Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

[redacted]

25X1

National Photographic Interpretation Center

SECRET

NGA Review Completed.

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Next 1 Page(s) In Document Exempt

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

A Brief Introduction . . .

Whether the nation is at war or at peace, policy makers rely on intelligence, and photography is a prime source. Arthur C. Lundahl, the first director of NPIC (1961-1973), characterizes photography as ". . . the super servant of mankind which provides us an infinite graphic record of all natural and cultural activity. The qualitative and quantitative interpretation of that record provides us a universal language of communication enabling man to show all things more accurately than vision itself."

Of critical importance today is the preserving of peace between the great powers. To accomplish this we are vitally dependent upon photography. Under the SALT agreements, US and Soviet conferees, using their best substitute for onsite inspection of each other's military bases, often speak about "confirmation by national means," an expression for overhead photography and other sources.

The National Photographic Interpretation Center was established to perform analysis of photography to provide information on questions of national interest. NPIC has pioneered in the US development of human skills, techniques, and instrumentation for the exploitation of photography.

This brochure offers many insights and explanations. For more details, the civilian and military leadership of NPIC invites your questions and comments.

25X1

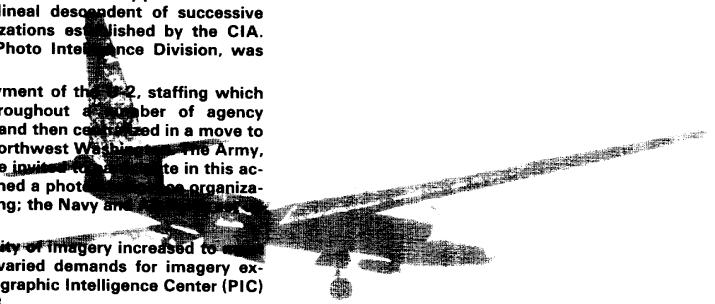
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

A Look At The Past . . .

The National Photographic Interpretation Center (NPIC) was established in January 1961 under the Director of Central Intelligence (DCI) in response to the needs of national security. The Center is manned by personnel from CIA and DIA. It is a lineal descendent of successive photointelligence organizations established by the CIA. The first of these, the Photo Intelligence Division, was originated in 1953.

In 1956 with the deployment of the U-2, staffing which had been scattered throughout a number of agency buildings was expanded and then centralized in a move to the Steuart Building in northwest Washington. The Army, Navy, and Air Force were invited to participate in this activity. The Army established a photo intelligence organization in the Steuart Building; the Navy and Air Force liaison units.



As the quality and quantity of imagery increased to meet the growing and more varied demands for imagery exploitation, the CIA Photographic Intelligence Center (PIC) was established in 1958.

With the issuance of the National Security Council Intelligence Directive 8 in 1961, PIC became the National Photographic Interpretation Center with national responsibilities to serve the entire community. Two years later NPIC relocated to the building it currently occupies—

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

National Security Council Intelligence Directive 8 (NSCID 8)

The NSCID 8, issued in 1961, created NPIC with the following provisions: the DCI was to provide a national center, the director of which would be designated by the DCI and approved by the Secretary of Defense; personnel and other support were to be provided jointly by the departments and agencies which were engaged in photographic intelligence production and were represented on the United States Intelligence Board; the Center was to support departmental needs as much as possible without degradation of national activities; and, in time of war, the administration of NPIC would pass to the Secretary of Defense.

NPIC Support Responsibilities Under the National Tasking Plan (NTP)

In 1967 a community study resulted in a National Tasking Plan which divided responsibilities among various US photointerpretation organizations. The NTP confirmed NPIC's responsibility for national-level imagery exploitation. NPIC is responsible for accomplishing detailed studies on specified functional areas in support of intelligence production by various national-level agencies represented on the National Foreign Intelligence Board (NFIB) and the National Intelligence Tasking Center (NITC). NPIC is also tasked to support directly members of the NFIB and the NITC.

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

[redacted]

TASKS

NPIC tasks include responsibility for first phase exploitation of all national reconnaissance satellite imagery; second phase territorial search and periodic reporting on approximately 10,600 COMIREX targets; and third phase exploitation of all deployed strategic missile ranges, electronics, strategic industries, atomic energy, and chemical/biological/radiological facilities.

In terms of national intelligence problem areas, substantive NPIC responsibilities include—

- Fast-reaction exploitation for indications, warning, and tip-off;
- Exploitation in support of crisis monitoring;
- Imagery search for activity of interest at the national level;
- Treaty/agreement compliance monitoring (e.g., strategic arms limitation, Middle East cease fire, etc.);
- Exploitation in support of current intelligence production;
- Exploitation in support of strategic and general-purpose force analyses; and
- Exploitation in support of national estimates.

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Reporting Concepts . . .

The interpretation of imagery acquired from various collection sources and the complete, timely, and accurate reporting of the intelligence information derived are the functions of NPIC's Imagery Exploitation Group (IEG).

The imagery analyst uses a light table equipped with high-powered optics to exploit the imagery and identify signatures, specific indicators, or evidence of foreign military activity of intelligence interest at the highest national levels. The essential elements of information are checked against previous imagery and changes are reflected in a computerized data base and reported in cable, hard copy, and various briefing formats. Support in processing the derived intelligence information is provided by NPIC's Production Services Group (PSG) and Technical Services Group (TSG).

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

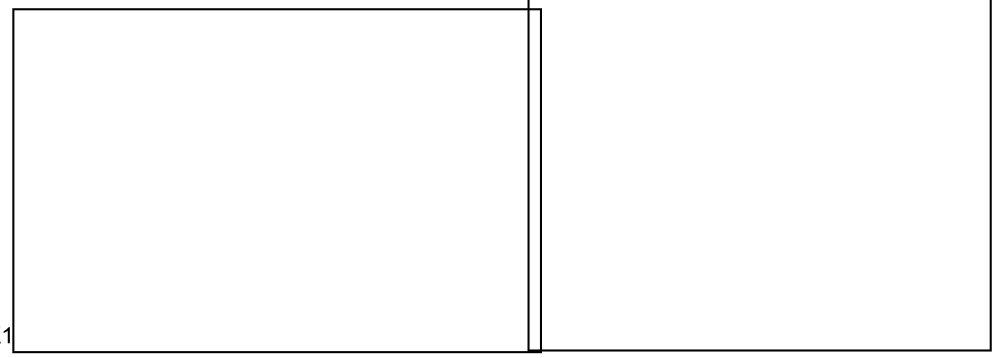
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1

Search . . .

NPIC conducts a systematic search of all acquired imagery to detect significant changes to known targets and to identify new targets for subsequent intelligence collection. Search efforts are concentrated on the deployment of additional or new strategic weapons systems, aircraft, naval vessels, nuclear weapons, electronics, and related production facilities at existing or new installations in the Soviet Union and the Peoples Republic of China. Efforts to detect the introduction of these capabilities into a "third world" country are also an important part of the search process.

25X1



25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

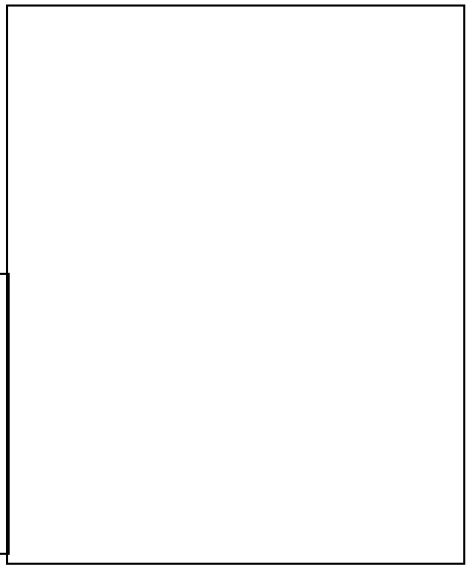
Strategic Weapons Technology . . .

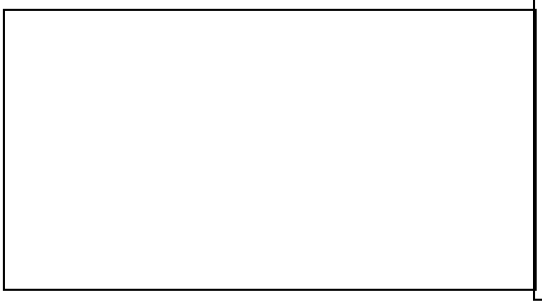
Monitoring developments in missile, aircraft, naval, electronic, nuclear, and advanced weapons technology is a major application of imagery collection and exploitation. Imagery of production facilities and military and industrial research and development installations is examined to determine strategic weapons capabilities.

Modifications and improvements to fighter and long-range bomber aircraft; naval surface combatant and nuclear-powered submarine construction and deployment; testing and deployment of new missile systems; nuclear proliferation; and command and control, communications, and electronics research, development, and production are all monitored and reported.

25X1

25X1
8



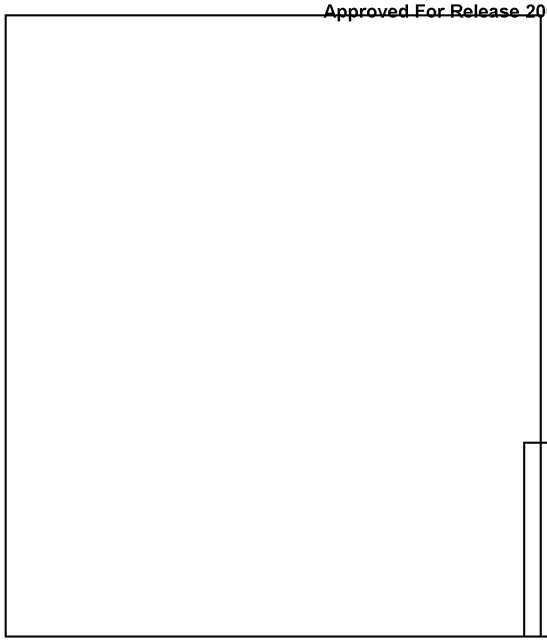


25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1

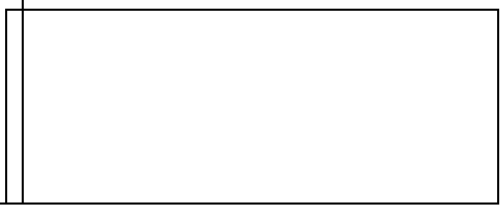
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1



Warning/Crises . . .

Maintaining an awareness of and an alert posture toward existing or potential areas of crises worldwide is an integral part of the exploitation process. NPIC examines imagery and reports any indications of foreign military activity which might threaten the national interests of the United States. Imagery-derived intelligence has a vital role in the management of crises—from inception, to recognition, to resolution.

Soviet incursions into Africa, Syrian and Israeli intervention in the Lebanese civil war, the Ethiopian-Somali conflict over Ogaden, and the Libyan-Egyptian border conflict are prime examples of crisis situations during which imagery exploitation has provided valuable intelligence information. The Sino-Soviet border, particularly the Soviet buildup of large ground forces in Mongolia, is a potential source of world crisis requiring continual attention



25X1

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

[redacted]

25X1

Monitoring . . .

NPIC exploits aircraft and satellite imagery to monitor and verify compliance with international disarmament or disengagement agreements affecting the national security of the United States. The status of Soviet dismantling of ICBM launch sites and submarine-launched ballistic missile capability in compliance with strategic arms limitation agreements is verified; deployment of additional ICBM sites and launching of additional ballistic missile submarines are monitored. Warsaw Pact Forces opposite NATO are studied in garrison and in the field for indications of movement or concealment, changes in force levels, introduction of new equipment, and hostile activity toward the West.

10 In accordance with the disengagement agreements between Israel, Egypt, and Syria following the Yom Kippur War of October 1973, the United States has continued to fly reconnaissance missions over the Sinai Peninsula and the Golan Heights. NPIC analyzes this photography to verify compliance with the agreements.

25X1

[redacted]

[redacted]

[redacted]

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

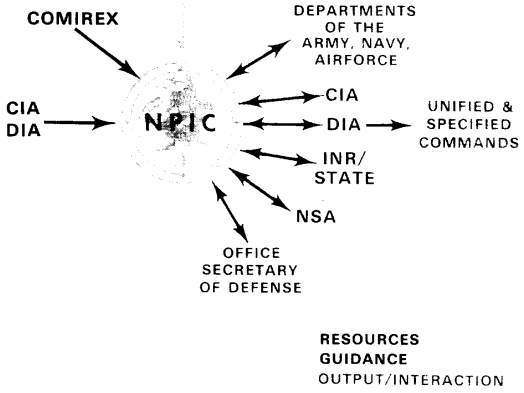
How NPIC Relates . . .

NPIC maintains close working relations with developers, collectors, exploiters, and users of multisensor reconnaissance imagery. These include all organizations engaged in satisfying reporting requirements on military intelligence, nonmilitary intelligence, mapping/charting, SALT/MBFR, and natural disasters.

NPIC's relations with other organizations cover the exchange of finished imagery interpretation information; technical information, particularly mensuration and photoscientific data; basic collateral data; and research and development test data.

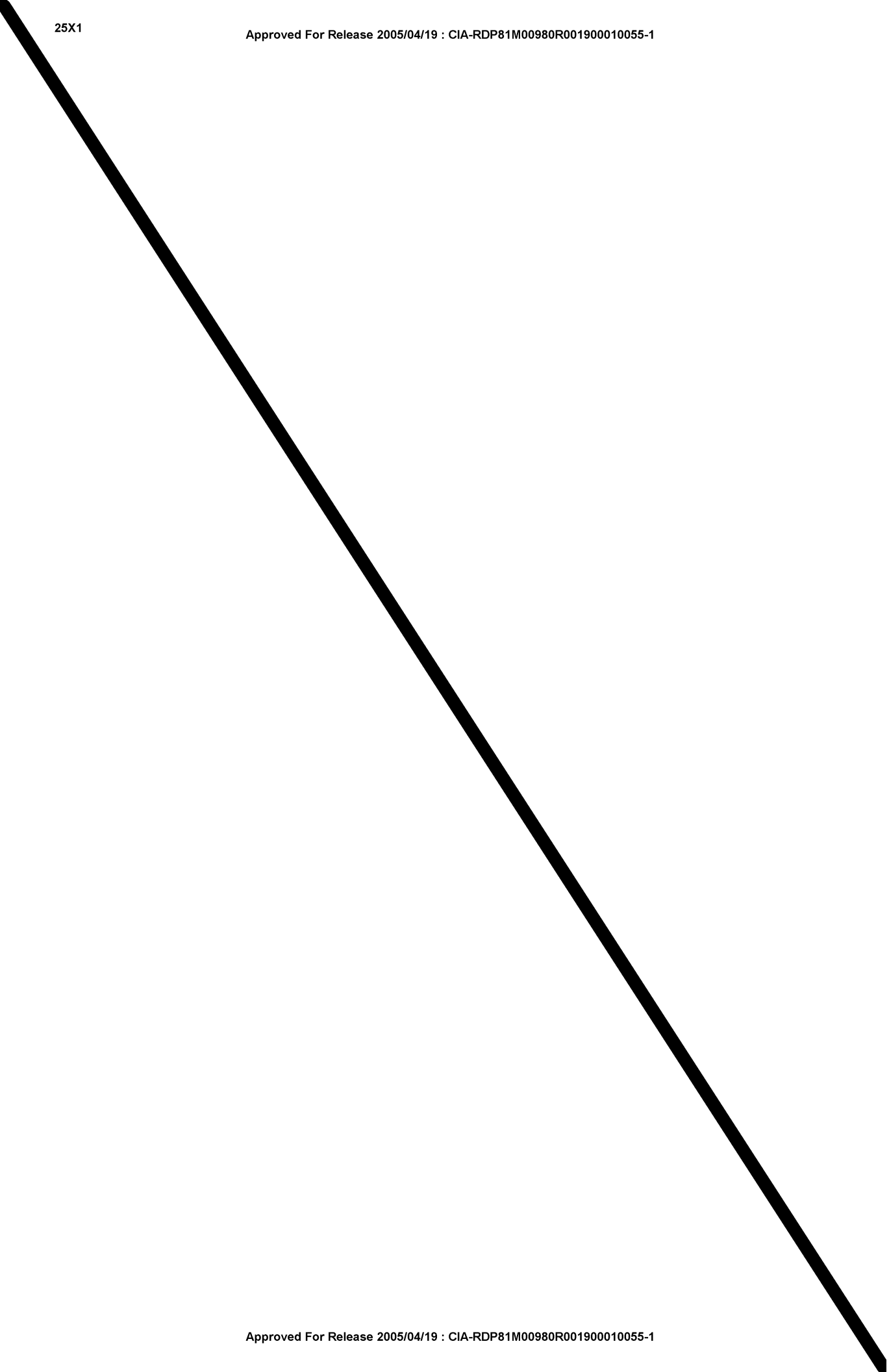
NPIC interacts on a daily basis with major collection and exploitation organizations including those within DoD, CIA, and the State Department, as well as the National Intelligence Tasking Center and pertinent national-level committees.

Because NPIC has been assigned the responsibility for serving as a center for common support in the imagery exploitation field, it is continually engaged in ensuring that the support it furnishes is consistent with community needs. The Center accomplishes this through the establishment of and/or participation on committees, panels, and task groups and by performing technical liaison with military and civil agencies.



Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1



Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

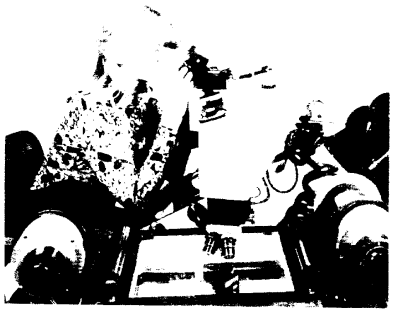
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Applied Photo Science . . .

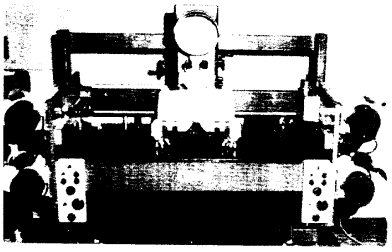
The Applied Photo Science Division, staffed primarily by photoscientists, photoengineers, mathematicians, and other physical scientists, has four principal responsibilities—

- **Evaluate the performance of imaging systems and the quality of their products through objective and subjective assessment of imagery;**
- **Propose methods of improving performance of existing imaging systems and evaluate characteristics of proposed systems;**
- **Provide image enhancement support to imagery analysts by digital image processing; and**
- **Maintain regular liaison with members of the photointerpretation community.**

25X1



13

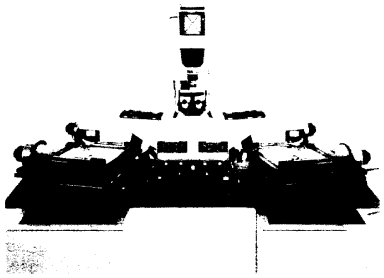


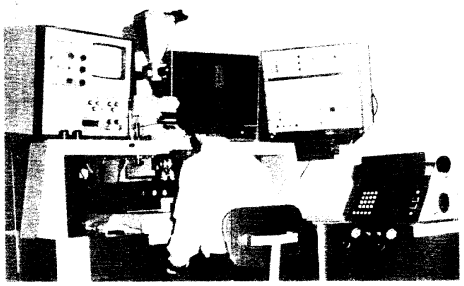
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

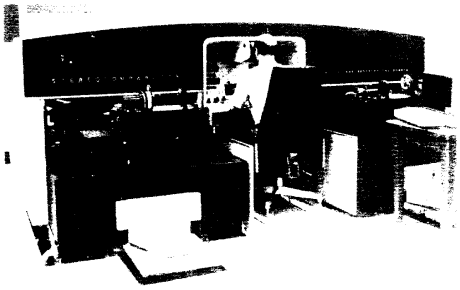
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Photogrammetry . . .

Photogrammetry is the science of making reliable measurements from photography. In support of the imagery exploitation process, the Photogrammetry Division (PHD) is responsibile for providing imagery-derived dimensions of objects of significant intelligence interest. PHD is also involved in analyzing and evaluating the operation of the imaging systems to improve the usefulness of the imagery for mensuration. This evaluation enables the photogrammetrists to estimate the accuracy of their measurements. PHD maintains liaison with other organizations involved in photogrammetry in order to share and promote the development of improved techniques, to develop common standards, and to coordinate critical measurements.







Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

National Files . . .

NPIC is responsible for maintenance of the National Base of Imagery-Derived Information (NBIDI), which includes the Installations Data File (IDF), the Exploitation Products File (EPF), the Objects Data File (ODF), and the Mensuration Parameters File (MPF). The IDF contains imagery-derived information on foreign installations throughout the world and data on the quality of the imagery. The EPF is an index to imagery exploitation reports and memoranda on foreign installations. If an abstract of a report is available, it is also included in the EPF. The ODF contains information on objects and equipment observed on film; this information is derived from communitywide imagery exploitation. The MPF contains frame data from the satellite camera systems used in overhead reconnaissance missions.

NPIC DATA SYSTEM

The Center's new data processing system is called the NPIC Data System (NDS). The NDS is an online, interactive, data-handling system which supports exploitation personnel so that NPIC can provide imagery-derived information to the intelligence community.

The NDS is used to process the intelligence information resulting from imagery exploitation. The interpretation results are entered, edited, reviewed, and approved on a video display screen. With these video display terminals, each imagery analyst is provided with direct access to the NDS. Once each piece of this data has been approved, it is stored in the IDF and reported as appropriate. The IDF is maintained via a video display terminal, and the information in the file can be accessed by organizations in the intelligence community.

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

COINS

NPIC is a leading participant in the Community On-Line Intelligence System (COINS), a network of computer-based information storage and retrieval systems. These systems are interconnected for interagency sharing of computerized files.

25X1

Currently, 62 files are available through the COINS network and NPIC's files—the IDF, the EPF, the MPF and the ODF—are the most used in the network. Approximately 50 percent of all COINS queries are for information from the IDF. This information is passed through various communication links which tie together the storage and retrieval systems at DIA, NSA, and NPIC. Network service is provided to other government organizations through terminals connected to one of the above systems.

16

GROUND PHOTO SERVICES COLLECTION

NPIC manages and maintains the CIA Ground Photography Master File consisting of about 1 million photographs. This file is available to all members of the intelligence community. It is worldwide in scope with emphasis on military and related target subjects, although some sociological material is included. A color slide file of more than 50,000 transparencies is also maintained.

MAP FILE

NPIC maintains a small, specialized map and chart collection. This collection is used in support of the imagery exploitation and mission support activities conducted by [redacted] components.

FILM FILE

NPIC is tasked to manage and maintain a central file of imagery acquired through the various national reconnaissance programs. This file is used to support NPIC, departmental photointerpretation components, and community analytical organizations.

[redacted]

25X1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

[redacted] 25X1

Products . . .

ELECTRONIC REPORTING

NPIC produces various cables which report the results of imagery exploitation to the community. The Spot Cable is a free-text cable highlighting the intelligence finds of the day. Similarly, the Weekly Summary Cable, produced on Thursday, summarizes the highlights of the week. The Immediate Photographic Interpretation Report (IPIR) is a readout of the highest-priority COMIREX targets for a mission and reports out all targets within a five-day timeframe. The Mission Independent Photographic Interpretation Report (MIPIR) is a daily data-link transmission to DIA and CIA of readouts of COMIREX targets designated for periodic updating. The MIPIR also includes readouts of selected COMIREX targets for updating other data bases.

HARD-COPY PUBLICATIONS

NPIC disseminates detailed, imagery-derived intelligence in hard-copy reports incorporating annotated graphics and tabular data. These reports range in size, complexity, and style from the rigidly formatted, comprehensive Basic Imagery Interpretation Report (BIIR) to the rapidly disseminated, short, free-text Imagery Interpretation Report (IIR). BIIRs satisfy community requirements for detailed information on selected targets and subjects of high intelligence interest. An IIR usually describes and illustrates a single installation, activity,

17

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

[redacted]

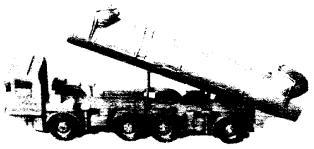
25X1

class of object, or event. IIR illustrations are also available in vugraph or briefing board format. Included within this range of hard-copy NPIC reports are the Photographic Interpretation Report which can be internally generated or produced in response to a direct support request from a consumer agency, and the Summary Report, a free-text report usually disseminated within a week.

BRIEFING AIDS

Some of the most widely used Center products are briefing charts, vugraphs, and slides. They are produced individually on items of significance, as well as collectively for complete briefing packages. Most of these products are stored in the National Substantive Briefing Aids Collection.

The NPIC possesses the capability to construct three-dimensional models, a capability which is unique in the intelligence community. Using all-source imagery and collateral information, the modelmakers construct to scale objects and land areas of high intelligence interest.



[redacted]

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Other Support Services . . .

PRINTING

The NPIC has had a long history of serving as a major reproduction center for the intelligence community. Printing services are provided for all Washington-area NTP contributors, and special committees and working groups depend on the NPIC print shop for printing. The Center also provides editing, type composition, and graphic services to customers on a resource-available basis.

PHOTOGRAPHY

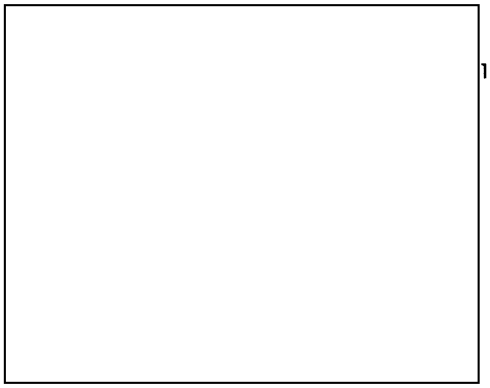
NPIC's photo lab is a facility equipped and staffed for high-volume, custom photographic processing. The lab provides this service for both black and white and color film in the production of briefing boards, enlarged and contact paper prints, film positives, and slides. To meet the needs of the Center and respond to intelligence community requirements, photo lab personnel maintain an up-to-date knowledge and mastery of the latest photographic processing techniques.

EQUIPMENT

NPIC tests and evaluates newly developed and commercially available exploitation equipment to determine acceptability and performance. Preventive and emergency maintenance and equipment calibration is provided in house. NPIC personnel design and execute modifications of existing equipment and systems used for imagery exploitation at the Center.

LIBRARY

The NPIC Library is an all-source library and reference information facility which supports imagery analysts and other specialists concerned with photographic intelligence. It offers a reference and loan collection of classified and open-source publications; professional reference and research services; terminal access to intelligence data bases; and procurement, announcement and distribution of publications.



25X1

19

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

NPIC's People . . .

25X1

The Center is employee oriented and has strong personnel development programs. NPIC employs [redacted] people (more than half of whom are professional), representing a diversity of skills and backgrounds. Skilled personnel include imagery analysts, photogrammetrists, photo scientists, computer specialists, editors, graphics specialists, and librarians, among many others.

NPIC is a leader of upward mobility and equal employment efforts on behalf of minorities. A quarter of the work force, both professional and clerical, consists of minorities, and a third of the personnel are female.

To encourage upward mobility, NPIC set up the Director's Opportunity Program to train promising clerical employees for professional positions. Another program, the Director's Undergraduate Opportunity Program, provides academic and on-the-job training to help candidates compete with college-trained peers.

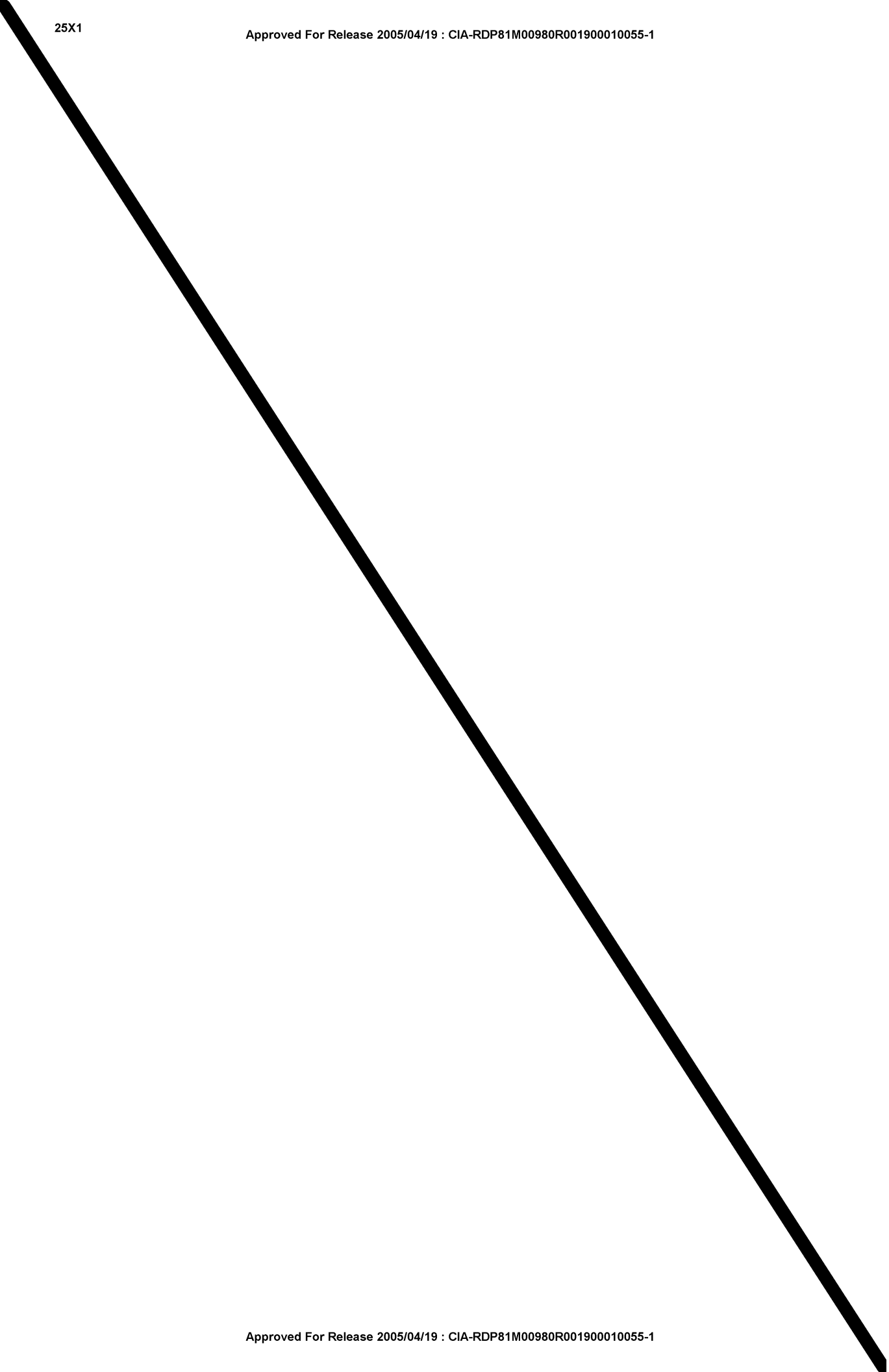
20

To improve equal employment opportunities, the Center has set up courses, such as communication skills, basic mathematics, and library research techniques, to help personnel undertake higher-level academic work. The Center has also designed career information exhibits and displayed these at colleges and at meetings of associations and professional societies with large minority memberships. In community outreach, the purpose of which is to assist minority individuals to qualify for gainful employment, the Center has participated in job fairs, science fairs, tutoring programs and career orientation efforts at several District of Columbia high schools.

With the inherent capabilities of its personnel and strong personnel development programs, the Center will continue to fulfill its role in providing vital information for the intelligence community.

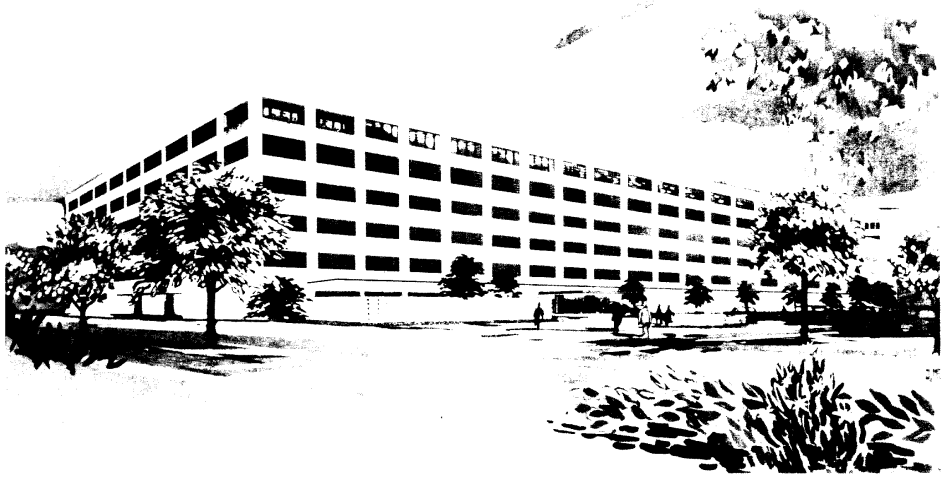
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1



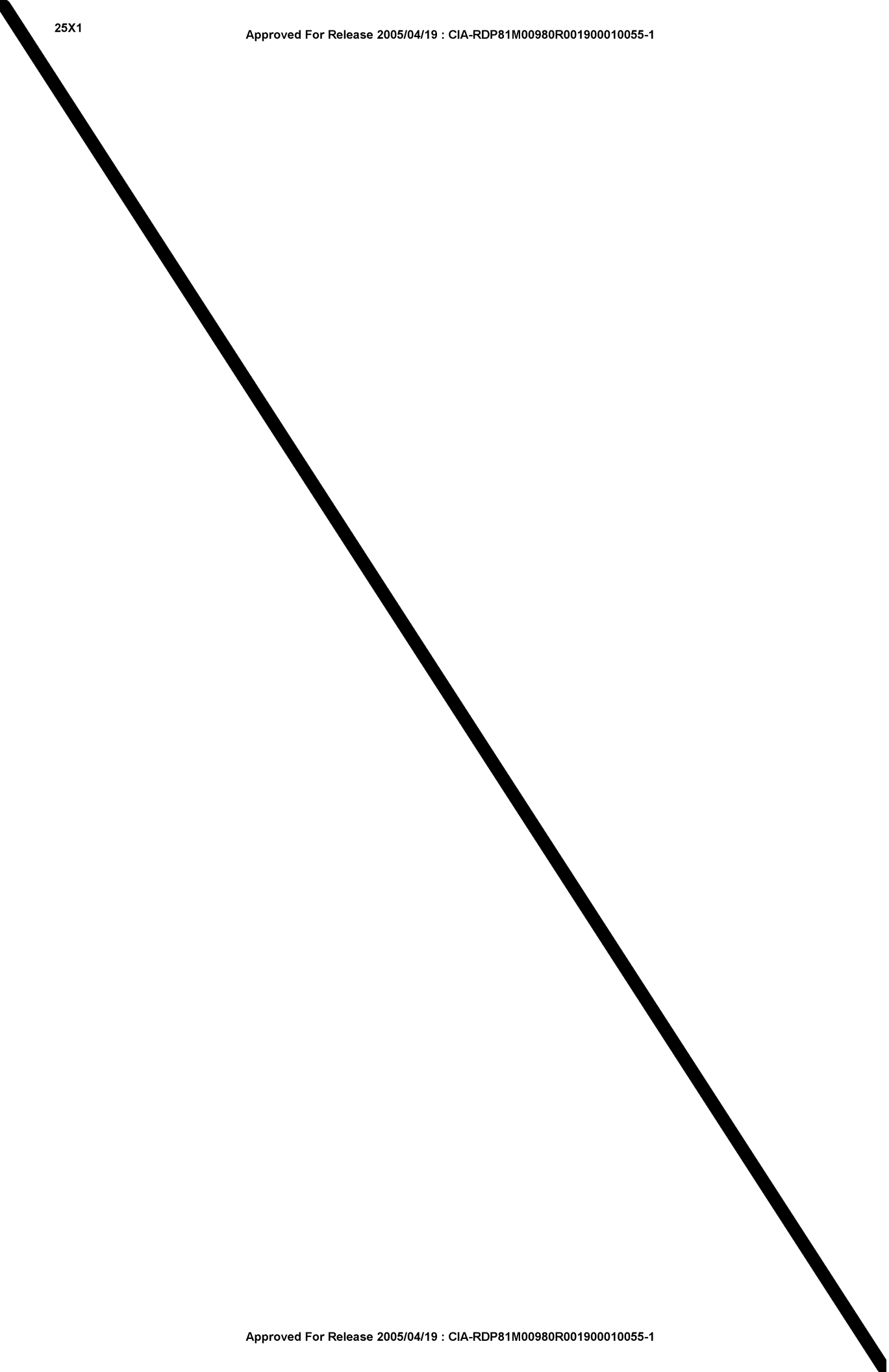
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1



Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

25X1
Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1



Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055-1

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055

SENDER WILL CHECK CLASSIFICATION TOP AND BOTTOM

	UNCLASSIFIED		CONFIDENTIAL		SECRET

OFFICIAL ROUTING SLIP

OLC #78-1110

TO	NAME AND ADDRESS	DATE	INITIALS
1	OLC, 7D49 Hqs		
2		DDS&T	
3			
4			
5			
6			

	ACTION		DIRECT REPLY		PREPARE REPLY
	APPROVAL		DISPATCH		RECOMMENDATION
	COMMENT		FILE		RETURN
	CONCURRENCE		INFORMATION		SIGNATURE

Remarks:

The attached is provided for your information.

FOLD HERE TO RETURN TO SENDER

FROM: NAME, ADDRESS AND PHONE NO.	DATE
A/EXO/DDS&T	27Apr78

Approved For Release 2005/04/19 : CIA-RDP81M00980R001900010055

	UNCLASSIFIED		CONFIDENTIAL		SECRET

FORM NO. 237 1-67 Use previous editions (40)