(U) Chapter 16

Cryptology and the Watergate Era

(U) BACKGROUND TO SCANDAL

(U) The greatest political scandal in American history originated with an obscure note in the Metro section of the *Washington Post* on Sunday, June 18, 1972. In it, two Métro section reporters, Bob Woodward and Carl Bernstein, covered what appeared to be an amateurish break-in at the Democratic National Headquarters in the Watergate Hotel in downtown Washington.

(U) The Nixon administration managed to cover over the political effects of the break-in until after the elections in November. But when Congress returned in January, it was ready to investigate. In February 1973, the Senate voted to establish a Select Committee, commonly referred to as the Ervin Committee after Senator Sam Ervin, Democratic senator from North Carolina, to hold hearings. At the time, no one associated with the committee knew where they would get information, since the administration was keeping a tight lip, and the Watergate burglars weren't talking. But on March 23, one of the burglars, James McCord, turned state's evidence. The federal judge, John Sirica, had been pressuring the defendants by threatening lengthy prison terms if they did not cooperate. Now McCord was cooperating, and the entire thing began to unravel. The president, concerned with getting on with his second term, tried to shush the whole thing.

(U) President Nixon and his inner circle, 1973

(U) The scandal, of course, would not shush. Instead, it mushroomed, swallowing first Nixon's White House staff, then much of his cabinet, and finally the president himself. On August 8, 1974, Nixon resigned and Gerald Ford moved into the White House.

(U) In a real sense, Watergate resulted from Vietnam. President Nixon was obsessed with the disorder and demonstrations that hurled the Johnson administration down and

played a large role in the defeat of Hubert Humphrey in 1968. One of the central incidents of the disorderly 1960s was Daniel Ellsberg's decision to publish a collection of the Johnson administration's papers on the war, which came to be known as the Pentagon Papers. Nixon ordered an investigation of Ellsberg, and two of his White House confidants, Egil "Bud" Krogh and David Young, put together a clandestine unit, which they called the "Plumbers" because the objective was to plug leaks. The group obtained the assistance of White House Special Counsel Charles Colson, who brought in some experts in clandestine surveillance formerly from CIA and FBI, among them Howard Hunt and G. Gordon Liddy. The Plumbers broke into the office of Ellsberg's psychiatrist, Lewis Fielding. The unit itself was eventually disbanded, but the individuals were retained by the Committee to Re-Elect the President (CREEP), and they eventually bugged the office of Lawrence O'Brien, chairman of the Democratic National Committee, in the Watergate complex.[1]

(TS-TK) For a time, cryptology was a bystander in this turmoil, but the antiwar demonstrations eventually touched NSA's business. In 1966, Stanford University students picketed Stanford Electronic Laboratories, where Lockheed Missile and Space Corporation (LMSC) was designing the P-11 SIGINT satellite payloads. When students occupied the building, James DeBroekert of LMSC smuggled one of the payloads out of the building, through Moffett Naval Air Station and over to Building 190 where the rest of the Lockheed SIGINT satellite effort resided. This very close call for the cryptologic payload had a happy ending only because the students never really knew what they were picketing.[2]

(C) Next year disorder hit the Princeton University campus. The radical group Students for a Democratic Society (SDS) discovered the existence on campus of the Communications Research Division of the Institutes for Defense Analyses (IDA/CRD), which had been set up in the late 1950s to help NSA with difficult cryptanalytic problems. Unclassified CRD publications appeared to link the organization with the Defense Department, and SDS set out to force a campus eviction. After several months of sporadic demonstrations, on May 4, 1970, students broke through police lines and vandalized the inside of the building. A few days later a student was arrested as he attempted to set the building on fire. CRD built an eight-foot-high fence around the building and occupied it in a permanent siege mode. But the students had already achieved their objective. The atmosphere was no longer good for defense contractors, and Princeton asked CRD to move. CRD found other quarters off campus and moved out in 1975.[3]

(U) In June 1971, amid the hysteria over the American invasion of Cambodia, the *New York Times* began publishing a series of documents relating to the war effort. The papers had originally been given to journalist Neil Sheehan of the *Times* by one Daniel Ellsberg, a former defense analyst during the Johnson administration. Two days later a federal judge issued a restraining order, but that did not stop the presses. Ellsberg sent copies to seventeen more newspapers, and the revelations continued. On June 30, the court lifted its restraining order, and the *Times* published the rest of the batch. Journalists quickly labeled them the Pentagon Papers.

(U) Ellsberg had been hired into the Pentagon as one of Robert McNamara's "whiz kids." In 1967 Ellsberg was assigned to a project under Lawrence Gelb to undertake a study of U.S. involvement in Vietnam. Brilliant and dogmatic, Ellsberg turned against the war. He felt that the documents could be damaging to the war effort, so when he left the Pentagon to take a job with the Rand Corporation, he reproduced a copy and carried it with him.

(U) It was a very large document indeed – over 7,000 pages – and Ellsberg spent thousands of dollars making copies. For several years he tried to use the papers to convince policy makers (Henry Kissinger and William Fullbright, among others) to change U.S. policy in Southeast Asia, but in vain. As a last resort, then, in 1971 he turned the documents over to the newspapers.[4]

(U) Daniel Ellsberg

(U) Ellsberg claimed that the Pentagon Papers, although officially classified, were actually unclassified. In fact, the last four (of forty-seven) volumes contained COMINT relating to diplomatic negotiations with North Vietnam, and it was this information that the government was trying to protect when it applied for a restraining order. Newspapers did not release the information in 1971, but journalist Jack Anderson got the last four volumes and released them in 1972. Among the revelations was one concerning the intercept and exploitation of Soviet premier Kosygin's telephone calls while he was in London in February 1967. The intercept apparently came from the British, so from a technical point of view this incident revealed no American cryptologic information.[5]

(S-CCO) NSA examined the four volumes and found five instances in which COMINT was undoubtedly the source of the information. Ambiguity prevailed in each case, and NSA's policy people bent over backwards to avoid having to charge Ellsworth or Anderson with violation of Section 798 of Title 18. But the director was concerned enough that he sent an emissary, Milton Zaslow (then deputy director for production), on a secret mission to try to convince the *New York Times* not to publish on the basis of national security. The *Times* editors viewed NSA as a stalking horse for the Nixon administration and published anyway. "You could," Zaslow said later, "cut the suspicion with a knife." [6]

(U) The Pentagon Papers and subsequent Anderson columns began a trend. The trend was to tell all. It started small, but became a tidal wave of revelations. That same year, for instance, Anderson revealed that NSA was reading the communications of the South Vietnamese embassy in Washington, through the ingenious device of providing the

ciphers which controlled the Vietnamese equipment. Soon after, the *Manchester Guardian* published an article about CIA COMINT operations in Laos.[7] Then in the fall of 1971, in one of his more sensational columns, Anderson stated that the United States had an intercept operation in the American embassy in Moscow that not only intercepted Soviet communications, but was collecting and exploiting the private car phone communications of Politburo leaders.[8]

(U) Anderson, NSA later discovered, had acquired a box of top secret CIA National Intelligence Digests (NIDs), the unwitting courtesy of an NSC staffer who had been in the habit of taking them home for a little bedtime reading. After a marital falling out, his wife took the accumulated NIDs to Anderson, who kept them in his office and used them in his columns over a period of years.[9]

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The previous insider-tells-all account, Herbert Yardley's *The American Black Chamber*, had been written in a fit of greed (Yardley needed money). People like Fellwock could apparently be bought by ideology. It echoed the climate of the 1930s, when the Soviets got their spies for free (or at the very least, for expense money).

(U) Ideology-based public revelations became fashionable with the publication in 1975 of ex-CIA agent Phillip Agee's *Inside the Company – A CIA Diary*. Although Agee's aim was CIA's covert operations organization, he knew much about SIGINT, and he revealed what he knew. He claimed, for instance, that NSA had used close-in techniques to intercept plain text from the UAR embassy in Montevideo, Uruguay. He also claimed that Swiss-built Hagelin machines had vulnerabilities which NSA exploited to obtain plain text.[11]

(U) Using the indefatigable Fellwock as a key source, the Canadian Broadcasting Corporation did a 1974 series entitled "The Fifth Estate – the Espionage Establishment," which made a wide-ranging exposure of intelligence organizations in the United States and Canada. This series laid out in sharp detail the overall cryptologic cooperative system encompassed within the UKUSA agreements. It was followed up by tag-on magazine articles, including several by British journalist Chapman Pincher regarding SIGINT at GCHQ. Journalists exposed the role of the British intercept site in Cyprus during the coup in 1974, and GCHQ's efforts to keep the station running during the fighting. That same year a Marvin Kalb biography of Henry Kissinger discussed NSA's exploitation of Egyptian communications during the Yom Kippur War the previous year.[12]

(U) NSA AND CLANDESTINE ACTIVITIES

(U) Over the years, cryptologists had participated in two activities whose legality was eventually called into question. One, codenamed Shamrock, was a way to intercept messages without setting up intercept sites. The other, Minaret, became enmeshed with an illegal use of information for domestic law enforcement.

(U) Shamrock

(U) The easiest way to get access to telegrams was to get them from the cable companies which transmitted them. This method actually dated back to World War I, when the federal government, using the implied war powers of the president, set up cable and postal censorship offices. A copy of every cable arriving and departing from the United States was routinely sent to MI-8, which thus had a steady flow of traffic to analyze. After the war, the Army closed all intercept stations. Yardley's Black Chamber continued to use messages provided by the obliging cable companies until 1927, when the Radio Act of 1927 appeared to make this illegal, and the Communications Act of 1934 reinforced this. Lack of traffic forced Friedman's SIS to set up intercept stations in the 1930s.[13]

(U) In 1938, the Army's chief signal officer, General Joseph Mauborgne, approached David Sarnoff, president of RCA, with a request from the secretary of war to renew the arrangement whereby the Army received drop copies of cable traffic. Sarnoff was willing, and during the war the major cable companies (RCA, AT&T, and Western Union) once again provided cables to the cryptologists. Signal Intelligence Service set up Radio Intelligence Companies to collect cables through censors installed at the cable company offices. Following the surrender of Japan, military officials approached the companies to request their continued cooperation, as they had after World War I. This time, however, they met considerable resistance. Cable company officials argued that the Federal Communications Act of 1934 appeared to make this illegal in peacetime. They wanted legislation.

(U) What they got was a promise from the attorney general, Tom Clark, that they would be protected from lawsuits while the Justice Department sought authorizing legislation. (Opinions differ as to whether or not President Truman put this in writing.) But the legislation was not forthcoming, and in 1947 the company executives contacted Secretary of Defense James Forrestal, who had to renew Tom Clark's assurance that they would not be prosecuted, and that the operations would not be exposed. Two years later, still lacking legislation, they approached the new secretary of defense, Louis Johnson. He advised them again that Clark and Truman had been consulted, and had once again approved the practice. Somewhat mollified, they finally dropped the subject.[14]

(U) At NSA the cable drop operation was treated as a compartmented matter, and only a few employees knew where the traffic came from. Couriers carried cabled messages to NSA, but there was no direct contact with the cable companies themselves. NSA selected about 150,000 cables per month for further analysis – the rest were destroyed. Although not technically illegal, Lew Allen, who was director in the mid-1970s, said it did not pass the "smell test" very well. Stopping it was not a difficult decision for him.[15]

(U) *Minaret*

(U) There is no stark line between "foreign intelligence" and domestic law enforcement. The phrases, which appear to be watertight, actually leak into each other at many points. But this never became an issue until the Watergate period.

(U) In the collection of foreign intelligence, cryptologists often came across unrelated communications, which were routinely destroyed because of their irrelevance. But when items of importance to the FBI came available, they were normally passed on. This was done without much thought given to the boundaries between foreign intelligence and law enforcement, which were by law to be kept separate. The practice began in the 1930s and continued through the war years and into the 1950s.[16]

(U) In 1962, following the Cuban Missile Crisis, the White House wanted to know who was traveling to Cuba (which had been made illegal but for exceptional cases). This involved passing on American names and violated customary SIGINT rules by which information on American citizens was to be ignored. It was clearly related to law enforcement, however, and it was the origins of the so-called "Watch List" which became known as the Minaret program.[17]

(S-CCO) The idea proved to be irresistible. In 1965, as a result of the conclusions of the Warren Commission, the Secret Service asked NSA to be on the lookout for certain people who might be a threat to the president. The first list was composed almost entirely of Americans, but NSA complied because of the obvious implications of not providing such important information. In 1973 the Agency asked that the Americans be removed from the list and hung onto that position despite anguished protests from the Secret Service.[18]

(U) The Watch List expanded in the 1960s to include people suspected of narcotics trafficking, and at one point most of the names on the list were individuals suspected of

narcotics-related activity. The list was formally documented by USIB in 1971.[19] But by far the most controversial expansion of the list occurred in 1967, and it involved domestic terrorism.

(S-CCO) In 1967 the country appeared to be going up in flames. Vietnam War protests were becoming common, and "ghetto riots" in America's urban centers had virtually destroyed sections of Detroit and Los Angeles. President Johnson wanted to know if the domestic antiwar movement was receiving help from abroad, and he commissioned Richard Helms at CIA to find out. CIA came up with very little, but in the process of mobilizing the intelligence community, the Army was tasked with monitoring communications for the purpose of answering Johnson's question. On October 20, Major General William P. Yarborough, the Army chief of staff for intelligence, informed NSA of the effort, in which ASA was involved, and asked for help.[20]

(S-CCO) With FBI as the prime source of names, NSA began expanding the watch list to include domestic terrorist and foreign radical suspects. The watch list eventually contained over 1,600 names and included such personages as columnist Art Buchwald, journalist Tom Wicker, civil rights leaders Martin Luther King and Whitney Young, the boxer Muhammed Ali, and even politicians such as Frank Church and Howard Baker. Virtually all the names were provided by other government organizations. However, NSA did add thirteen names, all but two of them Agency employees who were acknowledged spies, such as Martin and Mitchell. One of them was the aforementioned Percy Fellwock.[21]

(S-CCO) The project, which became known officially as Minaret in 1969, employed unusual procedures. NSA distributed reports without the usual serialization. They were designed to look like HUMINT reports rather than SIGINT, and readers could find no originating agency. Years later the NSA lawyer who first looked at the procedural aspects stated that the people involved seemed to understand that the operation was disreputable if not outright illegal.[22]

(U) ASA's monitoring of domestic radical communications was almost certainly illegal, according to the legal opinions of two different groups of government lawyers. Even worse, it had come to public notice in 1970 when NBC aired a program alleging that ASA had monitored civilian radios during the Democratic Convention of 1968. ASA quickly closed it down and went out of the civil disturbance monitoring business.[23]

(S-CCO) Minaret was quite another matter, and it did not depend on ASA for its existence. Lew Allen had been director for less than two weeks when his chief lawyer, Roy Banner, informed him of Minaret – it was the first the new director had known of the program. Banner noted a recent court decision on wiretaps that might affect the Watch List. A federal judge had ruled in a case involving leading Weathermen (SDS radical wing) that all federal agencies, including NSA, must disclose any illegal wiretaps of the defendants. NSA's communications monitoring, although not technically a wiretap, could be construed as such by recent court decisions. Although the Weathermen in question might not be on the Watch List, the time was not far off when a court case would expose the list.

(S-CCO) This operation did not pass the "smell test" either. According to Allen, it appeared to be a possible violation of constitutional guarantees. He promptly wrote to Attorney General Elliot Richardson to request that Richardson himself authorize the retention of all individuals by name on the list.[24]

(U) This was in September 1973. The Watergate hearings in Congress had just wrapped up, and the special prosecutor, Archibald Cox, had subpoenaed the presidential tapes. The executive department was in chaos. Richardson's predecessor, Richard Kleindeinst, had been forced out under pressure, and his predecessor, John Mitchell, was almost sure to go to jail. In that atmosphere, the attorney general was not going to permit the continuation of an operation of such doubtful legality. He requested that NSA stop the operation until he had had a chance to review it. With that, Minaret came to a well-deserved end.[25]

(U) Clandestine Methods

(U) If you can't break a code, the time-honored method is to steal it. Two of NSA's most cherished secrets, the black bag job and the wiretap, became public knowledge during the Watergate period.

(U) Black bag jobs referred to the art of breaking, entering, and theft of codes and cipher equipment. The Office of Naval Intelligence (ONI), an unlikely leader in the field, became the first practitioner. In 1922 ONI picked the lock of the safe in the Japanese consulate in New York and filched a Japanese naval code. This theft led to the establishment of the first permanent American naval cryptologic effort, OP-20-G, in 1924.[26]

(U) ONI continued to be the main practitioner of the art. Prior to World War II the Navy pilfered a diplomatic code which was used at embassies which lacked a Purple machine. Joseph Mauborgne, the head of the Army Signal Corps, hit the overhead when he found out. Mauborgne reasoned that if the Japanese ever discovered the loss, they might change all their systems, including Purple, and extracted from the Navy an agreement that all such break-ins in the future would be coordinated with the Signal Corps.[27]

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(U) J. Edgar Hoover

(U) The Huston Plan

(U) Richard Nixon had been president just over a year when he initiated a string of actions which ultimately brought down his presidency. The White House-ordered invasion of Cambodia, a militarily ineffective foray, unleashed a wave of domestic protests, culminating in the shootings at Kent State in May of 1970. Stung by the reaction, the president called the heads of the intelligence agencies, and on June 5 he told Richard Helms of CIA, J. Edgar Hoover of the FBI, Lieutenant General Donald Bennett of DIA, and Admiral Noel Gayler of NSA that he wanted to know what steps they and their agencies could take to get a better handle on domestic radicalism. According to journalist Theodore White, who later reconstructed the meeting:

> He was dissatisfied with them all . . . they were overstaffed, they weren't getting the story, they were spending too much money, there was no production, they had to get together. In sum, he wanted a thorough coordination of all American intelligence agencies; he wanted to know what the links were between foreign groups – al-Fatah; the Arab terrorists; the Algerian subsidy center – and domestic street turbulence. They would form a committee, J. Edgar Hoover would be the chairman, Tom Huston of the White House would be the staff man. [31]

(U) Thomas Charles Huston, the evident object of the president's displeasure, was a young right-wing lawyer who had been hired as an assistant to White House speech writer Patrick Buchanan. His only qualifications were political – he had been president of the Young Americans for Freedom, a conservative campus organization nationwide. And Huston wasn't even the key player. Hoover was named chair of the committee, in order to place him in a position in which the FBI would finally be forced to confront domestic radicalism. [32]

(U) The committee report confronted the issue, all right, and it laid out a number of "further steps," many of which were illegal. The report recommended increasing wiretapping and microphone surveillance of radicals; relaxing restrictions on mail covers and mail intercepts; carrying out selective break-ins against domestic radicals and organizations; lifting age restrictions on FBI campus informants; and broadening NSA's intercepts of the international communications of American citizens. But Hoover knew the score, and he attached footnotes to each of the techniques which he did not want the FBI involved in. When it went to the president, it was carefully qualified by the FBI, the one organizations that would be the most involved.[33]

(U) The president sent word back to Huston, through Haldeman, of his approval, but did not initiate any paperwork. So when the committee was tasked to implement the recommendations, it was tasked by Tom Charles Huston, not the president. Hoover informed John Mitchell, the attorney general, that he would not participate without a written order from Mitchell. Mitchell discussed this with Nixon, and both agreed that it would be too dangerous. Ultimately, the president voided the plan, but not before NSA had become directly involved in the seamier side of life.[34]

(S-CCO) NSA was ambivalent. On the one hand, Gayler and his committee representative, Benson Buffham, viewed it as a way to get Hoover to relax his damaging restrictions on break-ins and wiretaps. Gayler had personally pleaded with Hoover, to no avail; now the committee mechanism might force the stubborn director into a corner. But that was a legal matter for the FBI to sort out. When asked about intercepting the communications of Americans involved in domestic radicalism, Gayler and Buffham became more pensive. They informed the committee that "NSA currently interprets its jurisdictional mandate as precluding the production and dissemination of intelligence from communications between U.S. citizens, and as precluding specific targeting against communications of U.S. nationals." Of course American names occasionally appeared in intercepted traffic, but use of even this incidental intercept needed to be regularized by a change to NSCID 6.[35] As with the FBI, NSA wanted a legal leg to stand on.

(S-CCO) What stand did NSA take? Gayler genuinely wanted to be helpful, especially when the president so insisted on getting help. In meetings he seemed ready to turn NSA's legendary collection capability to the services of the Huston mandate. But his lawyers advised caution, and, according to Huston himself, NSA was more nervous than any of the other intelligence agencies. Gayler clearly wanted a legal mandate.[36]

(U) The White House Tapes

(S-CCO) General Lew Allen, General Phillips's successor, came to the job with a strong admonition from his boss, Secretary of Defense James Schlesinger: stay as far away from Watergate as possible. He was aghast, then, when he learned on a Friday in January 1974 that a virtual army of lawyers was on its way to Fort Meade with the White House tapes. Howard Rosenblum, the director of research and engineering, had made it known that NSA might be able to analyze the infamous White House tapes which had been

subpoenaed by the special prosecutor. They all arrived in staff cars on a Friday with boxes of tapes. NSA's experts went through the tapes for hours, then gave them back to the lawyers. They had found an eighteen-minute gap on one of the tapes. It appeared to be a deliberate erasure, as the tape had been gone over multiple times in a manner that did not support the president's contention that the erasure had been accidental.[37]

(U) THE ALLEN ERA AT NSA

(U) Occasionally a person's impact on events demands that the period be named after him or her. General Lew Allen was such a man. But the "Allen Era" did not actually begin with Allen.

(U) In July 1972 Noel Gayler departed the Agency. He got a fourth star and became CINCPAC. Gayler, an upwardly mobile officer with high ambitions, was the first director to move up. NSA had always been a dead end, where mavericks could end their careers at an agency where mavericks were appreciated, even required. He was not to be the last – rather, Noel Gayler was the first of four officers in succession who gained their fourth star and moved on. The second was his successor, Air Force lieutenant general Sam Phillips.

(C) Phillips came from a highly technical background. A fighter pilot in World War II, he came to NSA from the Apollo program, where he had been the director. The visibility of the program, and the accolades that had been heaped on his management of it, indicated that he was destined for bigger things. According to one source, he knew before he arrived that he would stay only one year, and would move on to command the Air Force Systems Command as a four-star general. However, his successor, Lew Allen, believed that Phillips became aware of NSA's vulnerability to the Watergate mess once he was ensconced and that this influenced his determination to move on.[38]

(U) Lew Allen came from the same sort of background, but more so. He had a doctorate in nuclear physics, had worked at Lawrence Livermore Laboratories, worked in the satellite collection business for the Air Force, and when nominated to be DIRNSA, was de facto director of the Intelligence Community (IC) Staff.

(U) He had become a protégé of James Schlesinger, who had brought him onto the IC Staff. But owing to a temporary feud between Schlesinger and Congress over whether the job should be civilian or military, Allen had not been confirmed. So when Schlesinger became secretary of defense, he asked Allen to become DIRNSA, a position that did not require congressional confirmation.[39]

(U) Lew Allen was easy to like. His quick mind was covered over by a kindly demeanor and a slowness to anger. Even Stansfield Turner, who feuded endlessly with Allen's successor, Bobby Inman, wrote that Allen "particularly impressed me with a firm statement that the NSA took its direction on what information to collect from the Director of Central Intelligence. All I needed, he said, was to tell him what I wanted."[40]

(U) Lieutenant General Sam Phillips   (U) Lieutenant General Lew Allen

(TS-CCO-TK) Lew Allen once described candidly the baggage that he brought with him to NSA. Schlesinger was convinced that NSA was too large and too expensive, and he told Allen to look into the charge. (He found it to be unsubstantiated.) He had always been impressed with the technical competence resident at NSA, but he felt that "NSA, like many large bureaucracies, had a lot of turf. . . ." Having come from the NRO side of the satellite business, he knew firsthand of NSA's desire to control SIGINT satellites and ground stations, and he felt that NSA harbored "ambitions for responsibilities that somewhat exceeded the grasp." He had heard that NSA had enormous warehouses of undecipherable tapes. (This too he found to be exaggerated.)[41]

(C) His focus on the technical side of life was perfect for NSA, a technical agency. Allen had no patience with bureaucratic turf battles, and he did not think that constant reorganizations were a good use of time. But he did bring over from the Air Force a penchant for systems design, and for that, one needed a designer. So one of his first acts was to appoint an architectural planning staff to design the various components of the cryptologic system. He had an architect for everything: covert collection, Third Party, overhead, support to military operations, high-frequency systems, line-of-sight systems, signals search, and so on. One of Lew Allen's most important legacies was to institute a planning mentality where one had not existed.

(FOUO) In 1977, in the last year of his tenure, he confronted a congressional proposal to pull NSA out of the Defense Department. To a man as firmly grounded in the military

as Allen, this was a nonstarter. Pointing out that 75 to 80 percent of NSA's material supported the military, he came down firmly on the side of staying in the Defense Department. As to the concurrent proposal to civilianize the director's job, the continued credibility with military commanders was too important a qualification to lose.[42]

(U) THE CHURCH COMMITTEE

(U) When John Dean, the president's legal counsel, began unburdening himself to the Ervin Committee in the spring of 1973, the testimony implicated the CIA in aspects of the Watergate scandal. So William Colby, the deputy for operations, decided to do a survey.[43]

(U) The "Family Jewels" was a 693-page report of possibly illegal CIA activities through the years. Colby, who had become DCI by the time the report was finished, informed the four chairmen of the House and Senate committees which had oversight of the CIA and succeeded in convincing all of them that the matter was over with and that CIA would clean up its own house. But by then so many people within the CIA knew about the report that its eventual exposure became almost inevitable.

(U) William Colby

(U) On December 22, 1974, journalist Seymour Hersh published a story in the *New York Times* based on the "Family Jewels," charging that the CIA had been involved in Chaos, an operation to monitor domestic radical groups during the Nixon administration.[44] The next day, President Ford detailed Henry Kissinger to look into Hersh's allegations. (Although informing Congress, Colby had never told the White House about the report.) Colby confirmed the general outlines of the story to Kissinger, and the president knew that he would have to investigate.[45] So on January 4, Ford appointed a President's Commission on CIA Activities within the United States. It was headed by Vice President Rockefeller, and the press promptly dubbed it the Rockefeller Commission.[46]

(U) While the commission was deliberating, the president himself revealed, on January 16, that some of the allegations of wrongdoing included plots to assassinate foreign heads of state. As if enough controversy did not already surround the commission, this new charge served to scuttle its effectiveness. In the end it issued a very reasonable and workmanlike report which recommended certain structural reforms to guard against

(U) Nelson Rockefeller

future transgressions, and it set forth specific prohibitions of certain activities like illegal wiretaps and participation in domestic intelligence operations. (It declined to rule on assassinations, pleading lack of time to get to the bottom of these allegations.) But by then no one was listening. [47]

(U) Senators were clamoring for an investigation, and on January 27 the Senate established the Senate Select Committee on Intelligence. Philip Hart of Michigan was originally approached to chair the committee, but he was gravely ill with cancer, and so the job was offered to Frank Church of Idaho. Unlike Hart, Church harbored presidential ambitions, and some feared that he would use the committee as a pulpit to advance his ambitions. Like the Rockefeller Commission before it, this investigative body came to be known after its chair and has gone down in history as the Church Committee.

(U) Some, like Church himself, were suspicious of the intelligence community and sought to expose as much as possible. Into this camp fell Democrats Gary Hart of Colorado and Walter Mondale of Minnesota, along with Republicans Charles McMathias of Maryland and Richard Schweicker of Pennsylvania. Many were moderates (Warren Huddleston of Kentucky and Howard Baker of Tennessee being examples) while two senators, Barry Goldwater of Arizona and John Tower of Texas, did not believe in exposing intelligence secrets no matter what the provocation. [48]

(S-CCO) To begin with, NSA was not even on the target list. But in the course of preliminary investigation, two Senate staffers discovered in the National Archives files

(U) Frank Church

some Defense paperwork relating to domestic wiretaps which referred to NSA as the source of the request. The committee was not inclined to make use of this material, but the two staffers leaked the documents to Representative Bella Abzug of New York, who was starting her own investigation. Church terminated the two staffers, but the damage had been done, and the committee somewhat reluctantly broadened its investigation to include the National Security Agency.[49]

(S-CCO) What the committee had found was the new Shamrock operation. It had become easier to use wiretaps than to get traffic from cable companies, and NSA was using this technique with increasing frequency. But the Church staffers quickly uncovered the older Shamrock operation, and this became the focus of its early investigation of NSA. Knowing the ramifications, Allen terminated the portion of Shamrock that dealt with the cable companies on May 15, in the middle of the preliminary hearings.[50]

(FOUO) NSA's official relationship with the Church Committee began on May 20 with a visit from the committee staff; five days later Church himself came to Fort Meade for briefings and tours. This began a close association which extended over the entire summer and through October 1975. In the beginning it was a rough road, with committee staffers trying to dig deep, while NSA officials tried to protect. But with a few choice words from Allen, NSA's responsiveness improved and, with it, the cooperation of the committee. By the time it was all over it had become a model of how an intelligence agency should relate

to Congress, and it enhanced NSA's reputation on Capitol Hill. But it had been tough slogging.[51]

(U) In September, the committee decided to request open testimony by Allen. They discussed two operations, Shamrock and Minaret, and in the end decided to question him about only Minaret. The committee discussions on the question were among the most rancorous of all, and Goldwater and Tower openly dissented from the proposition of requiring anyone at NSA to testify on any subject. But they were outvoted, and Allen was subpoenaed, despite a phone call from President Ford to Frank Church.[52]

~~(S-CCO)~~ Never had NSA been forced into such a position, and Lew Allen was very nervous. In a preliminary letter to Church he stated:

> As we prepare for open hearings, I am struck even more forcibly by the risks involved in this method of reporting to the American people.... Despite the honest and painstaking efforts of your Committee and Staff to work with us to limit damage, I remain concerned that the open hearing presents significant and unnecessary risks.[53]

Allen pleaded that the cost of exposure of Minaret could be very high. The Watch List was a byproduct of NSA's operation to monitor ILC (international commercial) communications,

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(U) The Church Committee conducted its open hearing on NSA on October 29, after two days of meticulous closed-door rehearsals. The director began with a prepared statement describing NSA's mission in very general terms and used historical examples (the Battle of Midway and the decryption of the Japanese Purple machine being two) to depict the value of such operations. He detailed the Agency's legal authorities and defined what NSA thought was meant by "foreign intelligence" and "foreign communication." Conceding the murky nature of the definitions, he then launched into a discussion of the Watch List, placing it in historical context and discussing how NSA interpreted the tasking and executed the support to requesting agencies. He stated that he himself had closed down Minaret two years before.[55]

(FOUO) Lew Allen's performance was a triumph. Future vice president Walter Mondale noted to the director that "the performance of your staff and yourself before the committee is perhaps the most impressive presentation that we have had. And I consider your agency and your work to be possibly the single most important source of intelligence for this nation." Despite the accolades, however, when the committee in closed session discussed how much to tell about NSA, the majority voted to include Shamrock, which Allen had opposed because of the embarrassment to the cable companies. Goldwater, Tower, and Howard Baker were set in bitter opposition, but Church contended that legislation would be necessary to insure that abuses would not be repeated, and both Shamrock and Minaret constituted important material to back up the request for

legislation. When asked, Secretary of Defense James Schlesinger and the DCI, William Colby, viewed the release of these two projects to be affordable.[56]

(U) When the Church Committee issued its final report in February 1976, the discussion of NSA was brief. Focusing on what NSA could *potentially* do, rather than what it *was* doing, Church concluded:

> The capabilities that NSA now possess[es] to intercept and analyze communications are awesome. Future breakthroughs in technology will undoubtedly increase that capability. As the technological barriers to the interception of all forms of communication are being eroded, there must be a strengthening of the legal and operational safeguards that protect Americans.

NSA's existence should be based on a congressional statute which established the limitations, rather than on an executive order then twenty-three years old. And so ended the discussion of NSA, just seven pages in a report comprising seven volumes of hearings.[57]

(U) THE PIKE COMMITTEE

(U) The backwash of Hersh's Family Jewels article also infected the House of Representatives and produced the predictable clamor to investigate. So the House held its own investigation, under Representative Otis Pike of New York. Not surprisingly, it became known as the Pike Committee.

(U) But it did not begin that way. The first chairman was to be Lucien Nedzi, who chaired the Intelligence Subcommittee of the Armed Services committee. But this effort dissolved in controversy when Democrats on the committee discovered that Colby had taken Nedzi into his confidence over the original Family Jewels report and had convinced him not to investigate. Fatally compromised, Nedzi resigned, and the task fell to Pike.[58]

(U) Otis Pike

(U) While the Church Committee focused on CIA, the Pike Committee had a much broader charter. It was to review the entire intelligence apparatus and to focus on operational effectiveness, coordination procedures, the protection of individual liberties, possible need for more congressional oversight, and on planning, programming, and budgeting. Pike promised to evaluate the performance of the intelligence community

against its budget. But the membership was liberal (somewhat more so than that of the Church Committee) and the staff intrusive. The focus quickly swung to the topic of abuses of individual liberties, and stayed there.[59]

(FOUO) NSA had already had one experience with Pike, when he had chaired a subcommittee investigating the *Pueblo* capture of 1968. It had not been a happy encounter. The committee had leaked *in camera* testimony of the director, Lieutenant General Carter, to the press, and Carter was furious. Once burned, the NSA staff was wary (see *American Cryptology during the Cold War, 1945-1989, Book II: Centralization Wins, 1960-1972*, p. 449).

(FOUO) The House charter gave the committee the power to determine its own rules concerning classification, handling, and release of executive department documents. Burned during the *Pueblo* investigation, NSA lawyers were anxious to nail down an agreed-upon set of procedures, but preliminary meetings yielded no agreement on the procedures for handling SIGINT documents. Lew Allen, who later characterized the Pike Committee staffers as "irresponsible," issued instructions to "limit our discussions with the full House committee and staff to administrative, fiscal and management matters."[60]

(S-CCO) Relationships quickly deteriorated. NSA officials described the committee staff as "hostile," the procedures for handling classified material as questionable, their willingness to learn about NSA as nonexistent. One NSA official noted that only one Pike staffer ever visited NSA, in contrast to the Church Committee, whose entire membership and staff visited Fort Meade in May 1975. Pike staffers objected to having NSA officials in the room when NSA employees were being questioned, and the staff interrogation of ⬚ degenerated into a shoving match.[61]

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(FOUO) In August, the committee called Lew Allen to testify. The letter requesting his presence stated that the budget policies and procedures would be the topic, but questioning soon turned to supposed monitoring of Americans. Allen objected to covering this ground in open session, and after a long committee wrangle and Allen's adamant refusal to go further, the committee voted to go into executive session. Summarizing NSA's objections, he said: "I know of no way to preserve secrecy for an agency such as NSA other than to be as anonymous as possible, and to abide by the statutory restrictions which the Congress instructed us to, and those are that we do not discuss our operations; we do not discuss our organization; we do not discuss our budget in public."[62] Throughout Allen's appearance, Pike and Congressman Ron Dellums of California seemed suspicious and disbelieving. At one point Pike interrupted the interrogation to say:

> Now why don't you just tell us and be forthcoming, without my having to drag it out of you, or any other member having to drag it out of you, what sort of communications of American citizens you are intercepting, how you are intercepting them, what you are doing with them, and why you feel it is necessary to keep on doing it.[63]

The presumption of guilt was palpable.

-(S-CCO) On September 8, the committee requested that NSA supply it with pertinent intelligence products relating to the Yom Kippur War. The documents arrived on the 10th, and by the next day they were in the press. The Ford administration cut off all contact with the committee at that point, citing the leak of NSA materials. The passage that resulted in the cut-off was a CIA summary which read:

> Egypt – The (deleted) large-scale mobilization exercise may be an effort to soothe internal problems as much as to improve military capabilities. Mobilization of some personnel, increasing readiness of isolated united, *and greater communications security* are all assessed as part of the exercise routine.... (Italics added.) [84]

The phrase "and greater communications security" tipped off the COMINT origins of the information, and became known around NSA as the "four little words." It caused a crisis in executive-congressional relations because of the assertions by Pike that Congress could declassify on its own information classified by the executive department. The matter was resolved, after several weeks, by an agreement that the Ford administration did, indeed, control executive classified material, and in return agreed to relax its total ban on providing classified documents to the committee. NSA was soon forwarding material to the committee again.

(S-CCO) The final report criticized NSA's reporting policy, which amounted to fire-hosing the intelligence community. "NSA intercepts of Egyptian-Syrian war preparations in this period [Yom Kippur War] were so voluminous – an average of over 200 reports each week – that few analysts had time to digest more than a small portion of them." It noted that NSA frequently had the right answers, but that customers probably did not fully understand what NSA was really saying. The Agency was also criticized for participating in the general intelligence failure during the 1968 Warsaw Pact invasion of Czechoslovakia. Like Church, Pike recommended that NSA's existence be authorized through congressional legislation and that "further, it is recommended that such legislation specifically define the role of NSA with reference to the monitoring of communications of Americans." [65]

(U) The Pike Committee ended awash in controversy. On January 19, the committee distributed its final report. The Ford administration protested that it contained classified information, including several sections with codeword material. The committee voted, 8-4, not to delete the classified sections, and it sent the 340-page report to the House. Faced with anguished protests from the Ford administration, the House Rules Committee on January 29 voted 9-7 to reverse the Pike Committee decision. (Pike condemned this as "the biggest coverup since Watergate.") [66] But it was already too late. On January 22 the *New York Times* reported that it had knowledge of details of the report. On January 25, CBS correspondent Daniel Schorr stated triumphantly on national television, "I have the Pike Report." Four days later the House secured all copies of the report except the one in Schorr's possession. Fearing a Ford administration backlash and possible prosecution, CBS refused to publish. Schorr then contracted with the *Village Voice*, and the report

appeared in entirety in that publication in February, an event which led CBS to terminate his employment.[67]

(U) Despite protestations by Pike that the executive department was doing all the leaking, his own committee appears to have been the source. The draft report was distributed to committee members the morning of January 19, and by four o'clock that afternoon a *New York Times* reporter was already on the phone with the staff director asking questions based on the report. Versions of the report would appear in the press, the committee would make wording changes, and the next day the new wording would be in the newspapers.[68]

(U) Pike apparently began the investigation determined to produce a fair and balanced evaluation of American intelligence. He focused at first on job performance measured against funds expended. But the committee was top-heavy with liberal Democrats, and things quickly got out of hand ideologically. The committee and its staff refused to agree to commonly accepted rules for handling classified material, and when the executive department thwarted its desire to release classified material, it leaked like a sieve. The dispute with the administration over the release of NSA material produced an impasse, and diverted the committee from its original task. The House committee that was appointed to investigate the investigators turned up a shabby performance by the Pike Committee. In the end, it did Pike and Congress more damage than it did the Ford administration. All in all, it was a poor start for congressional oversight.

(U) THE ABZUG COMMITTEE

(U) Serious (if ideologically polarized) inquiry descended into opéra bouffe with the charter of yet a third investigation. The leader was Bella Abzug, who had been elected to Congress in 1972 from a liberal district in New York City amid the early voter reactions to Watergate.

(S-CCO) Abzug chaired the Government Information and Individual Rights Subcommittee of the Committee on Government Operations. In mid-1975, with the Church Committee holding preliminary investigations in executive session, Abzug got hold of some of the more sensational information relating to Shamrock and Minaret. (The information was apparently leaked by Church Committee staffers.)[69] The climate for a

(U) Bella Abzug

full investigation of NSA was right. The press had picked up some of the themes resonating in the Church and Pike hearings. An article in the September 8 edition of *Newsweek* described the "vacuum cleaner" approach to ILC collection and referred to NSA as "Orwellian." This was counterbalanced by a statement that "the NSA intends nothing like tyranny – it is probably the most apolitical agency in Washington." But the fourth estate had clearly discovered the technological advances that permitted NSA to cast a very broad net, and characterized it as a potential threat to individual liberty.[70]

(S-CCO) NSA relationships with the Abzug Committee staff were poisonous. At their very first session, Abzug staffers refused to sign the normal indoctrination oath, and further discussions proceeded at the noncodeword level. Despite the refusal to accept executive department rules on clearances, the committee subpoenaed huge amounts of material. One subpoena, for instance, demanded every record, including tape recordings, of every scrap of information pertaining to the Agency's COMINT mission since 1947. (Tape recordings alone comprised in excess of a million reels.)[71] Fearful of leaks that might dwarf those of the Pike Committee, the Ford administration decided to deny these requests.

(C) In October, Abzug began maneuvering to get Lew Allen to testify in open session. The sparring sessions (Allen had no intention of complying) ended on October 29 when Allen appeared before the considerably less hostile Church Committee. Preempted, Abzug pressed for lower level NSA officials, and subpoenas began arriving at NSA. With the climate of mutual suspicion that existed, NSA resisted. Allen went to Jack Brooks, chairman of the full committee, to protest, and extracted a promise that Abzug could subpoena, but Brooks would refuse to enforce the subpoenas. In the end, Abzug got her hands on one unfortunate NSA official, Joseph Tomba, who appeared in open session and refused, at the request of DoD lawyers, to answer most questions put to him. The committee held Tomba in contempt, but Jack Brooks was good to his promise, and the citation was not enforced.[72]

(C) In the process of dealing with Abzug, Lew Allen and his staff were subjected to fearful browbeating, but they held fast, defended by not only the full executive department, but by Congressman Jack Brooks himself. Hearings dragged on into 1976, making Abzug the longest running of the investigative committees. Then, in September of 1976 they began to fade, as Abzug became involved in a campaign for the Senate, and hearings ceased. (She ultimately lost.) The committee eventually issued a draft report (February 1977) which predictably concluded that there were still loopholes which would allow NSA to intercept U.S. communications for foreign intelligence purposes and that these loopholes should be closed. But the importance was secondary. Church had already exposed the loopholes and had made the same recommendations. Moreover, by then President Ford had issued his new executive order, 11905, which forbade many of the "abuses" that Abzug had in mind. The committee faded into irrelevance.[73]

(U) With that, the investigative process had run its course. It had been a pretty thorough public housecleaning for all intelligence agencies. For CIA (and to a lesser extent FBI) it had been traumatic and damaging. For NSA, the trauma had been much

less. The principal reason was the director. Lew Allen – kindly, thoughtful, intellectual, and forthright – was just the right person at just the right time. He disarmed most of NSA's more reasoned critics with the way he directed his staff to respond to Congress. He headed off controversy before it got well started. Most of all, his five-star performance before the Church Committee convinced many that NSA had not gone seriously off track and that it should be preserved at all cost. A glimpse under the cryptologic curtain convinced most senators and congressmen that NSA was the true gem of the intelligence world.

(U) THE BACKWASH

(U) The Watergate era changed cryptology. The tell-all atmosphere resulted in a flood of revelations unprecedented then and now. It also resulted in new executive department restrictions on cryptologic operations and ushered in a new era of congressional oversight.

(U) *The Revelations*

(U) The investigations were conducted amid an absolute fury of press revelations, many apparently stemming from the committee staffs. The *Washington Post* termed NSA "America's Huge Vacuum Cleaner" and highlighted the reading of South Vietnamese diplomatic communications during the peace negotiations of 1972. *Post* articles in May 1975 revealed the atrocities of Pol Pot's government in Cambodia and indicated that COMINT was the source. (This was probably a Ford administration leak.) The *New York Times* and *Daily Telegram* both exposed an alleged navy underwater SIGINT collection program called Holystone (which, if true, would have held the program at serious risk). The *Times* published articles about the extensive American support for a new SIGINT program for the shah of Iran. *Penthouse* published a lengthy exposé of the nature and scope of NSA's operations, adding tidbits about a Third Party relationship with Israel, capability to track Soviet submarines, and the supposed monitoring of domestic communications.[74]

(U) More serious still were articles on American cryptologic relationships with Second Parties. In November 1975 the *Sunday Los Angeles Times* revealed the location and function of three American SIGINT sites in Australia, including one at Pine Gap in central Australia. In New Zealand, members of Parliament demanded that the government confirm or deny the nation's membership in UKUSA.[75]

(U) Revelations continued the following year. In February the *Far East Economic Review* shone the spotlight on Ramasun Station, and the press coverage continued through the spring, thus increasing the chance that Thailand would close the station (which it did). *Rolling Stone* chimed in with an article by an ex-operator named Chet Lippo, who evidently wanted to follow in the footsteps of Winslow Peck. David Kahn, the noted authority on cryptologic history, published a series of articles revealing cryptologic operations and sounding an alarm about potential violations of civil liberties. One article,

"Big Ear or Big Brother," depicted the theme of Orwellian intrusion. (Kahn had become exercised over the DES (Data Encryption Standard) controversy which was then roiling academia; see p. 231). British and Australian journalists continued their revelations about the close UKUSA relationship – this trend ended in the exposure of every UKUSA monitoring site in both countries. William Beecher, the investigative journalist who had been so proficient in digging out intelligence operations in the past, published revelations about an American collection operation in the U.S. embassy in Moscow and about Soviet attempts to interfere with it by bombarding the embassy with microwaves.[76]

(U) Glomar Explorer

(C) One of the most intriguing exposés related to a CIA operation called Azorian. In 1968 a Soviet Golf-class nuclear submarine on patrol in the Pacific mysteriously went to the bottom with all hands. The Soviets could not locate the wreck, but the U.S. Navy could, and the U.S. began to study the feasibility of capturing it. Once it was concluded that it would be feasible, the job was given to DCI Richard Helms.

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(S) Ultimately the Azorian task force came up with a special ship, which could lower a "capture ship" to the Soviet sub, which rested in 1,700 feet of water about 750 miles northwest of Hawaii. The capture ship had huge claws which would be capable of grabbing the submarine and bringing it to the surface as it was hoisted to the mother ship. Hughes Corporation became the prime contractor, and Sun Shipbuilding of Chester, Pennsylvania, was selected to build the vessel. CIA devised a cover story that the ship was designed for mineral prospecting on the ocean floor.

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(S) In August 1974, with CIA [ ] people aboard, the Hughes vessel, named *Glomar Explorer*, sent its capture vessel to the bottom. Everything went fine until the crew began lifting the submarine from the ocean floor. The submarine hull snapped, and [ ] of it sank back down to the bottom. The portion that CIA retrieved had [ ] They would have to go back.

(S) Despite the fact that a Soviet seagoing salvage ship observed the operation from a safe distance, CIA planned to return to the site and risk exposure [ ] But then the press intruded. The original leak resulted from a burglary at Summa Corporation, a subcontractor for the operation. CIA feared that a Hughes Corporation memo regarding Azorian might have been in some papers that disappeared from the office, and they decided to brief a few of the police investigators
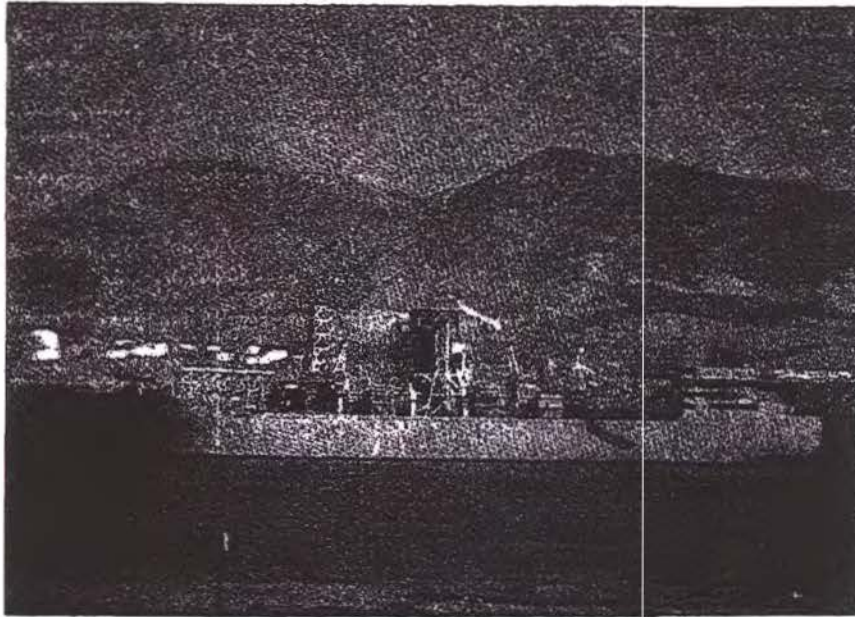
(U) Glomar Explorer

involved with the case. It was a potentially sensational story and, sure enough, it was leaked to *Los Angeles Times* reporters covering the break-in. In March 1975, before the second salvage mission could be mounted, Jack Anderson went public with it, and CIA decided to cancel all further attempts.[77]

(U) Koreagate

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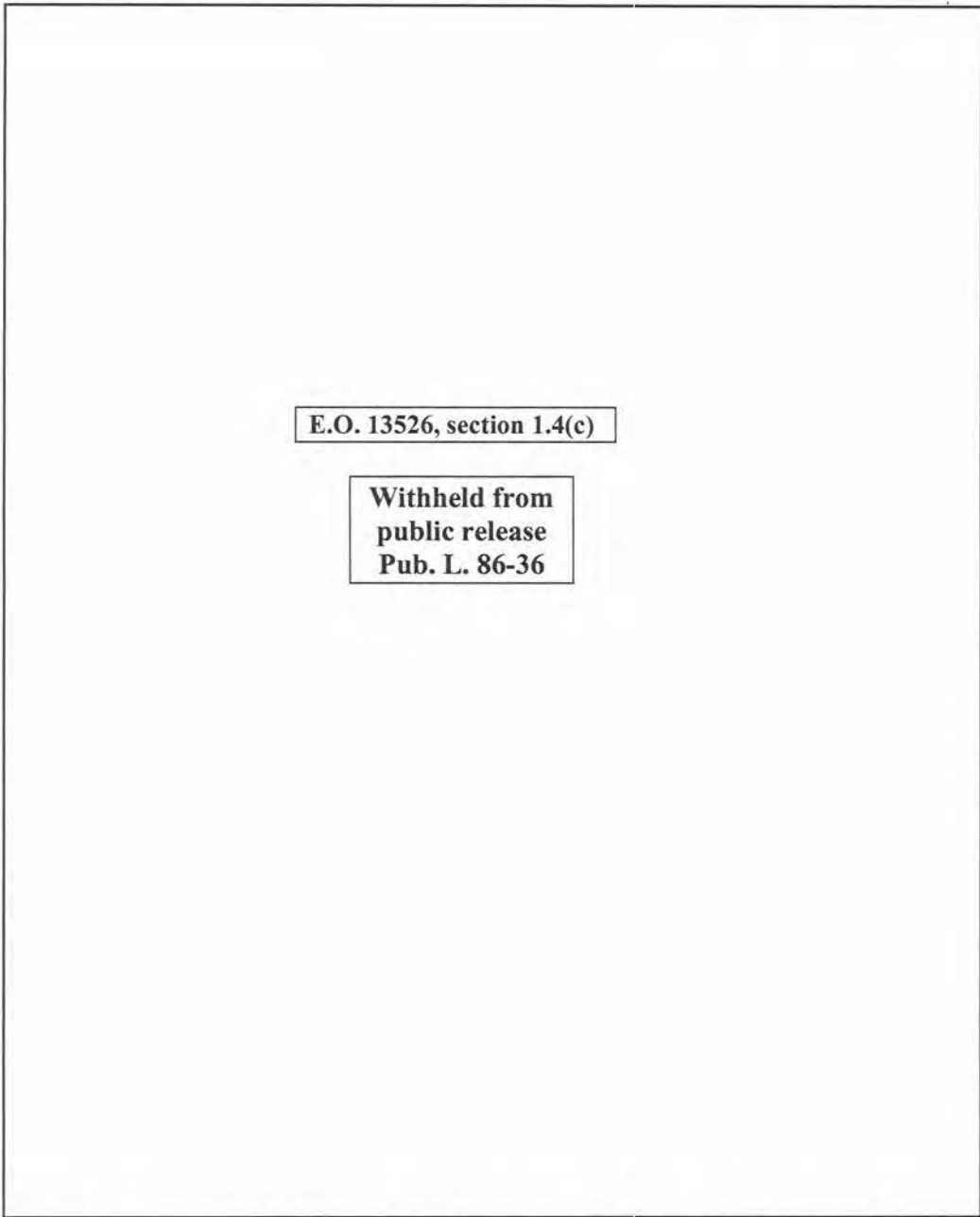
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(U) Newspapers were, of course, following the Fraser investigation, and rumors began appearing that the indictment was based on NSA information. On September 4, 1977, the *New York Times* published an article alleging that Henry Kissinger, Melvin Laird, and other top officials had been aware of the South Korean bribery ring at least as early as 1972. In discussing the source of this information, the *Times* said: "While the investigators did not identify the documents precisely, other sources said that the

documents came from the Central Intelligence Agency, which was earlier reported to have agents in the presidential executive mansion in Seoul, and from the National Security Agency, which has been reported to have intercepted South Korean cable traffic between Seoul and Washington."

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(U) On September 6, two days after the *Times* story, a federal grand jury indicted Tong-Sun Park on thirty-six felony counts of bribery, conspiracy, mail fraud, illegal campaign contributions, and other charges. A California congressman and several former Korean intelligence officials were listed as "unindicted co-conspirators." This placed the issue in the realm of the courts.[83]

(U) But the Koreagate affair was hardly dead. In October 1977, the *New York Times* reported the bizarre case of Sohn Young Ho. Sohn, the top KCIA agent in New York City, was in the process of asking the United States for political asylum when Edward J. Derwinski, a member of the Fraser Committee, allegedly tipped off the KCIA, which went looking for Sohn, possibly intending to mailbag him back to Seoul for safekeeping. Fortunately, the FBI got to him first, but the source of the information about the Derwinski leak, according to the *Times*, was NSA.[84]

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Congressional oversight was fine as long it was kept within a narrow range and subjected to the greatest restrictions. As a test of providing SIGINT support to law enforcement, however, it had a much shorter influence. The Reagan administration began reversing that course in 1981,

insisting that SIGINT be expanded to provide more, rather than less, support to domestic law enforcement.

(U) *Executive Order 11905*

(U) If the president did not act to restrict the intelligence community, it was clear that Congress would. So during the fall of 1975, with the Church hearings in full throttle, President Ford appointed an Intelligence Coordinating Group, chaired by White House counselor Jack Marsh, to draft a comprehensive order, at once organizing the intelligence community and placing checks on it.[86] The result was Executive Order 11905.

(U) Organizationally, the president gave the DCI more authority to supervise the intelligence community, including the critical budget review "club" that Nixon had tentatively proferred to Richard Helms in 1971. The DCI became chairman of a new Council on Foreign Intelligence, which included the assistant secretary of defense for intelligence (a newly created position which would supervise NSA's director). Ford abolished the 40 Committee, which had ruled on all covert operations (including SIGINT peripheral reconnaissance missions) and replaced it with an Operations Advisory Group. He continued the President's Foreign Intelligence Advisory Board and directed that three of its members constitute a special Intelligence Oversight Board to keep track of possibly illegal activities by intelligence organizations. The executive order attempted to draw a clear line between "foreign intelligence" and "domestic law enforcement." [87]

(U) The organizational aspects were of less concern to NSA than were the specific prohibitions. The order prohibited the intercept of communications made from, or intended by the sender to be received in, the United States, or directed against U.S. persons abroad, except "under lawful electronic surveillance under procedures approved by the Attorney General." [88]

(S-CCO) The new executive order resulted in the termination of many NSA activities in support of law enforcement.

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(S-CCO) The crisp wording of the order obscured the resident subtleties. How did an analyst know if a person was an American citizen, a resident alien, or just a person with an American-sounding name? How would NSA segregate within its database those

individuals against whom collection was legal, from those against whom collection was authorized only in specific instances? In fast moving crises such as the *Mayaguez* affair, how could NSA determine if collection was authorized? If it was not, but lives were in danger, who would rule on permissibility? And how much easier it was to Monday morning quarterback the situation than to operate during crisis in the dim, floating world of possible prosecutability. In mid-1976 the NSA DDO, Robert Drake, noted to the IC staff that "To the question of whether or not day-to-day SIGINT production can continue under the provisions of the Executive Order, the answer is yes. In other words, although the guidance is annoying, at times conflicting, and necessarily subject to interpretations at the desk level, I can cope with it. . . . On Monday morning, of course, we all can judge that that incident [*Mayaguez*] was reportable but in cases such as this Monday may be too late." Despite such uncertainty, NSA drafted the general wording of the executive order into a new regulation, USSID 18, which stood the test of time for many years. As with the executive order, it was an attempt to preempt more restrictive congressional legislation. Lew Allen considered the matter to be extremely important and got White House approval.[90]

(U) One result of the Watergate period was to complicate NSA's life in the area of domestic wiretapping. The matter of wiretapping for law enforcement had been contentious since the first Supreme Court decision in 1927, which gave the federal government broad latitude to do electronic surveillance. Courts gradually narrowed this down, and by the 1970s the new climate of concern for individual liberties had basically made warrantless electronic surveillance inadmissible as evidence. But wiretaps for foreign intelligence did not fall within this rule, and in the early 1970s federal courts ruled that foreign intelligence wiretaps were legal.[91]

(S-CCO) The "New Shamrock" operations involved wiretapping foreign embassies in the United States. Begun in the 1950s, those wiretaps had continued for years despite periodic resistance by J. Edgar Hoover. Through the decade of the 1960s, the number of such wiretaps fluctuated in the sixty to seventy range. But in December 1974 Attorney General Levi instituted new and cumbersome approval procedures which both lengthened the time needed for approval and broadened the exposure of specific operations from just a few people to a number spread around the intelligence and national security community. At the top of the heap, the attorney general maintained personal control and began disapproving requests that sported justifications that he regarded as weak. Lew Allen tried to divest Levi of control of domestic foreign intelligence wiretaps, but was unsuccessful. But, though EO 11905 specifically stated that taps for foreign intelligence would be treated differently from taps for domestic law enforcement, successive attorneys general continued to control foreign intelligence taps through the Carter administration. To NSA, it was a cost of doing business that had not existed before Watergate.[92]

(U) The last act in the play occurred in 1978 when Congress passed, and the president signed, the Foreign Intelligence Surveillance Act (FISA). This added another approval layer, consisting of a special court of seven judges which would rule on requests from the attorney general for warrantless taps. Although this lengthened further the process of

instituting the taps, it had no effect on their approval.

(U) Congressional Oversight

(U) Congressional oversight of the intelligence community sprang from the Watergate period. Prior to the Church and Pike committees, oversight was more or less nominal and was confined to just four committees: the Armed Services and Appropriations committees in both houses of Congress. Had Congress no budget to approve, oversight probably would have been even more sketchy than it actually was.

(U) Each of the four committees set up special intelligence subcommittees, comprising the full committee chairman and three or four trusted members from both sides of the aisle. Their examination of funding requests was cursory, and they never asked embarrassing questions about operations. The president controlled the requests, and if someone's intelligence budget were to be shaved down, the executive department would have to do the shaving – congressmen did not get into those details. Thus, inclusion in the president's budget was tantamount to approval.

(U) In the Senate, one man dominated oversight – Richard Russell of Georgia. Serving from 1933 to 1971, Russell chaired both the Armed Services Committee and the Intelligence Subcommittee of the Appropriations Committee. In the House, a succession of chairmen, almost all from conservative southern states with strong national defense leanings, dominated the proceedings. Mendel Rivers, Carl Vinson, and F. Edward Hebern strongly supported intelligence projects and insured that the information was held as tightly as possible in Congress. Lawrence Houston, the CIA general counsel, once said that "Security was impeccable. We never had the slightest breach." [94] Summing up the dealings with Congress, Clark Clifford said, "Congress chose not to be involved and preferred to be uninformed." [95] This situation lasted as long as bipartisan consensus continued.

(U) Special intelligence clearances remained mysterious and obscure. In 1968, at the time of the Tonkin Gulf hearings in the Senate Foreign Relations Committee, no committee members, not even the chairman, William Fulbright, had even heard of clearances above top secret. This problem tied the committee in knots during the testimony of Robert McNamara relating to the August 4, 1964, attack (see Book II, p. 518):

> Senator Gore: Mr. Chairman, could we know what particular classification that is? I had not heard of this particular classification.
>
> Senator Fulbright: The staff, Mr. Marcy, and Mr. Hold are cleared for top secret information. This is something I never heard of before either. It is something special with regard to intelligence information. However, Mr. Bader was cleared for that.

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CRYPTOLOGIC QUARTERLY

Secretary McNamara: If the staff would wish to request clearance, I am sure the Government would do it.

Mr. Marcy: All of the members who are here submitted renewal requests for top secret clearance recently and, so far as I know, all of those requests have been granted.

Secretary McNamara: But that is not the issue. Clearance is above top secret for the particular information involved in this situation.[96]

(U) By the time the congressional hearings had ended in 1975, the culture had completely changed. Church had termed CIA a "rogue elephant," and closer congressional scrutiny was inevitable. The first thought of Congress was to set up a joint House-Senate committee, but the House fell behind and, unwilling to wait, the Senate established the Senate Select Committee on Intelligence (SSCI) on May 19, 1976. The tardy House, consumed with procedural wrangling over the release of the Pike Report, delayed until July 17, 1977, more than a year later, when it established the House Permanent Select Committee on Intelligence (HPSCI).[97]

(FOUO) Ultimately, all members of Congress were to be presumed cleared, and all staff members from the two oversight committees had SI and other security clearances to allow them to do their job. Clearances were also granted to select staff members of certain other committees (like Appropriations) to permit them to do their jobs. Though there were some rough spots at first, NSA-congressional liaison came to be a more or less routine function bedeviled only occasionally by security problems. Certainly there were no repeats of the maverick Pike Committee performance. NSA senior Walter Deeley summed up the matter ten years later: ". . . I think one of the best things that ever happened to this country is the fact of the establishment of the House Committee on Intelligence and the Senate Committee on Intelligence, and they have total, absolute total, scrutiny over what NSA does."[98]

(U) *The Enabling Legislation*

(U) The same Congress that decreed congressional oversight also wanted enabling legislation for the intelligence agencies that had not been established by law, as well as specific limiting legislation for CIA (which had already been established by the National Security Act of 1947). NSA was the most visible of the agencies that had come into being by executive order, and the Agency was one of the main targets of the draft legislation. All the drafts took the same basic form. NSA would have the same authorities as under the Truman Memorandum and would remain within the Department of Defense. The director and deputy director would be appointed by the president and confirmed by the Senate. As with the CIA, the director could be either civilian or military, but if military, the deputy must be a career civilian. What distinguished these drafts from the Truman Memorandum was the heavy emphasis on civil liberties, to be guaranteed through an overlay of oversight bodies – checkers and people to check the checkers. The driving force

behind the legislation seemed to be the final report of the Church Committee, in which the committee promised to end the abuses of the past.[99]

(C) Initially the enabling legislation was pushed along by the strong breeze of reform dominating the Carter White House. But as the president settled into the business of governing, he found this focus on supposed abuses of previous administrations to be increasingly irrelevant. Moreover, the intelligence agencies, and especially NSA, yielded a cornucopia of information. He became less and less interested in pushing legislation that would remove NSA from his total control and give part of that control to Congress. The Carter White House allowed the breezes of reform to blow themselves out, and NSA remained firmly tied to the president's authorities. The Truman Memorandum stood.[100]

(U) The Enigma Revelations

(U) In England, far away from Watergate's tumultuous effects on government, a storm was brewing that was to help NSA, even as it stripped away the gauze of anonymity that remained. It became known as the Enigma revelations.

(U) The story of cryptology's role in World War II had been kept secret since 1945. Only the Americans, who had publicly investigated the surprise attack on Pearl Harbor, had uncapped that bottle, and even they had managed to confine the story to 1940 and 1941, and to limit the disclosures to the breaking of Japanese diplomatic codes and ciphers. The other 95 percent had remained hidden.

(U) The story began to trickle out in 1972, with the publication of John Masterman's book *The Double Cross System*, which covered the capture and turning of German human agents in Britain during the war. How they were captured was another story and went to the heart of the Enigma story, but Masterman kept that part a secret.[101]

(U) The first break to the Enigma story itself occurred in France in 1973, when Gustave Bertrand, the head of French intelligence before the war, published his memoirs revealing the Polish break into Enigma and the conference in 1939, just before the German Blitzkrieg swept over the country. Bertrand detailed his key role in obtaining information on Enigma for the Poles, and he described France's attack against Enigma in the final months preceding the German invasion of 1940. He also described what the British knew about the system.[102]

(U) For a time the British remained silent. But within the ranks of World War II veterans there was a movement to tell their own story, largely to set right what they felt were distortions in the Bertrand account. Leading this effort was Frederick Winterbotham, a former RAF lieutenant colonel who had devised the system for protecting SIGINT during World War II. Winterbotham began working on his own book, published in 1974 as *The Ultra Secret*. He did not speak with a grant of authority from his government and had in fact been warned not to publish. But since the publication of Bertrand's book a year earlier, references to the British attack on Enigma had appeared in nooks and crevices of articles and book reviews, many of them authored by people who had

participated in the operation during the war. Winterbotham knew that it was only a matter of time, and he determined to beat the rush. His book laid out the entire story of Bletchley Park, albeit with certain inaccuracies which came with the fading of memory. [103]

(U) Following Winterbotham, many participants told their stories. For some, like Peter Calvocorresi, editor-in-chief of Penguin Books, revelation became eloquent literature. For others, like Gordon Welchman, it became a detailed technical description that caused the government to blanch (and NSA to pull his accesses). [104]

(U) But none exceeded in scope and detail Harry Hinsley's book on British intelligence during World War II, which was largely a detailed history of Bletchley and the Enigma project. Alone among the writers and historians, Hinsley was given access to the still-classified documents, so that a well-documented story would emerge from among the welter of revelations and memoirs. Hinsley was given permission to use classified documents largely to correct misimpressions stemming from the memory-based accounts of Winterbotham, Calvocoressi, and others. [105]

(U) The story of American codebreaking successes was later in coming. Ronald Clark's *The Man who Broke Purple*, a somewhat breathless (and not entirely accurate) biography of William Friedman, came out in 1977, and was followed by less memorable personal accounts by two Navy men, Edward Van Der Rhoer's *Deadly Magic* in 1978 and Jasper Holmes's *Double-Edged Secrets* in 1979. These could not compete in drama and readability with the stories churning out of the British press, and it took an Englishman, Ronald Lewin, to begin to tell the American story in his book *The American Magic*. [106] The British story captured the moment, while accounts of similarly significant American COMINT successes bobbed unhappily in their wake.

(U) Memoirs, biographies, and selective leaks of information would not, of course satisfy either the public or the historians. The only realistic alternative was to begin declassifying and releasing documents. Here, national security came to loggerheads with the public's right to know, and the issue was resolved only during the post-Watergate sorting out. The declassification effort resulted from two post-Watergate initiatives, FOIA and EO.

(U) Congress passed a new Freedom of Information Act (FOIA) in 1974. In it the congressmen took an old law relating to government documents, which required the requester to prove the need for the documents, and reversed it, instead requiring the government to prove the need to maintain secrecy. [107] Under this new law each government agency set up special arrangements to process FOIA requests. For several years NSA's FOIA team routinely denied every request based on national security. This worked under President Ford, but the new Carter administration in 1977 took the side of the plaintiffs on FOIA. Releasing significant numbers of documents became only a matter of time.

(FOUO) Executive Order 11652, issued in 1972, dealt with openness in government, and decreed that government documents be automatically declassified and released to the

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(U) World War II SIGINT histories

National Archives after thirty years.[108] The order actually preceded FOIA, but it did not
have a major effect on NSA until after the Church and Pike hearings. By then, Lew Allen
had become director, and Winterbotham had begun the Enigma revelations. Seeing that it
was only a matter of time, Allen's staff began negotiating with GCHQ for a coordinated
bilateral policy on release. They agreed to concentrate on World War II records (those
most in demand) and to restrict their declassification initially to the COMINT effort against
German, Japanese, and Italian armed forces. In Britain, declassified records would go to
the Public Records Office – in the United States, to the National Archives in Washington.
NSA would also look at selected Korean War and Vietnam era records, but the British
declined, citing a rule against proceeding into the postwar period.[109]

(U) NSA began the Herculean task of reviewing millions of pages of World War II (and
prior) records in 1976, with four reemployed annuitants hired on a temporary, sixty-day
basis. The program expanded as more and more files were discovered. Admiral Inman
decided to set up a classified NSA archives to hold the records which had been saved but
were not yet ready for declassification, and the new "Cryptologic Archival Holding Area"
was set up in SAB-2, which had been built in the early 1970s as a warehouse to hold
material being transported to a records destruction facility. (At the time NSA did not have
its own facility.)[110]

(FOUO) FOIA ran parallel to the systematic declassification effort, and the two threads became frequently intertwined. In 1978 a researcher named Earnest Bell, who had worked in the Army's wartime COMINT office in London, submitted a FOIA request for all German and Japanese COMINT material for the entire war. NSA's legal counsel, Roy Banner, advised Inman that NSA would likely lose a lawsuit, and the Bell FOIA request greatly expanded the volume of material that the reemployed annuitants had to review. Ultimately twenty-one REAs were hired under Inman to plow through the enormous pile of raw COMINT reports to satisfy Bell's request.[111]

(U) THE IMPACT OF WATERGATE

(U) The Watergate period resulted in a massive change in the way the cryptologic system related to the American public. Congressional oversight, which sprang from the Church and Pike Committees, fundamentally altered the way NSA related to the legislative branch of government. In a real sense, NSA had to answer to two masters, and the relatively simple life of prior decades became more complex. The new arrangements took some getting used to, but in many ways accountability worked to the advantage of an agency that worked within the law, and within a decade few could imagine going back to the old way of doing business.

(U) If congressional oversight ultimately worked to NSA's benefit, the public exposures accompanying the Watergate period did not. Too many sensitive operations were exposed; too many exposés were splashed across the newspapers. The deleterious effects of the Watergate period stayed with the cryptologic community for many years to come.

Notes

1. (U) Theodore H. White, *Breach of Faith: The Fall of Richard Nixon*, 1st ed. (New York: Atheneum Publishers, 1975); Karnow, *Vietnam*, 634.

2. (U) Bradburn, et al., *The SIGINT Reconnaissance Satellites*, 5-37.

3. (U) CCH Series VI.A.1.6.2.

4. (U) Seymour Hersh, *The Price of Power: Kissinger in the Nixon White House* (New York: Summit Books, 1983), 321-32.

5. (U) CCH Series VI.H.H.19.6; 19.16.

6. (U) CCH Series VI.H.H.19.6; Harrison Salisbury, *Without Fear or Favor* (New York: Times Books, 1980), 315-18; Interview, Milton Zaslow, by Tom Johnson, 19 June 1998.

7. (U) Hersh, *Kissinger*; CCH VI.I.I.1.2.

8. (U) Ibid.

9. (U) Interview, Meyer J. Levin, by Robert D. Farley and Tom Johnson, 14 January 1987, OH 2-87, NSA.

10. (U) Winslow Peck [Percy Fellwock], "U.S. Electronic Espionage – a Memoir," *Ramparts*, August 1972, 36-50.

11. (U) CCH Series VI.I.I.1.2.; DDIR files, 96026, box 13, "1974."

12. (U) CCH Series VI. I.I.1.2; Frank Smist, Jr., *Congress Oversees the United States Intelligence Community, 1947-1989* (Knoxville, Tenn: University of Tennessee Press, 1990),184-86); DDIR files, NSA retired records, 96026.

13. (U) "Summary of Statutes Which Relate Specifically to NSA and the Cryptologic Activities of the Government," undated file in CCH administrative files collection.

14. (U) Athan Theoharis, *Spying on Americans: Political Surveillance from Hoover to the Huston Plan* (Philadelphia: Temple University Press, 1978), 120; NSA Archives, acc nr 18238, CBTF 36; Unpublished manuscript by David Alvarez, Chapter 1, in CCH files.

15. (U) Allen interview.

16. (U) CCH Series VII.B.4; F.19, Vol 1.

17. (U) David Kahn, "Big Ear or Big Brother?," *New York Times Magazine*, May 16, 1976, 13, 62-72.

18. (U) CCH Series XII.H.57.4.

19. (U) Church Committee hearings, Vol V, 10, in NSA records center, 28791-2, 80-079.

20. (U) Theoharis, *Spying on Americans*, 121-22; James Bamford, *The Puzzle Palace: A Report on America's Most Secret Agency* (Boston: Houghton Mifflin Co., 1982), 248; Church Committee correspondence.

21. (U) NSA Archives, acc nr 18238, CBTF 36; Church Committee correspondence, Vol V, 12. Kahn, "Big Ear or Big Brother?," 13, 62.

22. (U) Interview, Tom Charles Huston, by Gerald Haines [   ], 31 January 1986, OH 6-86, NSA.

23. (U) Theoharis, *Spying on Americans*, 20, 121.

24. (U) Allen interview.

25. (U) Theoharis, *Spying on Americans*, 122-23.

26. (U) National Archives, Record Group 457, SRH-001.

27. (U) Ibid.

28. (U) DDIR files, 96026, box 8, "CIA Sensitive Items."

29. (U) When Nixon became president, Carter tried to brief him on a current wiretap program, but Haldeman, whom Carter called "a first class son of a bitch," insisted on being briefed first. Carter refused, and he and Hoover agreed to cancel the operation. See NSA's oral history interview with Carter, by Robert D. Farley, 3-6 October 1988, OH 15-88, NSA.

30. (U) Theoharis, *Spying on Americans*; DDIR files, 96026, box 13, "1974."

31. (U) White, *Breach of Faith*, 133; Theoharis, *Spying on Americans*, 22-26.

32. (U) Theoharis, *Spying on Americans*, 16, 22-31.

33. (U) Ibid.

34. (U) Ibid., 32-33.

35. (U) File on the Huston committee in CCH Series XII.D.; Church Committee correspondence.

36. (U) Huston interview; Kahn, "Big Ear or Big Brother?," 13, 62; Theoharis, *Spying on Americans*, 27.

37. (U) Allen interview; Interview, ⬜
⬜ by Charles Baker, Tom Johnson, Michael Peterson ⬜, 25 February 1993, OH 4-93, NSA;
Interview, Paul Brady, by ⬜ 25 July 1995, OH 22-95, NSA; Interview, Howard Rosenblum, by Robert
Farley and Charles Baker, 19 September 1991, OH 3-91, NSA. The existence of a taping system in the Oval
Office had been revealed to the Ervin Committee by a Nixon aide, Alexander Butterfield, in July of 1973.
Individual tapes were under subpoena, and the most controversial of them contained a gap of eighteen minutes at
a crucial point in the Watergate coverup. It was the tapes under subpoena, and especially the tape containing
that eighteen-minute gap, that were taken to NSA for examination.

38. (U) Allen interview.

39. (U) Ibid.

40. (U) Stansfield Turner, *Secrecy and Democracy: The CIA in Transition* (Boston: Houghton Mifflin, 1985),
24.

41. (U) Allen interview.

42. (U) CCH Series XII.D; DDIR files, 96026, box 10, "Directorate Correspondence, Nov. 75-Dec 76."

43. (U) Powers, *Man Who Kept the Secrets*, 288.

44. (U) Smist, *Congress Oversees the United States Intelligence Community*, 9-10, 149; Powers, *Man Who Kept
the Secrets*, 288-89.

45. (U) Theoharis, *Spying on Americans*, 9-11.

46. (U) John Robert Greene, *The Presidency of Gerald Ford* (Lawrence, Kansas: University of Kansas Press,
1995), 106.

47. (U) Greene, *The Presidency of Gerald Ford*, 106; NSA Archives acc nr 45146N, H07-0201-6.

48. (U) Smist, *Congress Oversees the United States Intelligence Community*, 30.

49. (U) Huston interview; Smist, *Congress Oversees the United States Intelligence Community*, 63.

50. (U) Huston interview; Church Committee correspondence.

51. (U) Ibid.

52. (U) Christopher Andrew, *For the President's Eyes Only: Secret Intelligence and the American Presidency
from Washington to Bush* (New York: HarperCollins, 1994), 415.

53. (U) Church Committee correspondence; DIRNSA letter of 7 October 1975.

54. (U) Ibid.

55. (U) CCH Series VI.D.2.18; Smist, *Congress Oversees the United States Intelligence Community*, 73.

56. (U) Kahn, "Big Ear or Big Brother?," 65; Smist, *Congress Oversees the United States Intelligence
Community*, 73.

57. (U) Smist, *Congress Oversees the United States Intelligence Community*, 10; Kahn, "Big Ear or Big
Brother?," 72; Church Committee correspondence.

58. (U) Smist, *Congress Oversees the United States Intelligence Community*, 135; Gerald K. Haines, "The Pike
Committee Investigations and the CIA," *Studies in Intelligence* (1997), 41:3, 54.

59. (U) Church Committee correspondence; House Committee on Intelligence – correspondence files, 1975, in
NSA retired records 28792, 80-079. Haines, "The Pike Committee," 56.

60. (U) Allen interview; House Committee on Intelligence – correspondence file; Smist, *Congress Oversees the United States Intelligence Community*, 175.

61. (U) House Committee on Intelligence – correspondence file.

62. (U) Ibid.

63. (U) Ibid.

64. (U) Smist, *Congress Oversees the United States Intelligence Community*, 185; The actual damage to national security occasioned by the "four little words" was surely less than was claimed by the administration and, anyway, Henry Kissinger had already leaked the wording of the report to a journalist. Thus the Pike Committee was not the first to leak. See Haines, "The Pike Committee Investigations."

65. (U) House Committee on Intelligence – correspondence file.

66. (U) Ibid.

67. (U) Ibid.

68. (U) Ibid.

69. (U) NSA Archives, 28795, 80-079.

70. (U) Ibid.

71. (U) Gerald R. Ford Library, NSF, in CCH Series XVI.H., "Abzug Committee."

72. (U) Huston interview; NSA retired records, 28795, 80-079.

73. (U) NSA retired records 28795, 80-079.

74. (U) CCH Series VI.I.1.2.

75. (U) Ibid.

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81. (U) Smith interview; Carter Library, NSF, in CCH Series XVI.I., "Koreagate."

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84. (U) *New York Times*, October 20, 1977.

85. (U) [Signature illegible] Memo to Brzezinski, unknown date in 1978, in Carter Library NSF, in CCH Series XVI.I., "Koreagate."

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91. (U) Church committee hearings, Vol. 5, 81, in NSA retired records 28791-2, 80-079; House Committee on Intelligence – correspondence file, 1975, in NSA retired records 28792, 80-079.

92. (U) DDIR files, 96026, box 13, "1974." Ford Library, NSF, "Wiretap/domestic collection," in CCH Series XVI.

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97. (U) Cline, *The CIA Under Reagan*, 279.

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(U) Chapter 17

The New Targets and Techniques

(S-CCO) The demise of the Southeast Asia problem caused a revolution in SIGINT targeting. In many ways, though, it was no revolution at all, because the new focus was simply an old problem – the Soviet Union. In 1970, when Vietnamization was young, the Soviet Union occupied only 44 percent of NSA's attention. Five years later it had climbed back up to almost 60 percent and stayed there through the decade. Of the non-Soviet targets, only ILC increased in strength, from 5 percent to 10 percent. All the rest stayed stationary or declined.[1]

(U) STRATEGIC ARMS LIMITATION

(U) History shows that many presidents who have been given credit for starting something actually did not. This was the case with the negotiation of strategic arms limitations with the Soviets. President Lyndon Johnson, rather than Richard Nixon, initiated negotiations in 1967. At the time, Secretary of State Dean Rusk predicted that it would become "history's longest permanent floating crap game."[2] He was very nearly right.

(U) The Warsaw Pact invasion of Czechoslovakia in 1968 brought the abortive Johnson negotiations to an early and abrupt end. But Richard Nixon, hoping for some real departures in the foreign affairs field, got them started again. His new foreign policy ombudsman, National Security Advisor Henry Kissinger, contacted the Soviet ambassador to Washington, Anatoly Dobrynin, and they agreed to meetings in Helsinki. The "crap game" then floated to Vienna and finally to Geneva, where it settled for the duration of the Cold War. Negotiations survived the bombing of Hanoi, the Watergate crisis, and the invasion of Afghanistan in 1979.[3]

(U) In May 1972 the protracted negotiations produced the first Strategic Arms Limitation Treaty, called SALT I. The treaty had two parts.

a. Part 1 was defensive. The two sides agreed to limit their antiballistic missile forces to two locations. Each side was permitted to defend its capital city with defensive missiles, plus one other site, which would be a single cluster of silo-based launchers. This part of the treaty was of unlimited duration, to be reviewed every five years.

b. Part 2 was offensive. It froze the silo-based missiles and submarine-launched ballistic missiles at their current (1972) level for five years (until October 1977). Since the Soviets would not admit what total number they possessed, the treaty did not express any numerical figures. American intelligence estimated that they possessed about 2,400 launchers while the U.S. had only 1,700. This left the Soviets with a larger total missile force, but there were compensations. It did not cover strategic bombers and excluded

MIRVs (multiple independently targettable reentry vehicles) – the U.S. was far ahead in both categories.

(U) Congress ratified both parts of the treaty, but Senator Henry M. Jackson of Washington succeeded in passing an accompanying resolution requiring that future treaties embody the principle of numerical parity. This set the tone for treaty negotiations through the end of the decade.[4]

(U) With "numerical parity" being the goal, the two sides continued negotiating and set 1974 as a goal to hammer out a SALT II treaty. But Watergate turmoil set back the timetable, and when Gerald Ford moved into the White House in August of 1974 things were far from settled on the SALT front. But then chance intervened. Kissinger had arranged a "getting to know you" meeting between Ford and Brezhnev in the Russian city of Vladivostok, and the meeting produced an unexpected interim agreement, henceforth called the Vladivostok Accords. The two chiefs agreed on a numerical ceiling of 2,400 launchers (which just happened to be the approximate total of Soviet launchers) and a ceiling of 1,320 MIRVed warheads for each side. The Soviets had for the first time accepted the principle of numerical equivalence, and in return the U.S. had agreed to count strategic bombers. They dropped their insistence that future treaties include U.S. forces in Europe, which the American side regarded as strictly tactical and defensive.[5]
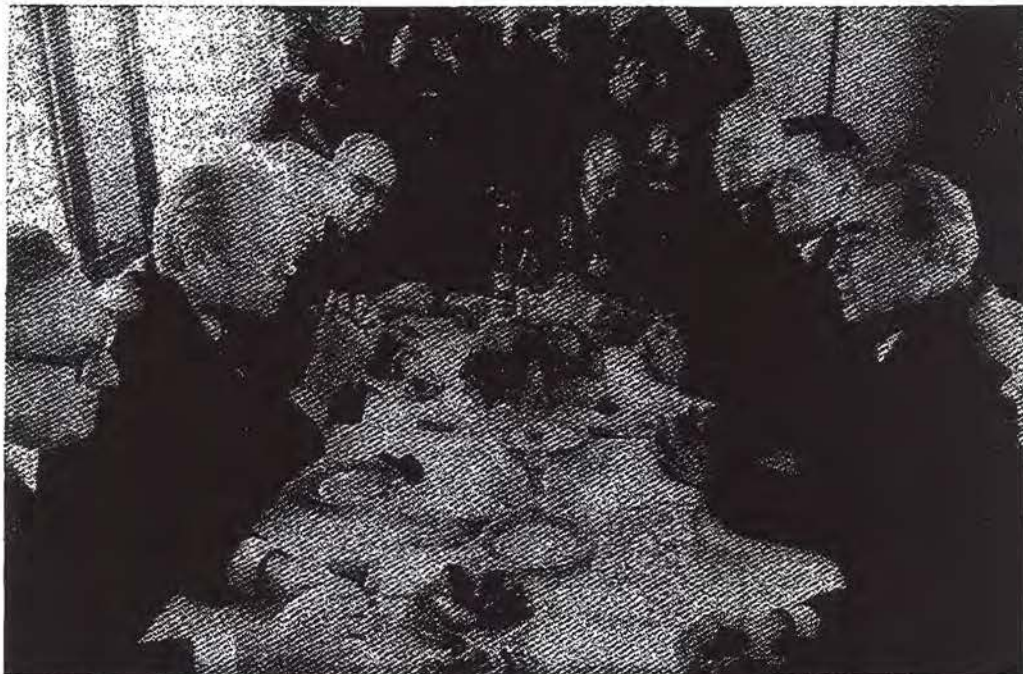
(U) President Ford and Soviet premier Brezhnev in Vladivostok, 1974

(U) The Vladivostok Accords left as many loose ends as they tied up. They did not define "strategic bomber," and future years saw endless wrangling over whether or not the new Soviet Backfire would be counted in SALT II. On the American side, the F-111 fighter-bomber would have a nuclear capability, but would it have any sort of strategic mission? These issues remained murky.

(S-CCO) For NSA and the cryptologic community, the signing of SALT I and negotiations over a still-undefined SALT II focused the mission. Article XII of the ABM treaty prohibited parties from using "deliberate concealment measures which impede verification by national technical means of compliance with the provisions." [6] "National technical means" meant SIGINT and overhead photography. The requirement to verify Soviet strategic forces levels and missile capabilities defined NSA's top priority for the next fifteen years.

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(U) David Boak

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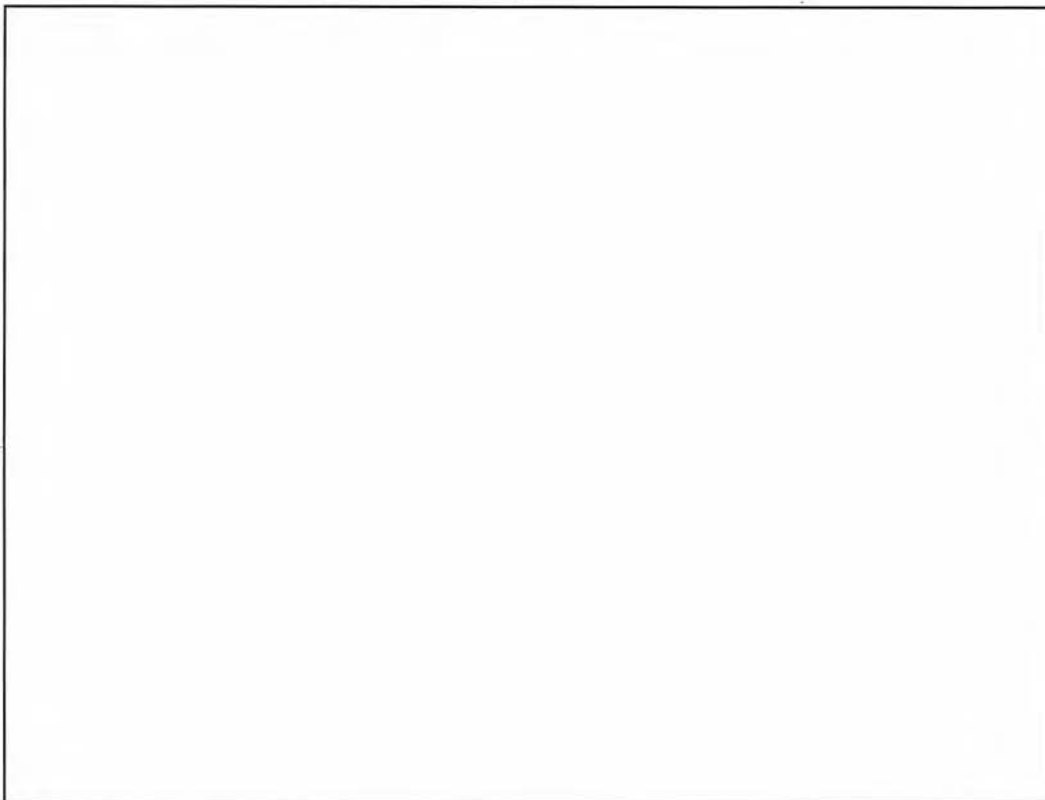
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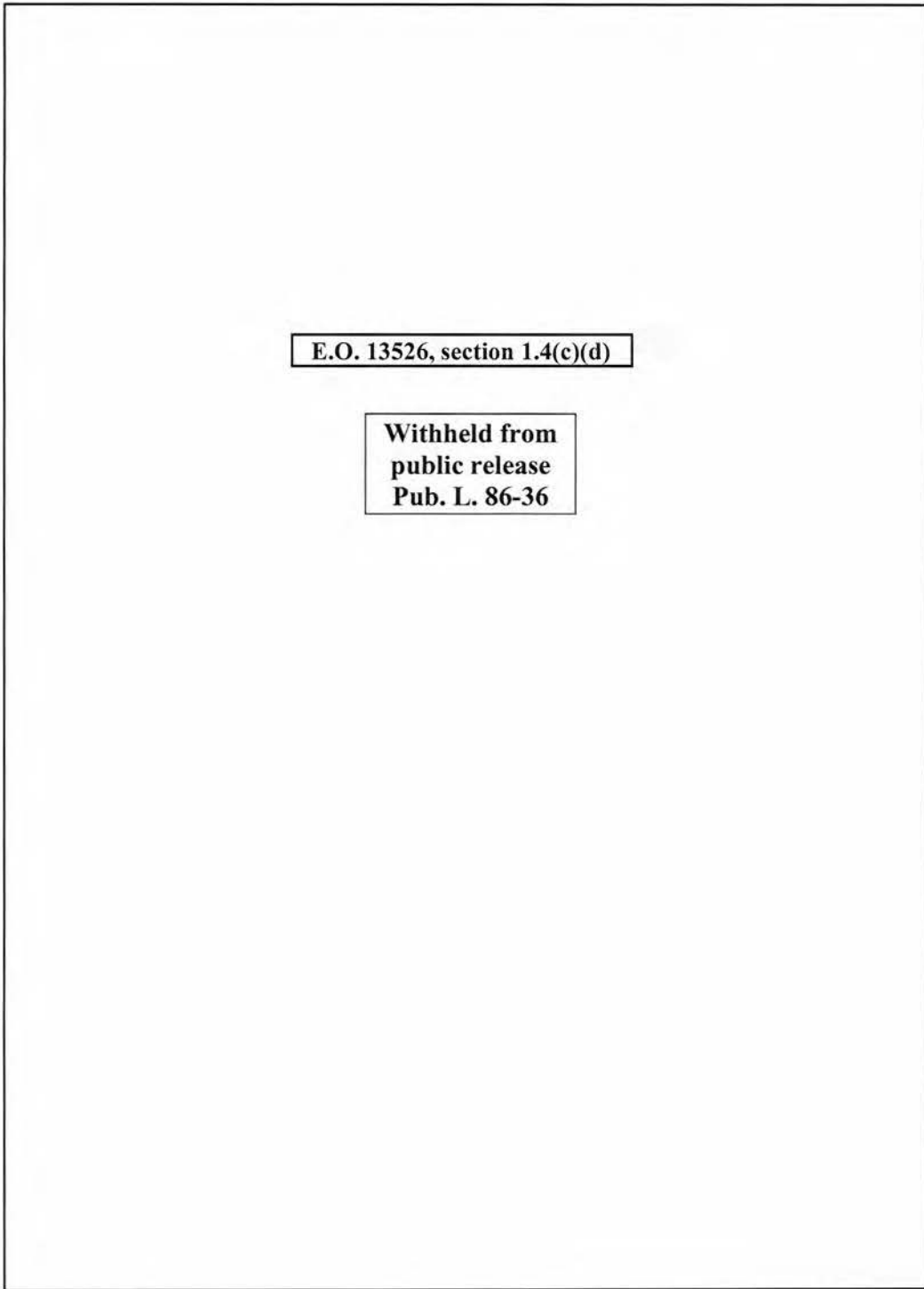
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(U) Richard Bernard

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(U) COMSAT/INTELSAT

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(S CCO) The rapid growth of communications satellites spurred NSA in the 1960s to develop a whole new SIGINT program. The original idea had been to try to do all space-related collection from the same set of facilities, and Stonehouse, in Asmara, became the first collector [   ] But the idea, while seductive, soon fell to the ground. Stonehouse closed in 1975, a victim of civil war, and, anyway, had [   ] The [   ] program needed its own system.

(S-CCO) Secretive and suspicious, the Soviet Union proceeded on its own independent path, building the *Molniya* highly elliptical comsats to serve the Warsaw Pact nations, and others, such as Cuba, who wanted to use East Bloc communications. Under the one-system-does-all approach, NSA forcibly folded A Group *Molniya* collection requirements into the developing Intelsat collection system. It should be possible, NSA reasoned, because a comsat was a comsat was a comsat. But it was only true at the point of

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

collection.

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(U) *The A Group Secession*

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(U) CRYPTOLOGIC COMMUNICATIONS IN THE POST-VIETNAM ERA

(S-CCO) The communications engineers who had devised ways to get raw traffic back to Fort Meade electrically in the 1960s were not permitted to rest. The new requirement for the 1970s was to bring back raw RF so that all intercept and processing could be done in the U.S. The new communications capabilities came just in time to solve the woeful budget problems of the early 1970s and to respond to demands by Third World countries to get cryptologic sites off their soil. In a way, the communicators had become victims of their own success – remoting and data linking, now technically feasible, became the minimum essential requirement for a cryptologic system that was becoming increasingly centralized.

(FOUO) To understand the explosion of circuit requirements, one need only glance at Table 9. Cryptologic remoting brought the number of NSA circuits up to 1,755 by 1981, an increase of almost 1,100 percent in fifteen years. Cryptology had become the largest single user of DoD communications capability.[70]

(U) Table 9 [71]
Growth of NSA Telecommunications Circuits (1966-1981)
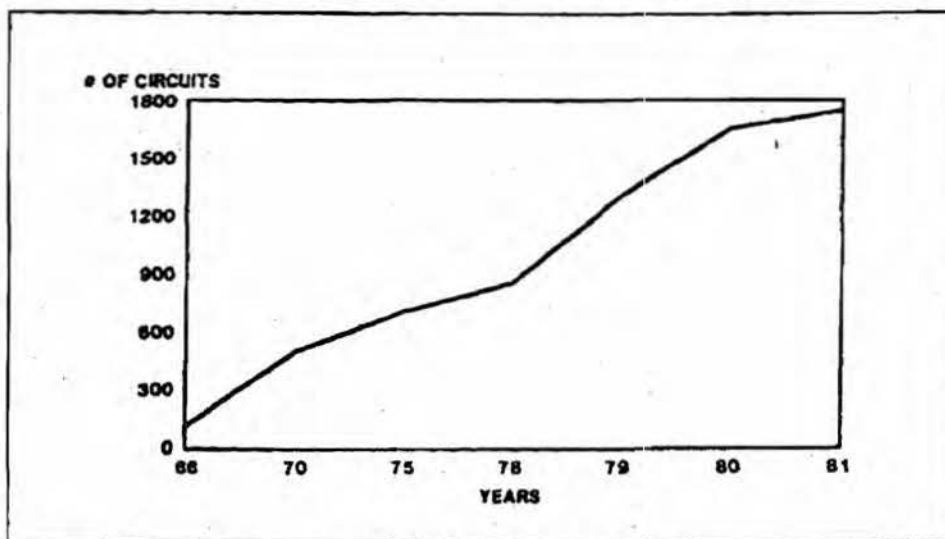
(S-CCO) In the States, the communications terminal was known as the Daring Duo. Activated in March 1977, this pair of huge earth terminals (AN/FSC-78) provided NSA with a direct Defense Satellite Communications System (DSCS; customarily pronounced "discus") ingress and egress

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(C) The communications conflicts of the 1960s were not resolved by the end of the decade. The great move toward centralization was a creation called the Defense Special Security Communications System (DSSCS), which was to combine Criticomm (the NSA system) with Spintcom (the DIA system to support the SSOs). It involved new sponsorship (DCA, Defense Communications Agency), new technology, and lots of money. Within five years all was wreckage. DSSCS was grossly over budget and under capability, and DCA terminated it in 1969. So the decade ended with NSA still clinging tenaciously to its own unique communications network, with all its offshoots – Criticomm, Opscomm, Strawhat, and the like. NSA had designed the entire system to support unique cryptologic requirements, and DCA, despite promises, had been unable to meet them.[73]

(FOUO) In 1970, the secretary of defense decided that the remnants of DSSCS would join its new Autodin communications system, which had been created to carry Genser traffic for the rest of the Department. Because Genser (general service, non-SI) communications centers operated on the basis of noncodeword traffic, all cryptologic traffic would have to enter the system already encrypted. To insure that a firewall existed between codeword and noncodeword messages, DCA introduced a special communications router system – Genser stations had R routers, while cryptologic stations had Y routers. NSA joined Autodin in 1972, phasing in over the ensuing three years.[74]

(FOUO) DCA had great hopes for the Autodin system, and in this case they were (mostly) fulfilled. Manpower required to operate the system declined by almost 1,800 billets, while speed of service increased dramatically. But while record traffic melded into the Autodin system, NSA retained its "special" systems: IATS (which had replaced Strawhat), Opscomm, and direction finding circuits. The General Accounting Office pointed out rather testily in 1973 that the IATS circuitry alone had a higher capacity than all the circuits NSA had integrated into Autodin. NSA admitted this and promised that it would work to achieve IATS/Autodin integration.[75]

(S-CCO) The Opscomm explosion of the 1960s had continued unabated into the 1970s. By 1973 there were 323 of them, being used for every conceivable purpose from passing analyst-to-analyst chatter to technical reports and diarized raw traffic. The largest single owners were NSOC, DEFSMAC and the COC (which controlled worldwide Soviet radio printer collection). The operators loved having their own communications system, but the communicators chafed. Chief NSA communicator Max Davidson wrote in that same year that "Production personnel consider the OPSCOMM complex as their 'own' communications, quite apart from the CRITICOMM, et al., systems. . . . It is unconventional, expensive, uses non-standard procedures and requires dedicated circuits. Paradoxically, it either rigidly enforces specific formats or ignores formats and procedures entirely." Despite such protests by communications people, Opscomms survived because of their great versatility. They had been the bases for the revolution in timely reporting, and no one in DDO could conceive of operations without Opscomms.[76]

(U) NSA continued its communications improvement program to speed message processing. After the activation of IDDF, the new communications center in 1972, the Agency matched the new technology with AMPS (Automated Message Processing

System), which was a way to prepare outgoing messages in a format that could be read by an OCR (optical character reader) by typing it on an IBM Selectric typewriter with a special ball. Mating the AMPS message preparation system with the OCR devices in the communications center relieved communications operators from the drudgery of retyping messages for transmission. Initially activated in May 1970, AMPS technology spread slowly through the headquarters and out to the field.[77]

(U) After working with DCA for many years to come up with an automatic switch for comm center use, NSA turned to its own resources and finally developed a usable product in the early 1970s. The new system, called Streamliner, automated communications center functions like traffic routing. It was married to OCR technology and new Teletype Mod 40 terminals to replace the antiquated Mod 35s. Streamliner was developed at NSA, and the contract was awarded to General Telephone Electronics Information Systems in 1974. The first of thirty-three Streamliner systems was activated at Northwest, Virginia, in 1976.[78]

(U) COMSEC AND THE SECURE VOICE PROBLEM

(FOUO) Operations security studies like Purple Dragon (see *American Cryptology during the Cold War, 1945-1989, Book II: Centralization Wins, 1960-1972*, 551) brought home the vulnerability of telephones and speech sent over unprotected tactical radios. Of all the various areas of OPSEC, the unsecure telephone was the greatest security threat. A DoD study in 1971 stated that "Voice communications are the most significant exploitable weakness in present-day military communications. The highest national COMSEC priority is assigned to research, develop, production and operational deployment of techniques and equipment to reach an acceptable level of voice security." It was estimated that voice security was required on five to ten percent of all the Department of Defense telephones.[79]

(U) Through prodigious effort, NSA had fielded families of equipment for use on the battlefields of Southeast Asia, some of which filled the need, and some of which were wanting. But voice security was costly and added considerably to the weight of equipment that had to be dragged along. Narrowband systems produced Donald Duck voice quality, while wideband systems, while producing good voice quality, were hardly small enough to be called "tactical." Keying was always a problem, and most potential users did not use voice security in any form. The enemy went right on exploiting voice communications. This was the most frustrating of all NSA's COMSEC concerns.

(U) NSA's first program for DoD telephone protection had been Autosevocom, a cumbersome and expensive system that was available only for high-level users. Because of its inadequacies, the Defense Department capped it at 1,850 terminals, and in the late 1960s, hoping for something better, decided not to continue with the expansion of Autosevocom.[80]

(U) In order to produce a system that worked, NSA needed to solve two problems: voice quality and keying. The first was solved through a revolutionary system called "linear predictive coding," which permitted good voice quality in a narrowband system.

(C) In 1967, because of the tremendous pressure to build a cheap, high-quality voice encryption system, Howard Rosenblum of NSA's R&D organization proposed a radical departure in key distribution. At the time, the limit of keyholders for a single secure telephone system was about 300. So Rosenblum proposed that each secure telephone should have its own unique key, and that secure telephones communicate with each other after using their unique keys to receive a common session key from a central key distribution center. When a user picked up his secure telephone and dialed a number, the transmission would go to a central key facility which would look up the key of both the sender and receiver and match them so they could talk. Neither end had the key of

(U) Howard Rosenblum

the other; only the central facility would hold both. He called the concept Bellfield, and through it, he hoped to be able to put a secure telephone on the desks of everyone in DoD.[81]

(C) NSA secured a secret patent on the concept and worked on Bellfield for several years, first designing a system called STU-I (Secure Telephone Unit I). STU-I would involve a narrowband, full-duplex voice security system using commercial telephone lines. Everything would be contained within the terminal device, so that no communications center would be needed to encrypt the voice. The goal was to develop a system that would cost, initially, about $5,000 per unit, but that cost would slide to $2,500 once contractors began full production. The key to it all was to deploy huge numbers of the devices so that unit production costs could go down to an affordable level.[82]

(C) STU-I did not measure up. It was as big as a two-drawer safe and cost $35,000 per copy. But it validated the Bellfield operational concept, and NSA gave no thought to not continuing. The COMSEC organization promptly embarked on its replacement, STU-II.

(C) To tackle the tactical secure voice problem, NSA launched the Saville program in the late 1960s. The objective was inexpensive, small, lightweight, high-voice quality (i.e., wideband) tactical COMSEC appliques for the warfighter. The war in Vietnam drove this program almost completely. Vinson, designed to replace the far bulkier KY-8, was part of the Saville family and became virtually synonymous with Saville. Perhaps the most innovative area in Vinson design was the application of Saville Advanced Remote Keying, which permitted local users to generate cryptographic keys and distribute them over the

TOP SECRET UMBRA

Vinson protected net. Eventually over 250,000 Vinson tactical secure voice equipments were delivered to U.S. and Allied forces.[83]

(U) *The Soviet Threat*

(S) During the 1960s U.S. counterintelligence officials got wind of Soviet SIGINT operations in the United States. In the early years, the information, primarily from HUMINT, was rather vague, but was sufficient to focus attention on the Soviet embassy on 16th Street in downtown Washington, only two blocks from the White House; the Soviet mission to the UN in Manhattan; and the Soviet residential centers at Oyster Bay, New York, and Glen Cove, Long Island. There were also reports of the Soviets using cars to conduct microwave surveys and of their using apartments in Arlington, Virginia, and New York. A defector reported that the Washington area intercept was the most valuable source of intelligence that the Soviets had in the U.S.[84]

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Investigation
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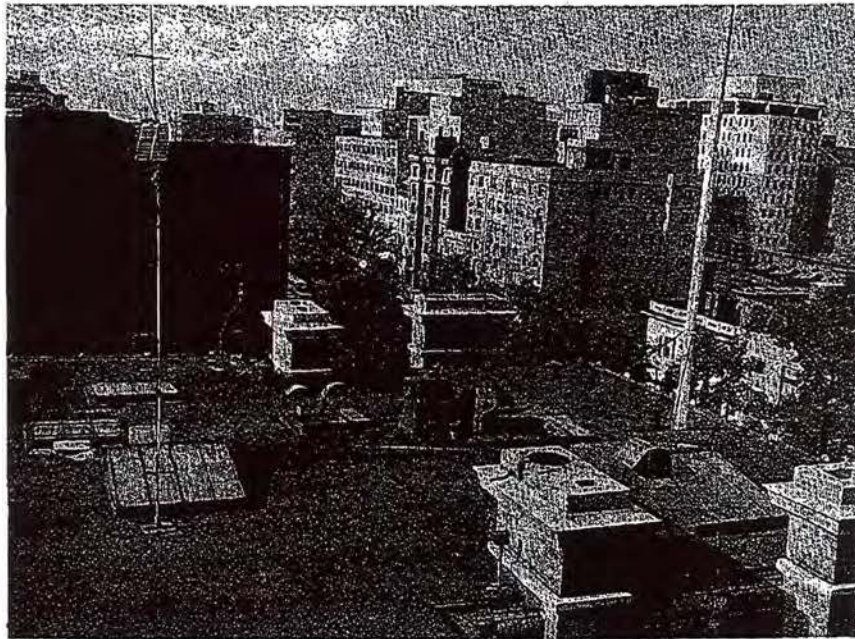
(U) West portion of the roof of the Soviet embassy, Washington, D.C.

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HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY

(S) In the early years the Soviets concentrated on U.S. government communications, including military commands like SAC and NORAD, military airborne command posts, and nonmilitary agencies, including the State Department, FBI, and NASA. According to the FBI sources, most of the USSR's warning information during the Cuban Missile Crisis of 1962 came from monitoring Washington area communications. In 1968, 126 military command and control circuits were rerouted from microwave to cable in the Washington area, but these were the only countermeasures taken before the mid-1970s.[85]

(S) In the early 1970s Soviet interest began to shift to defense contractors. A 1971 KGB directive ordered that intercept work against scientific and technical work be strengthened. Grumman, Fairchild, GE, IBM, Sperry Rand, and General Dynamics were all named as targets by confidential sources. The Soviets reportedly obtained information on the most sophisticated new weapons systems, including the F-14 fighter, B-1 bomber, Trident submarine, and advanced nuclear weapons developments. If true, this would mean that the Soviets no longer needed spies as they had during the years of the Philby and Rosenberg rings. They could simply get the information from the airwaves. This brought a new factor into the equation. If telephones were such lucrative targets, the U.S. would have to start thinking about voice security for defense contractors, too.[86]

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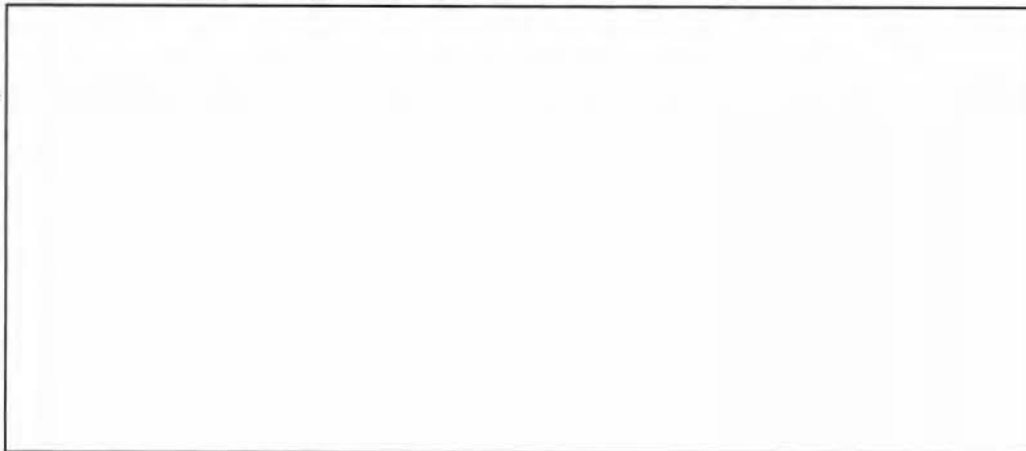
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(U) *The Solutions*

(TS-CCO)
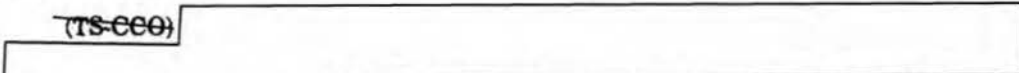
The initial result was a highly sensitive National Security Defense Memorandum 266, signed by Henry Kissinger, then the National Security

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Advisor, and addressed only to the secretary of defense, director of OMB, DCI, and the director of Telecommunications Policy. This memorandum directed that Washington area microwave communications be buried to the extent possible. This would be a near-term measure. Longer term solutions would include expanding secure voice communications throughout the government and private industry. The Office of Telecommunications Policy would work on the long-term solutions.[88]

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(TS) The issue remained under study, and President Ford reviewed the options in the waning days of his administration. By that time   it became obvious that securing only Washington area communications would not do. Some circuits had been secured, but many had not. The major corporations were cooperating with the government program, but other, smaller companies just entering the market did not have the capital base to pay for a large program of rerouting their circuits to underground cables. Forcing them to bury their circuits could put them at a competitive disadvantage with AT&T. Ford's advisors outlined a wide-ranging and complex program which would include burying more microwave circuits, developing and distributing more and better secure telephones, close interworking between government and private industry, and federally mandated programs directing implementation of approved protection techniques throughout the national microwave net. Securing the nation's vital national defense-related communications would cost in the neighborhood of $1 to $2 billion.

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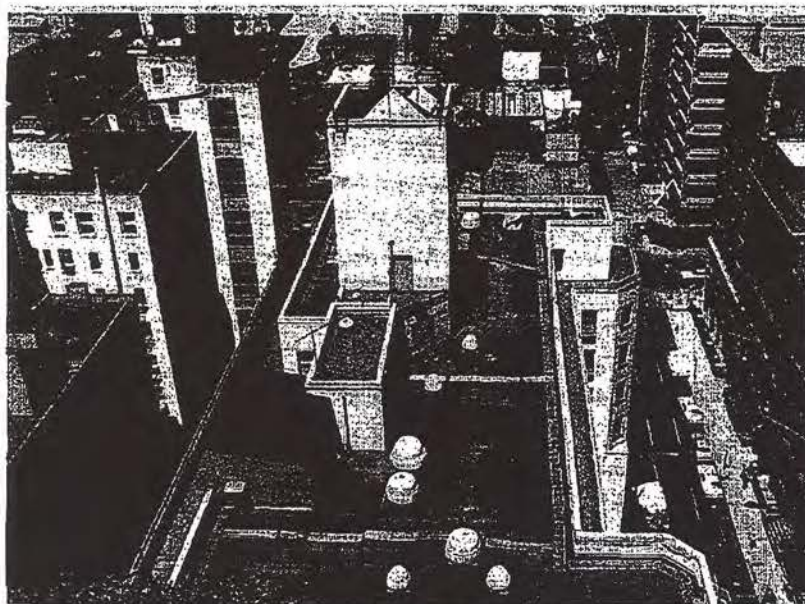
(U) Soviet
mission,
United Nations
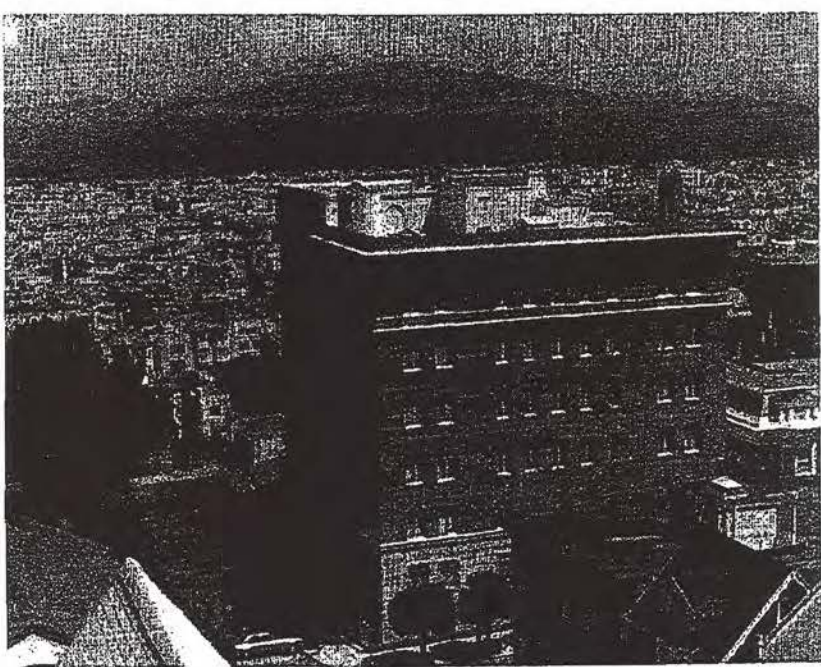
(U) Soviet
consulate
in San
Francisco

(TS) Ford approved a program to proceed with protection of both government and private sector communications. He also approved the establishment of a joint National Security Council/Domestic Council Committee on Telecommunications Security to oversee the effort. But he did not approve making a public announcement about the problem.[92]

(TS) Just prior to the November elections in 1976, President Ford signed PD-24, a presidential directive so sensitive that only fifteen copies were made. Expressing the administration's concern over the Soviet exploitation program, the directive brought contractors into partnership with the government to evaluate the potential damage. Five companies – Vitro Laboratories Division of Automation Industry, Newport News Shipbuilding and Drydock Company, General Electric, IBM, and Lockheed – were named to work with the federal government on the issue.[93] Only a matter of days later Ford lost the election, and the whole issue became Jimmy Carter's problem.

(TS) Ford and his vice president, Nelson Rockefeller, had been strong supporters of NSA's efforts. Carter's administration brought a new look. New White House officials were not so inclined to view this solely as a national security issue, but as related also to the protection of individual liberty and privacy. Carter directed a complete review of the Ford administration program. Carter was concerned about countermeasures, including the legality of the program to secure wirelines in the Washington, New York, and San Francisco areas under Project Duckpins. He questioned the effect of proposed countermeasures, including denial of Soviet requests to purchase more property in the Washington area. He also wanted to know what effect the Duckpins project, which involved close interworking with AT&T, would have on the ongoing Justice Department antitrust suit against that same corporation. He suggested that countermeasures could lead to Soviet retaliation, especially the possible increase in microwave bombardment of the U.S. embassy in Moscow. In short, he wanted a new program that would have the stamp of the Carter administration. And he wanted the entire thing kept absolutely secret.[94]

(TS) The joint government-contractor study initiated by Ford concluded that the Soviets were getting very valuable national security data from defense contractor communications. The CEOs of the participating companies were shocked at the degree to which their telephone conversations were being exploited. With this report in hand, in June 1977 the deputy secretary of defense told Lew Allen to alert certain other defense contractors and bring them into the problem. Ultimately, NSA contacted seventeen contractors and briefed them about their vulnerabilities.[95]

(TS) Meanwhile, Carter's national security advisor, Zbigniew Brzezinski, directed that Duckpins, the wireline security project, be rushed through to completion. He also requested that government-developed wireline and circuit security technology be made available immediately, but here the competing Defense and Commerce authorities slowed things. The Carter administration, initially suspicious of Defense influence in the private sector, wanted Commerce to take the lead in dealing with private industry on the issue. A presidential directive in 1979 divided responsibility between Defense (with NSA as the executive agent) for the protection of government communications, and Commerce for the

protection of private and industry communications. This was to be the first of many conflicts between Defense and Commerce over cryptographic and telecommunications technology policy.[96]

(TS-CCO) As part of the Carter strategy, the White House directed the DCI to assess the state of vulnerability.

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(TS) Brzezinski, who was turning out to be a hawk's hawk in a generally dovish White House, actually considered employing active measures such as jamming the Soviet interception program. But his DCI, Stansfield Turner, pointed out that the U.S. could lose much more than it might gain by this, and headed off further consideration.

(S) Another diversion which proved not at all helpful at solving the problem was Vice President Mondale's concern for the protection of individual privacy. The vice president viewed the matter in the context of civil liberties, and he kept wanting to know how we were going to stop the Soviets from reading the mail of individual Americans. This frequently diverted cabinet-level discussions into fruitless pursuits, until Brzezinski succeeded in relegating it to a low priority at meeting agendas. As the national security advisor told Mondale at one point, "An effective program in this area would cost several billion dollars and we need to know much more about the actual threat before recommending an expenditure of this magnitude. . . ." Budgetary realities do have a way of killing off diversionary issues.[98]

(S) The whole matter became a key input into the "battle of the embassies" that was so important during the Reagan administration. In 1966 the U.S. and the Soviet Union began negotiating for new space in Moscow and Washington for the construction of new, modern embassies to replace the cramped and aging buildings then in use. State notified Defense,

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The protest did not crest until after Ronald Reagan had been elected, but the Carter administration was concerned about it, even though determined to keep the whole matter quiet.

(U) The long-range solution was to develop the elusive universal telephone encryption device. STU-I, with its $35,000 price tag, had not been the answer. The follow-on, STU-II, came in at half the cost, but still required that all contacts run through a central key facility. This made call set-up awkward and time consuming and meant that even people
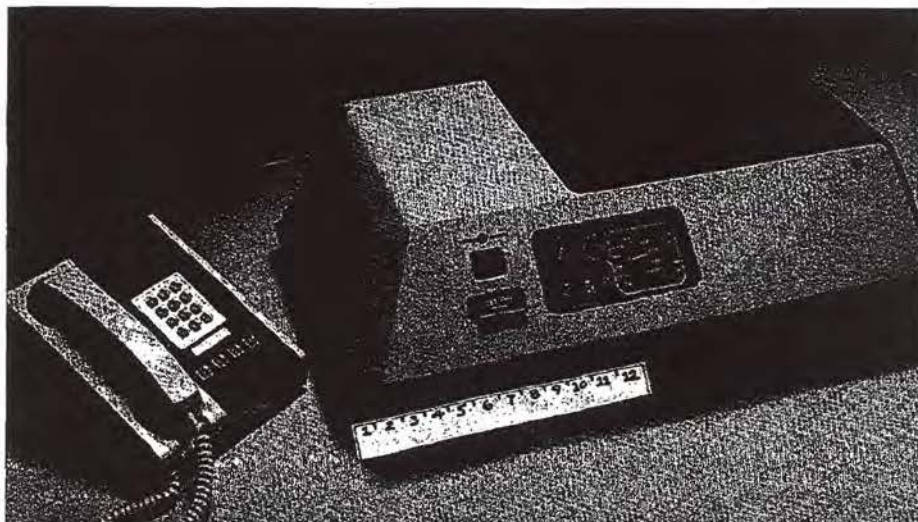
(U) STU-II

having the instruments would use them only when they had plenty of time or were certain that they would get into classified material during the call. Moreover, the instrument itself rested on a fifty-pound box that resembled the aged KY-3. It just wasn't user friendly, and only 15,000 of them were produced before the program ended. It began in 1979 and ended in 1987 when it was overtaken by the "real deal," the STU-III.[100]

(S) The communications protection program, so secret in concept, was shot through with leaks. The first stemmed from a mention of it in the Rockefeller Report of 1975, and from then on the press had a field day, squeezing more and more information out of unnamed administration sources, both knowledgeable and unknowledgeable. The final indignity was a Jack Anderson report exposing supposed NSA methods of determining the size and scope of the Soviet program. The information for this 1980 column came from Ronald Pelton, who was never paid for his information. Pelton, almost penniless, then went to the Soviet embassy, where he knew he could get cash.[101]

(U) Record communications were easier to protect than were voice systems, and the U.S. government had secured just about all the circuits that it needed to protect long before. But the redoubtable KW-26, which had been the standard since the mid-1950s, was showing its age. NSA had known about the KW-26's drawbacks since its first deployment. A point-to-point circuit encryption device, its numbers had to be multiplied by the number of circuits arriving in a comm center. In the mid-1960s NSA began working

on a replacement under Project Foxhall. Foxhall was designed under the premise that the only thing unique to an individual circuit was the key generator. All other equipment, including modems and amplifiers, could be used by all circuits in common.[102]

(U) What emerged from Foxhall was the KG-84, the next generation of key generator. It was a key generator only, and a very fast one which could be used on the high-speed circuits that had evolved since the early days of the KW-26. NSA awarded the contract to Bendix in 1979, with delivery scheduled to begin in December of 1981.[103]
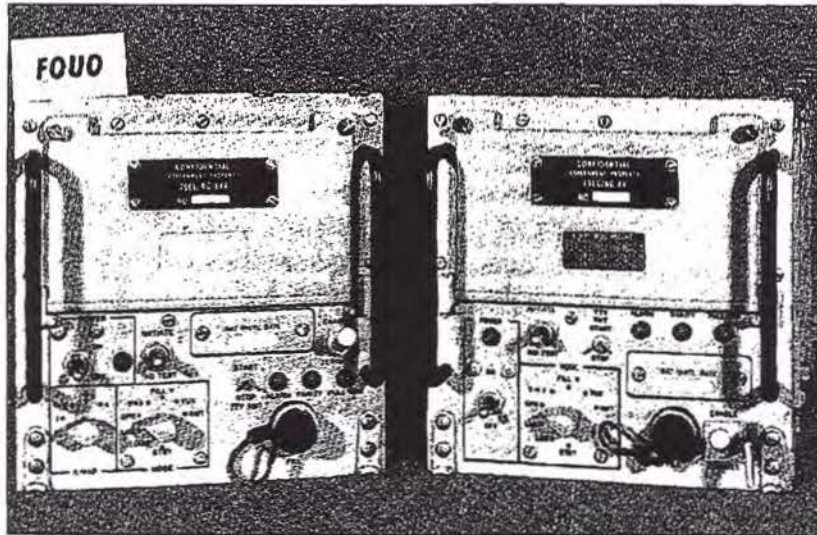
(FOUO) KG-84

(U) NSA COMPUTERS ENTER THE 1970s

(U) By the 1970s NSA was no longer making computer history. Industry development was more diffuse, and many of the ideas that spawned corporate computer development were originating in other places. Important as it was, cryptology did not drive technology to the extent that it had earlier. Internally, concerns were shifting to organizational issues.

(U) The Era of Mainframes

(FOUO) Beginning with Harvest in 1962, NSA was dominated by general-purpose mainframes. These were "nested" in centralized complexes consisting of many computers, and each complex was dedicated to a particular purpose. A 1973 study of NSA computers done by a panel chaired by Dr. Willis Ware of the Rand Corporation identified six large complexes.[104]

(S-CCO) At the front end of the process was the communications complex. This complex consisted primarily of Univac and Honeywell products, which were especially adaptable to receiving streams of data typical of those originating from communications centers. (Honeywell, in fact, provided the IATS computers at field sites.) IDDF, the main communications center, used Sigma computers which processed record traffic from the Criticomm system. On the operations side, the complex of Univacs and Honeywells sucked up the deluge of intercept files being forwarded from field sites via the IATS system. It entered NSA through the Daysend program, and from there it was sent to [____] which split out the intercept files for various applications programs according to the target signals (A Group, B Group, and G Group, primarily).

(S-CCO) The next stop was Carillon, which was a complex of five IBM-370s strapped together. These fourth generation computers were the most advanced on the market, but IBM products were notoriously difficult to mate with those of other companies, and material from the [____] system had to be reformatted and spun off onto magnetic tapes, which were then hand-carried to the [____] complex and processed in job batches according to their priority. Batch jobs tended to be run at night so that the material would be ready for the analyst in the morning. [____] ran the applications programs that were specific to each analytic organization. This was almost entirely a traffic analytic process.

(S-CCO) The Rye complex began in the late 1960s supporting NSOC's predecessor, the Current SIGINT Operations Center (CSOC), which served as a timely operations center on the Soviet problem. Klieglights were the grist for the mill – short, highly formatted information fragments which often became formal product reports. The technology had been put together by [_____] and a team of traffic analysts and computer systems people. Like his boss, Walter Deeley, [_____] was abrasive and iconoclastic. But he got things done, and Deeley liked that.

(S-CCO) The Rye complex ran several different software systems, most important of which was called Tide, which processed incoming Klieglights. Rye became the central nervous system for NSOC, and it internetted over 100 Opscomm circuits. By this time the Opscomm traffic (primarily Klieglights) flowed directly into two Univac 494s, which distributed it via CRTs to analysts on the NSOC floor. But by the mid-1970s Tide had become overburdened. The mammoth Soviet naval exercise Okean 1975 submerged Tide in 88,000 jobs per day, more than doubling the usual load. Two years later the overworked system crashed seven times in a single day. The end was near, and programmers and systems analysts hurried a new system, called Preface, into being. Preface operated on a Univac 1100. Although it began handling its first job in 1978, it took several years to move all the processing off the 494s and onto the new system.[105]

(S-CCO) Cryptanalytic processing was still the biggest computer processing effort. NSA had four large complexes, each tailored to specific jobs. In addition, cryptanalysis was still the home of the special-purpose device (SPD), computers designed and built for a specific task. They were faster than anything else around, but were so job-specific that they usually could not be converted to another use, and when the target cryptanalytic system disappeared or became less interesting, the SPD had to be scrapped. By 1978 the

main cryptanalytic complex had become known as Hypercan (High Performance Cryptanalysis), with a multitude of subcomplexes with names like Sherman and Lodestar. In each case the main processor was a CDC product.[106]

(S-CCO) Two other complexes made up the NSA computer mainframes. The ILC processor, a pair of Univac 1108s, scanned huge volumes of plaintext commercial traffic using word dictionaries to find specific activity that NSA was looking for. When investigative journalist Thad Szulc published his twisted exposé "NSA: America's Five Billion Dollar Frankenstein" in 1973, this capability was the one that he focused on most directly. A second cluster, consisting of CDC products, processed ELINT. The CDC 6600, considered by many to be the first supercomputer, was built by the successor to ERA, which had done so much contracting in support of NSG in the days following World War II.

(U) In fact, the CDC 6600 represented the dawning of the supercomputer business in NSA. It was succeeded by the CDC 7700, four times as fast and more capable in every respect. Seymour Cray, who started at CDC, formed his own company, Cray Research Incorporated, in 1972, and NSA purchased the first machine, the Cray 1, in 1976.[107] (Table 10 contains a brief history of supercomputer purchases by NSA.)

(FOUO) In 1973 a full-scale debate erupted within NSA over closed- versus open-shop programming. Under the closed-shop system, naturally favored by C Group, all programming and systems design people would be concentrated in a central organization (i.e., C Group), which would take care of all requests for support. In the open-shop concept, most computer people would be distributed to customer organizations where they could write applications programs while in daily contact with the people who needed the support. Needless to say, DDO favored this approach and even pushed the idea that the best applications programmer would be a person who came from the supported organization and did programming on the side. Dr. Willis Ware, a Rand Corporation executive who served on NSASAB, sponsored a compromise, wherein large systems would be centralized in C Group, but applications programming would be done, in the main, in the customer organization. After a long and bitter argument, this approach prevailed, to the relief of many who believed that this was the inevitable outcome.[108]

(U) A year earlier another simmering organizational feud had resulted in a special study. The debate, which had begun at least as early as 1970, involved the possible merger of computer and telecommunications functions into the same organization. The two had become so inextricable that the technology drove the issue. In 1972 Paul Neff, the chief of the policy staff, suggested that a full study be made, and this spawned the Carson Committee, chaired by Neil Carson of P1. Carson recommended that the computer organization should be pulled out of DDO and merged with telecommunications, the so-called "take T and C" approach. DDO strongly opposed the divestiture of resources, and the issue remained an irritant for four more years, when Lew Allen took a new look and finally directed the merger.[109]

(U) Table 10 [110]
Evolution of the Supercomputer

(U) *Platform*

(S-CCO) The great weakness of the disconnected mainframes was interaction. As systems became more interdependent and SIGINT requirements became more time-sensitive, the need to send information across computer boundaries affected NSA more and more seriously. Under Walter Deeley's direction (Deeley was then chief of V, the organization that ran NSOC), William Saadi wrote a requirements paper for the internetting of Agency computers. (It could hardly have been coincidental that the most pressing Agency requirement in this area was to internet Tide and Carillon.) [111]

(U) Kermit Speierman, the chief of C, asked his deputy, Cecil Phillips, to put together a seminar of NSA and non-Agency people to look at the problem. A young systems engineer named [   ] was urging NSA to look at some technology that had been developed by the Defense Advanced Research Projects Agency (DARPA). In 1969 DARPA had developed a computer internetting system called ARPANET. At the seminar called by Phillips, the DARPA representative explained ARPANET, and NSA quickly adopted the DARPA solution. The project was called Platform. [112]

(U) The schema for Platform was worked out for NSA by Bolt, Beranek and Newman, Incorporated, which released its report to NSA in 1974. The original plan allowed for four host complexes, which could be expanded as the system got bigger. The core process was to be run on a Honeywell 316, which would be the Interface Message Processor (IMP). Platform soon expanded to the field, and Harrogate was the first field site brought into the system. [113]

(C-CCO) The 1970s was a period of accelerated development of software and database systems. The volumes of data flowing into the Agency every day demanded very sophisticated databases, and in this NSA pioneered relational systems. Some, like M-204, were developed specifically for NSA. One database, called COINS (Community On-line Information System), began in the mid-1960s under NSA executive agency. Initially a joint NSA/DIA project, it became a community-wide database at the SI/TK level. COINS became a substitute for various product reports, and customers were simply given direct access to massaged SIGINT data rather than having NSA take the data and manufacture a product report of mind-numbing length and detail. Still another database, then called SOLIS, was created in 1972 to hold all NSA electrical product reports. [114]

(U) NSA'S FOREIGN COLLABORATION

(S-CCO) Scarce resources meant reliance on outside help. And as the budgets got slimmer, NSA turned increasingly to the help that foreigners could provide. This trend accelerated in the 1970s to a greater degree than at any time in U.S. post-World War II cryptologic history.

(S-CCO) There were dramatic differences in reliance on foreign partners depending on the target. A Group placed heavy reliance on Second Parties, but very little on Third

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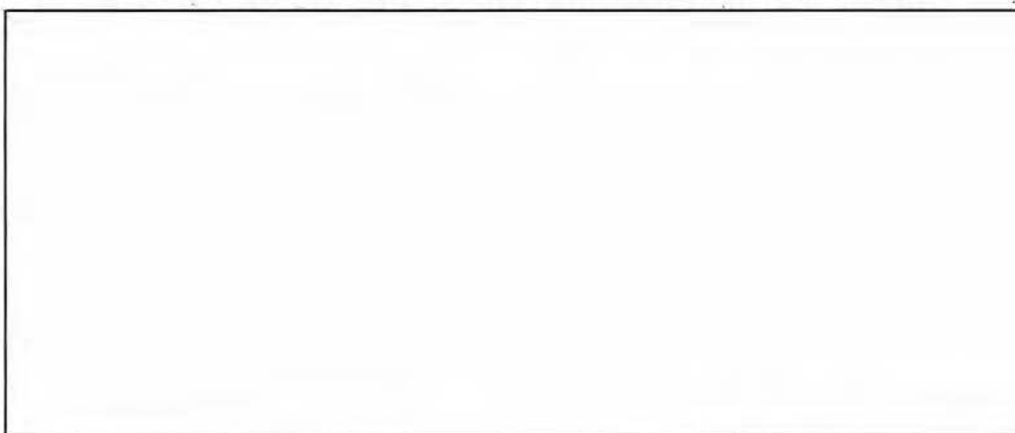Withheld from
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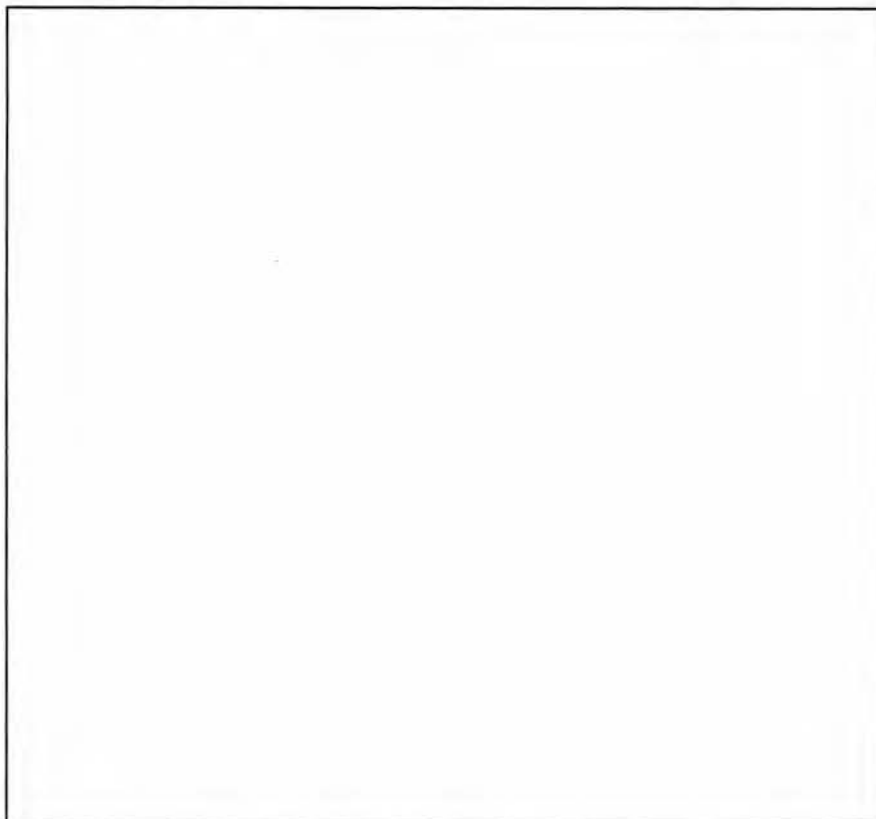
(U) *Great Britain*

(S CCO) With the British, collaboration remained almost total. The key decisions that kept the two countries closely tied related generally to advances into new technological realms. At each bend of the road, NSA made a conscious decision to remain engaged.

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(U) Each country lived with the foibles of the other. The American tendency to leak everything significant to the press was counterbalanced in England by the Official Secrets Act, by which the government tried, often unsuccessfully, to stop publication of material regarded as "sensitive." GCHQ employees were unionized from an early date, and this introduced some interesting twists to the relationship with the Americans, who were not unionized. Politically, the Left in England was stronger than in the U.S., and they employed some novel techniques to attempt to wreck the intelligence business. One such was the device of "public foot paths," a Medieval concept by which, under British common law, paths that had been used by walkers in previous centuries were required to be kept open. Careful research into public records almost always yielded one or more such ancient walking routes through military installations. Thus diligent British researchers discovered foot paths across both Chicksands [   ], and would endeavor, at least once a year, to walk them to maintain the concept. Having walkers wandering through SIGINT antenna fields was not what a typical base commander had in mind.[121]

(U) Australia

(U) American intelligence had enjoyed a long and close relationship with Australia from the time of the election of Robert Menzies (of the Liberal Party) in 1949 through the end of his very long term of office (1961). His successors were also inclined to be pro-American, and the sunny situation continued through the end of the decade. But in 1972 the Australian Labor Party (ALP), headed by one Gough Whitlam, assumed the reins, and relations turned stormy. While conservative Australians generally supported the bilateral relationship with the U.S., the ALP had developed a leftist and decidedly anti-American stance.[122]

(U) Robert Menzies

(U) Gough Whitlam

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(U) Whitlam was opposed to Australian participation in the war in Vietnam, and he pulled Australian troops out of the combat zone. He also announced that he would see to it that Australian forces came home no matter where they were; this included a small contingent in the island nation of Singapore.

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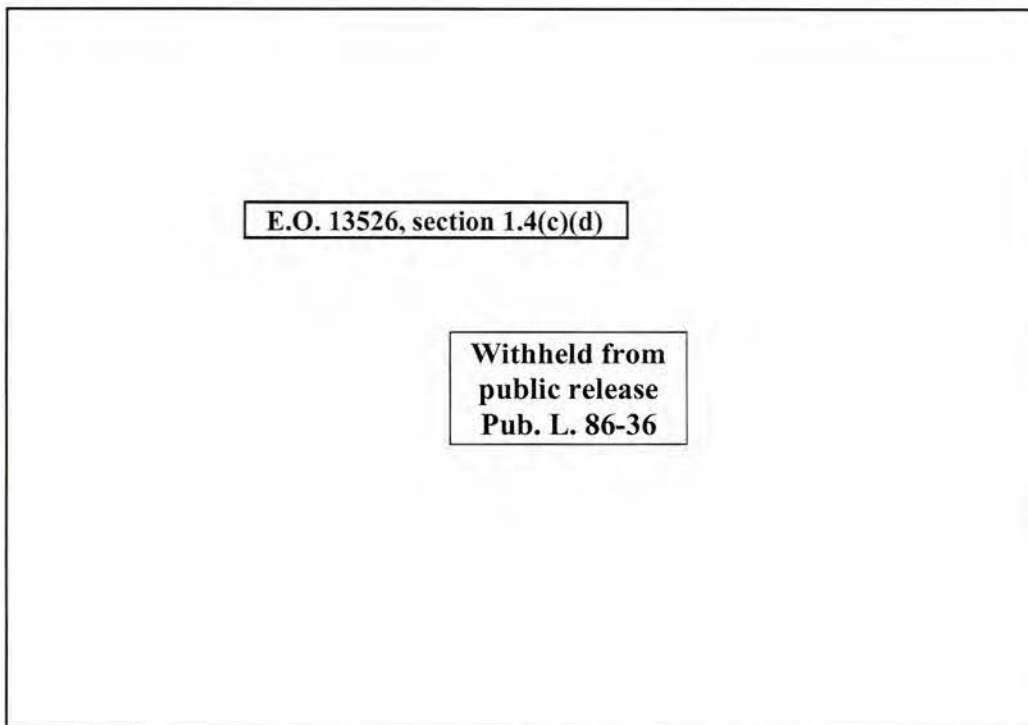
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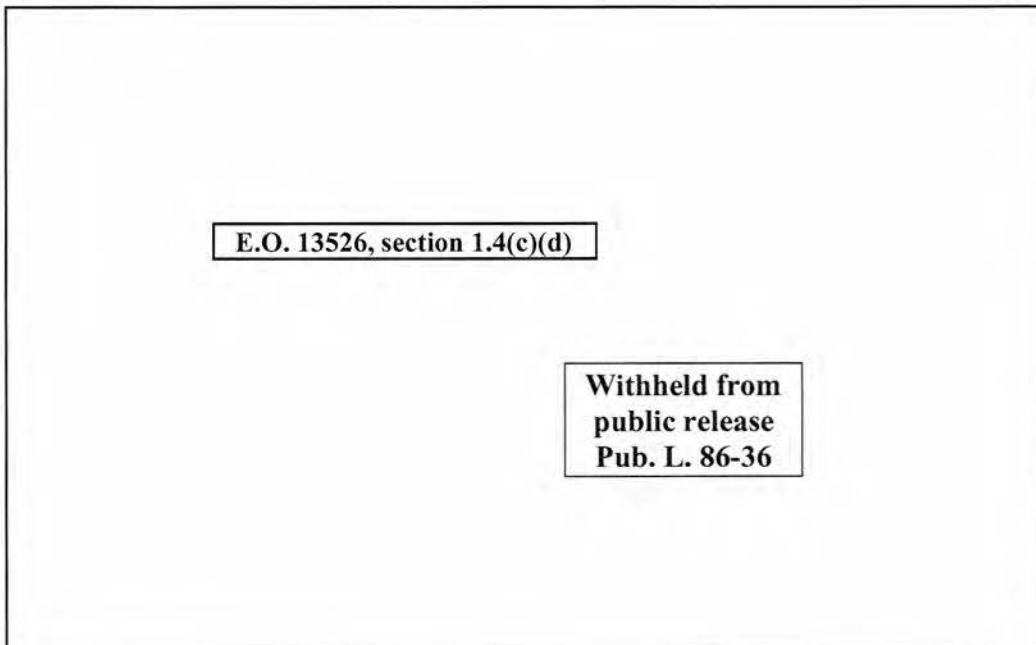>
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(FOUO) Cryptology and Whitlam were not done, even after he departed for private life. Soon after he was sacked, the press revealed that Whitlam planned to accept a hefty financial donation to the ALP from the Ba'ath Party in Iraq.

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Even in 1975 the regime of Saddam Hussein was so odious that Whitlam could not survive the besmirchment. His political career was effectively over. The new prime minister, Malcolm Fraser, was decidedly pro-American, and U.S.-Australian relations returned to something approaching an even keel.[126]

(U) During his days in power, Whitlam subjected his entire intelligence establishment to a searching evaluation. To take charge of the investigation, he appointed Mr. Justice R. M. Hope, whom everyone in Labor regarded as a dedicated civil libertarian. The Hope Commission continued to investigate and deliberate for almost three years, releasing its final report in 1977, long after Whitlam was at home growing roses. But instead of destroying the intelligence mechanism that Whitlam so detested, Hope proposed to strengthen it. His greatest praise was reserved for DSD, which he and his committee members regarded as the best source of intelligence available.

(U) DSD resided in the Defence establishment, but rather than remove it, Hope proposed to give it more autonomy, more people, and more money. In many ways Hope's recommendations paralleled events in the United States in 1952, when NSA was created within Defense, but autonomous from the JCS. DSD's mission was a national one, Hope wrote, and should be strengthened in all its aspects, especially in economic and diplomatic intelligence important to non-Defence organizations. The commission also praised the relationships with NSA and GCHQ.[127]

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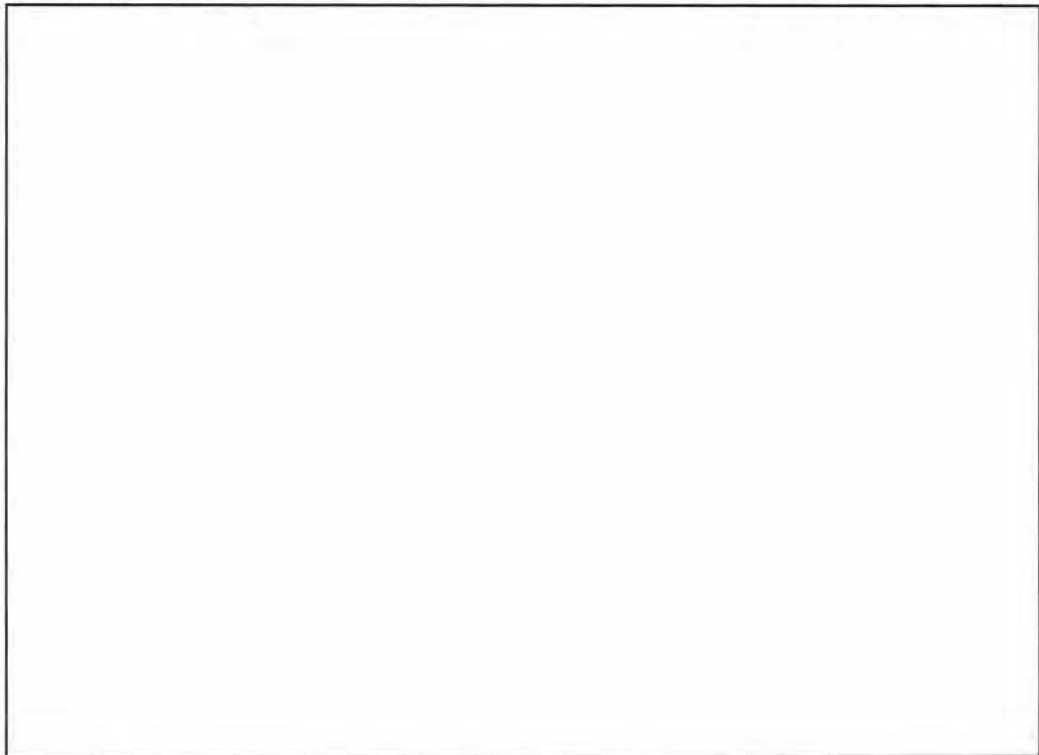
(U) *Third Party Programs*

(S-CCO) Until 1974, NSA's Third Party programs had been run by the deputy director, Louis Tordella. This highly centralized management arrangement worked as long as Third Parties remained relatively unimportant. By the time Tordella retired in 1974, this was no longer the case, and the new deputy, Benson Buffham, promptly changed the arrangement, naming a separate Third Party program manager (originally Robert Drake, the DDO, who wore it as a second hat). This effectively decentralized Third Party management outside of the deputy director's office and got more people involved in decision-making. It was a long-overdue reform.[132]
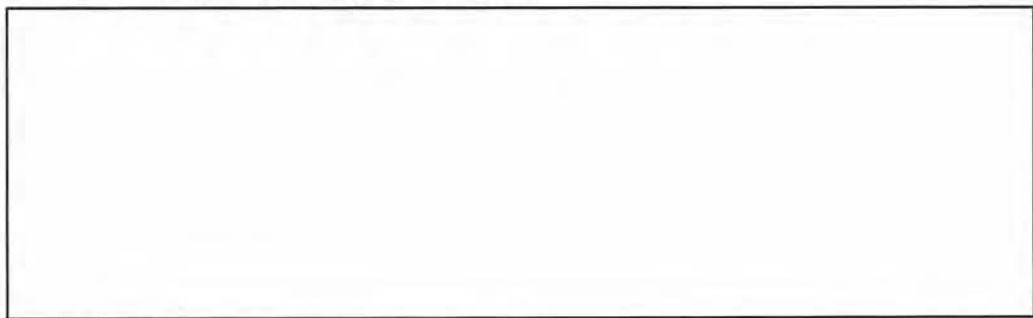
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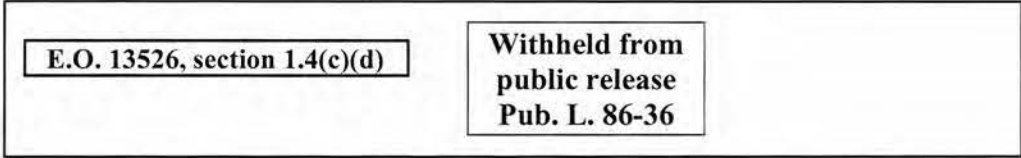
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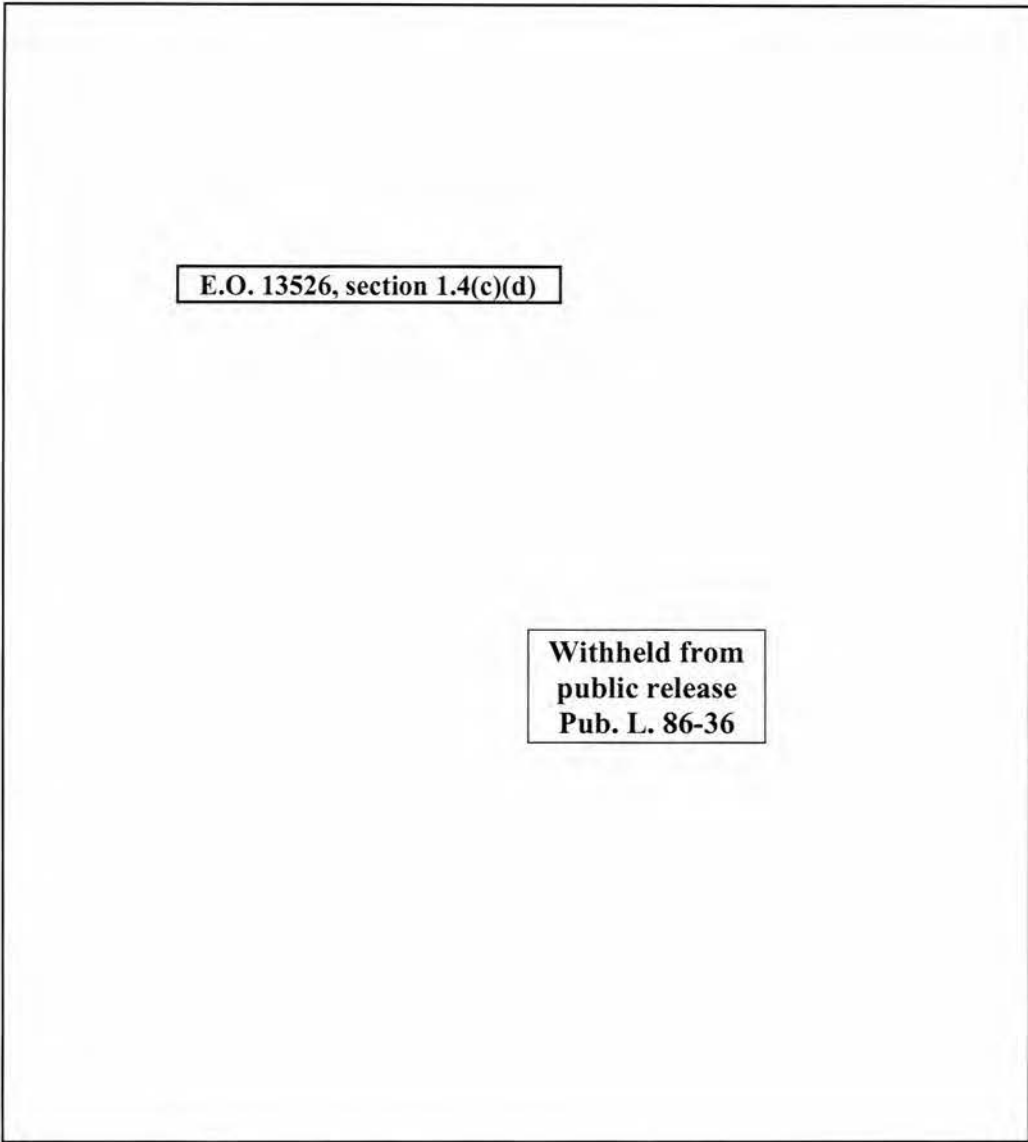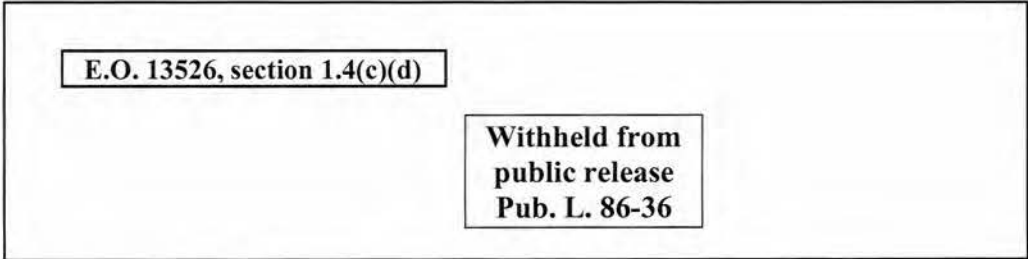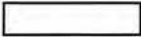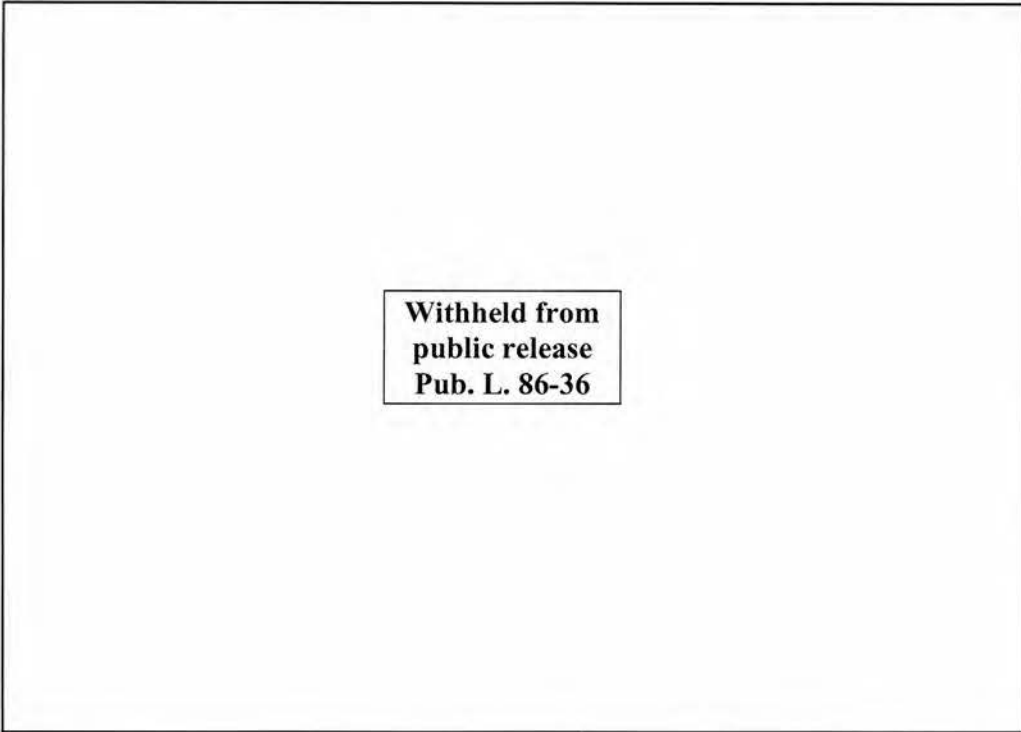Pub. L. 86-36

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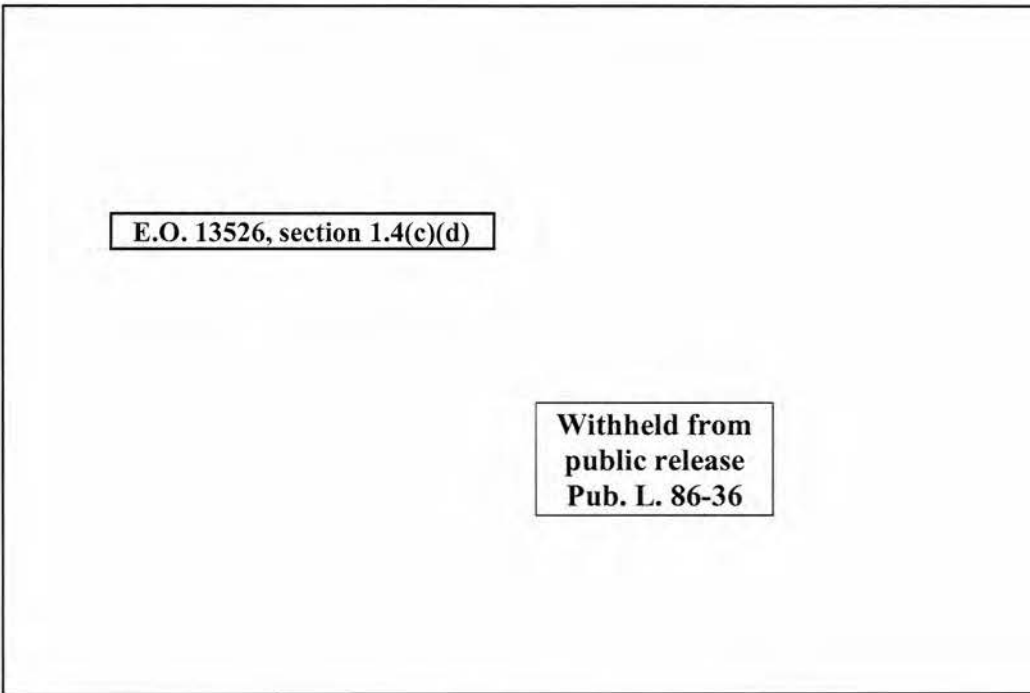public release
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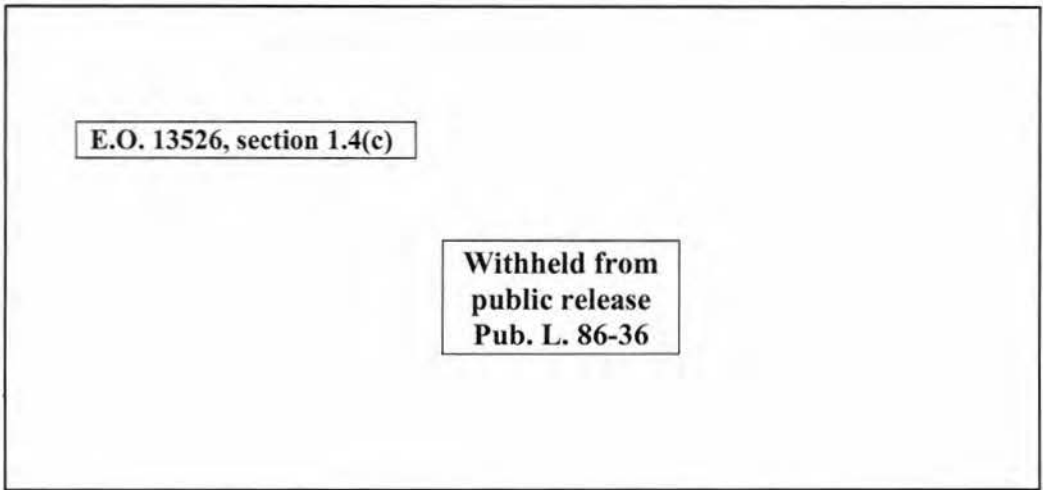E.O. 13526, section 1.4(c)(d)

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89. (U) [   ] interview; Interview, Raymond Tate, by Tom Johnson, OH 5-98, NSA.

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(U) Chapter 18

The Middle East and the Yom Kippur War

(FOUO) In the post-World War II cryptologic world, a few events loom large in history. The Yom Kippur War of 1973 was one of those larger-than-life situations that forever changed the course of cryptologic history and intelligence reporting in general. It also subjected NSA to much more publicity than it needed or wanted.

(U) BACKGROUND TO WAR

(U) The Middle East War of 1967 ended as World War I had ended – that is, in a most unsatisfactory way. Arab nations were humbled and bitter, while triumphant Israel had finally gained the additional territory it needed to make its precarious borders "defensible." Palestinian refugees invaded neighboring countries and became a thorn in the side of all who wished to forget about the Arab-Israeli problem. In short, nothing had been solved, and the situation was made to order for another war.

(U) In the aftermath of 1967 the United Nations Security Council passed resolution 242, which served thereafter as the formal basis for peace. Its basic premise was the "inadmissibility of acquiring territory by war," and it established an important quid pro quo. If the states of the Mideast agreed to recognize Israel's right to exist and its territorial integrity, Israel would in turn withdraw from the occupied territories. This was coupled with the principle of navigation through international waterways (including, of course, the Suez Canal and Straits of Tiran) and the repatriation of refugees.

(U) As a general proposition this was recognized by most contending parties (Syria being the noted exception). But all parties interpreted the seemingly solid prose to fit their own cases. Arab states, for instance, assumed that the resolution required total withdrawal, while Israel contended that it only meant withdrawal to "defensible borders." This would not, in the Israeli view, include withdrawal from the West Bank (and certainly not Jerusalem). On the Arab side the most divisive issue was the refugee problem, which beset all the states bordering Israel to some degree. Israel felt that the Arab states should accept all refugees within their borders; the Arab states wanted to return them all.[1]

(U) In the years following the war, political developments changed the face of the dispute. In one year, 1969, revolutions resulted in the overthrow of three moderately pro-Western governments: Libya, Sudan, and Somalia. Of these the most significant was the advent of Muhammar Gaddhafi in Libya. Gaddhafi became the first sponsor of "state-sponsored terrorism," that most unwelcome development of the Mideast situation. Gaddhafi was only twenty-seven at the time – clearly the Middle East would contend with him for a long time to come.

(U) In the same year, Egypt's Gamel Abdel Nasser, unrepentant of his disastrous sojourn to war in 1967, announced that he would begin a "war of attrition" which would include shelling the Israeli positions on the Bar Lev Line in the Sinai. This elicited a predictable Israeli response, and for several years artillery duels raged in the desert.

(U) But the most difficult problem remained the refugees. The two largest groups were in Lebanon and Jordan, and in the Jordanian camps, the Palestinian political and military organization advanced to the point where it had become an independent power within the state of Jordan. In 1970, George Habash's Popular Front for the Liberation of Palestine (PFLP) hijacked four commercial airplanes filled with tourists to a remote air strip near Amman, demanding a massive release of Arabs imprisoned in various capitals. His harsh treatment of the hostages brought worldwide condemnation, and the obstreperous behavior of his minions within the camps in Jordan brought clashes between his forces and the Jordanian Army. Nasser stepped in to negotiate a cease-fire, but the strain was too much, and he died suddenly of a heart attack. Ultimately the PFLP blew up the planes, European governments freed seven Arab prisoners, and the guerrillas released 300 hostages and dispersed the rest to refugee camps in and around Amman.[2]

(U) British trained, the Jordanian army of King Hussein was small but effective. On September 17 it moved against the Palestinian camps, and the U.S. responded with an intensified military buildup in the eastern Mediterranean to insure that Hussein kept his hold on his throne. Syria attacked Jordan from the north, but withdrew before U.S. intervention was necessary. The refugees were driven out, and decamped for Lebanon, thus transferring the central refugee problem to that country. The embittered Palestinians formed the Black September terrorist movement (after the September date of their ouster from Jordan).[3]

(U) In Egypt, the completely unexpected rise of Anwar Sadat, one of the original group that ejected the ruling monarchy in 1956, injected new dimensions to the Mideast situation. Sadat was at once more democratic, more intelligent, and more skilled in military matters, than Nasser had been. Thought to be a temporary figurehead, he quickly maneuvered politically to cut down his rivals. He also maneuvered his forces toward the inevitable future clash with Israel, but in new and unpredictable ways, and with less fanfare and rhetoric. Once he had secured his power base in Egypt, he ejected the Soviet advisors on whom Nasser had relied and began negotiating with the West for military aid. It was shaping up as a diplomatic revolution in the Middle East.[4]

(U) The early 1970s were the heyday of international Mideast terrorism. The PLO, the PFLP, and various other warring factions contended for press attention. In 1972 the PLO attacked the Olympic Village in Munich. They also targeted a trainload of emigrants from the USSR entering Austria and helped assassinate the U.S. ambassador in Khartoum.[5]

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(U) Anwar Sadat

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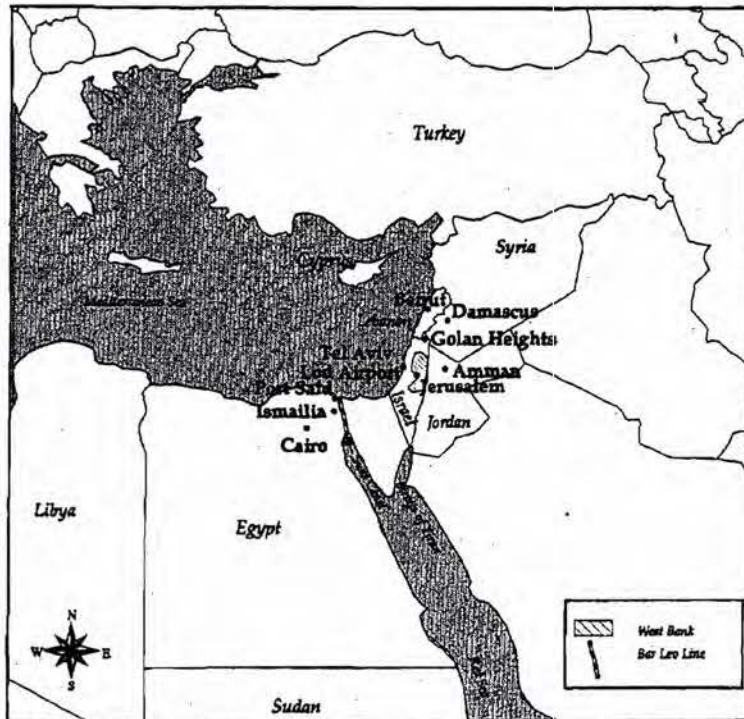
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(U) THE PREPARATIONS

(U) Sadat and his allies in Syria and Jordan decided on a preemptive war at a meeting in Cairo in September of 1973. They agreed to launch simultaneous attacks on Israeli forces in the Sinai and Golan Heights, while Jordan, lacking a missile defense capability, would hang back in a defensive posture in the early stages. They did not at the time set a precise date, but agreed that they would launch their initial attack during the Yom Kippur observances in early October.[8]
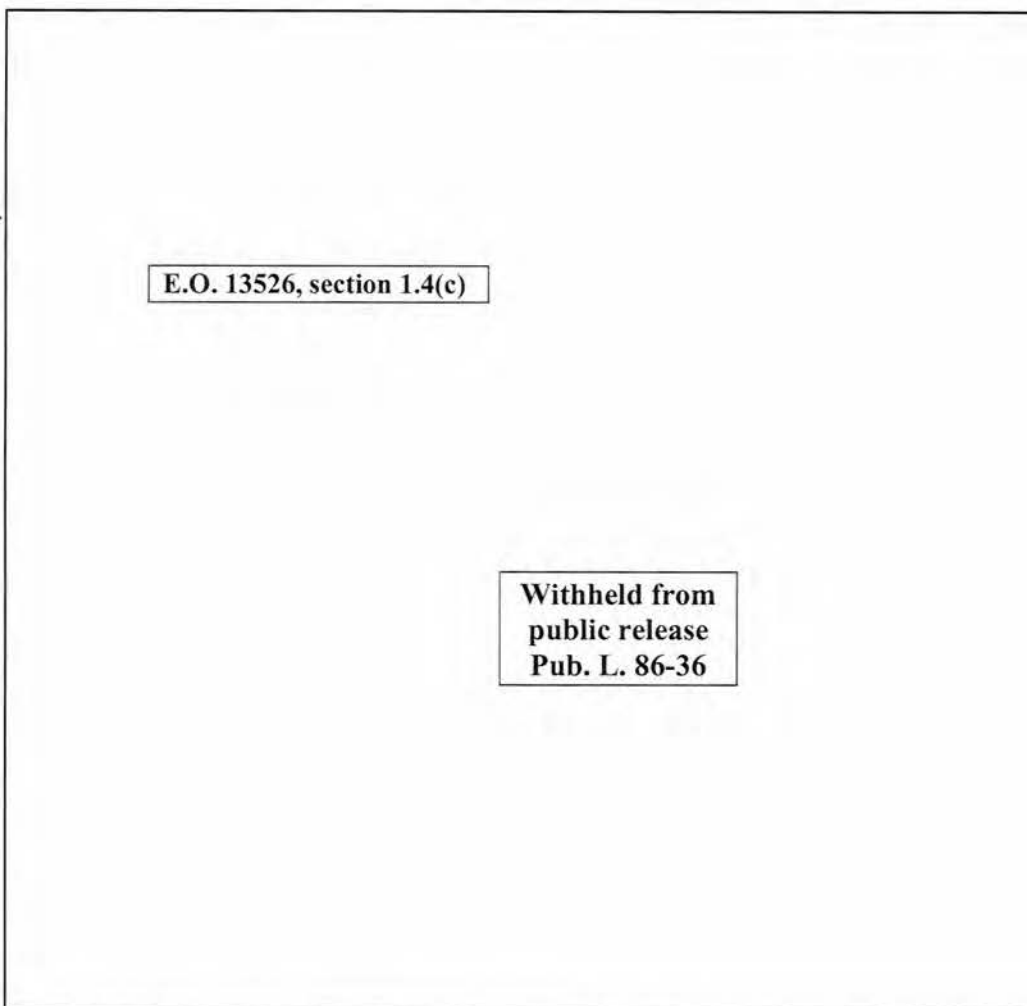

(U) Middle East in 1973

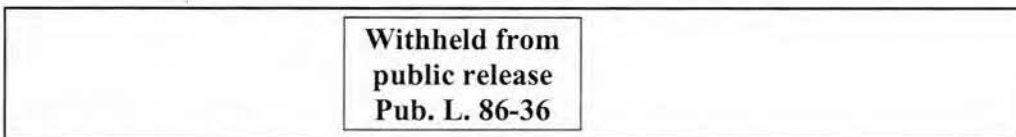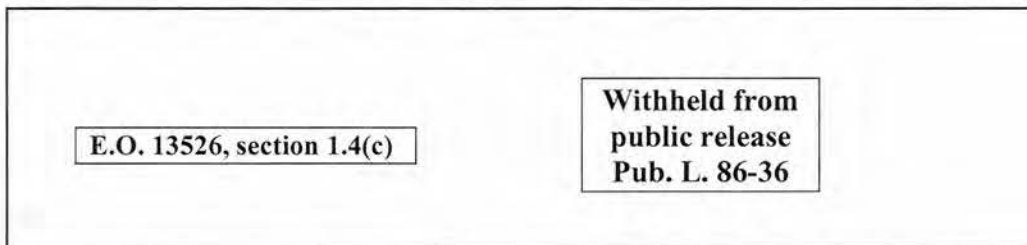| E.O. 13526, section 1.4(c)	Withheld from public release Pub. L. 86-36

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(U) THE BUNKER BRIEFING

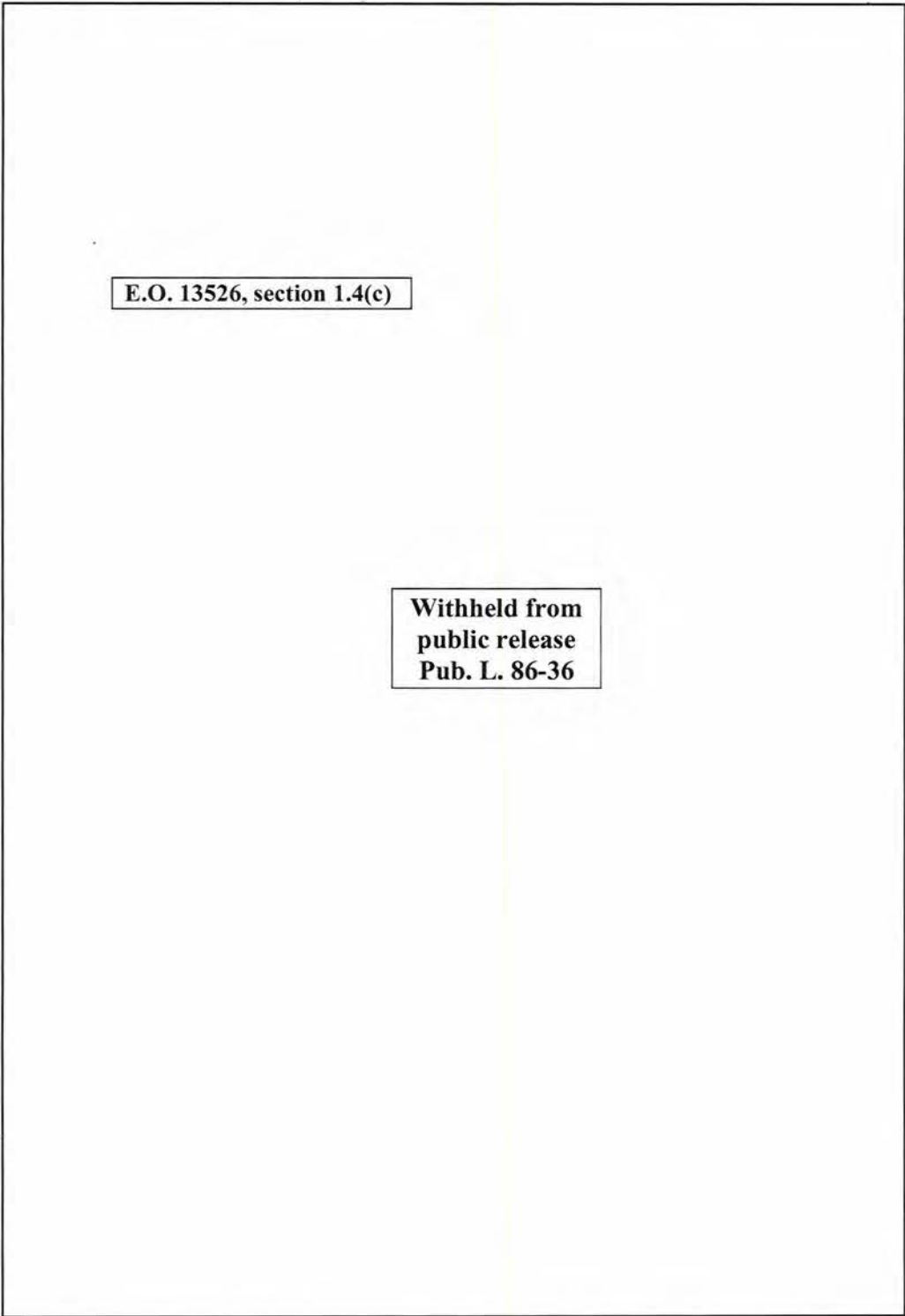Withheld from
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(U) THE ATTACK

(U) Unlike previous offensives by Arab states, this one was well coordinated. Egyptian troops sprang against the Bar Lev Line in the Sinai, throwing back the 600 Israeli troops and sweeping into the desert beyond with two armies. They came armed with SAMs, and Israel did not enjoy its customary air superiority in the early going. Soon the Egyptians had advanced ten kilometers into the Sinai, but then they slowed, apparently not anticipating such a rapid advance. It appeared that they had made no follow-up plans for such a breakthrough. To the north, meanwhile, Syria charged the Golan Heights with tanks and threw the surprised Israelis back.[18]
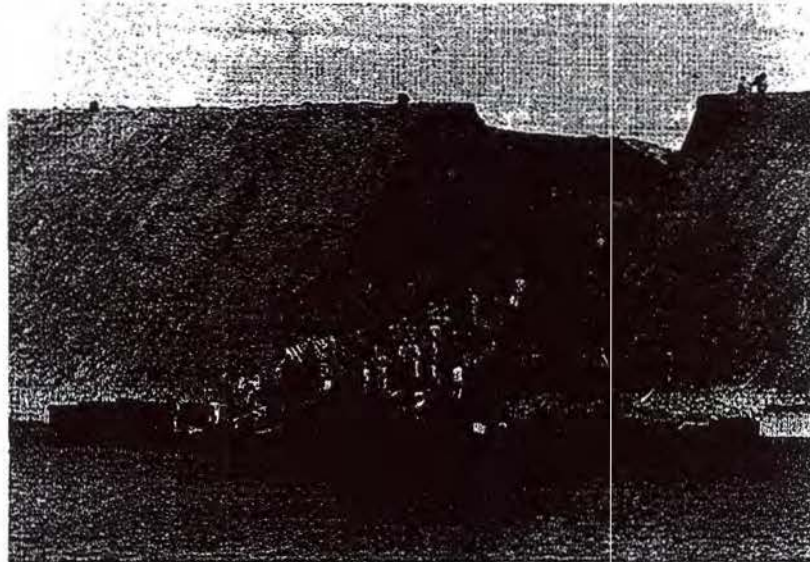
(U) Egyptian soldiers attack through the Bar Lev Line.

(U) The Israeli mobilization had only just begun that morning, but it was made swifter by the fact that it was Yom Kippur, and everyone who was needed for defense could be found in the synagogues. Israel concentrated its initial defense on the Golan Heights, fearful of the consequences of failure so close to population and industrial centers. The northern front was soon stabilized; then Israel turned its attention to the Sinai. Intelligence located a weak point in the center of the peninsula, at the point where the two

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Egyptian armies joined, and Israel launched a thrust through the center which dominated the second week of the war. At the end of the week, Israeli troops had reached the Suez Canal and, amid heavy casualties, crossed it.

(U) At the beginning of the second week the United States, fearful of an Israeli defeat, began a huge arms resupply, flying in planeload after planeload. At the same time, the Soviet Union signaled its continued support for the Arab cause with its own resupply operation. In retaliation for the U.S. position, OPEC, at the urging of Sadat, imposed an oil embargo on the United States and any European country that appeared excessively pro-Israel. (Only the Netherlands was singled out.) The Yom Kippur War thus launched the first great oil crisis in American history.[19]

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(U) Week three was the crunch point. Israel had exploited its penetration of Egyptian lines, and the week began with both Egyptian and Syrian forces in serious trouble. Both the U.S. and the USSR, fearing a major superpower conflict, groped desperately for a cease-fire. The Nixon administration was in complete chaos – Vice President Agnew had

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just resigned in disgrace, and Nixon had fired special Watergate prosecutor Archibald Cox, throwing the entire government into constitutional crisis. In the midst of this, National Security Advisor Henry Kissinger flew to Moscow and hammered out a temporary fix with Brezhnev, including a cease-fire in place, reaffirmation of UN Resolution 242, and immediate diplomatic negotiations among the contending parties.

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(U) Ultimately the Egyptians got to keep some of their gains in the Sinai, the Israelis were pressured into pulling their troops from the western side of the Canal, and they also had to give up portions of Syria captured from the Assad government. Israel came out of the experience convinced that they had been jobbed, but Sadat was so pleased with it that he helped Kissinger persuade Faysal of Saudi Arabia to drop the oil embargo. The compromise outcome of the Yom Kippur War also got the peace process started at long last, and Egypt eventually won the entire Sinai through negotiation. Sadat finished the process of converting from a Soviet to an American alliance, thus completing a diplomatic revolution in the Middle East in which Washington, rather than Moscow, became Egypt's closest ally.[24]

(U) THE POSTMORTEMS

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(U) Self-delusion was a strong factor in the 1973 debacle. U.S. intelligence had concluded that Arab military armies possessed questionable prowess. "There was . . . a fairly widespread notion based largely (though perhaps not entirely) on past performances that many Arabs, as Arabs, simply weren't up to the demands of modern warfare. . . ." It was supposed that the Arabs themselves understood this and would thus never think of attacking impregnable Israeli forces. Then there was the problem of reinforced consensus. The Israelis were confident that war was not imminent. Their followers within the U.S. intelligence community, wanting to look smart, parroted the Israeli view, and as one agency after another weighed in with its conclusion that war was unlikely, those assessments themselves became the footnotes for new assessments. Moreover, each agency assembled its own microscopic piece, in the manner of assembling a Chevrolet, without stepping back to look at the whole.[30]

(FOUO) Only one agency was out of the loop. As Lieutenant General Graham noted glumly afterward, NSA, unacquainted with the political wisdom of the others, examined the individual parts of the puzzle, then assembled it into a whole. There was still something to be said for examining only the objective factors of a problem.[31]

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(S-CCO) The last act of the Yom Kippur story was not played out until 1975. The Pike
Committee, investigating alleged intelligence abuses of the Watergate era, focused much
attention on the Yom Kippur War and the failure to warn. The committee insisted on
including a CIA summary of Yom Kippur in the final report, which included the *four little
words*, "and Egyptian communications security." This exposure of SIGINT monitoring of
Egyptian communications, seemingly innocent by today's standards, precipitated a

constitutional crisis over the authority to declassify security information. The Ford administration won the struggle, and the full House of Representatives voted to suppress the report. But that meant little to the leak-prone Pike Committee, and the entire report, including the *four little words*, appeared in the press. The Pike Report discussed Bunker's prediction, which thus became one of the legends of American cryptologic history.

Notes

1. (U) Arthur Goldschmidt, *A Concise History of the Middle East* (Boulder, Colorado: Westview Press, 1979), 283.

2. (U) Goldschmidt, *Concise History*, 289.

3. (U) Steven L. Spiegel, *The Soviet-American Competition in the Middle East* (Lexington, Mass: Lexington Books, 1988), 196-203.

4. (U) Peter Mansfield, *A History of the Middle East* (New York: Viking, 1991), 292; Goldschmidt, *Concise History*, 292-93.

5. (U) Goldschmidt, *Concise History*, 293.

6. (U) USAFSS, "A Historical Monograph on Libyan Reactions to U.S. Airborne Reconnaissance Missions, 1972-1980," 20 February 1981, in CCH Series X.J.5.1; CCH Series VIII.22.

7. (U) Yom Kippur War crisis file, CCH Series VIII.23.

8. (U) Goldschmidt, *Concise History*, 300.

9. (U) Yom Kippur War crisis file.

10. (U) Ibid.

11. (U) Telephone interview, [   ], by Tom Johnson, 17 September 1994; Interview, [   ], by Tom Johnson, 3 October 1994, OH 44-94, NSA; Interview, [   ], by Tom Johnson, 4 October 1994, OH 50-94, NSA; Interview, [   ] by Robert L. Benson, 26 March 1976, NSA.

12. (U) [   ] interview.

13. (U) *On Watch: Profiles from the National Security Agency's Past Forty Years* (Fort Meade: NSA, 1986), 75-79.

14. (U) [   ] interview; Yom Kippur War crisis file.

15. (U) [   ] interview.

16. (U) Yom Kippur War crisis file.

17. (U) Yom Kippur War crisis file; [   ] interview.

18. (U) Goldschmidt, *Concise History*, 301.

19. (U) Ibid., 302-03.

20. (U) Yom Kippur War crisis file.

21. (U) Ibid.

22. (U) Goldschmidt, Concise History, 302-03; Mansfield, 295; Informal papers in CCH Series XII.D.

23. (U) Goldschmidt, *Concise History*, 305.

24. (U) Ibid.

25. (U) Yom Kippur War crisis file.

26. (U) Yom Kippur War crisis file, 3/00/3824-75.

27. (U) Ford Library, NSF, in CCH Series XVI.H., "Mid East."

28. (U) Yom Kippur War crisis file, CIA assessment, December 1973.

29. (U) Yom Kippur War crisis file, DIA intelligence summary for October 3, 1973.

30. (U) Yom Kippur War crisis file, CIA assessment.

31. (U) Allen interview.

32. (U) Vera Filby, "A Decade of Change in SIGINT Reporting," in CCH Series XII.D.

33. (U) Yom Kippur War crisis file; Interview with [   ] in Cryptolog, December 1976.

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