistant deputy for training. Returning to the fleet in July 1977, he became the executive officer, and then commanding officer, of Fighter Squadron 14, assigned to the aircraft carrier USS *John F. Kennedy*. After this tour, then-Commander Dantone served as the fighter-training officer for the U.S. Naval Air Forces, Atlantic Fleet. This tour was followed by 18 months of nuclear power training, ending in December 1982, and a further tour as executive officer of the USS *Enterprise* between January 1983 and February 1985. Captain Dantone next assumed command of the USS *Wichita*, before assignment as the commanding officer of the pre-commissioning unit for the aircraft carrier USS *Abraham Lincoln* in November 1987. The following September, he assumed command of the aircraft carrier USS *Dwight D. Eisenhower*, and commanded that vessel in the Red Sea immediately following the Iraqi invasion of Kuwait during Operation Desert Shield. Leaving the USS *Eisenhower* in December 1990, Dantone became director of the Program Appraisal Division before assuming command of Carrier Group Three from April 1992 to March 1994.

In April 1994, Rear Admiral Dantone became the deputy director of military support at the National Reconnaissance Office, serving concurrently as deputy director of operations, national system support, Joint Staff, and as deputy director of the Defense Support Project Office, Office of the Assistant Secretary of the Air Force for Space, in Washington, D.C.

Rear Admiral Dantone's decorations and awards include the Legion of Merit with two gold stars, the Meritorious Service Medal with two gold stars, the Air Medal with combat "V" with Numeral "8" and one gold star, and the Navy Commendation Medal with combat "V."



**DR. WILLIAM A. DECKER**



**DEPUTY DIRECTOR FOR SYSTEM ENGINEERING**  
**10 SEPTEMBER 2001-12 SEPTEMBER 2003**

**W**illiam Arthur "Art" Decker was born on 25 September 1943 in Rolla, Missouri. He received his Bachelor of Science in Electrical Engineering in 1965 from the University of Missouri in Columbia, and between that year and 1971 he continued with his education, completing a Master of Science in Electrical Engineering and a Doctorate of Science in Electromagnetic Theory at the same institution.

Dr. Decker started his professional career as a civilian employee of the U.S. Navy in June 1966, where he carried out research and development projects in Washington, D.C. In September 1968, he accepted employment with the Bendix Corporation in Kansas City, Missouri, where he worked on the Polaris missile program.

Three years later, in October 1971, Dr. Decker joined the Central Intelligence Agency and the Directorate of Science and Technology. He initially worked as a technical intelligence analyst, examining foreign capabilities in communications, antennas, radars, and exotic weapons, publishing his findings as technical intelligence reports. Three years later, in February 1974, he joined the CIA's Office of Development and Engineering and began a tour of duty at the National Reconnaissance Office, holding leadership positions in precursors of three of the NRO's present-day directorates, including the Signals Intelligence Acquisition and Operations Directorate, the Advanced Systems and Technology Directorate, and the Imagery Intelligence Acquisition and Operations Directorate.

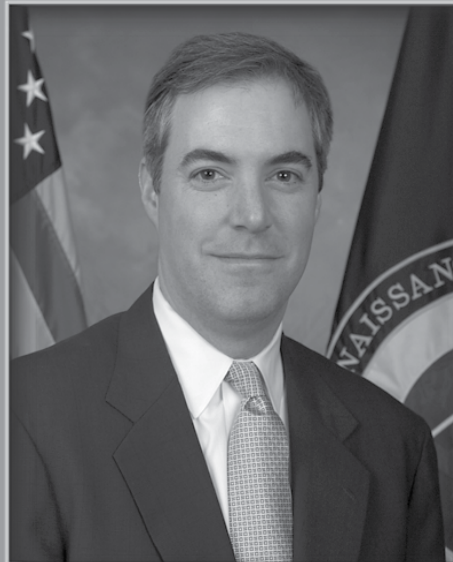
During a period of seven years with the Office of Development and Engineering's SIGINT Programs Group, Dr. Decker worked on development of a major block-change system and served as chief of program system engineering for four years. In 1982, he was assigned as associate director of the Collection Systems Group, where he worked on development of advanced technologies and new concepts for intelligence collection. In 1982, he began a two-year assignment as associate director of imagery intelligence programs.

In October 1984, Dr. Decker joined The Analytical Sciences Corporation (TASC) as a program manager. Six years later, in July 1990, he became vice president and director of the System Engineering Group at TASC, supporting NRO programs. In this position he was responsible for supervising several hundred employees who supported programs of the four NRO directorates. He was also a key participant in all major signals intelligence studies during this time, first in the office of Plans and Analysis and later in the Signals Intelligence Acquisition and Operations Directorate. He also actively participated in the benchmarking and business practices sub-panels of the Jeremiah Panel.

In October 1995, Dr. Decker was appointed senior vice president and director of the newly established System Engineering Division of TASC, which supported National Reconnaissance Office, Central Intelligence Agency, and National Security Agency programs. In this position he was responsible for leading nearly a thousand TASC employees supporting Intelligence Community systems engineering, systems integration, and technical support programs.

Leaving TASC in April 1997, Dr. Decker continued to be active in the Intelligence Community and worked as a private consultant providing advanced systems planning for the NRO. For five months in 1999 he served as the NRO representative and chairman of the Independent Review Panel in support of the White House-commissioned broad area review of launch vehicle failures.

On 6 July 2001, the NRO reorganized the former Office of Corporate Systems Engineering, giving it a different name and a deputy director comparable in importance and authority to the other existing NRO deputy directors leading military and national support efforts. Two months later, on 10 September 2001, Dr. Decker was appointed the NRO's first Deputy Director for Systems Engineering, a position in which he served until 12 September 2003.



**MR. VINCENT W. DENNIS**



DEPUTY DIRECTOR FOR  
RESOURCE OVERSIGHT & MANAGEMENT  
**4 OCTOBER 1999-13 FEBRUARY 2004**

**B**orn in Washington, D.C., on 21 June 1964, but raised in Durham, North Carolina, Vincent William Dennis received a Bachelor of Arts in History from Davidson College in 1986 and a Master of Arts in Public Policy from Duke University in Durham in 1990.

He began his federal service as the legislative director to Congressman Alex J. McMillan (R-NC). After completing graduate education, he became a presidential management intern in the Office of the Secretary of Defense. Dennis joined the Central Intelligence Agency on 19 June 1995 and served in several assignments across the Intelligence Community, including the National Security Agency, the Defense Intelligence Agency, and the Special Operations Command as well as in the Office of the Secretary of Defense and the Director of Central Intelligence. Dennis reported to the National Reconnaissance Office in 1996 as director of the Office of Legislative Liaison. Following two years in that position, he became associate deputy director of Resource Oversight and Management.

After completing Harvard University's Senior Managers in Government Program, he became deputy director of the NRO Resource Oversight and Management Office on 4 October 1999. As NRO's chief financial officer, Dennis was responsible for resource management within the organization, including budget formulation and execution, financial operations, financial systems development, cost estimating, and Congressional affairs. He principally focused on managerial cost accounting, financial management, information systems, strategic resource planning, and corporate budgeting.



**MAJOR GENERAL  
ROBERT S. DICKMAN, USAF**



**DIRECTOR, OFFICE OF  
ARCHITECTURES, ASSESSMENTS  
& ACQUISITION  
5 JUNE 1998-7 JULY 2000**



**B**orn in Brooklyn, New York on 5 October 1944, Robert Sanborn Dickman grew up in New Jersey. He entered the U.S. Air Force in June 1966 as a second lieutenant, after graduating with distinction from the Reserve Officer Training Corps at Union College in Schenectady, New York with a Bachelor of Science in Physics. Between June 1966 and June 1968, he studied at the U.S. Air Force Institute of Technology at Wright-Patterson Air Force Base in Ohio, where he completed a Master of Science in Space Physics.

Dickman first served as the theoretical and high-energy physicist at the Air Force Office of Scientific Research in Arlington, Virginia, followed by an assignment at the Directorate of Space, Air Force headquarters in Washington, D.C. Between June 1973 and May 1975, Dickman served as systems program manager at the Air Force Satellite Communications System Program Office at Los Angeles Air Force Base in California. Subsequently, he attended Squadron Officer School and Air Command and Staff College, both at Maxwell Air Force Base, Alabama.

Returning to Washington, D.C. in June 1976, then-Major Dickman spent the next three years as operational manager of military satellite communications with the Office of the Deputy Chief of Staff for Plans and Operations, Headquarters, U.S. Air Force. In October 1979, he moved to the position of chief of the Space Defense Operations Center Implementation Branch, at North American Aerospace Defense Command headquarters in Colorado Springs, Colorado. By the time he left that assignment in June 1982, Dickman was executive officer to the vice commander in chief, North American Aerospace Defense Command.

In 1983, Colonel Dickman obtained a Master of Arts in Management from Salve Regina College in Newport, Rhode Island, and was a distinguished graduate of the Naval War College, also in Newport, that same year. In July 1983, he returned to Colorado as director of Space Systems, Deputy Chief of Staff for Operations, at the headquarters of the newly formed U.S. Air Force Space Command in Colorado Springs. The following year, he served as chief of the Commander's Group at headquarters of the North American Aerospace Defense Command and at Air Force Space Command. Remaining in Colorado until June 1987, Dickman served as vice commander, 2nd Space Wing, Falcon Air Force Base, and as assistant to the director of operations, U.S. Space Command, and finally as director of missile warning, Air Force Space Command.

Returning to Washington, D.C., Dickman then served two years as chief of the Space Systems Division, Directorate of Space and Strategic Defense Initiative Programs, and a further three years until June 1992, as deputy director of Space Programs, Office of the Assistant Secretary of the Air Force for Acquisition. From July 1992 until June 1993, he was director of plans at the Air Force Space Command. Then, between July 1993 and January 1995, now-Major General Dickman served as commander of the 45th Space Wing at Patrick Air Force Base, Florida, as director of the Eastern Range and as commander of the Cape Canaveral Air Station. Returning once more to Washington, D.C., Dickman served as director of Space Programs, Office of the Assistant Secretary of the Air Force for Acquisition, until September 1995. The following month, in October 1995, he became the first Department of Defense Space Architect.

Major General Dickman joined the National Reconnaissance Office on 5 June 1998 as director of the Office of Plans and Analysis. When that office was reorganized and renamed in December 1998, Dickman remained in his position as director of the new Office of Architectures, Assessments, and Acquisition (OAAA), and finally as director of the newly created NRO Corporate Operations Office, serving until 7 July 2000. Major General Dickman retired from active military duty on 1 August 2000.

Major General Dickman's many awards and decorations include the Defense Distinguished Service Medal, the Defense Superior Service Medal, the Distinguished Service Medal, the Legion of Merit, the Defense Meritorious Service Medal, and the Meritorious Service Medal with oak leaf cluster, the Air Force Commendation Medal with oak leaf cluster, the Master Space Badge, and the National Reconnaissance Office Gold Medal. In recognition of Major General Dickman's significant contributions to military space programs, the National Space Club awarded him their Astronautics Award in 1998.



**MR. ROBERT H. DUMAÏS**



**DIRECTOR OF IMINT SYSTEMS ACQUISITION  
& OPERATIONS DIRECTORATE  
30 JULY 1995-31 OCTOBER 1996**



**B**orn in Southbridge, Massachusetts on 25 October 1940, Robert Henry Dumais received a Bachelor of Arts in Physics from Boston University in 1967 and a Master of Science in Mathematics from Northeastern University in Boston in 1976. In 1960, while pursuing his education, Dumais joined Itek Corporation in Lexington, Massachusetts, as a physicist working on the Corona imagery satellite project. He also worked on coherent optics, spatial filtering, and photographic research studies. In 1970, he joined EIKONIX Corporation in Bedford, Massachusetts, as a senior staff scientist. Here he worked on post-flight analysis of both strategic and tactical reconnaissance systems, and performed research on image processing, linear system theory, and estimation theory.

Dumais joined the Central Intelligence Agency in December 1974 and was initially assigned to the Office of Research and Development, Directorate of Science and Technology. In this position, he worked on the first soft-copy imagery exploitation systems. He transferred to the Office of Development and Engineering in 1976 and joined a team working on an advanced program. Three years later, in 1979, he served on the Systems Analysis Staff of another program and was appointed its chief in 1983.

From 1984 until 1986 Dumais served as deputy director for system collection before becoming associate director of an NRO space program. Two years later, in September 1988, he became director of the program. He left the National Reconnaissance Office in January 1994 to become deputy director of the CIA's Office of Technical Collection, serving in this capacity until March 1995. He then returned to the National Reconnaissance Office as deputy director for acquisitions, system development, and operations, in the IMINT Systems Acquisition and Operations Directorate. Three months later, on 1 August 1995, Dumais assumed the position of director of the IMINT Systems Acquisition and Operations Directorate, holding this post until he retired from government service on 31 October 1996.

Dumais received many awards including the Central Intelligence Agency's Intelligence Medal of Merit, awarded in 1985, the Meritorious Officer Award in 1988, the Distinguished Officer Award in 1990, and the Distinguished Intelligence Medal awarded in 1991. In 1996 alone, Dumais received a second Distinguished Intelligence Medal, as well as the Intelligence Community Distinguished Service Medal and the National Reconnaissance Office Gold Medal.



**MR. MARTIN C. FAGA**



**DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE  
28 SEPTEMBER 1989-5 MARCH 1993**

**B**orn in Bethlehem, Pennsylvania on 11 June 1941, Martin Clark Faga received a Bachelor of Science degree in 1963 and a Master of Science degree in 1964, both in electrical engineering from Lehigh University. At Lehigh, Faga served in the U.S. Air Force Reserve Officers Training Corps and received his commission as a second lieutenant upon graduation. Until 1968, he served as a research and development officer in the Air Force, working in the field of infrared reconnaissance and the application of laser technology to reconnaissance. He then worked briefly for the Perkin-Elmer Corporation in customer liaison before joining MITRE Corporation in 1969 as a member of the technical staff, working in the field of remote sensors.

In 1972, Faga joined the Central Intelligence Agency, where he worked as an engineer on advanced systems for intelligence collection. He became a member of the professional staff of the Permanent Select Committee on Intelligence of the House of Representatives in 1977, assigned to the Program and Budget Authorization Subcommittee. In 1984, he became the head of the staff assigned to that subcommittee. There his responsibilities included staff oversight of technical collection programs and coordination of all subcommittee work.

He became assistant secretary of the Air Force for space in September 1989, in which position he was responsible for the overall planning, budgeting, and supervision of Air Force space matters. His duties included maintaining cooperative liaison between the Air Force and other military services, the National Aeronautics and Space Administration, and the executive departments responsible for civil and military space activities. Concurrently, between 28 September 1989 and 5 March 1993, Assistant Secretary of the Air Force Faga served as director of the National Reconnaissance Office. He declassified the existence of the NRO in September 1992, ending more than 30 years in which the organization had been classified secret within compartmented channels. A strong proponent for improved support to military operations, he appointed the first NRO deputy director for military support and championed increased access by U.S. military forces to NRO products. He began re-engineering and upgrading programs for most NRO satellite systems during his tenure and acted to combine the NRO's separate Central Intelligence Agency, U.S. Air Force, and U.S. Navy satellite programs into functional directorates.



**REAR ADMIRAL  
RAND H. FISHER, USN**



**DIRECTOR OF COMMUNICATIONS SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE  
1 FEBRUARY 1999-20 AUGUST 2004**

**R**and Hilton Fisher was born in Hollywood, California on 21 April 1951. Raised in the San Fernando Valley, he entered the United States Naval Academy, along with his twin brother Rory, in June 1969 and graduated with distinction in 1973. He received a Bachelor of Science in Physics and an ensign's commission, and reported to the Naval Air Station at Pensacola, Florida. He earned his wings as a naval aviator in May 1975. During this time, he earned a Master of Science in Physics and Aeronautical Systems from the University of West Florida in Escambia County.

As a naval aviator, Fisher first served in Attack Squadron 147, flying the A-7E Corsair II, deployed on board the aircraft carrier USS *Constellation* in the Western Pacific. During this tour, between June 1975 and October 1978, Lieutenant Fisher became strike flight leader and qualified as an air wing landing signal officer. In October 1978, he reported to Training Squadron 4 at the Naval Air Station, Pensacola, Florida as a flight instructor in the T-2C.

In July 1980, Lieutenant Fisher became an aeronautical engineering duty officer and for the next two years attended the Naval Postgraduate School at Monterey, California, receiving a Master of Science in Physics and Ordnance Engineering in October 1982. He then reported as mission avionics officer to the commander of Naval Air Forces Atlantic. Following completion of that tour in June 1985, then Lieutenant Commander Fisher transferred to the Pacific Missile Test Center at Point Mugu, California, where he served as the Unmanned Aerial Vehicle (UAV) program officer, planning and executing successful tests and evaluations of the U.S. Navy Pioneer UAV System aboard the battleship USS *Iowa*.

In October 1988, Commander Fisher reported to the Space and Naval Warfare Systems Command in Washington, D.C., where he spent the next nine years as a research and development program manager, director of the Systems Program Management Division, lead systems engineer for the U.S. Naval Space Technology Program, deputy program manager of the Special Systems Program Office, major program manager of the Special Systems Program Office, and finally, as the program manager of the Advanced Systems Program Office.

Immediately following his promotion to rear admiral (lower half) on 8 December 1997, Fisher became commander of the Naval Air Warfare Center Weapons Division at China Lake, California, where he simultaneously served as the assistant commander for test and evaluation, Naval Air Systems Command. The Naval Air Warfare Center Weapons Division at that time included 7,650 personnel at four locations including China Lake and Point Mugu, California, as well as the White Sands Missile Range and Albuquerque Detachments in New Mexico.

Rear Admiral Fisher became director of the Communications Systems Acquisition and Operations Directorate at the National Reconnaissance Office on 1 February 1999 and served in that capacity until 20 August 2004. He was also the Naval Space Technology Systems program director and commander of the Space and Naval Warfare Systems Command Space Field Activity. On 1 October 2001, Fisher was promoted to the rank of rear admiral.

Rear Admiral Fisher logged over 2,500 career flight hours in numerous aircraft including the T-2C, TA-4J, A-7E, F-14, C-12, and C-131. He was awarded the Defense Superior Service Medal, the Legion of Merit, the Defense Meritorious Service Medal, the Meritorious Service Medal, the Joint Service Commendation Medal, the Joint Meritorious Unit Award, the Navy and Marine Corps Commendation Medal, the National Defense Service Medal with one bronze star, the Vietnam Service Medal with one bronze star, and the Sea Service Deployment Ribbon.



**MR. DENNIS D. FITZGERALD**



**DIRECTOR OF SIGINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**1 NOVEMBER 1996-11 JUNE 2001**

**DEPUTY DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE**

**10 AUGUST 2001-30 JULY 2006**

**PRINCIPAL DEPUTY DIRECTOR  
NATIONAL RECONNAISSANCE OFFICE**

**30 JULY 2006-27 APRIL 2007**

**B**orn on 28 February 1943 in New Haven, Connecticut, Dennis David Fitzgerald received his Bachelor of Science degree in Physics from Fairfield University in Fairfield, Connecticut in June 1964. Between 1968 and 1980, he earned four Master of Science degrees—in applied physics, mathematics, electrical engineering, and space technology—from Johns Hopkins University in Baltimore, Maryland.

Fitzgerald started his professional career in private industry, working on the Polaris and Poseidon Submarine Launched Ballistic Missile Programs as a field engineer for Sperry Gyroscope, Incorporated. In June 1966, he moved to the Vitro Corporation, then located in Silver Spring, Maryland.

In January 1974, Fitzgerald joined the Central Intelligence Agency's Directorate of Science and Technology. During most of his government career he served with the DS&T's Office of Development and Engineering at the National Reconnaissance Office. At the NRO, he held leadership positions in the predecessor programs of the current Imagery Intelligence, Signals Intelligence, and Advanced Systems and Technology Directorates. In the Office of Development and Engineering's Systems Analysis Group between 1974 and 1980, he worked on advanced technologies and new concepts for overhead intelligence collection. In 1980, he became involved with collection systems procurement as deputy director of the Technology Application Group. In 1982, he served as the deputy director for systems collection with responsibility for imagery vehicle procurement.

He served two tours of duty outside of the Office of Development and Engineering: first as associate director of the National Photographic Interpretation Center, where he supervised transition of the improved NPIC data system from development through operation, and second as deputy director of the Central Intelligence Agency's Office of Research and Development. In October 1994, Jeffrey K. Harris, director of the NRO, appointed Fitzgerald to lead the newly established Office of Systems Applications. There Fitzgerald coordinated international and commercial affairs and efforts to develop smaller satellites than those currently in use. On 1 November 1996, he became director of the SIGINT Systems Acquisition and Operations Directorate at the NRO. He also served concurrently as director of the CIA Office of Development and Engineering, an appointment made in October 1995. On 11 June 2001, Fitzgerald returned to CIA headquarters as associate deputy director of DS&T. On 10 August 2001, he returned to the NRO as deputy director. After an Air Force/NRO statement of intent made the deputy director a two-star Air Force position on 30 July 2006, Fitzgerald became NRO's first principal deputy director of national reconnaissance, where he served until 27 April 2007.

Fitzgerald's awards include the Senior Intelligence Service Distinguished Officer Award, the Senior Intelligence Service Meritorious Officer Award, the Central Intelligence Agency Medal of Merit, the Central Intelligence Agency Intelligence Commendation Award, and the National Reconnaissance Office Gold Medal. In addition to his interest in horse racing, Fitzgerald was an avid runner and completed 10 marathons. He held certificates as a professional engineer (in New York and Virginia) and was a licensed master electrician (Virginia). He died on 31 December 2008.





**BRIGADIER GENERAL  
WILLIAM M. FRASER III, USAF**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
11 DECEMBER 2000-29 NOVEMBER 2002**



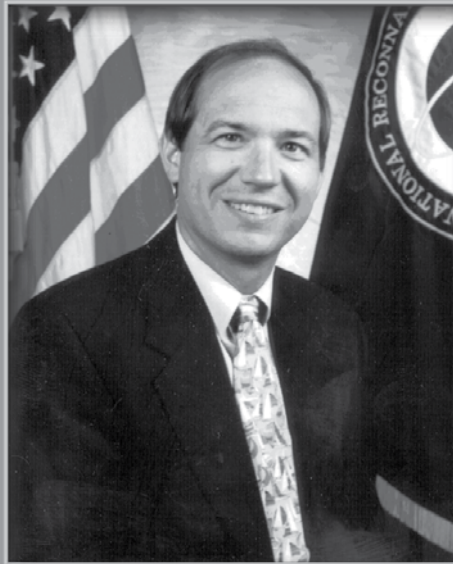
**W**illiam McKinley Fraser III was born on 17 August 1952 in Lakeland, Florida. He entered the U.S. Air Force in 1974 as a distinguished graduate of the Texas A&M University Reserve Officer Training Corps, where he also earned a Bachelor of Science in Engineering Technology. Commissioned a second lieutenant on 8 November 1974, he underwent pilot training at Williams Air Force Base in Arizona. Until March 1980, Fraser trained as an instructor pilot at Randolph Air Force Base in Texas. He then served as a T-37 instructor and check pilot with the 96th Flying Training Squadron and as a T-37 instructor pilot and flight examiner with the 82nd Flying Training Wing, both at Williams Air Force Base. During this time, Captain Fraser completed Squadron Officer School and earned a Master of Science in Management Information Systems at the University of Northern Colorado.

Assigned to the Pentagon in Washington, D.C. from March 1980 through May 1981, Fraser served as the Operational Support Aircraft Program element monitor and as the worldwide military command, control, and communications element monitor with the Air Staff Training Program at U.S. Air Force headquarters. Returning to field assignments in October 1981, Fraser underwent training in the B-52H with the 4017th Combat Crew Training Squadron at Castle Air Force Base in California before deploying as a commander and an instructor pilot in B-52H and B-52G aircraft with the 46th Bombardment Squadron at Grand Forks Air Force Base, North Dakota. Later, Major Fraser served as chief of the B-52G Standardization and Evaluation Branch with the 319th Bombardment Wing at Grand Forks, an assignment that ended in December 1984.

Following completion of U.S. Marine Corps Command and Staff College by correspondence in 1983 and attendance at the Armed Forces Staff College in 1985, Fraser served as chief, European Single Integrated Operational Plan Tactics with the office of the Joint Strategic Target Planning Staff at Offutt Air Force Base in Nebraska, and then as the executive officer to the chief of staff, Strategic Air Command. Between October 1987 and July 1990, he served as chief of the Nuclear Requirements Cell at Supreme Headquarters Allied Powers Europe in Mons, Belgium. Returning to the United States in July 1993, then-Colonel Fraser served two years with the 509th Operations Group and 509th Bombardment Wing at Whiteman Air Force Base in Missouri, the only U.S. Air Force operational base for the B-2 Stealth bomber. He later served as vice commander of the 509th Bombardment Wing before returning to Belgium for an additional two years of duty as a special assistant to Supreme Allied Commander Europe.

In February 1997, Fraser became commander of the 28th Bombardment Wing at Ellsworth Air Force Base in South Dakota, before beginning service in May 1998 as the chief of staff of the U.S. Strategic Command at Offutt Air Force Base. One year later in May 1999, Fraser took command of the 2nd Bombardment Wing at Barksdale Air Force Base in Louisiana, serving in that position until December 2000. There he was responsible for maintaining the wing in a state of constant readiness to carry out bombardment operations on a global scale by ensuring the organization, training, and equipping of a combined active-duty military and civilian force of more than 5,400 people. Promoted to brigadier general on 1 January 2000, Fraser became Deputy Director for Military Support at the National Reconnaissance Office on 11 December 2000, and served until 29 November 2002.

A command pilot with more than 3,800 flying hours, Brigadier General Fraser has flown the B-1B, B-2, B-52G/H, the KC-135R, and T-37 and T-38 aircraft. His many awards and decorations include the Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with two oak leaf clusters, the Defense Meritorious Service Medal with oak leaf cluster, the Meritorious Service Medal with oak leaf cluster, the Air Force Commendation Medal with oak leaf cluster, the Air Force Achievement Medal, the Combat Readiness Medal, the National Defense Service Medal, the Armed Forces Expeditionary Medal, the Armed Forces Service Medal, and the Military Outstanding Volunteer Service Medal.



**MR. JEFFREY D. GRANT**

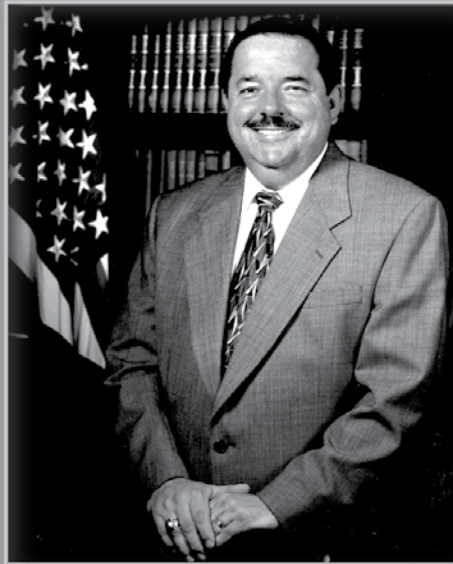


**DIRECTOR OF PLANS & ANALYSIS**  
**6 JUNE 1994-2 OCTOBER 1997**

**B**orn in Akron, Ohio on 16 March 1954 and raised in Greenville, South Carolina and Anchorage, Alaska, Jeffrey Donald Grant earned a Bachelor of Science in Engineering from Clemson University in Clemson, South Carolina in 1973 and a Bachelor of Science in Ocean Engineering from the Florida Institute of Technology in Melbourne in 1975.

Grant joined the Central Intelligence Agency on 6 June 1976 as an engineer and initially worked in the Office of Scientific Intelligence in the Directorate of Science and Technology. He specialized in the study of Soviet undersea radar, sonar, and navigational aids. Grant served in a variety of engineering positions within the CIA's Directorate of Science and Technology before joining its Office of Development and Engineering at the NRO on 13 April 1980. Thereafter, through 1993, Grant served as a project management engineer, as the associate director of systems engineering, as the chief of the Systems Engineering Division, and as the chief of the Systems Analysis Staff. In July 1993, Grant began a one-year tour as deputy of the DCI's Community Management Staff Planning Office. Returning to the National Reconnaissance Office on 6 June 1994, Grant became the director of the Office of Plans and Analysis where he remained until he retired from government service on 2 October 1997.

Among Grant's awards are the Intelligence Medal of Merit and the CIA Certificate of Distinction.



**MR. KEITH R. HALL**



DEPUTY DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE

**27 FEBRUARY 1996-27 MARCH 1997**

DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE

**27 MARCH 1997-13 DECEMBER 2001**

**K**eith Ralph Hall was born on 30 June 1947 in Rockville Center, New York. He earned a Bachelor of Arts in History and Political Science from Alfred University and a Master of Arts in Public Administration from Clark University. He also holds an honorary doctorate from Alfred University. Keith Hall served the U.S. Intelligence Community for over three decades, beginning in 1970 as a U.S. Army Intelligence Officer. In 1979, after commanding two overseas Army intelligence units, he became a presidential management intern, assigned to the White House Office of Management and Budget as the CIA budget examiner. In 1983, he joined the staff of the Senate Select Committee on Intelligence (SSCI), eventually becoming the deputy staff director. In 1991, he became deputy assistant secretary of defense for intelligence and security. In 1995, the DCI selected him to be the Agency's executive director for Intelligence Community affairs.

Keith Hall's career is highlighted by a series of important contributions to U.S. intelligence capabilities. As deputy staff director for the SSCI, he established a panel of experts to advise senators on critical national intelligences issues. He also created a separate audit staff to streamline accounting of program budget management and execution. As executive director for Intelligence Community Affairs, in the wake of the 1994 Aldrich Ames spy case he played a central role in identifying and implementing counterintelligence and security improvements across the IC. He also became the driving force behind improvements in intelligence dissemination capabilities that included creation of the IC's classified Internet and use of commercial broadcast and satellite communications to deliver critical intelligence globally.

While serving as executive director of Intelligence Community Affairs, Hall, together with the vice chairman of the Joint Chiefs of Staff, led the study that created the National Imagery and Mapping Agency (NIMA). This effort consolidated and coordinated all U.S. imagery and cartographic capabilities. In addition, he spearheaded development of the current Space Based Infrared (SBIR) architecture and established the first overarching integrated programming and budgeting process across the Department of Defense and the IC. In February 1996, the DCI named Hall deputy director and acting director of the National Reconnaissance Office. The Senate confirmed him as assistant secretary of the Air Force for space and director of the NRO on 28 March 1997. As NRO director, he instituted a series of management reforms while strengthening critical mission partnerships to more effectively meet the needs of customers worldwide. His transformation of NRO financial management policies, practices, and procedures—after the NRO “forward funding” and Westfield's construction controversies alleged financial mismanagement—served as an example for the Federal Government. Keith Hall retired from government service on 31 December 2001.

In addition to numerous military awards and decorations, Keith Hall received the Director of the Office of Management and Budget Award for Professional Achievement, the Central Intelligence Agency Gold Seal Medallion, the Secretary of Defense Award for Distinguished Civilian Service, and the Air Force Exceptional Civilian Service Award. He also earned the Armed Forces Communications and Electronics Association's Award for Distinguished Service to the Intelligence Community, the American Astronautical Society's Military Astronautics Award, and the NRO Medal of Distinguished Performance for outstanding leadership. In 2000, the National Space Club recognized him with its most prestigious award, the Robert H. Goddard Memorial Trophy, for his pivotal role in the evolution and operation of the national security space program.



**MR. JEFFREY K. HARRIS**



**DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE  
19 MAY 1994-26 FEBRUARY 1996**

Jeffrey King Harris was born on 28 June 1953 in White Plains, New York. He graduated from the Rochester Institute of Technology in 1975 with a Bachelor of Science in Photographic Science and Instrumentation. He began his career with the Central Intelligence Agency in 1975 as a photo technologist in the CIA's National Photographic Interpretation Center. Three years later, he transferred to the CIA's Office of Development and Engineering and joined the National Reconnaissance Office. At NRO, he worked on satellite development programs and served as chief of systems analysis and as associate director for several system acquisitions. His responsibilities included acquisition and operation of several NRO space-based reconnaissance and intelligence systems. During this time, Harris also managed research and development for space technologies and identified emerging technologies for application to the space reconnaissance and ground processing functions. In June 1993, Harris became associate executive director for Intelligence Community Affairs. In that capacity, he advised the Director of Central Intelligence (DCI) on intelligence space systems and supervised the Community Management Staff, which supported the DCI in his role as principal intelligence advisor to the President.

Harris became director of the National Reconnaissance Office on 19 May 1994 and served until 26 February 1996. In this capacity, Harris supervised the integration of NRO programs into functional directorates. Having served as a member of the R. James Woolsey Panel that studied the future of National Reconnaissance Office systems, he was a major proponent and architect of consolidating signals intelligence systems in a new partnership with the National Security Agency. Harris also directed declassification of the Corona imaging satellite program, an action approved by Director of Central Intelligence R. James Woolsey and President Bill Clinton in early 1995. Harris also established a public affairs program at the NRO.





**MR. JIMMIE D. HILL**



**NRO STAFF DIRECTOR**  
**12 JUNE 1978-9 APRIL 1982**  
**DEPUTY DIRECTOR OF THE**  
**NATIONAL RECONNAISSANCE OFFICE**  
**11 APRIL 1982-26 FEBRUARY 1996**



**B**orn on 28 December 1933 in Fort Worth, Texas, Jimmie Dale Hill enlisted in the U.S. Air Force in 1951 and, after receiving a commission through Officer Candidate School in 1960, rose through the ranks to major by 1974. He studied business and mathematics at Del Mar College between 1955 and 1957, business at the University of Oklahoma between 1957 and 1958, mathematics at San Antonio College between 1960 and 1961, and accounting at the University of Wichita between 1963 and 1964.

Prior to receiving his Air Force commission, Hill served as an aircraft mechanic and as a training non-commissioned officer. After completing Officer Candidate School, he became involved in several comptroller activities related to Air Force weapon systems acquisition. During the next five years, he served at the Secretary of the Air Force's Special Projects Office in El Segundo, California, which comprised Program A of the National Reconnaissance Office. In 1971, he transferred to the Office of the Under Secretary of the Air Force and the NRO in Washington, D.C. for duty with Program B, the Central Intelligence Agency's element of the National Reconnaissance Program. In 1973, he transferred from Program B to the NRO director's staff, where he remained until his retirement from the U.S. Air Force in February 1974.

On separating from the Air Force, Hill—now an Air Force civilian—became comptroller of the National Reconnaissance Office and special assistant to the under secretary of the Air Force. In 1978, he directed the Office of Space Systems, Office of the Secretary of the Air Force, an assignment that also made him staff director of the NRO. He became deputy director of the NRO and deputy under secretary of the Air Force for space on 11 April 1982, positions he retained until he retired from government service on 26 February 1996.

Beginning in 1967, Hill served a total of 29 years at the National Reconnaissance Office at all levels, 14 of them as deputy director. During this time he participated in decisions for all new NRO overhead reconnaissance systems. At the end of the Cold War, Hill was instrumental in restructuring the NRO to replace the separate program elements with functional directorates, collocating them in a new headquarters facility.

Jimmie Hill's Air Force awards include the Legion of Merit, the Meritorious Service Medal, and the Commendation Medal with three oak leaf clusters. As a member of the Air Force senior executive service, he received the Presidential Rank Award of Distinguished Executive in 1981 and 1991; he also received the Presidential Rank Award of Meritorious Executive in 1980 and 1988. Hill received the Department of Defense Distinguished Civilian Service Award in 1977, 1981, 1987, and 1996, and the Air Force Exceptional Civilian Service Award in 1988 and 1996. He also received the National Intelligence Distinguished Service Medal, the Central Intelligence Agency Distinguished Intelligence Medal, the NASA Distinguished Service Medal, the Defense Intelligence Agency Director's Award, the NRO Distinguished Service Medal, and the National Security Agency Bronze Medal. In 1996, the National Space Club awarded him the Goddard Memorial Trophy. In 1998, he received the Goddard Astronautics Award from the American Institute of Aeronautics and Astronautics. He died on 23 April 2013.



**MR. DAVID A. KIER**



**DEPUTY DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE  
31 MAY 1997-9 AUGUST 2001**

A native of Pittsburgh, Pennsylvania, David Allen Kier was born on 15 February 1943. He received a Bachelor of Science degree in physics from Washington and Jefferson College in 1964. In 1966, after a tour in the U.S. Army, Kier joined the National Aeronautics and Space Administration (NASA) Flight Research Center at Edwards Air Force Base, California as a flight test engineer. He provided technical support to several flight research programs such as the X-15, XB-70, many Lifting Bodies, and the F-111 fighter-bomber. In 1970, NASA detailed Kier to the Prototype Program Office at Wright-Patterson Air Force Base, responsible for the streamlined acquisition of the Light Weight Fighters, the YF-16 and YF-17, and the Advanced Medium STOL Transport, the YC-14 and the YC-15.

After completing graduate work at the University of Southern California in aerospace systems in 1973, Kier entered the government's Executive Leadership Development Program. This one-year program involved special training and rotational assignments to the Science and Technology Committee of the U.S. House of Representatives, National Aeronautics and Space Administration headquarters, and the Department of Commerce. At the conclusion of the program in 1974 he accepted a position at NASA headquarters as program manager for the High-Speed Vehicles Program, Office of Aeronautics and Space Technology. While serving in this position, he attended the National War College in 1977 and 1978.

In 1981, Kier joined the Central Intelligence Agency's Office of Development and Engineering in the Directorate of Science and Technology. There he managed several large-budget intelligence programs through May 1994, when he accepted a rotational assignment to the U.S. Navy. In March 1996, he became technical director at the National Reconnaissance Office, providing oversight and technical direction for all NRO programs. A year later, on 31 May 1997, Kier assumed the position of deputy director, National Reconnaissance Office, and principal deputy assistant secretary of the Air Force for space. He served in this position until his retirement from government service on 9 August 2001.



**BRIGADIER GENERAL  
ROBERT E. LARNED, USAF**



**DIRECTOR OF SIGINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**15 AUGUST 1996-31 OCTOBER 1996**

**DIRECTOR OF IMINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**1 NOVEMBER 1996-29 NOVEMBER 1998**

**R**obert Eric Larned was born in Portland, Oregon on 28 July 1946. In 1968, he earned a Bachelor of Science in Electrical Engineering from the University of Washington at Seattle. He entered the U.S. Air Force as a second lieutenant through Officer Training School that same year. He then served as a development engineer on the Minuteman re-entry vehicle heat shield, as an Air Force plant representative on the Minuteman Advanced Ballistic Re-entry Systems Program, and as the commander's aide with the U.S. Air Force Contract Management Division in Stratford, Connecticut; Wilmington, Massachusetts; and Los Angeles, California.

Larned followed these assignments with a three-year tour, between September 1973 and August 1976, at the Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico. There he worked as a technical programs manager and as a project officer improving the survivability of Air Force nuclear command, control, and communications systems. In 1972, 1973, and 1977 respectively, Larned completed Squadron Officer School at Maxwell Air Force Base in Alabama, earned a Master of Science in Business Administration at the University of Southern California in Los Angeles, and completed studies at the Air Command and Staff College.

In June 1977, Larned began a five-year series of assignments in the Washington, D.C. area. He served for two years as a congressional activity specialist with the deputy chief of staff for research and development, before working as the executive officer to the Secretary of the Air Force and then as assistant for the Defense Space Operations Committee in the Office of the Secretary of the Air Force. He then became the deputy for program control at the Defense Support Project Office in the Office of the Secretary of Defense; in this position he wrote the first Congressional Budget Justification Book (CBBJ) for the new Defense Reconnaissance Support Program. In June 1983, he completed studies at the Industrial College of the Armed Forces.

Moving to Colorado Springs, Colorado, now-Lieutenant Colonel Larned became the plans and programs officer at the North American Aerospace Defense Command and at the U.S. Air Force Space Command, before moving once again in June 1985 to take a post with the Office of Special Projects in Los Angeles. While at the Air Force Space Command, he co-authored the Air Force's innovation task force concept for information warfare. Two years later, in 1987, then-Colonel Larned returned to Washington, D.C., as director of programming with the Office of Space Systems, before once again returning to Los Angeles, this time as vice director of the Office of Special Projects.

Larned served as vice commander of the 50th Space Wing at Falcon Air Force Base in Colorado between June 1991 and June 1993, then as deputy director of operations at Air Force Space Command. Following these assignments and his promotion to the rank of brigadier general on 15 July 1994, Larned commanded the 341st Missile Wing at Malmstrom Air Force Base, Montana. In 1995, while in command of the 341st Missile Wing, the "First Aces" won the Blanchard Trophy as the best missile wing in the U.S. Air Force.

In September 1995, Brigadier General Larned became director of space programs with the Office of the Assistant Secretary of the Air Force for Acquisition in Washington, D.C.; one year later, on 15 August 1996, he began service as director of the National Reconnaissance Office SIGINT Systems Acquisition and Operations Directorate. Staying within the National Reconnaissance Office, Larned next became director of the IMINT Systems Acquisition and Operations Directorate on 1 November 1996, serving in that position until 29 November 1998. As IMINT director, Larned was responsible for acquiring, operating, and directing space activities for national space systems supporting the Department of Defense and the Intelligence Community. Concurrently with his NRO duties, Larned served as director, Office of Special Projects, U.S. Air Force. Brigadier General Larned retired from active military duty on 1 March 1999.

In addition to wearing the Master Space Badge and the Basic Missile Operator's Badge, Brigadier General Larned's military awards and decorations include the Defense Superior Service Medal, the Legion of Merit, and the Defense Meritorious Service Medal with three oak leaf clusters, the Meritorious Service Medal, and the Air Force Commendation Medal with oak leaf cluster.



**MR. JOHN A. LAUDER**



**DEPUTY DIRECTOR FOR NATIONAL SUPPORT**  
**26 MARCH 2001-12 JULY 2004**



John Allfree Lauder was born on 31 August 1946 in Sandusky, Ohio. He received his Bachelor of Arts degree, *summa cum laude*, from Hiram College in Hiram, Ohio in June 1968, and a Master of Arts in International Relations from Yale University in December 1973. He also completed courses at the University of Edinburgh in the United Kingdom, and at the John F. Kennedy School of Government at Harvard University.

After finishing his undergraduate studies, Lauder served in the U.S. Army, between May 1969 and January 1972, as a sergeant stationed at Fort Bragg, North Carolina. When he left the military, he served for six months on the staff of the Committee on Standards of Official Conduct of the U.S. House of Representatives in Washington, D.C.

Lauder joined the Central Intelligence Agency in 1974 through the Career Training Program. He first worked in the former Office of Strategic Research, where he conducted analyses on Soviet and later Middle Eastern military and conventional arms control issues. He then served as an assistant national intelligence officer for the Near East and South Asia and in other management positions overseeing aspects of Near Eastern, South Asian, and European analysis. In 1985, he became chief of the European Assessments Division in the Office of Soviet Affairs. Between August 1987 and June 1991, he served in Vienna, Austria, as a senior adviser to several U.S. delegations negotiating various conventional arms control issues between the Warsaw Pact and the North Atlantic Treaty Organization. During this time, he helped oversee preparation of the verification protocol for the Treaty on Conventional Forces in Europe.

Returning to the Central Intelligence Agency, Lauder served as deputy chief for intelligence in the director's Counter-terrorist Center before becoming executive secretary to the DCI. Between April 1994 and November 1997, Lauder worked as special assistant to the DCI for arms control and also served as director of the DCI's Arms Control Intelligence Staff. Following service in these posts, Lauder served as the DCI's special assistant for nonproliferation, as the Intelligence Community's and the CIA's issue manager for nonproliferation, and as director of the DCI's Nonproliferation Center.

On 26 March 2001, Lauder joined the National Reconnaissance Office as the Deputy Director for National Support. He also served concurrently as associate head of the NRO Corporate Support Career Service, which managed the careers, development, and evaluation of non-engineering CIA employees assigned to the NRO.

Lauder received the Distinguished Intelligence Medal for his work in leading the Arms Control Intelligence Community during a time of extraordinary change and challenge.



**MR. BRIAN A. MALONE**



**DIRECTOR, MANAGEMENT SERVICES  
& OPERATIONS OFFICE**

**16 JULY 2001-3 JANUARY 2014**



**B**rian Andrew Malone was born in Washington, D.C. on 31 August 1958. A third-generation Central Intelligence Agency employee, he grew up in Annandale, Virginia and joined the CIA in April 1977 as a cooperative education student. He earned a Bachelor of Arts in Management from the Georgia Institute of Technology in June 1981, and six years later completed a Master of Arts in Public Administration at The George Washington University in Washington, D.C.

Malone began full-time duty with the Central Intelligence Agency in July 1981 as a contracting officer in the Office of Logistics. In February 1983, he became a contracting officer in the Directorate of Intelligence, where he remained until being reassigned to the National Reconnaissance Office in March 1985. At NRO, he supported a large-scale competitive systems acquisition program. In June 1988, Malone became chief of the contracts staff at the National Photographic Interpretation Center. Reassigned to the Procurement Management Staff in October 1990, he was responsible for CIA procurement policy, personnel, and training. In September 1991, he accepted a rotational assignment to the CIA's Directorate of Administration Management Staff, where he was responsible for budget formulation and implementation.

On 13 June 1993, Malone was reassigned to the National Reconnaissance Office, where he spent two and one-half years as deputy chief of support. He was then assigned as chief of acquisition management within the Office of Finance and Logistics at the Central Intelligence Agency. Malone returned once more to the NRO on 3 January 1997, where he assumed duties as director of the Office of Contracts. On 16 July 2001, he became the second director of the NRO Management Services and Operations Office, where he served until 3 January 2014. Malone is a recipient of the NRO Director's Circle Award and the NRO Gold Medal for Distinguished Service.



**REAR ADMIRAL  
DANIEL P. MARCH, USN**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
9 MARCH 1992-31 MARCH 1994**

**D**aniel Peter March was born in La Jolla, California on 7 August 1939. Raised in California, Texas, and Florida, he entered the U.S. Naval Academy in July 1957 and graduated with the class of 1961 with a Bachelor of Science in Naval Science. March trained as a naval aviator at the Pensacola Naval Air Station in Florida, earning his wings in May 1962 before beginning a five-year series of assignments with training and attack squadrons—during his career he served with Training Squadrons 2 and 30, Fighter Antisubmarine Squadron 1, and Attack Squadrons 27, 66, 122, 125, 152, 165, and 174. Following a shore assignment and completing Naval Post Graduate School in Monterey, California—where he earned a Master of Science in Financial Management in December 1969—then-Lieutenant Commander March continued his service as a pilot in attack squadrons, flying 167 combat missions in A-1H, A-4B, and A-7E aircraft aboard the USS *Coral Sea* and the USS *Enterprise* in Southeast Asia during the Vietnam War.

Between November 1974 and March 1976, Commander March led Attack Squadron 66 aboard the USS *Independence*, and following a further shore assignment, commanded Carrier Air Wing One aboard the USS *John F. Kennedy* between June 1978 and April 1980. Between April 1981 and December 1982, Captain March commanded the USS *Ponce*, and between March 1984 and December 1985, commanded the aircraft carrier USS *Forrestal*.

In addition to his multiple sea and combat commands, March served in various shore assignments including two tours at the Navy Bureau of Personnel, from December 1966 to December 1968 and from March 1976 to June 1978, respectively. In these assignments, he served as the aviation lieutenant and below shore assignment officer, then financial assistant, and finally executive assistant to the assistant chief of naval personnel for officer development and distribution. March also served in the Strategic Plans and Policy Division of the Chief of Naval Operations' staff as tactical air forces objectives plans officer between July 1972 and April 1973. Additionally, he served as deputy chief of staff, Commander Operational Test and Evaluation Force, between December 1982 and March 1984, and as assistant chief of staff for operations, commander-in-chief, U.S. Pacific Fleet, between December 1985 and June 1987. Following his promotion to rear admiral (lower half) in June 1987, he served in a shore assignment as director of the Programs Resources Appraisal Division, Office of the Chief of Naval Operations.

An experienced naval officer with a varied combat and administrative background, March returned to sea in January 1989 as commander of Carrier Group Three, a post he held until June 1990, when he took command of Carrier Group Five. While serving with Carrier Group Five on 1 February 1991, the U.S. Navy promoted March to rear admiral. During this period, March commanded Task Force 154 in the Persian Gulf for Operations Desert Shield and Desert Storm, leading the largest carrier force deployed since World War II. Following his assignment as deputy director of space and electronic warfare with the Office of the Chief of Naval Operations, between January and March 1992, Rear Admiral March served as the deputy director for operations, National Systems Support, J-3, also known as Deputy Director for Military Support at the National Reconnaissance Office; he held this position until 31 March 1994.

Rear Admiral March's military decorations and awards include the Defense Distinguished Service Medal, the National Intelligence Community Distinguished Service Medal, the Distinguished Service Medal, the Legion of Merit with four gold stars, the Distinguished Flying Cross, the Meritorious Service Medal with one gold star, the Air Medal with Numeral "14," the Navy Commendation Medal with combat "V" and one gold star, the Navy Unit Commendation with one bronze star, a Meritorious Unit Commendation, the National Defense Service Medal with one bronze star, the Armed Forces Expeditionary Medal with one bronze star, the Vietnam Service Medal with three bronze stars, the Southwest Asia Campaign Medal with one bronze star, the Sea Service Deployment Ribbon with three bronze stars, the Republic of Vietnam Cross of Gallantry, the Republic of Vietnam Gallantry Cross Unit Citation, and the Republic of Vietnam Campaign Medal.



**MR. ROGER C. MARSH**



**DIRECTOR, MANAGEMENT SERVICES  
& OPERATIONS OFFICE**

**15 JANUARY 1992-16 JULY 2001**

**T**he first director of the Management Services and Operations Office at the National Reconnaissance Office, Roger Carroll Marsh was born on 22 December 1945 in Charlottesville, Virginia. Raised and educated in Virginia, Marsh entered the U.S. Army in December 1965 and served in South Carolina, Maryland, and the Republic of South Vietnam.

In November 1967, Marsh joined the Central Intelligence Agency's Directorate of Intelligence. In 1971, he moved to the Directorate of Science and Technology, Office of Development and Engineering. During the next ten years, he held a series of management positions of increasing responsibility within the directorate. In 1977, he received a Bachelor of Science in Business Administration from George Mason University in Fairfax, Virginia, and in March 1982, he became special assistant to the director of the Office of Development and Engineering.

On 15 January 1992, Marsh became the first director of the newly formed Management Services and Operations office at the NRO. As the senior administrative officer, he became responsible for providing all support services, which included facilities development and operations, headquarters security, human and personnel resources, information management, program services, logistics, and employee assistance programs. He retired on 16 July 2001 after nearly 36 years of government service. He died on 16 April 2006.

During his career, Marsh received numerous awards and commendations. Of special significance was the National Reconnaissance Office Gold Medal for Distinguished Service, recognizing his contribution in the consolidation and collocation of NRO headquarters in the Westfields facility in Chantilly, Virginia between 1992 and 1996. He also received the Central Intelligence Agency's Intelligence Medal of Merit in 1977 for his outstanding service in the development, acquisition, deployment, and operation of a sophisticated space-based technical intelligence collection system. The NRO recognized Marsh as a Pioneer of National Reconnaissance in 2005.



**BRIGADIER GENERAL  
HOWARD J. MITCHELL, USAF**



**DIRECTOR OF COMMUNICATIONS SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**17 JULY 1995-14 AUGUST 1998**

**DIRECTOR, OFFICE OF SPACE LAUNCH**

**2 JULY 1996-1 JULY 1998**

Howard John "Mitch" Mitchell was born in LaCrosse, Wisconsin on 28 March 1951. He entered the U.S. Air Force as a second lieutenant on 6 June 1973 after graduating from the Air Force Academy with a Bachelor of Science in Engineering Mechanics. From November 1973 until July 1976, he served as a deputy missile combat crew commander and, later, as a senior instructor and deputy commander with the 321st Strategic Missile Wing at Grand Forks Air Force Base in Grand Forks, North Dakota. Mitchell next served as mechanical systems manager, then chief of the Spacecraft Operations Branch, and later as chief of satellite and launch vehicle integration with the Defense Meteorological Satellite Program at Space Division headquarters at the Los Angeles Air Force Station in California. He completed a Master of Science degree at the Air Force Institute of Technology at the University of Michigan at Ann Arbor in 1977 and a Master of Arts in Business Administration at the University of North Dakota at Grand Forks in 1980, as well as Squadron Officer School at Maxwell Air Force Base in Alabama in 1978.

Following a further year of study at the Air Command and Staff College at Maxwell Air Force Base in 1983, Major Mitchell served as the space shuttle acquisition manager with the Directorate of Space Systems, Command, Control and Communications, Office of the Deputy Chief of Staff for Research, Development, and Acquisition at Air Force headquarters in Washington, D.C. Following two more years as chief of the Legislative Liaison Space Branch, Directorate of Legislative Liaison, Office of the Secretary of the Air Force in Washington, D.C., Mitchell attended the Defense Systems Management College at Fort Belvoir, Virginia, and completed studies at the Air War College by correspondence. Between December 1986 and June 1988, he served as director of special activities with the Office of the Deputy Chief of Staff for Systems at the Air Force Systems Command headquarters at Andrews Air Force Base in Maryland. He attended the Naval War College in Newport, Rhode Island, earning a Master of Arts in National Security Affairs in 1989 and then another Master of Arts in International Relations that same year at Salve Regina College, also in Newport.

In 1989, Lieutenant Colonel Mitchell became deputy director of engineering for the B-2 Systems Program Office at Aeronautical Systems Division headquarters at Wright-Patterson Air Force Base in Ohio. Between December 1990 and July 1992, he next served as program director for the Small Intercontinental Ballistic Missile System Organization at Norton Air Force Base in California. He was then assigned as program director in the Air Force Ballistic Missile Defense Systems Program Office at the Space and Missiles System Center headquarters at the Los Angeles Air Force Base, later serving there as director of developmental planning.

On 17 July 1995, Mitchell moved to the Office of Space Systems, Office of the Assistant Secretary of the Air Force for Space in Washington, D.C., serving as staff director, director of space launch, and then as director of the Communications Systems Acquisition and Operations Directorate, all at the National Reconnaissance Office. During his time at the NRO, Mitchell also completed CAPSTONE at the National Defense University at Fort Lesley J. McNair. He was promoted to brigadier general on 1 February 1997.

General Mitchell earned the Master Space Badge, the Master Acquisition Badge, the Master Communications Badge, and the Senior Missile Badge. In addition to his many military awards and decorations, he earned the Defense Distinguished Service Medal with oak leaf cluster, the Defense Superior Service Medal, the Legion of Merit, the Meritorious Service Medal with three oak leaf clusters, the Air Force Commendation Medal with two oak leaf clusters, the Air Force Achievement Medal, and the Combat Crew Readiness Medal. The Gen. Bernard A. Schriever Chapter of the U.S. Air Force Association named Mitchell an outstanding program director. He received the National Reconnaissance Office Gold Medal for Distinguished Service and the National Intelligence Distinguished Service Medal.





**MR. MICHAEL F. MUNSON**



DEPUTY DIRECTOR FOR NATIONAL SUPPORT  
**11 OCTOBER 1996-16 NOVEMBER 1998**



**B**orn in San Luis Obispo, California on 10 October 1944, Michael Frederick Munson received a Bachelor of Arts in History in 1967 from the University of Wisconsin. He began his professional career with the Defense Intelligence Agency in Washington, D.C., on 15 May 1967. The early stages of his career included positions in intelligence information systems management, culminating with his assignment as the chief of the Intelligence Production Systems Division. He earned a Master's degree from The American University in 1975, and later completed a course of studies at the Industrial College of the Armed Forces at Fort Lesley J. McNair in Washington, D.C. in 1981. Soon thereafter, Munson became the chief of the Intelligence Production Functional Management Office at DIA.

From 1981 until 1985, Munson served as assistant to the director for Defense Agency Programs, General Defense Intelligence Program staff. In this role, he supervised the development, implementation, review, and evaluation of intelligence programs and activities managed by DIA. In 1986, he became special assistant to the executive director of the DIA, responsible for policy direction, management, and administration of DIA resources and support operations. In 1987, he became a member of the defense intelligence senior executive service, assuming responsibilities as deputy director for resources. This position entailed day-to-day policy guidance, management, and operations of DIA personnel, contracting, training, photographic laboratory, library, printing, graphics, logistics, travel, and building services. In 1990, he also attended the Harvard University Executive Seminar on National Security.

In 1991, Munson established the Intelligence Program Support Group, becoming its first director. This support activity provided the assistant secretary of defense for command, control, communications, and intelligence with program analysis and evaluation of national and tactical intelligence programs and budgets, defense intelligence product reviews and evaluations, and management of defense intelligence architecture programs. Following this assignment, from January 1995 until March 1996 he served as deputy director of the Defense Intelligence Agency.

On 11 October 1996, Munson became the first Deputy Director for National Support at the NRO. Previously he had served as study director for the 1992 Jeremiah Panel that reviewed the NRO organization and provided recommendations for the nation's reconnaissance needs in the 21st century. He held this position until 16 November 1998 and retired from government service on 31 December.

During his career, Munson received several awards, including the Director of Central Intelligence's National Intelligence Certificate of Distinction in 1986, the Secretary of Defense Medal for Meritorious Civilian Service in 1993, and Presidential Meritorious Executive Rank in 1994.



**MR. JOHN F. NELSON**



**DEPUTY DIRECTOR FOR RESOURCE  
OVERSIGHT & MANAGEMENT**

**23 OCTOBER 1995-12 JANUARY 1998**

John Frederick Nelson was born on 12 August 1952 in Niskayuna, New York. In 1975, he received a Bachelor of Arts degree in political science from Northeastern University in Boston and in 1977, he earned a Master of Arts degree in public policy from the University of California, Berkeley.

Moving to Washington, D.C., Nelson worked in the Congressional Budget Office between October 1977 and October 1978, before serving as senior budget analyst with the Senate budget committee between July 1978 and April 1984. He also earned a Master of Science degree in accounting at Georgetown University in 1983.

Nelson joined the Central Intelligence Agency on 29 April 1984 as a program manager in the Directorate of Science and Technology's Office of Development and Engineering but left one year later, on 9 March 1985, to serve as a senior staff member and director of audits for the Senate Select Committee on Intelligence. He spent five years with that Committee during which time he established and directed the audit and investigations staff. Leaving government service on 1 June 1990, Nelson served briefly as vice president of HM Technologies, Incorporated in Sterling, Virginia, and then as treasurer and chief financial officer of Zeta Associates, a systems engineering firm in Fairfax, Virginia. He returned to the CIA on 23 October 1995 and became deputy director of the Office of Resource Oversight and Management at the National Reconnaissance Office. Until 12 January 1998, he served as the NRO's chief financial officer and supervised all financial, accounting, and budgetary operations in addition to restructuring and modernizing the NRO's financial management system, making it a model for other departments of the Federal Government.

Nelson received the National Intelligence Distinguished Service Medal and the National Reconnaissance Gold Medal in 1998, and the Director's Medal in 1999.



**REAR ADMIRAL  
RICHARD J. NIBE, JR., USN**



**DEPUTY DIRECTOR FOR MILITARY SUPPORT  
11 SEPTEMBER 1997-30 APRIL 1999**

**B**orn in Boone, Iowa on 17 February 1946, Richard Jerome Nibe, Jr. entered the U.S. Naval Academy in June 1964, earning a Bachelor of Science degree and a commission as an ensign with the class of 1968. Following completion of pilot training at Pensacola Naval Air Station in Florida in June 1971, and postgraduate work in aeronautical engineering at Princeton University, Nibe was assigned to Training Squadron 21. In November of that year, he was assigned to Attack Squadron 127 as an instructor pilot flying the A-4F Skyhawk. He subsequently served in three carrier-based light attack squadrons flying A-4F and A-7E Corsair II aircraft; these assignments included Attack Squadron 164 from April 1973 until October 1975, Attack Squadron 147 from June 1979 until January 1982, and Attack Squadron 83 from August 1984 until August 1987, where he served as squadron executive officer and commanding officer.

During these years, Nibe also completed two assignments in Washington, D.C. Between October 1975 and October 1978, he served as a research and development project officer at Defense Nuclear Agency headquarters, and between March 1983 and April 1984, as a staff officer in the Office of the Chief of Naval Operations, Plans and Policy Division, Strategic Concepts Branch. In 1984, he completed studies at the Naval War College.

After a brief assignment between December 1987 and May 1988 with Carrier Group Four as air operations officer, then-Commander Nibe entered nuclear propulsion training. He served as executive officer aboard the aircraft carrier USS *Nimitz* from December 1989 to May 1991, before taking command of the Third Fleet command ship USS *Coronado*. Under his leadership, the *Coronado* received the Battle Efficiency "E." In August 1993, Captain Nibe assumed command of the aircraft carrier USS *Abraham Lincoln* while on deployment to the Arabian Gulf. During this tour, the vessel won the Battle Efficiency "E" and earned an unprecedented second "Excellent" for the operational reactor safeguards examination.

From September 1995 until August 1997, Nibe directed intelligence, J-2, at the North American Aerospace Defense Command and U.S. Space Command at Peterson Air Force Base in Colorado Springs, Colorado. During this tour, on 1 March 1996, the U.S. Navy promoted him to rear admiral (lower half). On 11 September 1997, Rear Admiral Nibe became Deputy Director for Military Support at the National Reconnaissance Office, serving concurrently as deputy director for operations, Joint Staff J-3, and as deputy director of the Defense Support Project Office. Rear Admiral Nibe retired from active military duty on 1 May 1999.

Rear Admiral Nibe flew over 3,300 hours in tactical jet aircraft during his career, including the F-18 Hornet, and completed over 750 carrier landings. Among his many awards and decorations are the Defense Superior Service Medal, the Legion of Merit with one gold star, the Meritorious Service Medal with one gold star, the Navy Commendation Medal, the Navy Unit Commendation Medal, the Meritorious Unit Commendation with one bronze star, the Navy Expeditionary Medal, and the Armed Forces Expeditionary Medal.



**MR. EDMUND H. NOWINSKI**



**DIRECTOR OF IMINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE  
17 OCTOBER 1993-30 JULY 1995**

**E**dmund Henry Nowinski was born on 2 August 1944 in Newark, New Jersey. He received a Bachelor of Science degree in electrical engineering in 1967 from the Newark College of Engineering. Nowinski began his career as a research engineer with the Central Intelligence Agency on 11 June 1967, assigned to the Office of Special Projects, predecessor organization to the Office of Development and Engineering within the Directorate of Science and Technology. From 1967 through 1969, as a member of the Design and Analysis Division of the Office of Special Projects, he engaged in several research and development projects supporting early satellite reconnaissance systems for the National Reconnaissance Program. In late 1969, Nowinski moved to the system analysis staff, where he was responsible for overall system product quality. During the period 1969 through 1977, he held positions of increasing responsibility and played a significant role in the design and development of several satellite systems. In 1978, he became chief of the system analysis staff and, in 1980, was promoted to deputy director of the Program Group.

In August 1981, Nowinski became director of the newly formed Data Communications Group within the Office of Development and Engineering. In this capacity, he had responsibility for the development and operation of several satellite-based communications systems. In August 1985, he became deputy director of the Office of Development and Engineering, with overall management responsibility for imagery and signals intelligence and communications systems under the NRO's Program B. In December 1992, following the reorganization of the National Reconnaissance Office into functional directorates, Nowinski served as NRO's chief systems engineer. He was named the director of the Office of Development and Engineering in the CIA's Directorate of Science and Technology and director of the IMINT Systems Acquisition and Operations Directorate at the NRO on 17 October 1993, serving in the latter position until 30 July 1995. He retired from the Central Intelligence Agency on 31 October 1995.

During his career, he received two CIA Intelligence Medals of Merit, the CIA's Distinguished Intelligence Medal, and the National Reconnaissance Office Medals for Exceptional and Superior Accomplishments. He died on 19 January 2014.





**MR. ROBERT A. PATTISHALL**



**DIRECTOR, ADVANCED SYSTEMS  
& TECHNOLOGY DIRECTORATE  
31 MARCH 1997-28 FEBRUARY 2000**



**R**obert A. Pattishall graduated from the University of Maryland in College Park in 1969 with a Bachelor of Science degree in aerospace engineering. He went to work for the McDonnell-Douglas Corporation as a structural design engineer on the F-15 and also worked for Fairchild Space and Electronics Company as a dynamicist and attitude-control engineer on NASA's Advanced Communications Technology Satellite Program.

Pattishall joined the Central Intelligence Agency in 1975, serving initially in the Office of Development and Engineering, Directorate of Science and Technology. There he served in a wide variety of engineering management positions involving development of state-of-the-art reconnaissance satellite systems. While in the Office of Development and Engineering, he also performed two rotational assignments. The first was between 1978 and 1980, as a national collection program element monitor at the National Reconnaissance Office. The second assignment, between 1985 and 1987, was at an NRO field site, where he served as chief of engineering for operations and maintenance of a major satellite system.

Between 1987 and 1992, Pattishall served as associate director of a program, while concurrently serving as a key member of the intelligence architecture advanced development team that assisted with development of future sigint satellite architecture. With broad experience in these systems, Pattishall became director of a program group within the NRO SIGINT Directorate, from its inception as a functional directorate on 1 January 1993.

On 31 March 1997, Pattishall became director of the newly formed Advanced Systems and Technology Directorate at the NRO. In this role he was responsible for conducting an aggressive customer-focused research and development program that provided advanced technologies for global satellite reconnaissance. He served as AS&T director until 28 February 2000, when he retired from the CIA.

During his long career with the Intelligence Community, Pattishall received numerous awards including the Certificate of Merit in 1978, the National Intelligence Certificate of Distinction in 1981, the Intelligence Medal of Merit in 1985, and selection as the Central Intelligence Agency Engineer of the Year in 1986. In 1991, Pattishall received a unit citation for his work on the Telemetry Denial Working Group that supported the Strategic Arms Reduction Talks between the United States and the former Soviet Union on critical data denial provisions.



**BRIGADIER GENERAL  
THOMAS J. SCANLAN, JR., USAF**



**DIRECTOR OF COMMUNICATIONS SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**1 JANUARY 1993-16 JULY 1995**

**DIRECTOR OF SIGINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE**

**17 JULY 1995-26 AUGUST 1996**

**B**orn in Albany, Georgia on 24 March 1946, Thomas Joseph Scanlan, Jr. received a Bachelor of Science degree in mechanical engineering from the University of New Mexico, Albuquerque in 1969. He also graduated with distinction from the University of New Mexico Reserve Officer Training Corps program.

Between February 1969 and December 1971, Second Lieutenant Scanlan served as space systems manager for the 4754th Radar Evaluation Squadron at Hill Air Force Base, Utah. Later, he served as aide-de-camp to the commander at the Air Force Logistics Center, also at Hill Air Force Base. In 1973, he went to Turkey, where he served as chief of the space object identification section with the U.S. Logistics Group, Detachment 8. Returning to the United States, then-Captain Scanlan completed Squadron Officer School before transferring to California, where he spent three years as chief of data systems operations, Detachment 1, at the Air Force Satellite Control Facility, Sunnyvale Air Force Station. Between July 1977 and August 1978, Scanlan served as chief of the Data Systems Operations Branch and then as the Real-Time Systems program manager, also at the Air Force Satellite Control Facility.

In 1979, Scanlan completed a Master of Science degree in systems management at the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio, before becoming program manager of the Program Management Assistance Group, Air Force Systems Command headquarters, at Andrews Air Force Base in Maryland, between December 1979 and July 1981. He also completed studies at the Air Command and Staff College in 1981. Between July 1981 and July 1986, Scanlan served at the Pentagon as program element monitor for the Air Force Satellite Control Facility; then in research, development and acquisition; then as the special assistant for plans, research, development and acquisition; and then as the executive officer with the Office of the Deputy Chief of Staff, Research, Development and Acquisition, at U.S. Air Force headquarters. Between July 1984 and June 1985, then-Lieutenant Colonel Scanlan completed further studies at the Industrial College of the Armed Forces.

Returning to California in July 1986, Scanlan spent the next four years as program director of advanced systems with the Space Systems Division at Los Angeles Air Force Base, before becoming program director for space surveillance and tracking systems, also at Los Angeles Air Force Base. After finishing studies at the Defense Systems Management College in 1989, Brigadier General Scanlan took command of the 1st Wing, Air Force Space Command, at Peterson Air Force Base, Colorado. Two years later, in October 1992, he became the vice director of plans at the U.S. Space Command.

In January 1993, Scanlan returned to Washington, D.C., where he served at the Pentagon in the Office of Space Systems, Office of the Assistant Secretary of the Air Force for Space, as both staff director of the National Reconnaissance Office and as director of the NRO Communications Systems Acquisition and Operations Directorate until 16 July 1995. On 17 July 1995, Scanlan became director of the NRO Signals Intelligence Systems Acquisition and Operations Directorate, while also serving as director of the NRO Office of Space Launch, and served in that position until 1 July 1998.

In addition to holding the Master Space Badge and the Master Acquisition Badge, Brigadier General Scanlan's awards and decorations include the Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with oak leaf cluster, the Defense Meritorious Service Medal, the Meritorious Service Medal with four oak leaf clusters, the Air Force Commendation Medal with two oak leaf clusters, the Air Force Achievement Medal with oak leaf cluster, the National Intelligence Distinguished Service Medal, and the Air Force Systems Command Junior Officer of the Year.



**BRIGADIER GENERAL  
JOSEPH B. SOVEY, USAF**



**DIRECTOR OF IMINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE  
30 NOVEMBER 1998-6 MAY 2001**

Joseph Bert Sovey was born in Cleveland, Ohio on 25 August 1951. Admitted to the U.S. Air Force Academy in 1969, Sovey graduated with a Bachelor of Science in Engineering Management with the class of 1973. Commissioned as an Air Force second lieutenant in June of that year, Sovey first worked as a project manager with the Satellite Test Program at the U.S. Air Force Space Systems Division located at the Los Angeles Air Force Station in California. During his four-year tour at the Space Systems Division, he completed a Master of Science in Systems Management at the University of Southern California.

Between March 1977 and January 1983, Sovey served as a staff officer for command, control, and communications with the Developmental Plans Office of the Air Force Systems Command at Andrews Air Force Base in Maryland. While at Andrews, he also served as assistant for officer evaluation management in manpower and personnel and then as aide-de-camp to the commander of Air Force Systems Command. After completing studies at the Armed Forces Staff College in Norfolk, Virginia in July 1983, Sovey became program control chief and class II program manager for the Joint Tactical Information Distribution System Program Office at Hanscom Air Force Base in Massachusetts. This was the first in a series of assignments at Hanscom that lasted until July 1988. During this time, Lieutenant Colonel Sovey served as program director for the Joint Services Imagery Processing System for the Deputy Commander for Intelligence, then as deputy base commander of the 3245th Air Base Group, and finally as deputy system program director for the Joint Surveillance Target Attack Radar System.

Sovey's next assignments were in Washington, D.C., where he served between July 1988 and July 1992 as deputy chief of Congressional affairs and then as chief of the Program Integration and Congressional Affairs Division, both with the Office of the Assistant Secretary of the Air Force for Acquisition. While in Washington, D.C., Sovey studied at both the Defense Systems Management College at Fort Belvoir, Virginia, and the Industrial College of the Armed Forces at Fort Lesley J. McNair. In August 1992, Colonel Sovey began a new series of assignments with the Space and Missile Systems Center at the Los Angeles Air Force Base, California. First he served as director of the Satellite Communications Program Office, and then as deputy director and director of the Titan Systems Program Office.

With broad experience in acquisition, Sovey transferred back to Washington, D.C. in July 1995 to serve as associate deputy assistant secretary for management policy and program integration with the Office of the Assistant Secretary of the Air Force for Acquisition. In April 1996, Colonel Sovey returned to the Space and Missile Systems Center in Los Angeles and became program director of the Military Satellite Communications Joint Program Office. In this assignment, he was responsible for integrated systems management of satellites, mission control systems, and communication terminals for Department of Defense space communication programs.

On 1 August 1998, the Air Force promoted Sovey to brigadier general and, on 30 November 1998, appointed him director of the Imagery Intelligence Systems Acquisition and Operations Directorate at the National Reconnaissance Office. Brigadier General Sovey served as IMINT director until 6 May 2001. His responsibilities included acquiring, operating, and directing space activities for national space imagery systems supporting the Department of Defense and the Intelligence Community.

Among Brigadier General Sovey's many military awards and decorations are the Defense Superior Service Medal with one oak leaf cluster, the Legion of Merit with one oak leaf cluster, the Defense Meritorious Service Medal, the Meritorious Service Medal with three oak leaf clusters, and the Air Force Commendation Medal with one oak leaf cluster.



**MS. CAROL A. STAUBACH**



**DIRECTOR, ADVANCED SYSTEMS  
& TECHNOLOGY DIRECTORATE**

**1 MAY 2000-26 AUGUST 2001**

**DIRECTOR, IMINT SYSTEMS ACQUISITION  
& OPERATIONS DIRECTORATE**

**27 AUGUST 2001-6 JULY 2003**



Carol Annice Staubach was born in Johnstown, Pennsylvania on 1 February 1947. She graduated from the University of Pittsburgh in June 1968 with Bachelor of Science degrees in mathematics and physics. She did graduate work in mathematics at the University of Pittsburgh, while teaching high school in the Pittsburgh school system from January 1968 until April 1970. Staubach joined the Central Intelligence Agency in April 1970, serving in several positions in the Office of Joint Computer Services, Directorate of Administration, while continuing graduate studies at The George Washington University in Washington, D.C. In 1984, she transferred to the Office of Communications and led the New Building Communications Program, at that time the second largest procurement program in Central Intelligence Agency history.

In 1988, Staubach joined the National Reconnaissance Office as a deputy division chief assigned to assist development of advanced technology to support the NRO's imagery satellite collection programs. Three years later, in October 1991, she managed a leading-edge supercomputer development program within one of NRO's operational program offices. In June 1992, she became associate director, and then director, of the IMINT Systems Operations sector. In November 1996, Staubach served as director of the Geosynchronous Special Programs Office in the NRO SIGINT Directorate, and in October 1997, after a directorate-wide reorganization, as director of the Ground Systems Program Office. In the course of these assignments she ran NRO's largest signals intelligence program office.

On 1 May 2000, Staubach became director of the NRO Advanced Systems and Technology Directorate, where she served until being reassigned as director of the NRO Imagery Intelligence Systems Acquisition and Operations Directorate on 27 August 2001. She retired from government service in 2003. She died on 3 June 2019.

Staubach entered the Senior Intelligence Service in July 1985. She received the Distinguished Officer Award in January 1987, the Meritorious Officer Award in January 1993, and a National Intelligence Distinguished Service Medal in August 1997. She received the NRO Director's Circle Award in 2001. She died on 3 June 2019.





**CAPTAIN  
JAMES M. STEPHENSON, USN**



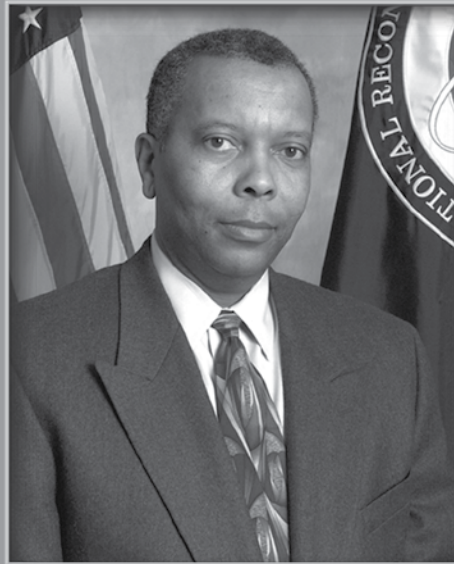
**DIRECTOR, OPERATIONAL SUPPORT OFFICE  
28 AUGUST 1992-1 SEPTEMBER 1993**

**B**orn on 9 August 1946, James Mell Stephenson earned a Bachelor of Science in Business Administration from Valdosta State University in 1968. Following flight training at the U.S. Naval Air Station, Pensacola, Florida between March 1969 and March 1970, Stephenson began his career as a naval flight officer in an EC-121M aircraft conducting reconnaissance missions in support of military operations in the Republic of South Vietnam, as well as national priority collections throughout the Western Pacific as part of Fleet Air Reconnaissance Squadron 1. Stephenson remained with this unit from August 1970 until March 1973; he also qualified as a senior evaluator and accumulated over 3,000 flight hours in various aircraft, including the EC-121, EP-3E and EA-3B. Between March 1973 and March 1976, he served in the Joint Strategic Target Planning Staff at Strategic Air Command headquarters at Offutt Air Force Base in Bellevue, Nebraska, where he was responsible for special targeting operations in support of the Single Integrated Operational Plan (SIOP). Additionally, he was singly responsible for threat and route analysis for all planned manned bomber sorties.

In April 1976, then-Lieutenant Stephenson began a 13-year association with the EA-6B "Prowler" community. During this period, he served in two operational squadrons and with the Fleet Replacement Training Squadron. His first operational squadron tour was with Tactical Electronic Warfare Squadron 130 from 1976 until 1979. Then from 1979 until 1982, he served as head of the Electronic Warfare Department in Tactical Electronic Warfare Squadron 129. In 1982, he served at the Naval Air (NAVAIR) Systems Command in Washington, D.C. During this assignment, Lieutenant Commander Stephenson was responsible for development and deployment of the Tactical EA-6B Mission Support System, as well as the advanced tactical jammer and exciter for the Improved Capability II (ICAP II) ALQ-99 System. While assigned to NAVAIR, Lieutenant Commander Stephenson was one of the key managers in the integration of the High Speed Anti-Radiation Missile (HARM) on the EA-6B aircraft. Promoted to commander, the U.S. Navy selected Stephenson for aviation command, and he returned to the Naval Air Station at Whidbey Island, Washington with Squadron 140.

Commander Stephenson subsequently worked at the U.S. Navy's Space Technology Program Office between May 1989 and August 1992, managing evolution and deployment of the Tactical Receive and Related Applications Broadcast Program and the multi-mission advanced tactical receiver. In 1990, he established and directed the Systems Application Program Office, which provided crucial support to the joint U.S. and multinational coalition forces later deployed against Iraq during Operations Desert Shield and Desert Storm. On 28 August 1992, Captain Stephenson became director of the newly formed Operational Support Office at the National Reconnaissance Office. Established after the Gulf War, this office provided closer liaison between the NRO and its customers and mission partners. He served in this position until 1 September 1993, when he retired from the U.S. Navy.

During his 25 years of active military duty, Captain Stephenson engaged in tactical and strategic strike operations, tactical reconnaissance, and electronic warfare. Besides attending Valdosta State University, he completed courses of study at Creighton University in Omaha, Nebraska, and at the Defense Management College. In recognition of his service, Captain Stephenson received the Defense Superior Service Medal, the Meritorious Service Medal, the Air Medal with three gold stars, the Navy Commendation Medal with Combat "V," the Joint Service Commendation Medal, and numerous other awards and citations.



**MR. GARNETT R. STOWE, JR.**



**NRO CHIEF OF STAFF**  
**6 SEPTEMBER 1994-1 AUGUST 2003**

**G**arnett Reddie Stowe, Jr. was born in Brooklyn, New York on 4 April 1949. Raised in the New York City metropolitan area, he received a Bachelor of Arts degree in history from Howard University in the District of Columbia in June 1972, where he also graduated with distinction from the U.S. Army Reserve Officer Training Corps. Stowe also holds a graduate certificate in aerodynamics, and attended the Harvard Intelligence and Policy Seminar.

Commissioned as second lieutenant in the U.S. Army after graduating from Howard University, Stowe served in the armor branch. During his military career he held command and staff positions from platoon to brigade level. Beginning in 1990 in Operation Desert Shield/Desert Storm, he commanded an aviation task force that participated in combat operations against Iraqi forces. After the First Gulf War, then-Colonel Stowe commanded Aviation Brigade, 2nd Armored Division, at Fort Hood, Texas. Starting in January 1992, and until his retirement from the military that December, Stowe conducted special projects and intelligence analyses and reviews for the Office of the Secretary of Defense.

Stowe joined the Central Intelligence Agency on 26 April 1993, initially serving with the Director of Central Intelligence Staff Group. After several months he moved to the Community Management Staff as a senior planning and policy officer, responsible for coordinating strategic planning efforts and policy positions for senior-level decision makers across the Federal Government. Appointed director of the Systems and Architectures Office, Community Management Staff in March 1994, he was responsible for coordinating the full spectrum of intelligence collection programs across the U.S. Intelligence Community and other Federal Government agencies for Director of Central Intelligence R. James Woolsey. With this broad perspective, Stowe became the executive assistant to the director of the National Reconnaissance Office in August 1994. On 6 September 1994, he became the NRO chief of staff. In this position, he directed staff functions and provided advice and counsel to the director and deputy director, NRO on key topics ranging from Congressional issues to senior staffing decisions.

Stowe is a member of the Senior Intelligence Service and is a Director of Central Intelligence Fellow. A decorated combat aviator, Stowe received several civilian awards including the NRO Distinguished Service Medal.



**MR. BOYD D. SUTTON**



**DIRECTOR OF PLANS & ANALYSIS**  
**1 OCTOBER 1992-5 JUNE 1994**

**B**oyd Davis Sutton was born in Phoenix, Arizona on 29 July 1941. He lived overseas with his parents from 1947 to 1959 while his father served with the Central Intelligence Agency in various posts in Europe and the Middle East. He earned a Bachelor of Arts in Political Economy from Pennsylvania Military College in 1964. On graduation, he received a commission as a second lieutenant in the U.S. Army. Following infantry officer basic and airborne training, he served with the 25th Infantry Division stationed in Hawaii. He deployed overseas with the 1st Battalion (Mechanized), 5th Infantry, for combat duty in the Republic of South Vietnam, where he served as a platoon leader, assistant battalion logistics officer, and battalion intelligence officer.

When he returned to the United States, then-Captain Sutton attended the Area Officers Intelligence Course at Ft. Holabird, Maryland. He then accepted an assignment with the 513th Military Intelligence Group in the Federal Republic of Germany, where he specialized in human intelligence collection. He completed a second tour of duty in South Vietnam in mid-1968 and served with the 525th Military Intelligence Group, then working on a clandestine project with the Central Intelligence Agency. He received two Bronze Star medals during this tour.

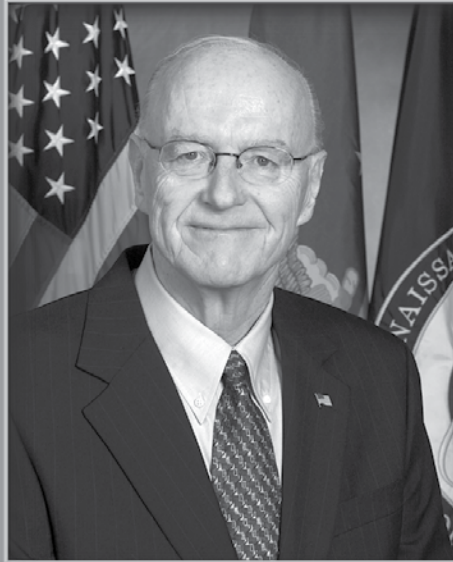
Returning from South Vietnam, Captain Sutton worked at the Defense Intelligence College, then moved to the Defense Intelligence Agency, where he created a new branch of analysis to study Soviet command and control systems. He subsequently joined CIA in a military capacity before resigning his commission to accept a permanent CIA position. He served in various analytic assignments studying Soviet military forces. As an estimate manager, he worked on the annual assessments of Soviet strategic forces. He then became the chief of the Soviet and Warsaw Pact Ground Forces Branch, serving in that capacity during the Soviet invasion of Afghanistan in late 1979 and the Polish crises of 1981 and 1982.

Sutton was selected for attendance at the National War College in 1982 and received first prize from the chairman of the Joint Chiefs of Staff, Gen. John W. Vessey, Jr., for his essay on "Strategic and Doctrinal Implications of Deep Attack Concepts for the Defense of Central Europe." Sutton then served in the Office of the Assistant Secretary of Defense for International Security Policy, where he managed production of papers on the use of advanced technologies to improve NATO's conventional defenses, working closely with the Secretary of Defense and U.S. Congress. For his work in this position, which led to changes in U.S. and NATO strategies, Sutton received the Defense Superior Service Medal from Secretary of Defense Caspar W. Weinberger.

Sutton returned to the CIA in 1985 and created a new staff to analyze collection program investments. In this capacity, he became a principal advisor to Director of Central Intelligence William J. Casey and was instrumental in guiding several major investment decisions in the late 1980s. During this time, he entered the Harvard University program for senior government executives. When Director of Central Intelligence William H. Webster established a panel in early 1989 to examine potential restructuring of the National Reconnaissance Office, Sutton was the CIA member. This effort led to creation of the NRO's office of Plans and Analysis, with Sutton as its first deputy director. Sutton served in that capacity until becoming director of the NRO Office of Plans and Analysis on 1 October 1992, serving in that position until 5 June 1994.

He continued to work at the CIA until his retirement in 1996. He died on 17 April 2018.





**MR. PETER B. TEETS**



DIRECTOR OF THE  
NATIONAL RECONNAISSANCE OFFICE  
**13 DECEMBER 2001-25 MARCH 2005**



**B**orn in Denver, Colorado on 12 February 1942, Peter Burritt Teets earned Bachelor of Science and Master of Science degrees in applied mathematics in 1963 and 1965 at the University of Colorado at Boulder and Denver, respectively.

Teets joined the Martin Marietta Corporation in Denver in 1963 as an engineer in flight control analysis. From 1970 until 1975, he managed the integration of a new inertial guidance system in the Titan IIIC launch vehicle. Between 1975 and 1980, he served as program manager for the Transtage Project and as director of space systems at Martin Marietta. In 1978, he earned a Master of Science in Management from the Massachusetts Institute of Technology. Between 1980 and 1982, he served as vice president of business development for Martin Marietta Denver Aerospace and, from 1982 until 1985, as vice president and general manager of the Aerospace Strategic and Launch Systems Division of Martin Marietta.

In 1985, Teets became president of Martin Marietta Denver Aerospace. While in this position, he received an honorary Doctor of Science degree from the University of Colorado at Denver. For two years prior to the merger of Lockheed Corporation and Martin Marietta in 1995, Teets served as president of the Martin Marietta Space Group and of the Martin Marietta Astronautics Group in Bethesda, Maryland. Following the merger, Teets worked until 1997 as president and chief operating officer of the new corporation's information and services sector in Bethesda. Teets became president and chief operating officer of the Lockheed Martin Corporation in July 1997. He remained in these positions until his retirement in 1999. In fall 2001, he left retirement to become under secretary of the Air Force and director of the National Reconnaissance Office, where he served until 25 March 2005.

Teets is a Sloan Fellow and a fellow of both the American Institute of Aeronautics and Astronautics and the American Astronautical Society. In 1999, he was inducted into the National Academy of Engineering. Teets served on the Council of Trustees of the Association of the United States Army (AUSA) and was a member of the board of directors of the National Action Council for Minorities in Engineering and the Ethics Resource Center.



**COLONEL  
DAN M. VANNATTER, USA**



**DIRECTOR, OPERATIONAL SUPPORT OFFICE  
2 SEPTEMBER 1993-31 JULY 1995**

A native of Muncie, Indiana, Dan Mathias Vannatter was born on 15 September 1946. He received a Bachelor of Arts in Psychology from Wabash College in Crawfordsville, Indiana in May 1968. Following graduation, Vannatter was drafted into the U.S. Army that December. An Engineer Officer Candidate's School graduate, Sergeant Vannatter received a second lieutenant's commission at Fort Belvoir, Virginia in October 1969.

Beginning in January 1971, he served nearly two years as an intelligence officer in the Republic of South Vietnam during the war in Southeast Asia. In October 1973, he returned to the United States as a special security officer at the Pentagon in Washington, D.C. Following completion of the Military Intelligence Advanced Course at Fort Huachuca, Arizona in June 1974, and the Special Forces Qualification Course at Fort Bragg, North Carolina, then-Captain Vannatter was assigned to the U.S. Army 10th Special Forces Group (Airborne). He next attended the Naval Postgraduate School in Monterey, California, where he earned a Master of Science in Operations Research/Systems Analysis in May 1979. Soon thereafter, he served as the operations research officer for combat developments at the U.S. Army Intelligence Center and School at Fort Huachuca.

In October 1982, Major Vannatter returned to the U.S. Army Special Operations Command at Fort Bragg, North Carolina, where he served as deputy chief of intelligence for the U.S. Army 1st Special Operations Command, as intelligence officer of the 7th Special Forces Group (Airborne), and as commander of the 7th Special Forces Group Military Intelligence Company. Following attendance at the Foreign Area Officer School and Spanish-language instruction at the Defense Language Institute at Fort Bragg in 1986, he was assigned to Headquarters, U.S. Southern Command, located at Quarry Heights outside Panama City, Panama as chief of the Intelligence Plans Division. In July 1988, Lieutenant Colonel Vannatter became the intelligence officer of the U.S. Army 7th Infantry Division (Light) and, while in this position, deployed to Panama with the initial entry forces of Operation Just Cause on 20 December 1989. He remained in Panama until the 7th Infantry Division redeployed to Fort Ord, California in March 1990.

Selected for battalion-level command in May 1990, Lieutenant Colonel Vannatter took command of the 102nd Military Intelligence Battalion, U.S. Army 2nd Infantry Division, in the Republic of South Korea, in July 1990. He returned to the United States in June 1992 to attend the Air War College in Montgomery, Alabama, graduating in June 1993. That July, Colonel Vannatter became director of the NRO's Operational Support Office. He reported to Washington, D.C., and assumed direction of the OSO on 2 September 1993. He held that position until 31 July 1995.

Among Colonel Vannatter's awards and decorations are the Defense Distinguished Service Medal, the Legion of Merit, the Bronze Star, the Defense Meritorious Service Medal, the Meritorious Service Medal with seven oak leaf clusters, the Joint Service Commendation Medal, the Army Commendation Medal with two oak leaf clusters, the Overseas Service Ribbon, the Vietnamese Cross of Gallantry with palm, the Vietnam Service Medal with four stars, the Master Parachutists Badge, and the Special Forces Tab.



**BRIGADIER GENERAL  
DONALD R. WALKER, USAF**



**NRO STAFF DIRECTOR  
6 FEBRUARY 1989-30 NOVEMBER 1992  
DIRECTOR OF PLANS & ANALYSIS  
JANUARY 1990-30 DECEMBER 1992  
DIRECTOR OF SIGINT SYSTEMS  
ACQUISITION & OPERATIONS DIRECTORATE  
4 DECEMBER 1992-16 JULY 1995**

**D**onald Robert Walker was born on 26 April 1944 in Buffalo, New York. He entered the U.S. Air Force Academy in 1962 and graduated with a Bachelor of Science in Engineering Science in 1966. Walker's first active-duty assignment was as a propulsion project engineer in the Titan III Systems Program Office of the Space and Missile Systems Organization at the Los Angeles Air Force Station in California. From September 1969 until February 1971, he continued his education at the University of Southern California through the Air Force Institute of Technology Program, earning a Master of Science in Mechanical Engineering, while at the same time completing Squadron Officer School.

Walker next served as a project engineer in the Engineering Division at Ogden Air Logistics Center, Hill Air Force Base, Utah, before transferring in June 1974 to the Sunnyvale Air Force Station in California, serving as deputy commander for satellite operations and mission director with the Air Force Satellite Control Facility. In 1980, he completed a Master of Arts in Business Administration at Auburn University and studies at the Air Command and Staff College, before assignment to the National Reconnaissance Office, Office of Space Systems, with the Office of the Secretary of the Air Force. There he served as director of national space systems planning and as deputy director for systems and technology. Five years later, in June 1985, he returned to the Los Angeles Air Force Station as director of operations with NRO Program A. At the same time, Walker completed studies at the Air War College and was designated a distinguished graduate in 1985.

In July 1986, Walker returned to Sunnyvale, California to serve as the last commander of the Air Force Satellite Control Facility and as the first commander of the Consolidated Space Test Center at Onizuka Air Force Station. There he was responsible for the worldwide satellite control network and mission control center that provided on-orbit support to NRO and Department of Defense spacecraft. In November 1987, Walker became program director for the Defense Satellite Communications System (DSCS) and deputy commander for defense surveillance at the Los Angeles Air Force Base. He was responsible for acquisition and operation of the DSCS, NATO III, Fleet Satellite Communications, and Air Force Satellite Communications programs.

On 6 February 1989, Walker became director of the Office of Space Systems within the Office of the Secretary of the Air Force in Washington, D.C., as staff director of the National Reconnaissance Office. Promoted to the rank of brigadier general on 1 May 1990, Walker became director of the NRO Office of Plans and Analysis, a position he held until 30 December 1992. That same year, on 4 December, Brigadier General Walker became director of the Special Projects Office, Office of the Secretary of the Air Force, at the Los Angeles Air Force Base in California, as well as the first director of the newly created NRO Signals Intelligence Systems Acquisition and Operations Directorate, remaining in the latter position until 16 July 1995.

Among Brigadier General Walker's military awards and decorations are the Legion of Merit, the Meritorious Service Medal with three oak leaf clusters, the Air Force Commendation Medal, the Air Force Outstanding Unit Award with oak leaf cluster, the Air Force Organizational Excellence Award with two oak leaf clusters, and the National Defense Service Medal. He was a member of the Tau Beta Pi National Engineering Honorary Fraternity and was chosen as an Honorary Chief Master Sergeant in 1987.



**COLONEL  
DANIEL W. WELLS III, USA**



**DIRECTOR, OPERATIONAL SUPPORT OFFICE  
9 DECEMBER 1996-18 AUGUST 2000**



**D**aniel William Wells III was born in Philadelphia, Pennsylvania on 24 April 1949. He attended the University of Delaware in Newark, Delaware, where he was a member of the Reserve Officer Training Corps. Commissioned a second lieutenant on graduation with a Bachelor's degree in physics in June 1971, his first U.S. Army assignment was in the Federal Republic of Germany. From June 1972 to October 1975, he served as a signals intelligence officer, electronic maintenance officer, and company executive officer. He next reported to the National Security Agency at Fort George G. Meade in Maryland, where he participated in the Junior Officer Cryptologic Career Program between September 1975 and December 1978. Then, until June 1982, Captain Wells served as a company commander and tactical intelligence officer at the U.S. Army Intelligence Center and School at Fort Huachuca, Arizona. He was then assigned to the Army Staff in Washington, D.C., where he served as an operations research officer from July 1982 until June 1985. Following this assignment, then-Major Wells served between July 1986 and August 1992 as a battalion operations officer, battalion executive officer, and brigade operations officer at Schofield Barracks, Hawaii. Between November 1990 and August 1992, Lieutenant Colonel Wells commanded the 732nd Military Intelligence Battalion at Schofield Barracks. This unit received the NSA Travis Trophy as the top cryptologic field station in the world for 1992.

Following battalion command, Lieutenant Colonel Wells was again assigned to the Army Staff at the Pentagon, where he served as chief of the Intelligence Support Military Operations Branch from August 1992 to July 1995. In this position, he also served as program director for the Trojan Spirit Program in the Office of the Deputy Chief of Staff for Intelligence. Colonel Wells was assigned to the National Reconnaissance Office in August 1996, where his initial assignment was in the Imagery Intelligence Systems Acquisition and Operations Directorate. Here he led the Directorate's study of the future ground architecture required for the Future Imagery Architecture program. On 9 December 1996, Colonel Wells became director of the NRO's Operational Support Office, a position he held until 18 August 2000.

Colonel Wells earned a Master of Science in Quantitative Analysis for Decision Making from The George Washington University in Washington, D.C., in December 1978. He also attended the Air War College in 1996, the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas in 1986, the Military Intelligence Advanced Course at the U.S. Army Intelligence Center and School at Fort Huachuca, Arizona in 1979, and the Infantry Office Basic Course in 1971.

Among Colonel Wells' awards and decorations are the Defense Superior Service Medal, the Legion of Merit, the Meritorious Service Medal, the Army Commendation Medal, the Joint Service Commendation Medal, the Army Achievement Medal, and the Army General Staff Badge.





**MAJOR GENERAL  
CRAIG P. WESTON, USAF**



**DIRECTOR, CORPORATE OPERATIONS OFFICE**

**8 JULY 2000-3 SEPTEMBER 2001**

**DIRECTOR, ADVANCED SYSTEMS  
& TECHNOLOGY DIRECTORATE**

**4 SEPTEMBER 2001-19 APRIL 2002**

**B**orn in Tokyo, Japan on 27 February 1950, but raised in Sacramento, California, Craig Pickering Weston graduated from the U.S. Air Force Academy in June 1972 with a Bachelor of Science degree in engineering mechanics and a commission as a second lieutenant. His first Air Force assignment was as a project engineer for air-launched munitions at the Armament Development and Test Center at Eglin Air Force Base, Florida. During this time, he also completed Squadron Officer School at Maxwell Air Force Base in Alabama.

In April 1977, then-Captain Weston began a four-year assignment as a flight test and research engineer for high-energy lasers at the Air Force Weapons Laboratory at Kirtland Air Force Base, New Mexico. In July 1981, he resumed his education at the Air Force Institute of Technology at Wright-Patterson Air Force Base in Ohio. He earned a Master of Science degree in aeronautical engineering in 1982, followed by further studies at the Defense Systems Management College and the Air War College. Between 1983 and 1988, Major Weston completed assignments as development manager for space systems in NRO Program A, Office of the Secretary of the Air Force for Special Projects at the Sunnyvale Air Force Station in California, and as mission director for space operations with the Office of the Secretary of the Air Force for Special Projects, also at Sunnyvale, which was renamed Onizuka Air Force Base in 1986.

After graduating from the Air War College in 1989, Weston became the program element monitor for Milstar with the Office of the Assistant Secretary of the Air Force for Acquisition at the Pentagon in Washington, D.C. From June 1991 until February 1993, then-Colonel Weston remained at the Pentagon and served first as acquisition planner for communications satellites with the Office of the Assistant Secretary of the Air Force for Acquisition, and then as executive officer in the Office of the Assistant Secretary of the Air Force for Acquisition.

Returning to California in 1993, Weston spent one year as deputy program director of the Military Satellite Communications Joint Program Office, Space and Missile Systems Center, Los Angeles Air Force Base, and then an additional three years as program director of the Space-Based Infrared Systems Program Office, Space and Missile Systems Center. Coming once again to Washington, D.C. in August 1997, Weston spent 16 months as program executive officer for warning, surveillance, and control programs, Office of the Assistant Secretary of the Air Force for Acquisition at the Pentagon, before taking the position of program executive officer for command and control programs. On 1 July 1998, the Air Force promoted Weston to brigadier general.

In July 2000, Brigadier General Weston resumed service at the NRO as director of the NRO Corporate Operations Office and as the organization's chief information officer. In this position, Brigadier General Weston led a multi-agency team that provided a broad spectrum of services—ranging from space launch, to acquisition milestone reviews, to space war games—to the nation's space reconnaissance program. His organization performed studies and analyses to improve current operations and determine the utility of future space systems to meet the Intelligence Community and the Department of Defense reconnaissance needs. As NRO chief information officer, Weston defined and implemented policies, standards, processes, metrics, and decision forums to improve the efficiency and effectiveness of space reconnaissance information systems within the larger Intelligence Community and Department of Defense information architectures.

On 4 September 2001, Brigadier General Weston became director of the NRO's Advanced Systems and Technology Directorate. Here he led a multi-agency team of futurists, scientists, and engineers engaged in advanced research, applied technology, and technology demonstration programs to further state-of-the-art technology for the nation's space reconnaissance program. He orchestrated a broad-based program to explore new concepts; to create breakthroughs in phenomenology, materials, and information processing; to develop next-generation space-qualified components and subsystems; and to flight and ground test systems to validate new concepts. The Directorate collaborated extensively with industry, academia, and the national and service laboratories in partnerships, alliances, and fora on thrust areas and specific projects that contribute to meeting the space reconnaissance needs of the Intelligence Community and Department of Defense.

Brigadier General Weston was also director of the Air Force-NRO Planning Integration Group, a task force dedicated to cooperative projects that provide NRO capabilities to significantly enhance Air Force acquisition and operations. Additionally, Weston was senior officer for the Air Force element of the NRO overseeing the training, education, and career management of Air Force officers, enlisted, and civilian personnel assigned to the organization. On 1 January 2002, Weston was promoted to the rank of major general.

His awards and decorations include the Legion of Merit with oak leaf cluster, the Defense Meritorious Service Medal, the Meritorious Service Medal with oak leaf cluster, the Air Medal, and the Air Force Commendation Medal. He has also received the Lt. Gen. John W. O'Neill Award for outstanding system program director, and the Douhet-Mitchell International Airpower Trophy at the Air War College.



**COLONEL  
STEPHEN A. WOJCICKI, USAF**



**DIRECTOR, OFFICE OF SPACE LAUNCH  
15 JULY 1999-17 MAY 2002**

**B**orn in St. Louis, Missouri on 6 April 1953, Stephen Alexander Wojcicki received a Bachelor of Science in Engineering Sciences from the U.S. Air Force Academy in June 1975. Between March 1976 and June 1980, he served as chief of the Historical Data Section, Space Computation Center, Cheyenne Mountain, Colorado. Wojcicki earned a Master of Science in Systems Management from the University of Southern California in May 1980, and that July became chief of spacecraft operations at the Sunnyvale Air Force Station in California.

Following six months in the Defense Systems Management College Program Manager's Course in 1984, Wojcicki served between July 1984 and January 1987 as the manager of Space Shuttle/Centaur Command and Data Systems at the National Aeronautics and Space Administration's Lewis Research Center in Cleveland, Ohio. He then became chief of the Launch Vehicle Operations Branch at the Cape Canaveral Air Force Station in Florida. After attending the Armed Forces Staff College in Norfolk, Virginia from July 1989 to January 1990, he served as space operations staff officer at U.S. Space Command, Peterson Air Force Base in Colorado from August 1989 to April 1992.

From May 1992 to May 1993, Wojcicki commanded the 19th Space Surveillance Squadron at the Pirinlik Air Station in Turkey, before taking the position of chief, Space Control and Force Applications Branch at U.S. Air Force headquarters until June 1997. Following one year as a member of the Secretary of Defense Strategic Studies Group between July 1997 and June 1998, Wojcicki was assigned to the National Reconnaissance Office, where he initially served as deputy director of imagery development programs, managing research and development efforts for the next generation of imaging satellites. On 15 July 1999, he became director of the Office of Space Launch at the NRO, where he served until 17 May 2002.

Colonel Wojcicki received the Defense Meritorious Service Medal, the Meritorious Service Medal, the Air Force Achievement Medal, and the Air Force Commendation Medal.







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